IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

LOGGERHEAD TOOLS, LLC, Plaintiff, v. SEARS HOLDINGS CORPORATION and APEX TOOL GROUP, LLC, Defendants.	Case No. 1:12-cv-09033 JURY TRIAL DEMANDED

SECOND AMENDED COMPLAINT

This is an action for willful patent infringement; multiple violations of the Lanham Act, violation of the Uniform Deceptive Trade Practices Act and the Illinois Consumer Fraud and Deceptive Business Practices Act, violation of Illinois common law of unfair competition, violation of Illinois common law of trademarks, common law fraud, fraud in the inducement, and promissory fraud, in which Plaintiff LoggerHead Tools, LLC makes the following allegations against Defendants Sears Holding Corporation and Apex Tool Group, LLC, based on (a) personal knowledge, (b) the investigation of its counsel, and (c) information and belief:

THE PARTIES

1. Plaintiff LoggerHead Tools, LLC ("LoggerHead") is an Illinois limited liability company with its principal place of business at 8310 West 127th St., Palos Park, Illinois 60464.

2. Defendant Sears Holding Corporation ("Sears") is a Delaware corporation having its principal place of business at 3333 Beverly Road, Hoffman Estates, Illinois. Sears may be

served via its registered agent for service of process, The Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, Delaware 19801.

3. Defendant Apex Tool Group, LLC ("Apex") is a Maryland corporation having its principal place of business in Sparks, Maryland. Apex may be served via its registered agent for service of process, The Corporation Trust Incorporated, 351 West Camden Street, Baltimore, Maryland 21201.

JURISDICTION AND VENUE

4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §1331 (federal question), §1338(a) (question related to patents) and supplemental jurisdiction pursuant to 28 U.S.C. §1367.

5. This Court has personal jurisdiction over Sears. Sears has conducted and does conduct business within the State of Illinois and within the Northern District of Illinois. Sears directly and/or through intermediaries (including distributors, sales agents, and others), ships, distributes, offers for sale, sells, and/or advertises its products (including, but not limited to, the products that are accused of patent infringement in this lawsuit) in the United States, the State of Illinois, and the Northern District of Illinois. Sears has committed patent infringement within the State of Illinois, and, more particularly, within the Northern District of Illinois as alleged in more detail below.

6. This Court has personal jurisdiction over Apex. Apex has conducted and does conduct business within the State of Illinois and within the Northern District of Illinois. Apex directly and/or through intermediaries (including distributors, sales agents, and others), ships, distributes, offers for sale, sells, and/or advertises its products (including, but not limited to, the products that are accused of patent infringement in this lawsuit) in the United States, the State of Illinois, and the Northern District of Illinois. Apex has committed patent infringement within the

State of Illinois, and, more particularly, within the Northern District of Illinois as alleged in more detail below.

7. Venue is proper in this judicial district pursuant to 28 U.S.C. §1391 and §1400.

8. Joinder of the Defendants in this action is proper pursuant to 35 U.S.C. § 299. As alleged in more detail below, both of the Defendants are offering to sell and/or selling the same infringing products, and questions of fact common to both Defendants will arise in this action.

THE PATENTS-IN-SUIT

United States Patent No. 6,889,579

9. On May 10, 2005, United States Patent No. 6,889,579 (the "'579 Patent"), entitled "Adjustable Gripping Tool," was duly and legally issued to inventor Daniel P. Brown ("Brown.") by the United States Patent and Trademark Office, after a full and fair examination. LoggerHead was assigned the '579 Patent, and it continues to hold all rights, title, and interest in the '579 Patent. A true and correct copy of the '579 Patent is attached as Exhibit A.

10. By way of example only, Claim 1 of the '579 Patent recites one of the inventions disclosed in the '579 Patent:

> An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:
>
> a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;
>
> the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening external thereto, each said at least one slot having a first section configured to engage the force transfer element of one said at least one grinning element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide.

United States Patent No. 7,992,470

11. On August 9, 2011, United States Patent No. 7,992,470 (the "'470 Patent"), entitled "Adjustable Gripping Tool," was duly and legally issued to Brown by the United States Patent and Trademark Office, after a full and fair examination. LoggerHead was assigned the '470 Patent, and it continues to hold all rights, title, and interest in the '470 Patent. A true and correct copy of the '470 Patent is attached as Exhibit B.

12. By way of example only, Claim 1 of the '470 Patent recites one of the inventions disclosed in the '470 Patent:

An adjustable gripping tool for engaging a work piece to impart work thereto, the tool comprising:

(a) a first element and a second element connected for relative movement which generates movement of at least one gripping element;

(b) the first element including a gripping portion configured to engage the work piece including at least one guide defined in the gripping portion and said at least one

gripping element;

(c) each at least one gripping element including a body portion adapted for engaging the work piece, an arm portion configured to engage one said at least one guide and a force transfer element contiguous with the arm portion;

(d) the second element including an actuation portion having at least one slot therein, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide, wherein the first element further includes at least one aligning element such that each said at least one aligning element is disposed between an adjacent pair of guides and extends parallel to the force transfer elements.

FACTUAL BACKGROUND

Inventor Dan Brown Designs and Develops the Patented Bionic Wrench® and Forms LoggerHead Tools, LLC

13. Brown is the inventor of the ’579 Patent and the ’470 Patent (collectively, “the Bionic Wrench Patents”), and the founder and President of LoggerHead Tools. Brown is a Clinical Associate Professor at the Segal Design Institute at Northwestern University, McCormick School of Engineering, where he teaches several engineering courses, including product design and development. He is also the founder and president of Consul-Tech Concepts, LLC, a product design and development consultancy that develops new products for the marketplace.

14. Brown has spent his life using tools and has dedicated his career to developing products in various industries. He is a named inventor on more than 30 U.S. patents.

15. Brown spent more than three years designing and developing an innovative new tool called the Bionic Wrench. During that time, Brown researched the market, patents and potential competitors; profiled the ideal customer as well as the end users of the tool; evaluated sales channels to identify the best strategy for success in the sales and distribution channels; designed and redesigned the tool; defined the best material options; reduced the number of parts; standardized components; eliminated steps in the manufacturing process; and searched for the best American supplier that could build the tooling, stamp the product, and assemble the tool.

16. To protect the substantial resources devoted to developing the new tool, Brown applied for the first Bionic Wrench Patent (the ’579 Patent) in January 2004.

17. In 2005, Brown founded LoggerHead Tools and launched the first Bionic Wrench product. LoggerHead expended extensive time, labor, skill, and money to create, market, produce, and sell its patented Bionic Wrenches. LoggerHead’s efforts resulted in a recognized and distinctive brand that created substantial goodwill for LoggerHead and the Bionic Wrench.

18. The Bionic Wrench is a revolutionary tool that, among other features, simply adjusts onto a nut/bolt on its flat sides by squeezing the handles, thereby allowing a user to complete work by gripping on the flat sides rather than the corners of a nut when rotating the wrench. The Bionic Wrench allows the user to use one tool for any size nut/bolt within a certain range, so the user does not have to search for the correct size wrench and need not determine whether the nut/bolt is in metric or nonmetric dimensions. The following photographs depict LoggerHead’s Bionic Wrench:

19. An important aspect of LoggerHead's business philosophy is that the Bionic Wrench is manufactured and assembled in the United States, using all American-made components. While it might have been easier to manufacture his products in low-cost, off-shore factories in China, Brown emphatically resisted sending his new invention to be manufactured off-shore. He chose to have the Bionic Wrench manufactured in the United States. Brown created a business model enabling LoggerHead to produce the Bionic Wrench in the United States and sell the product in a market dominated by low-cost imported tools. Brown was adamant about creating a company and a brand identity based on a "Made in America" business model.

20. After Brown's exhaustive search for the best American supplier that could build, stamp, and assemble the Bionic Wrench, LoggerHead established a relationship with Penn United Technologies, Inc. ("Penn United") in Pennsylvania, where every Bionic Wrench is manufactured.

21. In order to accomplish LoggerHead's "Made in America" business plan in a way that could compete against imported hand tools, Brown designed an entirely new tool that created unique value in the marketplace, and engineered a design that allowed for an efficient manufacturing process that was both productive and flexible. The result was LoggerHead's low overhead organizational structure and business model that has been widely praised for its commitment to manufacturing in the United States and creation of American jobs.

22. When LoggerHead introduced the Bionic Wrench in 2005, it was greeted with enthusiasm and accolades at trade shows and industrial design competitions. On March 21, 2006, The Wall Street Journal reported that,

> [I]n two of this year's noted international design competitions, only two U.S. companies took home highest honors for their products. One, predictably, was giant Apple Computer Inc. for its sleek, high-tech iPod Nano music player. The other was a tiny unknown Illinois upstart named LoggerHead Tools.

23. LoggerHead built substantial goodwill in just a few years based on the quality and novelty of the Bionic Wrench – as well as its commitment to American manufacturing and jobs. LoggerHead's manufacturer, Penn United, had seven manufacturing and assembly lines for the Bionic Wrench, and employed between 20 and 50 American workers to manufacture and assemble LoggerHead's Bionic Wrench.

24. LoggerHead's hard-earned goodwill helped it survive the global recession in 2008. Despite the economic downturn, LoggerHead resisted overtures from retailers who wanted to sell the patented Bionic Wrench under their own brands. Instead, LoggerHead worked tirelessly to establish a unique brand of its own. By the end of 2008, in the midst of a global

recession, LoggerHead had sold Bionic Wrenches for nearly $11 million at wholesale prices – which resulted in over $20 million in retail sales.

25. By mid-2012, LoggerHead had sold Bionic Wrenches for approximately $20 million in gross sales.

26. On August 26, 2008, LoggerHead received a U.S. trademark registration certificate from the United States Patent & Trademark Office for the phrase "Bionic Wrench®." Attached as Exhibit C1 is LoggerHead's trademark registration certificate ("Bionic Wrench Mark").

27. On May 6, 2014, LoggerHead received a U.S. trademark registration certificate from the United States Patent & Trademark Office for the Mark pictured below, and described as "consist[ing] of a three-dimensional depiction of a wrench head. The wrench head consists of a cog-like design in the nature of a circle with six rectangular slots. The broken lines depicting the handles indicate placement of the mark on the goods and are not part of the mark." Attached as Exhibit C2 is LoggerHead's trademark registration certificate ("Product Design Mark").

28. LoggerHead's Product Design Mark is non-functional, as determined by the USPTO during prosecution of the Product Design Mark.

29. LoggerHead's Bionic Wrench, merchandized in packaging bearing LoggerHead's Bionic Wrench Mark and embodying LoggerHead's Product Design Mark, have come to be well-known as high-quality, easy to use, American-made hand tools.

30. The Bionic Wrench product configuration and appearance, as depicted in LoggerHead's Product Design Mark, has received several awards for its design that include recognition for its overall configuration and design. These awards include the Popular Mechanics, Editor's Choice Award; the iF, International Forum Design Award, a Good Design Award, an International Industrial and Graphic Design Award from Chicago Athenaeum; and the Red Dot Award. These awards recognized the overall design of LoggerHead's Bionic Wrench, including the design aesthetic. The design aesthetic is included in LoggerHead's Product Design Mark and identifies the source of LoggerHead's Bionic Wrench.

31. LoggerHead sells Bionic Wrenches on its own website and also to established retailers including Sears, Canadian Tire, QVC, Costco, Amazon, Ace Hardware, True Value, Menards, and others.

32. LoggerHead's Bionic Wrench has been advertised on Sears DRTV in national television campaigns for Father's Day 2011 and 2012, and for Christmas 2011.

33. Consumers are exposed to LoggerHead's Bionic Wrench and to LoggerHead's Bionic Wrench Mark and Product Design Mark through magazines, newspapers, television, and the internet. As a result, LoggerHead's Marks have become widely known and valuable trademarks, possessing a strong secondary meaning among customers.

34. LoggerHead's Bionic Wrench Mark and Product Design Mark are valuable among consumer trademarks because they are constantly exposed to consumers. As a result, LoggerHead's Marks have come to symbolize enormous goodwill of LoggerHead's business in the community. No other manufacturer lawfully uses LoggerHead's Marks or any other substantially similar marks for similar types of goods.

35. LoggerHead's Bionic Wrench has been recognized throughout the world by leading trade associations for its design and innovative creativity, receiving many significant domestic and international design and innovation awards, including the following:

- Popular Mechanics Breakthrough Innovation Award (2009)
- iF International Forum Design Universal Design Award (2008)
- Plant Engineering Magazine (Bronze) Product of the Year (2007)
- iF International Product of the Year Award (2007)
- Farm Industry News FinOvation Award for Product Design (2007)
- Chicago Innovation Award (2006)
- iF International Forum Design Product of the Year - Gold Award (2006)
- Red Dot Product Design Best of the Best Award (2006)
- Popular Mechanics Editor's Choice Award (2005)
- Chicago Athenaeum Good Design Award (2005)

36. LoggerHead has shipped over 1.75 million units of the Bionic Wrench, all while operating on a low-overhead business model and investing much of the profit back into the company and its employees.

37. LoggerHead's Bionic Wrenches were substantially and continuously marked in accordance with the requirements of 35 U.S.C. § 287.

LoggerHead and Sears Form a Strategic Partnership to Promote and Sell the Bionic Wrench

38. With the Bionic Wrench having been embraced in the marketplace as an innovative new tool, Sears placed an order with LoggerHead for 15,000 Bionic Wrench units for the Christmas 2009 season to test how well the tool would do at Sears. Sears sold-out of all the Bionic Wrenches it ordered.

39. For the 2010 Christmas season, Sears ordered 75,000 Bionic Wrenches – a five-fold increase over its order from the prior year. Once again, Sears sold-out of all the Bionic Wrenches it ordered.

40. Based on the Bionic Wrench's sales success in 2009 and 2010, Sears and LoggerHead entered into a one-year supply agreement. The supply agreement had an effective start date of February 1, 2011, and expired February 1, 2012. Sears and LoggerHead each acted in accordance with the effective date set forth in the supply agreement, even though neither LoggerHead nor Sears had signed the agreement until April 19, 2011.

41. Sears agreed to produce and run a full-length television advertisement known as a Direct Response TV program ("DRTV") to promote the Bionic Wrench during the 2011 holiday season. Sears agreed to produce the Bionic Wrench DRTV, and in return, LoggerHead agreed to pay a fee (per unit sold) to subsidize the expense of the DRTV advertising.

42. In addition to paying a subsidy for the DRTV promotion, and in response to Sears' request, LoggerHead agreed that it would not sell Bionic Wrenches to Home Depot or Lowes – Sears' two primary retail hand-tool competitors.

43. The 2011 DRTV promotion was an enormous success. Sears sold over 300,000 Bionic Wrenches – an amount that exceeded Sears' sales forecast target by 23 percent.

44. Sears shared its excitement for the successful 2011 Bionic Wrench sales with LoggerHead, informing Brown in writing in early December 2011 that the Bionic Wrench was Sears' best-selling and most profitable tool in its category. The 2009 to 2011 collaboration between two Chicago-based companies – one a small start-up and the other one of the largest and most well-recognized Chicago companies in history – was an enormous success.

45. As a result of Sears' sales of the Bionic Wrench in 2011 that exceeded Sears' forecasts, on December 7, 2011, Sears' hand-tool buyer Amanda Campana ("Campana") informed Brown that Sears wanted to enter into a 2012 supply agreement with LoggerHead for the Bionic Wrench.

46. On December 15, 2011, Brown and his son, Dan Brown Jr. ("Brown Jr."), a LoggerHead sales employee, met with Campana at her request, because she wanted to discuss terms for a 2012 supply agreement with LoggerHead. Campana told Brown and Brown Jr. that given the success of the 2011 Christmas DRTV campaign, Sears wanted to run DRTV promotions for Father's Day and Christmas 2012.

47. For the next six months, between December 2011 and the end of May 2012, Sears assured and represented to LoggerHead numerous times – both orally and in writing – that Sears was ready, excited, and committed to another successful year with LoggerHead and the Bionic Wrench. During this six-month timeframe, Sears represented and assured LoggerHead with both oral and written commitments and promises that Sears would purchase at least 300,000 Bionic Wrench units in 2012. Sears further assured and promised LoggerHead that Sears would support the Bionic Wrench with DRTV advertising for Father's Day and Christmas 2012. Sears also repeatedly represented and promised LoggerHead that Sears would enter into a written supply agreement for 2012 reflecting such terms. These oral and written representations, assurances, and promises were provided to Brown and Brown Jr. by Sears' employees Campana, Carey Romano, and Stephanie Kaleta (among others) on several occasions between December 2011 and the end of May 2012:

- On December 20, 2011, at a dinner meeting between Brown, Brown Jr. and Campana to celebrate the success of the Bionic Wrench at Sears, Campana

expressed Sears' excitement about 2012 and told LoggerHead that Sears was looking forward to another successful year.

- On December 21, 2011, Campana confirmed via email that Sears was looking forward to another successful year selling the Bionic Wrench. Later that day, Campana sent Brown another email reconfirming Sears' forecast of 73,000 Bionic Wrench units for Father's Day 2012.
- In January 2012, after Campana learned that she was being reassigned to a different Sears' department, Campana wrote an email to Brown emphasizing that her reassignment would not in any way undermine Sears' commitment to partner with LoggerHead in promoting and selling the Bionic Wrench in 2012.
- On February 8, 2012, Brown met at Sears with Sears' new hand-tool buyer, Stephanie Kaleta, Campana's replacement. During that meeting, consistent with Campana's prior representations, Kaleta again committed and promised to Brown that Sears was forecasting 73,000 Bionic Wrench units for Father's Day 2012; that Sears was committed to run DRTV advertising campaigns for Father's Day and Christmas 2012; and that Sears would commit to purchasing 300,000 total Bionic Wrench units in 2012.
- On February 10, 2012, Sears began issuing purchase orders for the 73,000 Bionic Wrenches it had previously agreed to buy.
- Throughout February 2012, in reasonable reliance on Sears' commitment and promise to purchase 73,000 units for Father's day, LoggerHead worked with Penn United to fulfill Sears' Father's Day orders.

- On February 24, 2012, Kaleta wrote to LoggerHead confirming the Father's Day shipping schedule. Later that week the parties discussed marketing for the Bionic Wrenches, including artwork for the Father's Day displays.
- On March 6, 2012, LoggerHead sent to Kaleta a draft 2012 Supply Agreement containing Sears' commitment to purchase 300,000 units in 2012 as the parties had previously agreed.
- The next day, on March 7, 2012, upon receiving requested changes to the draft agreement from Kaleta, Brown Jr. sent the First Agreement Revision to the draft 2012 Supply Agreement inputting Sears' requested changes. Sears did not request any change to the provision committing Sears to a purchase of a minimum of 300,000 Bionic Wrench units for 2012.
- A week later, on March 13, 2012, Brown Jr. inquired into the status of the First Agreement Revision to the 2012 Supply Agreement. The following day Kaleta responded that she was waiting for the signoff and would advise Brown Jr. "ASAP." In a separate email, the parties discussed the Sears DRTV program for the Bionic Wrench for 2012.
- The following week, on March 19, 2012, Brown Jr. again inquired into the status of the 2012 Supply Agreement. The next day Kaleta had more revisions and on March 23, 2012, Brown Jr. sent Kaleta a Second Agreement Revision to the 2012 Supply Agreement incorporating her requested changes. There were no changes to the price, quantity, or lead times.
- Based on Sears' representations, assurances, and promises that it would purchase 300,000 units in 2012, LoggerHead prepared a video display for Sears and

demonstrated it to Kaleta. Kaleta explained that it was too late to use the display for the 2012 Father's Day period, but that she would consider using it during the 2012 holiday sales period – thus providing further assurances to LoggerHead that Sears would proceed with purchases pursuant to the terms that the parties had repeatedly agreed to orally and in email correspondence.

- On April 10, 2012, and April 18, 2012, Brown Jr. and Kaleta talked about the 2012 draft supply agreement and exchanged a Third Agreement Revision to the 2012 Supply Agreement. None of the revisions changed Sears' commitment to purchase 300,000 units in 2012.
- On April 25, 2012, Kaleta informed Brown Jr. that a signed agreement was imminent and was merely awaiting routine review by Sears' legal team.
- On April 27, 2012, prior to the National Hardware Show, Kaleta sent Brown Jr. a Fourth Agreement Revision to the draft 2012 Supply Agreement. Sears' edits that appeared in the Fourth Agreement Revision did not change or alter Sears' commitment to purchase 300,000 units in 2012. Kaleta and Brown Jr. agreed to discuss the changes that Sears made when they would both be at the National Hardware Show so that the draft could be finalized.
- On May 15, 2012, Sears' employee, Elliot Lourie, sent to LoggerHead Sears' Christmas forecast for 213,519 Bionic Wrench units. Lourie stated that he was submitting the forecast with 120 days of advanced notice and indicated that the forecast was being provided per the notice terms contained in the draft 2012 supply agreement.

- On May 25, 2012, LoggerHead's Brown and Brown Jr. held a status call with Sears' Adam Whitney and Stephanie Kaleta. On the call, Sears and LoggerHead both reconfirmed the parties' pricing and DRTV subsidy terms for the Father's Day program. At no time during the call was there disagreement between the parties regarding pricing or the DRTV subsidy for the Father's Day and the Christmas DRTV advertising. At no time on the call did Sears suggest that its May 15 forecast for 213,519 Bionic Wrench units was going to change in any significant way. The only caveat Sears raised was that the forecast could change some depending on whether the 2012 Father's Day DRTV promotion met forecasts.
- As a result of the May 25 call and Sears' representations that it was committed to moving forward, as previously agreed, with the DRTV and 300,000 total units, LoggerHead continued taking all necessary measures to ramp up production in order to meet Sears' holiday forecast for 213,519 Bionic Wrench units. Such measures included ordering various parts, working with Penn United to ensure assembly and production was proceeding at a pace to meet production deadlines, and ensuring that the quality of each Bionic Wrench met with LoggerHead's strict quality standards before arriving at Sears.
- Sales for the Bionic Wrench during the Father's Day period met or exceeded Sears' forecasts. Given Sears' assurance on May 25 that the Father's Day outcome would be the only thing that may change Sears' holiday forecast for 213,519 Bionic Wrench units, LoggerHead continued to take action to fulfill Sears' forecast for its large holiday purchase.

- All of the aforementioned promises and the parties' performance of the Father's Day DRTV and purchase orders that tracked or exceeded Sears' original forecast occurred in the absence of a signed supply agreement for 2012.

48. During that same six month time period between December 2011 and May 2012, Sears repeatedly sought assurances from LoggerHead that it would honor its commitment from the previous year to not sell the Bionic Wrench to Sears' retail competitors, including Home Depot and Lowes. Each time, LoggerHead confirmed that it would not sell to Sears' retail competitors, assuming Sears followed through on its commitment to purchase 300,000 Bionic Wrench units in 2012. Sears continued to promise that it would purchase 300,000 units. For example:

- On December 21, 2011 – the day after the celebratory dinner meeting between Sears' employee Campana and LoggerHead's Brown and Brown Jr., Campana emailed Brown about the terms of the 2012 supply agreement they had discussed at dinner. In order to induce LoggerHead to again agree that it would not sell the Bionic Wrench to Sears' retail competitors, Campana made it clear that Sears' 2012 Father's Day forecast would be lower if LoggerHead sold to Sears' competitors: "I wanted to ensure (sic) you that I am going to be able to give a ball park forecast for Father's Day when I return to the office after the New Year…We are very excited about the success of the Bionic Wrench and we are looking forward to another successful year. As I am working through my forecast though I wanted to know if there is any chance the Bionic Wrench will be in any of our competitors next year. This is something that I will need to factor in if it will be."

- Later that same day, Brown replied to Campana and once again assured Sears in writing that LoggerHead would not sell the Bionic Wrench to Sears' competitors given the strong, successful business partnership that Sears and LoggerHead had formed.
- In response to a letter Brown sent Kaleta on February 16, 2012, Kaleta and another Sears' employee, Adam Whitney, raised with Brown Jr. whether LoggerHead had signed any agreements with any of Sears' retail competitors. Brown Jr. assured him that LoggerHead had not signed any such agreements.
- Shortly after Brown Jr. confirmed that LoggerHead was not selling to Sears' competitors, Sears reissued purchase orders for Father's Day at the higher price LoggerHead insisted upon in Brown's February 16, 2012 letter.

49. Although Sears and LoggerHead proceeded for several months to perform the contemplated 2012 DRTV advertising and fulfill the original Sears' Father's Day forecast, Sears and LoggerHead never signed any version of the draft 2012 supply agreements.

50. Despite the absence of a signed supply agreement, Sears and LoggerHead produced and ran Father's Day DRTV advertising for the Bionic Wrench. Both Sears and LoggerHead honored the respective commitments and promises each side had made over the course of their discussions of terms for a 2012 supply agreement, which always included DRTV advertising for Father's Day and Christmas 2012.

51. Likewise, despite the absence of a signed supply agreement, between February 2011 and May 2011, Sears issued Father's Day purchase orders to LoggerHead for more than 77,000 Bionic Wrench units and LoggerHead fulfilled those orders. The 77,000 units closely

tracked the number of units Sears had forecasted for Father's Day while the parties were discussing terms for a 2012 supply agreement.

52. Throughout the 2012 Father's Day campaign, Sears and LoggerHead continued to work together on Sears' 2012 holiday season forecasts and continued to prepare for the 2012 holiday season DRTV advertising program without a signed supply agreement – just like the parties had done with respect to Father's Day in the absence of a signed supply agreement.

53. LoggerHead relied on Sears' repeated representations, commitments, and promises that Sears would purchase 300,000 total Bionic Wrench units in 2012. LoggerHead's reliance on those representations, commitments, and promises was reasonable – even in the absence of a signed supply agreement – for at least the following reasons:

- LoggerHead had relied on similar Sears' representations, commitments, and promises during the Father's Day sales period in the absence of a signed supply agreement, and throughout that entire process Sears' actions were consistent with its previous representations, commitments, and promises.
- In terms of sales and profit, Sears told LoggerHead that during the 2011 holiday season the Bionic Wrench was the best in its class. From LoggerHead's perspective, why would Sears abandon its 2012 holiday season commitment when the previous year it had been a tremendous success – especially in light of the fact that Sears was proceeding with the Father's Day plan even without a signed supply agreement.
- LoggerHead was not aware that Sears had any alternative to selling the Bionic Wrench during the 2012 holiday season.

54. After six months of Sears' commitments, representations, and promises to LoggerHead that it would purchase a total of 300,000 Bionic Wrench units in 2012 – including Sears' May 15, 2012 forecast for 213,519 Bionic Wrench units that was confirmed again in a May 25, 2012 phone call between Sears and LoggerHead – on June 20, 2012, Sears sent to LoggerHead a "revised" Christmas forecast for 2,971 Bionic Wrench units. The "revised" forecast was a complete and shocking departure from Sears' prior commitments and promises that it would purchase a total of 300,000 units in 2012, as well as Sears' specific commitment and promise that it would purchase approximately 213,519 units for Christmas 2012.

55. During all of the years LoggerHead sold Bionic Wrenches to Sears, Sears had never so dramatically revised its forecasts. To the extent Sears' forecasts changed at all, any such changes had always been at the margins.

56. After receiving the Sears' dramatically lower forecast, Brown sent numerous emails to Kaleta and several other Sears' employees, stating that LoggerHead was blindsided, astonished, and at a complete loss as to why Sears reduced its Christmas forecast from more than 200,000 units to less than 3,000 units.

57. On June 25, 2012, Sears, through an email from Kaleta to LoggerHead, falsely stated (for the first time), that Sears reduced the forecast because of an alleged inability to reach mutual agreement on the holiday DRTV campaign. This statement was false because LoggerHead had repeatedly agreed – both orally and in writing – to the very terms that Sears had proposed for the 2012 holiday DRTV campaign. In any event, even as late as June 25, 2012, Kaleta represented to Brown that Sears was still willing to move forward if the holiday DRTV issue was resolved.

58. At a complete loss as to why Sears had suddenly backed out of the commitments and promises it had made to LoggerHead for six months – and knowing that the parties had no disagreement with respect to the holiday DRTV campaign – Brown made a number of attempts to understand the real reason that Sears essentially cancelled an order it had agreed to make for months. In attempting to seek the truth about the cancellation from Sears, Brown also made it clear that even though LoggerHead did not and could not comprehend why Sears thought there was a disagreement on the terms for the holiday DRTV campaign, he was ready and willing to address whatever the issue was and move forward as the parties had been planning to do for months.

59. For weeks, Sears completely ignored Brown's questions and his attempts to resolve the phantom holiday DRTV issue – even though Kaleta had stated that Sears remained ready to proceed upon agreement of terms for the holiday DRTV campaign.

60. On July 19, 2012, Sears finally responded to Brown's inquiries. Sears' employee Adam Whitney sent an email purporting to "clarify" certain "facts" that explained Sears' conduct. Whitney's email actually confirms Sears' deceit, because Whitney was unable to identify any true disagreement between the parties that would prevent them from moving forward on the two promises and commitments Sears had made to LoggerHead for months: that it would produce a holiday DRTV advertisement promoting Bionic Wrenches, and that it would purchase approximately 200,000 Bionic Wrenches for the 2012 holiday. Whitney's email merely establishes that Sears decided to exercise the unfettered discretion and power it had in its relationship with LoggerHead to inflict harm on LoggerHead – Sears did not exercise the unfettered discretion and power it had based on any legitimate or justifiable business explanation. Instead, Sears acted in extraordinary bad faith.

61. The July 19 email from Whitney and his mischaracterization of events was the last time LoggerHead heard from Sears regarding the 2012 holiday season Bionic Wrench purchases.

SEARS COMMITTED FRAUD

62. In September 2012, approximately two months after Sears' final communication from Whitney, Sears, through its Craftsman brand, announced the introduction of its "Max Axess Locking Wrench," which is a virtual copy of LoggerHead's Bionic Wrench. The photo on the right below depicts the Max Axess Locking Wrench, and the photo on the left depicts the Bionic Wrench:

63. During the six months that LoggerHead and Sears were planning and preparing the 2012 holiday DRTV campaign and Sears' commitment to purchase more than 200,000 Bionic Wrench units, Sears never disclosed to LoggerHead that it had agreed to partner with

Apex to launch a Craftsman-branded knock-off version of the Bionic Wrench. LoggerHead was not aware, nor could it have reasonably found out, that over the previous six months when Sears was fraudulently negotiating a 2012 supply agreement, in what appeared to be "good faith," that Sears was secretly having its own Craftsman Bionic Wrench manufactured in China.

64. Given the lead times required to have a Craftsman-branded knock-off of the Bionic Wrench ready to be announced in September 2012, it is now apparent that during the six months Sears was representing, committing, and promising to LoggerHead that it would purchase 300,000 units in 2012, Sears was defrauding LoggerHead because Sears knew that it was not going to honor the commitment it had made repeatedly. Sears knew all along that it was going to partner with Apex to launch a Craftsman-branded imitation of the Bionic Wrench for sale during the 2012 holiday season.

65. When Sears changed its forecast from more than 200,000 units to less than 3,000 units on June 20, 2012, Sears had already finalized its agreement with Apex and knew that it would sell the Max Axess wrench instead of the Bionic Wrench for its Christmas sales campaign. For this reason, in addition to Sears' materially false statements and omissions to LoggerHead from December 2011 to May 2012, it is now clear that Sears' incomprehensible and ever-changing "explanations" for why it cancelled its May 2012 forecast for more than 200,000 Bionic Wrench units were also false. Sears radically changed the forecast not for any of the reasons it stated – it changed the forecast because it had secretly partnered with Apex to have a Craftsman-branded knockoff made in China. Sears sold that product during the holiday 2012 season instead of purchasing LoggerHead's Bionic Wrench as it had repeatedly committed and promised to do.

66. For these reasons, it is now apparent that all of Sears' representations, commitments, and promises identified in Paragraph 39 of this First Amended Complaint were knowingly and intentionally false, and Sears made those representations and promises with the intent to deceive LoggerHead and were also intended to induce LoggerHead to act in reliance on Sears' false representations and promises.

67. As a direct result of Sears' fraudulent misrepresentations to LoggerHead from December 2011 to May 2012, as well as Sears' fraudulent omission that concealed the agreement it had with Apex to launch the Craftsman Max Axess Locking Wrench during the 2012 holiday season, LoggerHead lost substantial sales and profits, and its manufacturer, Penn United, was forced to lay-off more than 30 employees in Pennsylvania and shut down several of the manufacturing/assembly lines in its Pennsylvania manufacturing facilities.

68. LoggerHead's financial losses were clearly foreseeable to Sears, as it was intimately involved and aware of the process of events which must take place to bring an innovative tool like the Bionic Wrench to market. Sears also knew that by continuing its sham negotiations with LoggerHead, it would likely succeed in convincing LoggerHead not to sell the Bionic Wrench to Sears' retail competitors such as Home Depot and Lowes. As a result, when the Craftsman-branded knock-off launched, Sears knew and intended that it would do so without competition from the Bionic Wrench by Sears' key retail competitors.

SEARS' UNFAIR COMPETITION SCHEME

69. Remarkably, Sears' campaign of fraud and deception continued even after it began selling the Craftsman Max Axess Locking wrench. In competing against LoggerHead and its patented Bionic Wrench, Sears repeatedly broke the law and violated virtually every federal, state, and common law proscription against unfair competition. Sears' deliberate and extensive unfair competition scheme was knowing, intentional, and in bad faith.

70. In addition to willfully infringing LoggerHead's Bionic Wrench Patents, Sears also willfully infringed LoggerHead's registered Bionic Wrench Mark and has infringed LoggerHead's Product Design Mark. Sears has used and continues to use LoggerHead's Bionic Wrench" Mark and Product Design Mark in interstate commerce. When a user performs a "Google," "Bing," or "Yahoo" search using LoggerHead's trademarked phrase "Bionic Wrench," sponsored ads for Sears appear at the top of the search results in all three search systems. The ads tout in bold "Craftsman Bionic Wrench at Sears." Upon clicking on the sponsored search result, the user is directed to Sears' websites selling the Craftsman Max Axess Locking Wrench and not the LoggerHead Bionic Wrench.

71. Sears appears to have purchased LoggerHead's federally registered trademark "Bionic Wrench" as keywords in the Google AdWords, Yahoo Advertising Solutions, and Bing Ads programs, so that an internet search for LoggerHead's trademark "Bionic Wrench" produces Sears' advertisements containing "Bionic Wrench" and "Craftsman Bionic Wrench" with links to Sears' websites selling the Craftsman Max Axess Locking Wrench. There is no product called the Craftsman Bionic Wrench. That phrase was created by Sears to intentionally deceive consumers and misappropriate sales of LoggerHead's Bionic Wrench for Sears.

72. Sears' use of "Bionic Wrench" as keywords and/or meta-tags, trigger commercial advertising for Sears to be displayed at the top of the page as a banner. And because search engines do not specify that these results are not organic or natural results of the user's search terms, it creates the illusion that these are the most relevant search results for the terms entered by the user and allows Sears to reap the goodwill LoggerHead developed in the Bionic Wrench Mark.

73. Furthermore, Sears' use of LoggerHead's Bionic Wrench Mark and Product Design Mark in connection with these ad programs provides the user with direct access (*i.e.*, a link) to Sears' websites to purchase its goods.

74. Sears' willful and infringing use of LoggerHead's Bionic Wrench Mark causes consumer confusion, and dilutes the value of LoggerHead's federally registered trademark. Sears intends for users searching for LoggerHead's Bionic Wrench to be directed to Sears' websites to purchase the Craftsman knock-off version of the Bionic Wrench, thereby trading on LoggerHead's goodwill and reputation.

75. In addition to confusing consumers and infringing LoggerHead's Bionic Wrench and Product Design Marks, Sears falsely advertised for the Craftsman Max Axess Locking Wrench on its Sears.com website. Specifically, Sears' false ads declare that the Craftsman Max Axess Locking Wrench has a "Unique Design" because it "[a]dapts to a wide range of fastener sizes and grips fasteners on all sides to prevent rounding" – but the design Sears' ads describe is precisely the innovation found in LoggerHead's patented Bionic Wrench. Sears' false ads further contribute to consumer confusion and also erode the goodwill LoggerHead has built up in designing and selling its patented Bionic Wrench.

76. In furtherance of its unfair competition scheme, Sears also launched a television commercial for its Craftsman Max Axess Locking Wrench that is strikingly similar to LoggerHead's own Bionic Wrench commercials produced long before the Craftsman product even existed. Identical elements appear in both commercials. Both commercials feature demonstrations of the wrenches on a bicycle wheel to show ease of use, and both commercials feature graphics emphasizing the unique "gripping" of the wrenches. LoggerHead's commercial advertised the Bionic Wrench as a "one size fits all" and "fourteen wrenches all in one" tool.

And Sears' commercial for the "latest innovation from Craftsman" (a false statement) likewise claims their wrench "replaces fourteen wrenches into a single tool" with the graphic "1 Locking Wrench=14 Wrenches." In short, Sears not only copied LoggerHead's patented product – it copied the precise ways in which LoggerHead promoted its patented product.

77. Also in furtherance of Sears' unfair competition scheme, Sears issued a press release on November 14, 2012, in an attempt to address the bad press it received after LoggerHead filed its Original Complaint. On the main landing page of its www.searsholdings.com website, Sears posted a press release entitled, "Statement Regarding Craftsman Max Axess Locking Wrench." Attached as Exhibit D to this First Amended Complaint is Sears' press release. That press release states that "the Craftsman Max Axess™ locking wrench operates in a different way" from the Bionic Wrench. That statement is knowingly false. The Craftsman wrench does not operate in a different way, a fact LoggerHead will establish at trial. The press release also states that the Craftsman wrench uses "a mechanism designed in the 1950s that Mr. Brown expressly argued to the patent office was different from his own design." That statement is also false. The Craftsman wrench does not use the mechanism of the old patent cited by Sears. In fact, the Craftsman wrench is different from the cited prior art patent in a host of ways as a cursory review of the patent and the Craftsman wrench reveals. Finally, Sears' press release is false and misleading because it suggests to the reader that the Craftsman Max Axess Locking Wrench is made in America when it is actually made in China. Sears' press release never discloses that the Max Axess Locking Wrench is not made in America – to the contrary, it suggests to the reader precisely the opposite, stating that "Craftsman sources all Craftsman Industrial hand tools here in the USA along with many other tools that bear the Craftsman name." That statement is knowingly designed to mislead and

counter LoggerHead's primary comparative advantage when competing against Sears' knock-off product.

78. Sears did not even bother to change the sizes of its knock-off version of the Bionic Wrench, instead releasing the exact two sizes of wrench that LoggerHead originally released. This fact also sows customer confusion – the very object of Sears' scheme to unfairly compete against LoggerHead.

79. Sears has now begun selling the Max Axess Locking Wrench at price points as low as $9.99.

80. This low price point prevents LoggerHead's Bionic Wrench, with its Made in America business model, from being able to gain entry into Sears's competitors and other retailers. For example, on information and belief, LoggerHead's Bionic Wrench was initially accepted for a national advertising campaign with ACE, but was bumped from its slot after the Max Axess Locking Wrench came onto the market with its lower price point.

81. Sears and Apex are able to charge such a low price for the Max Axess Locking Wrench because they avoided many of the startup costs of designing and creating a new tool [redacted]

82. Sears and Apex are further able to charge such a low price point for the Max Axess Locking Wrench because they avoided many of the startup costs of designing and creating a new tool by copying the Bionic Wrench design and packaging.

83. Additionally, Sears is further able to charge such a low price point for the Max Axess Locking Wrench because, [redacted]

[redacted]

84. All of Sears' acts of unfair competition were performed knowingly, in bad faith, and with the intent to deceive consumers and harm LoggerHead's sales and goodwill.

SEARS AND APEX CONSPIRED TO WILLFULLY INFRINGE LOGGERHEAD'S BIONIC WRENCH PATENTS AND TRADEMARKS

85. Apex Tool Group is one of the largest suppliers of hand tools and power tools in the world. Apex has been supplying Sears with its Craftsman-branded tools for more than two decades.

86. Apex was formed in 2010 as a joint venture of Cooper Tools and Danaher's Tools and Components. In 1991, Danaher Corp. was cited as "the maker of Craftsman tools," and Sears also announced in 1991 that effective January 1, 1992, Sears would buy *all* its Craftsman Mechanics hand tools from Danaher going forward.

87. On December 21, 2012, six weeks after LoggerHead filed its Original Complaint, Apex filed an action in this District against LoggerHead for a declaratory judgment of non-infringement and invalidity of LoggerHead's Bionic Wrench Patents. Apex's complaint was dismissed. However, in its pleading, Apex admitted the following:

- In the first half of 2012, Apex began preparation for commercialization of the Max Axess Locking Wrench.
- In approximately September 2012, Apex began supplying Sears with the Max Axess Locking Wrench for sales in Sears' retail stores and websites.
- The Max Axess Locking Wrench products that Apex sells to Sears are branded and marketed under Sears' Craftsman line of products.

- In addition to its sales of Craftsman-branded Max Axess Locking Wrench products to Sears, Apex has developed plans to market and sell the Max Axess Locking Wrench under Apex's own brands, such as its Crescent® line of products.

88. LoggerHead's success at Sears with the Bionic Wrench did not sit well with either Apex – the manufacturer of Craftsman hand tools – or Sears' employees responsible for promoting the Craftsman brand. Apex and Craftsman were embarrassed that Sears' number one selling hand tool in 2011 was not even a Craftsman/Apex product.

89. Apex and Sears knowingly and willingly agreed and conspired to infringe LoggerHead's Bionic Wrench Patents. Apex and Sears were fully aware that the Bionic Wrench was patent-protected. In spite of this knowledge, Apex and Sears copied the Bionic Wrench, made incidental and cosmetic changes to it, and then manufactured a knock-off copy of the Bionic Wrench and called it the Craftsman Max Axess Locking Wrench.

90. Despite the incidental and cosmetic differences between Craftsman Max Axess Locking Wrench and the Bionic Wrench, Sears' and Apex's sales of the Max Axess Locking Wrench willfully infringe both of LoggerHead's Bionic Wrench patents.

91. Sears and Apex knew that the Max Axess Locking Wrench infringes LoggerHead's patents, yet proceeded to sell it anyway in reckless disregard for LoggerHead's patent rights.

92. Sears and Apex have publicly stated that the Max Axess Locking Wrench does not infringe the Bionic Wrench patents because it uses an old mechanism purportedly disclosed in a 1957 patent that has expired. Those public statements are false. The Max Axess Locking Wrench is much different than the tool disclosed in the 1957 patent relied upon by Sears and Apex. Sears and Apex did not copy a 1957 patent – they copied LoggerHead's Bionic Wrench

and then concocted a baseless story about a 1957 patent because they had to come up with some answer to the charge of infringement.

93. In reality, Apex and Sears knew that the Max Axess Locking Wrench infringes LoggerHead's Bionic Wrench Patents – but they proceeded to sell it anyway because they concluded that the potential costs of infringement liability do not outweigh the benefits of selling the Max Axess Locking Wrench in competition with the Bionic Wrench. One commentator has described this "efficient infringement" strategy:

> America's largest big tech corporations are now using a business technique called "efficient infringement," which means that they calculate the benefits of stealing someone else's patented technology against the possibility of getting caught, tried in court and being forced to pay damages and penalties. If the benefits exceed the costs, they steal. What makes patent theft so attractive is that infringement is not a criminal act and those found guilty face no jail time. Paying up is the worst that can happen to the infringer… The principal victims of these big corporations' "efficient infringement" approach are America's independent inventors, small businesses and universities – the source of most breakthrough innovations and the creators of two-thirds of all new jobs in America.
>
> http://efficientinfringement.factsreviews.com/

94. In addition to copying LoggerHead's Bionic Wrench, Sears and Apex also conspired to copy and did copy the Bionic Wrench packaging.

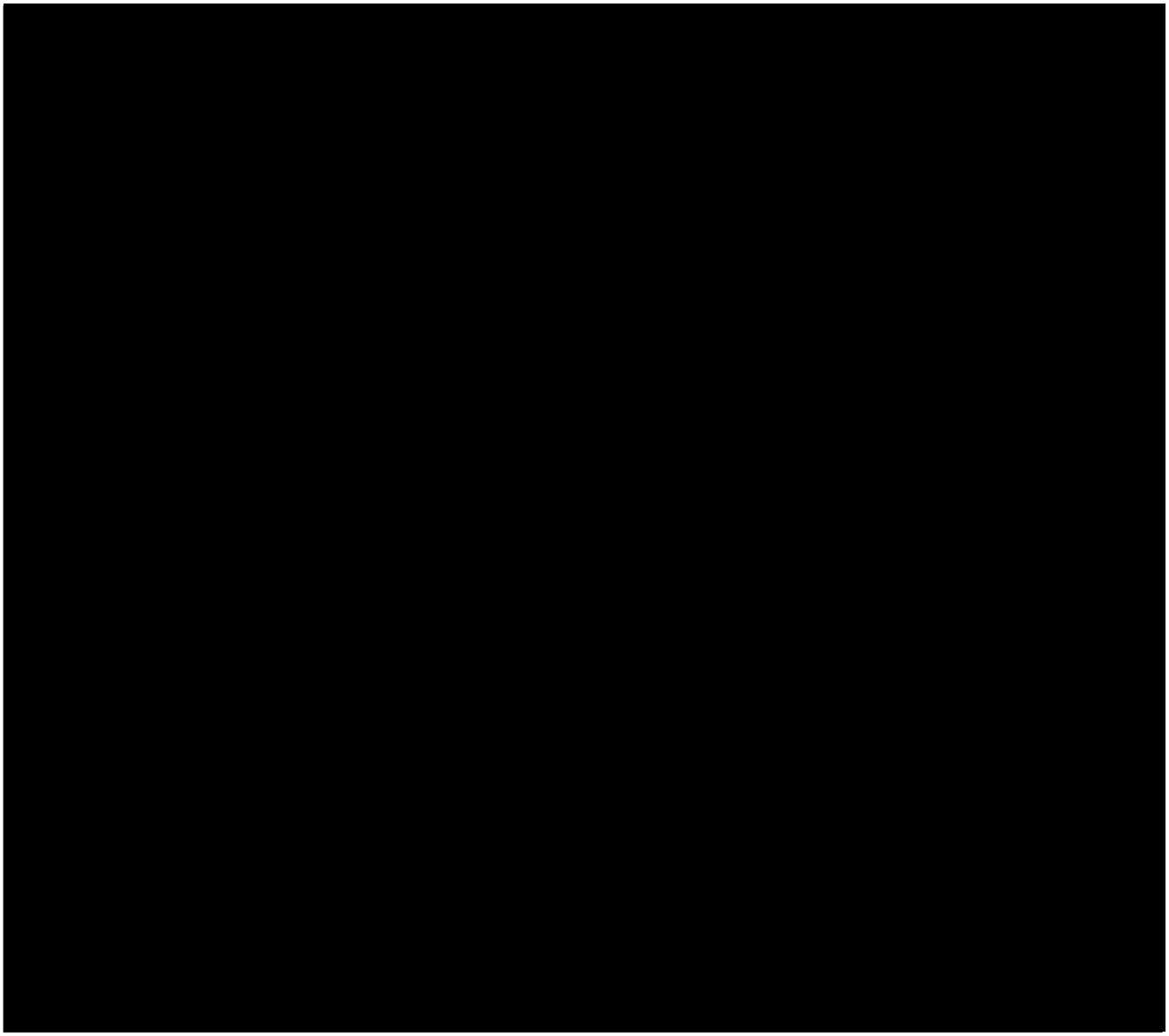
95. For example, [redacted]

[redacted]

96. [redacted]

[redacted]

[redacted]



97. The resulting Max Axess Locking Wrench packing looks like the image below:

98. As a direct result of Apex's copying, at Sears's direction, of the Bionic Wrench packaging, both the Bionic Wrench and Max Axess Locking Wrench have packaging that (1) is clear so shows a product with two handles and 6 jaws, (2) exposed handles, (3) a try me feature, (4) a lifetime warranty, and (5) an illustration that the product replaces multiple wrenches in one, among other similarities.

Count I
Willful Infringement of U.S. Patent No. 6,889,579
(Against Sears)

99. LoggerHead realleges and incorporates paragraphs 1-98 as though set forth fully herein.

100. Sears has directly infringed and is continuing to directly infringe, either literally or under the doctrine of equivalents, one or more claims of LoggerHead's '579 Patent by importing, making, using, selling and/or offering to sell in the United States wrenches disclosed and claimed in the '579 Patent, specifically including products known as a Craftsman Max Axess Locking Wrench. Sears is thus liable for direct infringement of the '579 Patent pursuant to 35 U.S.C. § 271(a).

101. Sears has infringed and continues to infringe LoggerHead's '579 Patent with knowledge of LoggerHead's patent rights. Sears also has knowledge that its accused products infringe the '579 Patent. Sears' acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of LoggerHead's patent rights.

102. LoggerHead has suffered and continues to suffer damages as a result of Sears' infringement of the '579 Patent. Pursuant to 35 U.S.C. § 284, LoggerHead is entitled to recover damages from Sears for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. LoggerHead is further entitled to enhanced damages for Sears' acts of willful patent infringement pursuant to 35 U.S.C. § 284.

103. Sears' infringement of the '579 Patent has damaged and will continue to damage LoggerHead, causing irreparable harm for which there is not adequate remedy at law, unless Sears is enjoined by this Court.

Count II
Willful Infringement of U.S. Patent No. 6,889,579
(Against Apex)

104. LoggerHead realleges and incorporates paragraphs 1-103 as though set forth fully herein.

105. Apex has directly infringed and is continuing to directly infringe, either literally or under the doctrine of equivalents, one or more claims of LoggerHead's '579 Patent by importing, making, using, selling and/or offering to sell in the United States wrenches disclosed and claimed in the '579 Patent, specifically including products known as a Craftsman Max Axess Locking Wrench. Apex is thus liable for direct infringement of the '579 Patent pursuant to 35 U.S.C. § 271(a).

106. Apex has infringed and continues to infringe LoggerHead's '579 Patent with knowledge of LoggerHead's patent rights. Apex also has knowledge that its accused products infringe the '579 Patent. Apex's acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of LoggerHead's patent rights.

107. LoggerHead has suffered and continues to suffer damages as a result of Apex's infringement of the '579 Patent. Pursuant to 35 U.S.C. § 284, LoggerHead is entitled to recover damages from Apex for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. LoggerHead is further entitled to enhanced damages for Apex's acts of willful patent infringement pursuant to 35 U.S.C. § 284.

108. Apex's infringement of the '579 Patent has damaged and will continue to damage LoggerHead, causing irreparable harm for which there is not adequate remedy at law, unless Apex is enjoined by this Court.

Count III
Willful Infringement of U.S. Patent No. 7,992,470
(Against Sears)

109. LoggerHead realleges and incorporates paragraphs 1-108 as though set forth fully herein.

110. Sears has directly infringed and is continuing to directly infringe, either literally or under the doctrine of equivalents, one or more claims of LoggerHead's '470 Patent by importing, making, using, selling and/or offering to sell in the United States wrenches disclosed and claimed in the '470 Patent, specifically including products known as a Craftsman Max Axess Locking Wrench. Sears is thus liable for direct infringement of the '470 Patent pursuant to 35 U.S.C. § 271(a).

111. Sears has infringed and continues to infringe LoggerHead's '470 Patent with knowledge of LoggerHead's patent rights. Sears also has knowledge that its accused products infringe the '470 Patent. Sears' acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of LoggerHead's patent rights.

112. LoggerHead has suffered and continues to suffer damages as a result of Sears' infringement of the '470 Patent. Pursuant to 35 U.S.C. § 284, LoggerHead is entitled to recover damages from Sears for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. LoggerHead is further entitled to enhanced damages for Sears' acts of willful patent infringement pursuant to 35 U.S.C. § 284.

113. Sears' infringement of the '470 Patent has damaged and will continue to damage LoggerHead, causing irreparable harm for which there is not adequate remedy at law, unless Sears is enjoined by this Court.

Count IV
Willful Infringement of U.S. Patent No. 7,992,470
(Against Apex)

114. LoggerHead realleges and incorporates paragraphs 1-113 as though set forth fully herein.

115. Apex has directly infringed and is continuing to directly infringe, either literally or under the doctrine of equivalents, one or more claims of LoggerHead's '470 Patent by importing, making, using, selling and/or offering to sell in the United States wrenches disclosed and claimed in the '470 Patent, specifically including products known as a Craftsman Max Axess Locking Wrench. Apex is thus liable for direct infringement of the '470 Patent pursuant to 35 U.S.C. § 271(a).

116. Apex has infringed and continues to infringe LoggerHead's '470 Patent with knowledge of LoggerHead's patent rights. Apex also has knowledge that its accused products infringe the '470 Patent. Apex's acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of LoggerHead's patent rights.

117. LoggerHead has suffered and continues to suffer damages as a result of Apex's infringement of the '470 Patent. Pursuant to 35 U.S.C. § 284, LoggerHead is entitled to recover damages from Apex for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. LoggerHead is further entitled to enhanced damages for Apex's acts of willful patent infringement pursuant to 35 U.S.C. § 284.

118. Apex's infringement of the '470 Patent has damaged and will continue to damage LoggerHead, causing irreparable harm for which there is not adequate remedy at law, unless Apex is enjoined by this Court.

Count V
Trademark Infringement (Lanham Act §32)
(Against Sears)

119. LoggerHead realleges and incorporates paragraphs 1-118 as though set forth fully herein.

120. LoggerHead owns the valid and protectable federally registered trademark "Bionic Wrench®."

121. LoggerHead's certificate of registration is prima facie evidence of the validity, ownership and exclusive right to use the Bionic Wrench trademark.

122. Bionic Wrench has been continuously used in commerce for the sale and promotion of LoggerHead's wrench since 2005.

123. Sears has infringed LoggerHead's federally registered trademark "Bionic Wrench" by purchasing the keywords and meta-tags "Bionic Wrench" and "Craftsman Bionic Wrench" on various Internet advertising solution programs. For example, when a user searches Google, Bing, or Yahoo with the terms "Bionic Wrench," ads for Sears appear at the top, touting in bold "Craftsman Bionic Wrench at Sears."

124. Sears' unauthorized interstate use of LoggerHead's Bionic Wrench Mark to sell, offer for sale and/or advertise their goods constitutes a reproduction, copying, and colorable imitation of LoggerHead's Bionic Wrench Mark and is likely to cause confusion, mistake, and deception as to the identity and origin of LoggerHead's goods and services, causing injury, damage and loss to LoggerHead.

125. A likelihood of confusion is created by Sears' use of Bionic Wrench in its internet advertising because the public will falsely believe that Craftsman's Bionic Wrench is associated, affiliated, authorized or sponsored by LoggerHead. This is especially true in light of the fact that

Sears sold LoggerHead's Bionic Wrench for years prior to introducing the Craftsman Max Axess Locking Wrench in 2012.

126. Sears' unlawful use of LoggerHead's Bionic Wrench trademark is willful and deliberate and constitutes a knowing violation of LoggerHead's rights.

Count VI
False Designation of Origin (Lanham Act § 43(a))
(Against Sears)

127. LoggerHead realleges and incorporates paragraphs 1-126 as though set forth fully herein.

128. LoggerHead has spent substantial time and money to engineer and market its products under the Bionic Wrench Mark and developing its reputation and goodwill. Consumers have come to identify the distinctive and protected Bionic Wrench Mark with a high quality, American-made, easy to use hand tool.

129. Sears' use of the identical name "Bionic Wrench" in its ads and its purchase of keywords and/or meta-tags to trigger commercial advertising in search engine programs such as Google AdWords, Bing Ads, and Yahoo Advertising Solutions, deceive and cause confusion among consumers, as to the source or origin of the goods offered by Sears and constitutes the use of false descriptions or representations in interstate commerce.

130. Sears' use of "Bionic Wrench" and "Craftsman Bionic Wrench" is likely to also cause initial interest confusion because Sears' use of LoggerHead's Bionic Wrench Mark on its ads lures consumers to its site and causes the consumer to initially believe that the products or advertisements are associated with LoggerHead. This constitutes unlawful trading on LoggerHead's goodwill.

131. As a direct and proximate result of Sears' unlawful activities, LoggerHead has incurred damages in an amount to be proven at trial, including, among other things, loss of

profits, diversion of sales, and diminution in the value of its goodwill associated with the Bionic Wrench Mark.

132. Sears' exploitation of LoggerHead's goodwill and reputation associated with Bionic Wrench is willful and intentional.

133. Sears' actions are in conscious disregard of LoggerHead's rights in the Bionic Wrench trademark and with the intent to trade off of LoggerHead's goodwill in its trademark.

Count VII
False Advertising (Lanham Act § 43(a))
(Against Sears)

134. LoggerHead realleges and incorporates paragraphs 1-133 as though set forth fully herein, with particular reference to paragraphs 70-80.

135. As described in the incorporated paragraphs, Sears made literally false and misleading statements of fact in commercial advertising and promotion about the Craftsman Maxx Axess Locking Wrench.

136. As alleged herein, Sears' false and misleading statements actually deceive or are likely to deceive a substantial number of consumers or companies seeking to purchase the Craftsman Max Axess Locking Wrench.

137. As alleged herein, Sears caused its false and misleading statements to enter interstate commerce.

138. As alleged herein, Sears' false and misleading statements were made willfully and in bad faith.

139. As alleged herein, LoggerHead has suffered actual or probable injury as a result of Sears' false and misleading statements.

Count VIII
Illinois Consumer Fraud and Deceptive Business Practices Act
(Against Sears)

140. LoggerHead realleges and incorporates paragraphs 1-139 as though set forth fully herein.

141. Sears' unauthorized, intentional, and willful use of LoggerHead's Bionic Wrench Mark to promote, advertise, market and/or sell their goods and services in Illinois constitutes unfair competition within the meaning of the Illinois Consumer Fraud and Deceptive Business Practices Act.

142. Sears' use of "Bionic Wrench" in connection with the sales and promotion of its goods through its advertising online with Google, Yahoo, and Bing, and through its purchase and use of LoggerHead's Bionic Wrench Mark in search engine advertising programs constitutes unfair competition and is likely to cause confusion among consumers as to the affiliation, connection, association and/or origin, sponsorship, or approval of Sears' goods by or with LoggerHead in violation of §510 et seq.

143. Sears' actions contributed to consumer confusion in other ways as well, including copying LoggerHead's commercials, issuing a false press release that misleadingly suggests that the Craftsman Max Axess Locking Wrench is made in America, and falsely stating that the Craftsman Max Axess has a "unique design," among other unlawful acts as alleged herein.

144. Notwithstanding Sears' actual knowledge of LoggerHead's ownership and prior use of the Bionic Wrench Mark, Sears has willfully and in bad faith continued to use LoggerHead's Mark in commerce without authorization to promote sale of its goods.

145. LoggerHead is entitled to injunctive relief to prevent Sears from using the name and Mark "Bionic Wrench" or similar Mark in connection with the advertising and/or sale of its

products or services and/or compensatory and statutory damages, punitive damages, plus costs and attorneys' fees.

Count IX
Uniform Deceptive Trade Practices Act (815 ILCS §510 et seq.)
(Against Sears)

146. LoggerHead realleges and incorporates paragraphs 1-145 as though set forth fully herein.

147. Sears' unauthorized, intentional, and willful use of LoggerHead's Mark Bionic Wrench to promote, advertise, market and/or sell their goods and services in Illinois constitutes unfair competition within the meaning of the Illinois Deceptive Trade Practices Act.

148. Sears' use of "Bionic Wrench" in connection with the sales and promotion of its goods through its advertising online with Google, Yahoo, and Bing, and through its purchase and use of LoggerHead's Mark in search engine advertising programs constitutes unfair competition and is likely to cause confusion among consumers as to the affiliation, connection, association and/or origin, sponsorship, or approval of Sears' goods by or with LoggerHead in violation of §510 et seq.

149. Sears' actions contributed to consumer confusion in other ways as well, including copying LoggerHead's commercials, issuing a false press release that misleadingly suggests that the Craftsman Max Axess Locking Wrench is made in America, and falsely stating that the Craftsman Max Axess has a "unique design," among other unlawful acts as alleged herein.

150. Notwithstanding Sears' actual knowledge of LoggerHead's ownership and prior use of the Bionic Wrench Mark, Sears has willfully continued to use LoggerHead's Mark in commerce without authorization to promote sale of its goods in violation of §510 et seq.

151. LoggerHead is entitled to injunctive relief to prevent Sears from using the name and Mark "Bionic Wrench" or similar mark in connection with the advertising and/or sale of its products or services, plus costs and attorneys' fees.

Count X
Illinois Common Law Trademark Violation
(Against Sears)

152. LoggerHead realleges and incorporates paragraphs 1-151 as though set forth fully herein.

153. LoggerHead has valid and protectable trademark rights in their distinctive and valuable Mark, Bionic Wrench.

154. LoggerHead has used and continues to use its Mark in the course of commerce and in conjunction with their legitimate business operations since 2005.

155. Sears' illegal actions alleged herein create likelihood of confusion or likelihood of misunderstanding as to sponsorship, affiliation, connection, association, or certification of the infringing Craftsman Max Axess Locking Wrench.

156. Sears has intentionally engaged in conduct that creates a likelihood of confusion in bad faith and in reckless indifference towards the rights of LoggerHead.

157. LoggerHead has been substantially harmed by Sears' infringement.

158. Because Sears' conduct was intentional, the imposition of punitive damages is warranted.

Count XI
Common Law Fraud
(Against Sears)

159. LoggerHead realleges and incorporates paragraphs 1-158 as though set forth fully herein.

160. As alleged herein, Sears made a series of false statements of material facts and omissions that it had a duty to disclose during 2012 as alleged herein (particularly including without limitation Paragraph 37).

161. As alleged herein, Sears knew that the statements as alleged herein were false.

162. As alleged herein, Sears intended to induce LoggerHead to act on the basis of its false statements and omissions and intended for LoggerHead to rely on Sears' false statements and omissions.

163. As alleged herein, LoggerHead did reasonably rely upon the apparent truth of Sears' false statements and omissions to its detriment and has suffered damages resulting from its reasonable reliance on Sears' false statements and omissions.

Count XII
Fraud in the Inducement
(Against Sears)

164. LoggerHead realleges and incorporates paragraphs 1-163 as though set forth fully herein.

165. Sears made a series of false statements of material facts during 2012 as alleged herein (particularly including without limitation Paragraph 37), and further made promises to LoggerHead that it had no intention of performing. Sears knew that its statements were false and knew that it had no intention of performing the promises it made to LoggerHead regarding sales for the 2012 holiday season. Sears intended that its false statements, promises, and omissions would induce LoggerHead to act in reliance upon Sears' false statements and promises, and LoggerHead did reasonably rely upon the apparent truth of Sears' statements and promises to its detriment.

166. For the purposes of inducing LoggerHead to refrain from selling Bionic Wrenches to Sears' retail competitors, including without limitation Home Depot and Lowes – and to induce

LoggerHead to expend substantial resources preparing to manufacture Bionic Wrenches for Sears for the 2012 holiday season that Sears had no intention of purchasing – Sears engaged in a fraudulent scheme in the form of serial, knowing, and willful misrepresentations and omissions of both present facts known to Sears and Sears' promises of future actions that it had no intention of performing, as well as concealing material facts from LoggerHead that Sears had a duty to disclose, including Sears' plans to sell the Max Axess Locking Wrench in competition with and in place of LoggerHead's Bionic Wrench during the 2012 holiday season.

167. LoggerHead was unaware of Sears' misrepresentations of present and future facts and was unaware of Sears' concealment of material facts, and was thereby induced by Sears to refrain from selling to Sears' retail competitors, and was also induced to expend substantial resources preparing to manufacture Bionic Wrenches for Sears for the 2012 holiday season, all of which caused LoggerHead to suffer substantial monetary damages when Sears did not purchase the Bionic Wrenches that it had fraudulently led LoggerHead to believe it would purchase.

168. For the purposes of inducing LoggerHead to manufacture Bionic Wrenches that it believed Sears would purchase, Sears intentionally concealed their discussions with Apex and their agreement with Apex to begin manufacturing of the Max Axess Locking Wrenches in time for sales in Sears' stores in 2012.

169. LoggerHead reasonably relied on Sears' material misrepresentations and omissions of material facts to their detriment, causing LoggerHead to suffer substantial monetary damages.

Count XIII
Promissory Fraud
(Against Sears)

170. LoggerHead realleges and incorporates paragraphs 1-169 as though set forth fully herein.

171. Sears made false promises of future actions to LoggerHead including, without limitation, promises of purchasing as much as 300,000 units of LoggerHead's Bionic Wrench in 2012 and producing a Bionic Wrench DRTV program for the 2012 holiday season, with the intent to deceive LoggerHead into believing Sear would purchase 300,000 Bionic Wrench units and produce a Bionic Wrench DRTV program for the 2012 holiday season.

172. Sears made such false promises to induce LoggerHead to manufacture Bionic Wrenches for Sears.

173. Sears also made these false promises with the intent to prevent LoggerHead from selling to other retailers and to buy time for Sears to manufacture a competing product (the Craftsman Max Axess Locking Wrench) that would not face competition from LoggerHead's Bionic Wrench.

174. LoggerHead reasonably relied on Sears' false promises.

175. LoggerHead has been damaged by its reliance on Sears' false promises.

176. Sears' promises of future conduct were part of an overall scheme to defraud LoggerHead.

177. But for Sears' false promises, LoggerHead would have diverted its resources into servicing its other customers and other potential customers. Instead, LoggerHead was led to believe Sears would become one of its largest customers when Sears was merely using LoggerHead to gain a market advantage.

Count XIV
Illinois Common Law Unfair Competition
(Against Sears)

178. LoggerHead realleges and incorporates paragraphs 1-177 as though set forth fully herein.

179. As alleged herein, Sears' willfully and maliciously engaged in a comprehensive scheme of unfair competition against LoggerHead. Sears misappropriated LoggerHead's Bionic Wrench and associated intellectual property in violation of federal, state, and common law.

180. As alleged herein, Sears' scheme of false advertising and copying of LoggerHead's product has caused customer confusion to LoggerHead's detriment.

181. As alleged herein, Sears engaged in the unauthorized, improper, and unlawful use of LoggerHead's property for a purpose other than that for which it was intended.

182. As alleged herein, LoggerHead has suffered damages as a direct and proximate result of Sears' unfair competition, and is therefore entitled to the best measure of the value of being deprived of the exclusive use of its property.

183. As alleged herein, LoggerHead created the Bionic Wrench through extensive time, labor, skill, and money.

184. As alleged herein, Sears' use of a knock-off version of the Bionic Wrench to directly compete against LoggerHead's Bionic Wrench has given Sears a special competitive advantage because it was burdened with little or none of the expense incurred by LoggerHead in the creation of the Bionic Wrench.

185. As alleged herein, Sears' unfair competition has caused commercial damage to LoggerHead.

Count XV
Product Design Trademark Infringement
(Lanham Act §43(a))
(Against Sears and Apex)

186. LoggerHead realleges and incorporates paragraphs 1-185 as though set forth fully herein.

187. LoggerHead owns the valid and protectable federally registered product design trademark consisting of a three-dimensional depiction of a wrench head. The wrench head consists of a cog-like design in the nature of a circle with six rectangular slots." (Supplemental Register, Registration No. 4,527,177).

188. LoggerHead's product design trade dress is a non-functional design.

189. LoggerHead's product design trade dress has acquired distinctiveness.

190. LoggerHead's Bionic Wrench has continuously used the product design for which the Mark was granted in commerce for the sale and promotion of LoggerHead's wrench since 2005.

191. Sears has infringed LoggerHead's federally registered design trademark by selling, offering for sale, and/or advertising goods that constitute a reproduction, copying, and colorable imitation of LoggerHead's Mark.

192. Apex has infringed LoggerHead's federally registered design trademark by selling, offering for sale, and/or advertising goods that constitute a reproduction, copying, and colorable imitation of LoggerHead's Mark.

193. Sears's unauthorized interstate use of LoggerHead's product design Mark to sell, offer for sale and/or advertise their goods constitutes a reproduction, copying, and colorable imitation of LoggerHead's Mark and is likely to cause confusion, mistake, and deception as to

the identity and origin of LoggerHead's goods and services, causing injury, damage and loss to LoggerHead.

194. Apex's unauthorized interstate use of LoggerHead's product design Mark to sell, offer for sale and/or advertise their goods constitutes a reproduction, copying, and colorable imitation of LoggerHead's Mark and is likely to cause confusion, mistake, and deception as to the identity and origin of LoggerHead's goods and services, causing injury, damage and loss to LoggerHead.

195. A likelihood of confusion is created by Sears's use of Bionic Wrench in its Max Axess Locking Wrench because the public will falsely believe that Craftsman's Max Axess Locking Wrench is associated, affiliated, authorized, or sponsored by LoggerHead. This is especially true in light of the fact that Sears sold LoggerHead's Bionic Wrench for years prior to introducing the Craftsman Max Axess Locking Wrench in 2012.A likelihood of confusion is created by Apex's use of Bionic Wrench in its Max Axess Locking Wrench because the public will falsely believe that Craftsman's Max Axess Locking Wrench is associated, affiliated, authorized or sponsored by LoggerHead. This is especially true in light of the fact that LoggerHead's Bionic Wrench was sold for years prior to Apex's copying of LoggerHead's Bionic Wrench and subsequent introduction of the Craftsman Max Axess Locking Wrench in 2012.

196. There is evidence of actual confusion on the part of LoggerHead's customers, who have contacted LoggerHead believing that the Max Axess Locking Wrench is associated, affiliated, authorized, or sponsored by LoggerHead.

197. The Max Axess Locking Wrench utilizes the same market channels as LoggerHead's Bionic Wrench.

198. LoggerHead has been damaged by Defendants' infringement and seeks damages as provided by statute.

Count XVI
Packaging Trade Dress Infringement (Lanham Act §43(a))
(Against Sears and Apex)

199. LoggerHead realleges and incorporates paragraphs 1-198 as though set forth fully herein.

200. LoggerHead owns the valid and protectable packaging trade dress that (1) has a cardboard backing with a clear coating so shows the Bionic Wrench product with two handles and 6 jaws, (2) exposed handles, (3) a try me feature, (4) a lifetime warranty, and (5) an illustration that the product replaces multiple wrenches in one,

201. LoggerHead's packaging trade dress, because it shows the Bionic Wrench product through its clear packaging and features both LoggerHead Marks on the packaging, is inherently distinctive.

202. LoggerHead's Bionic Wrench has continuously used the Bionic Wrench packaging in commerce for the sale and promotion of LoggerHead's wrench since 2005.

203. Sears has infringed LoggerHead's packaging trade dress by selling, offering for sale, and/or advertising goods that merchandized in packaging that constitutes a reproduction, copying, and colorable imitation of LoggerHead's packaging.

204. Apex has infringed LoggerHead's packaging trade dress by selling, offering for sale, and/or advertising goods that merchandized in packaging that constitutes a reproduction, copying, and colorable imitation of LoggerHead's packaging.

205. Sears's unauthorized interstate use of LoggerHead's packaging trade dress to sell, offer for sale and/or advertise their goods constitutes a reproduction, copying, and colorable imitation of LoggerHead's packaging trade dress and is likely to cause confusion, mistake, and

deception as to the identity and origin of LoggerHead's goods and services, causing injury, damage and loss to LoggerHead.

206. Apex's unauthorized interstate use of LoggerHead's packaging trade dress to sell, offer for sale and/or advertise their goods constitutes a reproduction, copying, and colorable imitation of LoggerHead's packaging trade dress and is likely to cause confusion, mistake, and deception as to the identity and origin of LoggerHead's goods and services, causing injury, damage and loss to LoggerHead.

207. A likelihood of confusion is created by Sears's use of the Bionic Wrench packaging trade dress in its Max Axess Locking Wrench packaging, because the public will falsely believe that Craftsman's Max Axess Locking Wrench is associated, affiliated, authorized, or sponsored by LoggerHead. This is especially true in light of the fact that Sears sold LoggerHead's Bionic Wrench for years prior to introducing the Craftsman Max Axess Locking Wrench in 2012.

208. A likelihood of confusion is created by Apex's use of the Bionic Wrench packaging trade dress in its Max Axess Locking Wrench packaging because the public will falsely believe that Craftsman's Max Axess Locking Wrench is associated, affiliated, authorized or sponsored by LoggerHead. This is especially true in light of the fact that LoggerHead's Bionic Wrench was sold for years prior to Apex's copying of LoggerHead's Bionic Wrench and subsequent introduction of the Craftsman Max Axess Locking Wrench in 2012.

209. There is evidence of actual confusion on the part of LoggerHead's customers, who have contacted LoggerHead believing that the Max Axess Locking Wrench is associated, affiliated, authorized, or sponsored by LoggerHead.

210. The Max Axess Locking Wrench utilizes the same market channels as LoggerHead's Bionic Wrench.

211. LoggerHead has been damaged by Defendants' infringement and seeks damages as provided by statute.

Count XVII
Trademark Dilution (Lanham Act §43(c))
(Against Sears)

212. LoggerHead realleges and incorporates paragraphs 1-211 as though set forth fully herein.

213. LoggerHead has used and continues to use the "Bionic Wrench" Mark in interstate commerce.

214. The "Bionic Wrench" Mark has become and continues to be "famous" within the meaning of 15 U.S.C. § 1125(c).

215. LoggerHead has spent substantial time and money to engineer and market its products under the Bionic Wrench Mark and developing its reputation and goodwill. Consumers have come to identify the distinctive and protected Bionic Wrench Mark with a high quality, American-made, easy to use hand tool.

216. Sears' use of the identical name "Bionic Wrench" in its ads and its purchase of keywords and/or meta-tags to trigger commercial advertising in search engine programs such as Google AdWords, Bing Ads, and Yahoo Advertising Solutions, gives rise to the false belief that Craftsman's Max Axess Locking Wrench is associated, affiliated, authorized, or sponsored by LoggerHead.

217. The association between the made-in-China Max Axess Locking Wrench is likely to impair the distinctiveness and harm the reputation of the "Bionic Wrench" Mark, which is associated with a high-quality, American-made hand tool.

218. Upon information and belief, Sears' use of the identical name "Bionic Wrench" in its ads and its purchase of keywords and/or meta-tags to trigger commercial advertising in search engine programs such as Google AdWords, Bing Ads, and Yahoo Advertising Solutions, is being done with the knowing and willful intent to trade on LoggerHead's reputation and the goodwill in the Bionic Wrench Mark, and to dilute and blur the distinctiveness and renown of the Bionic Wrench Mark.

219. Upon information and belief, Sears was and continues to be aware that its use of the Bionic Wrench Mark in relation to the Craftsman Max Axess was and continues to be done without the authorization of LoggerHead.

220. As a direct and proximate result of Sears' unlawful activities, LoggerHead has incurred damages in an amount to be proven at trial, including, among other things, loss of profits, diversion of sales, and diminution in the value of its goodwill associated with the Bionic Wrench Mark.

221. LoggerHead has no adequate remedy at law. If Sears's activities are not enjoined, LoggerHead will suffer immediate and continuing irreparable harm and injury to its business, reputation, and the goodwill and distinctiveness of the Bionic Wrench Mark.

PRAYER FOR RELIEF

WHEREFORE, LoggerHead respectfully requests this Court to enter judgment in its favor and against Defendants Sears and Apex, granting the following relief:

222. Judgment in LoggerHead's favor that Sears and Apex infringed and continue to infringe one or more claims of the '579 Patent and the '470 Patent.

223. An award to LoggerHead of damages adequate to compensate it for Sears' and Apex's acts of patent infringement, but in no event less than a reasonable royalty, together with interest and costs as fixed by the Court pursuant to 35 U.S.C. § 284.

224. An award to LoggerHead of enhanced damages, up to and including treble damages, pursuant to 35 U.S.C. § 284, for Sears' and Apex's acts of willful infringement.

225. A grant of permanent injunction pursuant to 35 U.S.C. § 283 against Sears and Apex, enjoining Defendants from further acts of patent infringement.

226. An award to LoggerHead of its costs of suit and reasonable attorneys' fees pursuant to 35 U.S.C. § 285 due to the exceptional nature of this case.

227. Order Defendants to account for, and turn over to LoggerHead, all monies received as a result of its infringement and other unlawful acts.

228. Permanently enjoin Sears and all others acting in concert or participation with Sears from using the name and Mark "Bionic Wrench" or similar mark in connection with the advertising and/or sale of its products or services.

229. Permanently enjoin Sears and all others acting in concert or participation with Sears from using any reproduction, copy, or colorable imitation of the name and Mark "Bionic Wrench" or any mark confusingly similar thereto in connection with the advertising and/or sale of its products or services.

230. Order Sears to remove from sale or display any and all labels, signs, prints, signage, Internet web pages, advertisements, including keywords or meta-tags utilized in Internet advertising programs and any other materials in their possession or control bearing any mark, name, or designation identical to or confusingly similar to LoggerHead's Bionic Wrench Mark and/or branding.

231. Order Sears to forfeit and cancel all links and/or web content which utilize "Bionic Wrench."

232. Permanently enjoin Sears and Apex from using LoggerHead's product design Mark no. 4,527,177 in connection with the advertising and/or sale of their products or services.

233. Permanently enjoin Sears and Apex from using any reproduction, copy, or colorable imitation of LoggerHead's packaging trade dress in connection with the advertising and/or sale of their products or services.

234. Permanently enjoin Sears and Apex from using any reproduction, copy, or colorable imitation of LoggerHead's product design Mark no. 4,527,177 in connection with the advertising and/or sale of their products or services.

235. Order Sears to remove from sale or display any and all labels, signs, prints, signage, Internet web pages, advertisements, including keywords or meta-tags utilized in Internet advertising programs and any other materials in their possession or control bearing any mark, name, or designation identical to or confusingly similar to LoggerHead's product design Mark no. 4,527,177.

236. Order Sears to forfeit and cancel all links and/or web content which utilize LoggerHead's product design Mark no. 4,527,177.

237. Order Sears to pay LoggerHead's damages totaling three times the amount of compensatory damages as provided for by 15 U.S.C. §1117 and other applicable law.

238. Award LoggerHead Sears' gross profits for common law fraud.

239. Award LoggerHead reasonable attorneys' fees and costs for this action pursuant to 15 U.S.C. §1117(a).

240. Award LoggerHead pre-judgment and post-judgment interest on its damages.

241. Award LoggerHead punitive damages for Illinois Consumer Fraud and Deceptive Business Practices Act, Tortious Interference With Business Relations, False Designation of Origin (Lanham Act § 43(a)), and Illinois Common Law Trademark Violation.

242. Any further relief that this Court deems just and proper.

Dated: July 25, 2014

Respectfully submitted,

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LoggerHead Tools, LLC

CERTIFICATE OF ELECTRONIC SERVICE

I hereby certify that on July 25, 2014, I electronically filed the foregoing document with the Clerk of the Court using the CM/ECF system which will send notification of such filing to registered parties.

/s/ *Sarah E. Simmons*
Sarah E. Simmons

EXHIBIT A

US006889579B1

(12) **United States Patent**
Brown

(10) **Patent No.: US 6,889,579 B1**
(45) **Date of Patent: May 10, 2005**

(54) **ADJUSTABLE GRIPPING TOOL**

(75) Inventor: **Daniel P. Brown**, Palos Park, IL (US)

(73) Assignee: **Loggerhead Tools LLC**, Palos Park, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/763,489**

(22) Filed: **Jan. 23, 2004**

(51) **Int. Cl.**[7] **B25B 13/28**
(52) **U.S. Cl.** **81/90.2**; 81/58; 81/90.1
(58) **Field of Search** 81/90.2, 58, 90.1, 81/90.3, 90.5, 91.1, 126, 128

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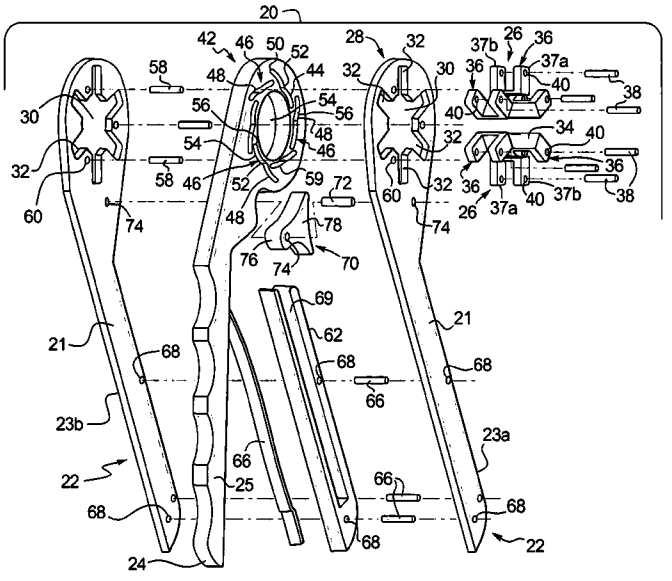
Primary Examiner—Joseph J. Hail, III
Assistant Examiner—Alvin J. Grant
(74) *Attorney, Agent, or Firm*—Vedder Price Kaufman & Kammholz

(57) **ABSTRACT**

A self-energizing and de-energizing adjustable gripping tool for engaging a workpiece to impart movement thereto includes a first element and second element connected for relative angular movement. The second element includes an actuation portion having a plurality of slots. Each of the slots includes a first section and a second section wherein the first and second sections each define divergent paths. The first element includes a gripping portion having a plurality of gripping elements and a plurality of aligning elements. Each gripping element has a pin connected thereto. One of the aligning elements is disposed between a pair of adjacent gripping elements. One of the force transfer elements engages one first section and one of the aligning elements engages one second section such that movement of the second element relative to the first element results in the first sections contacting each of the force transfer elements to actuate the gripping elements and the second sections contacting the aligning elements to maintain orientation of the first element with respect to the second element.

26 Claims, 8 Drawing Sheets



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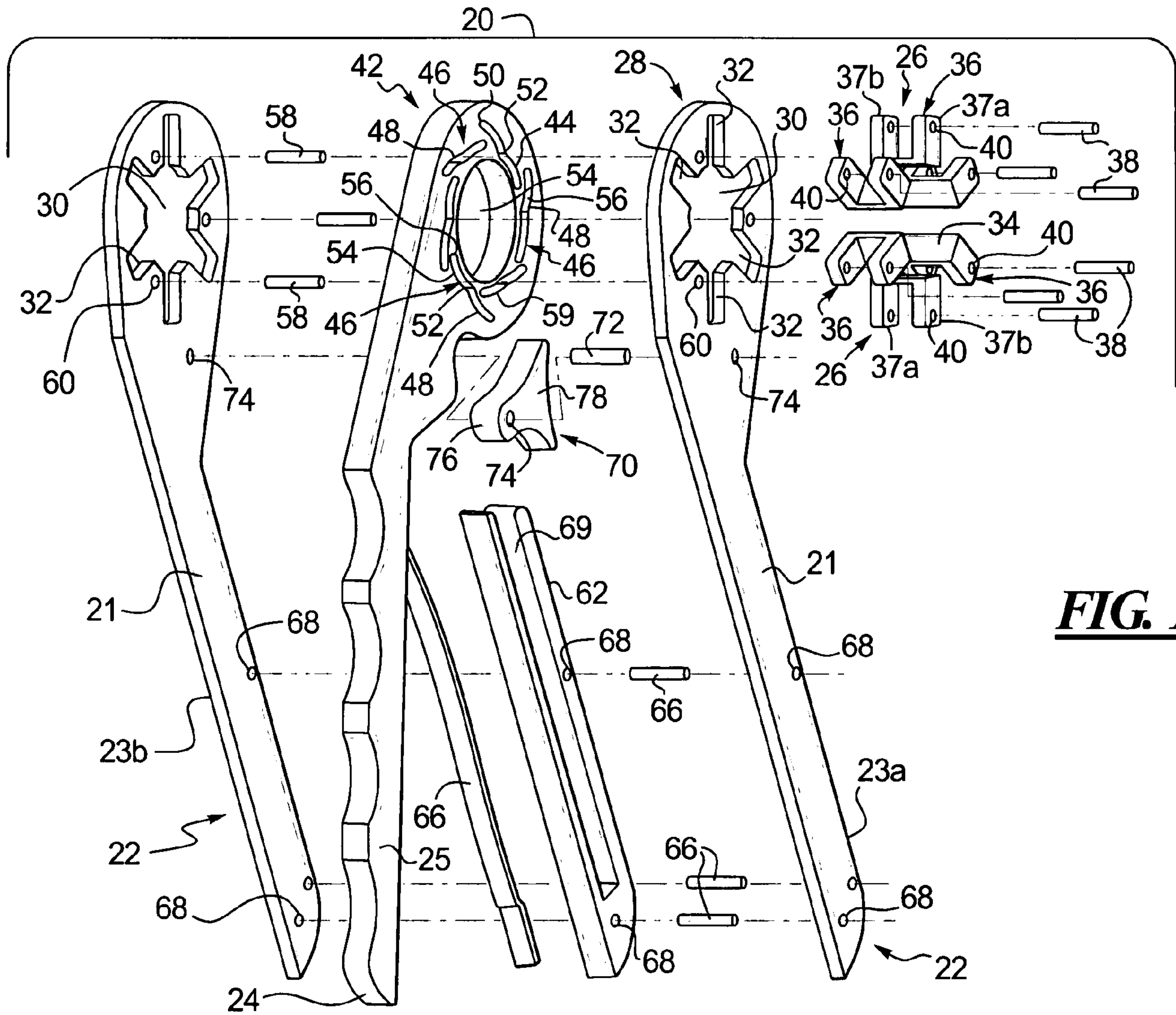
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FIG. 1

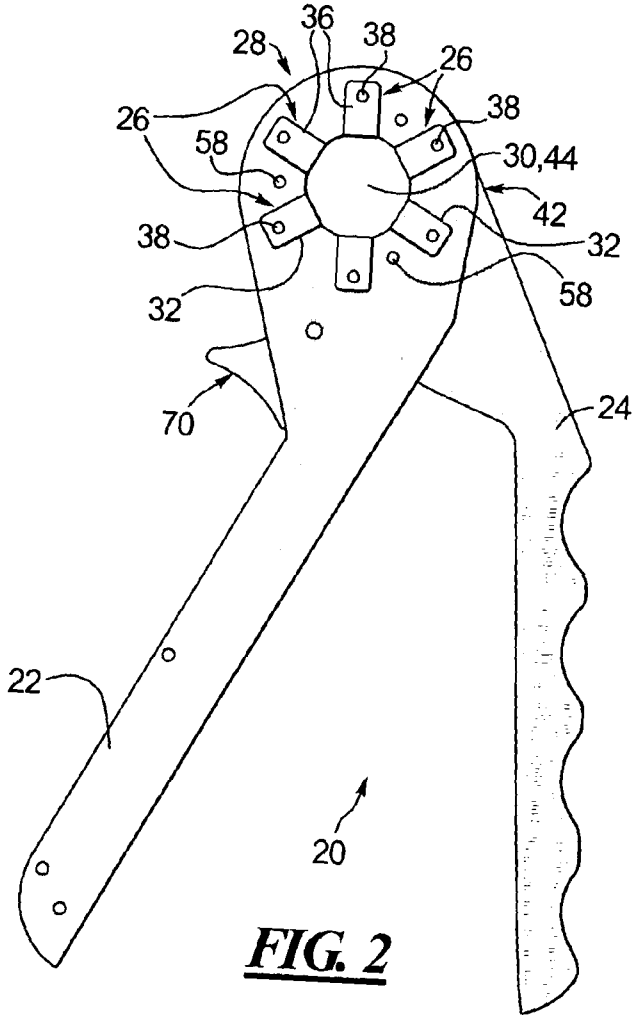
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FIG. 2

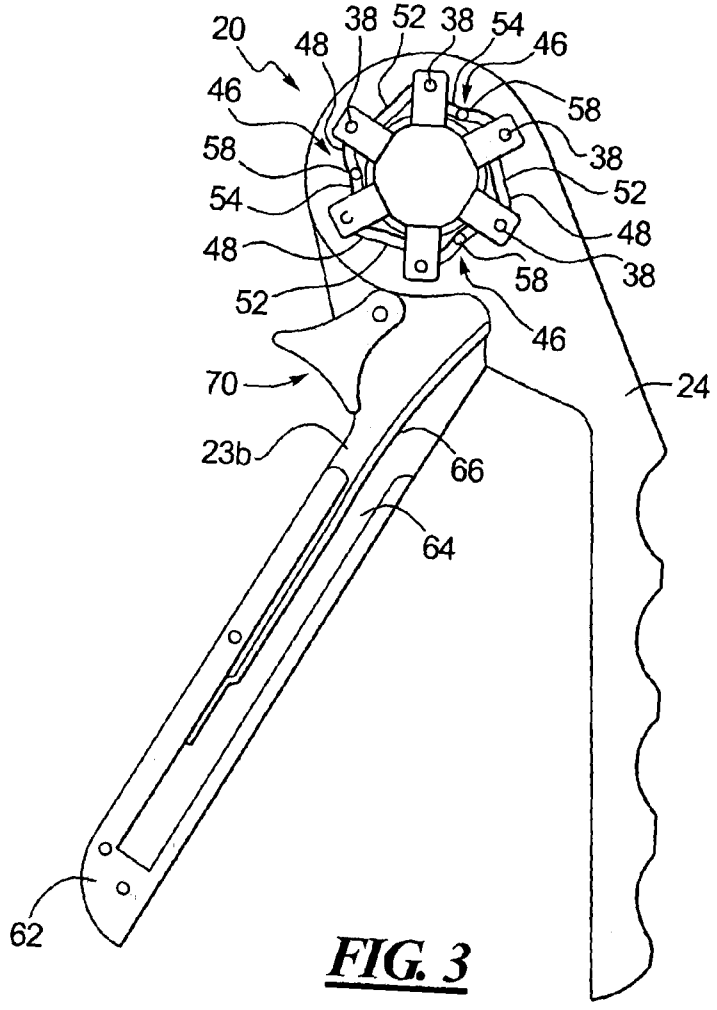
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FIG. 3

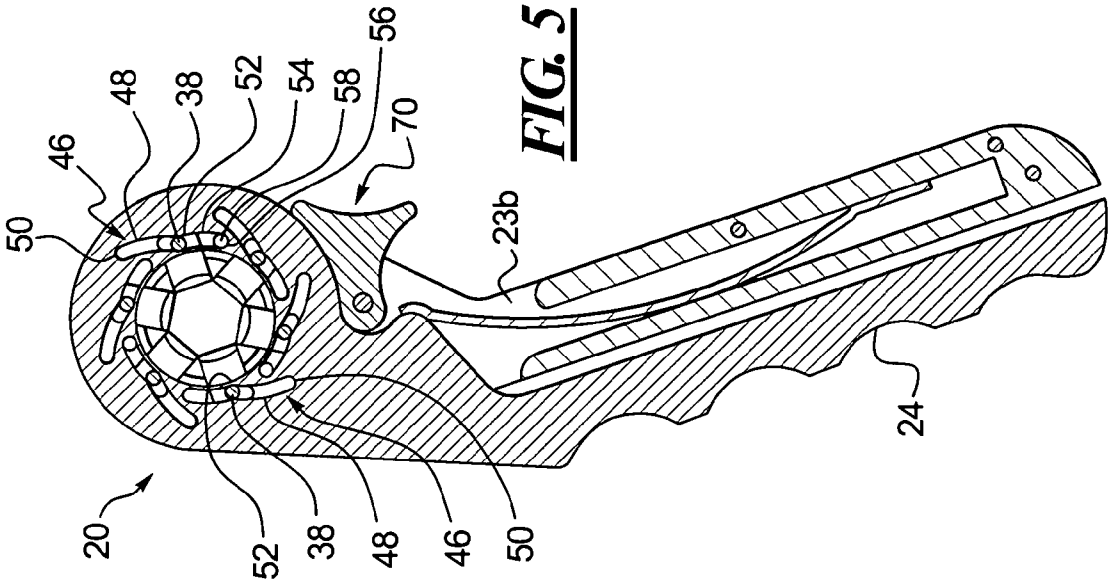
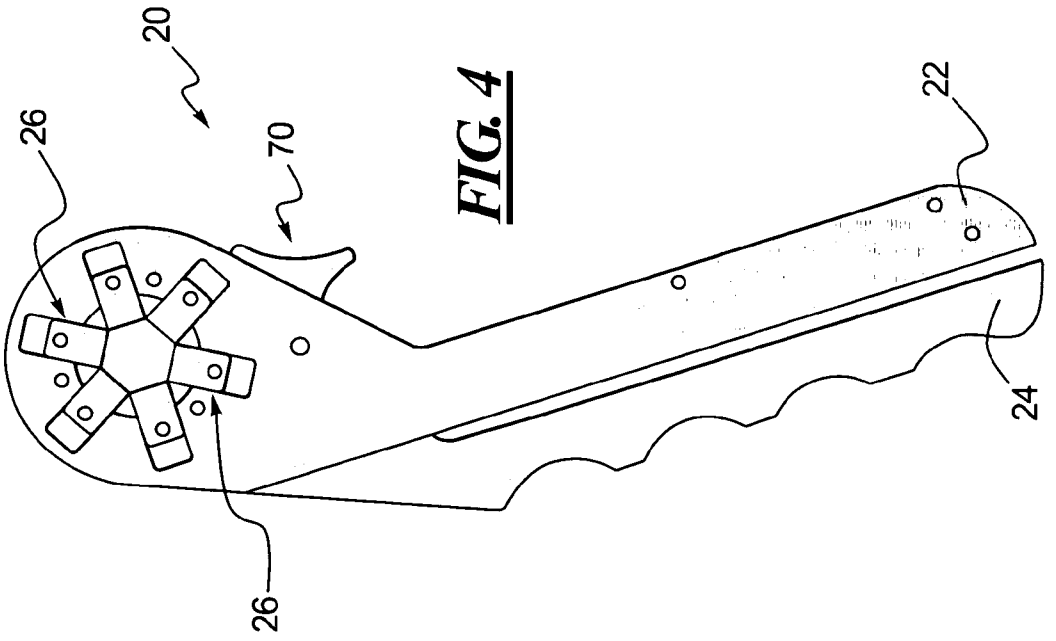


FIG. 5



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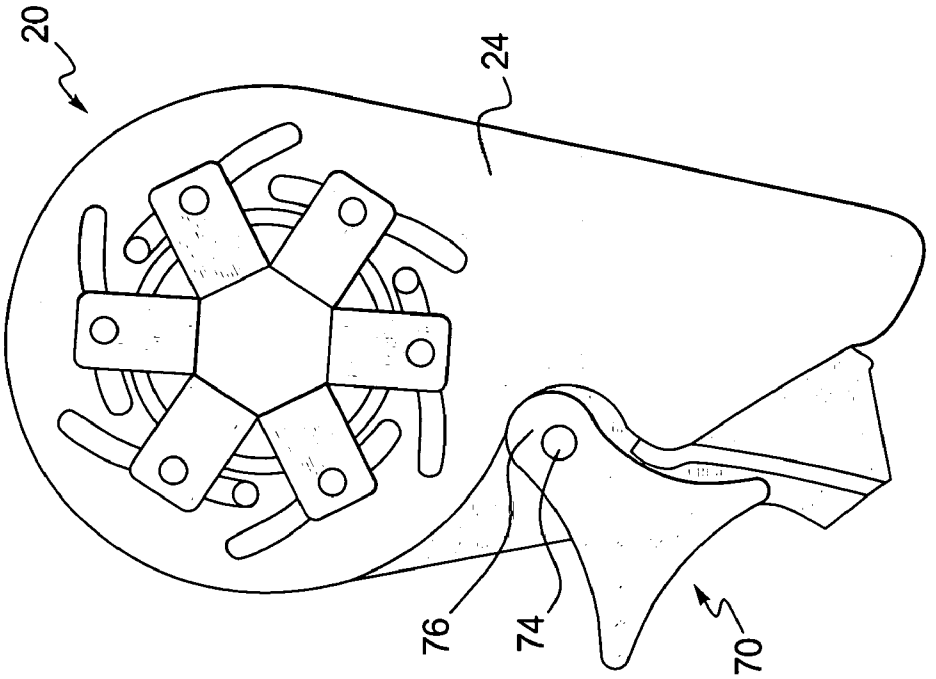

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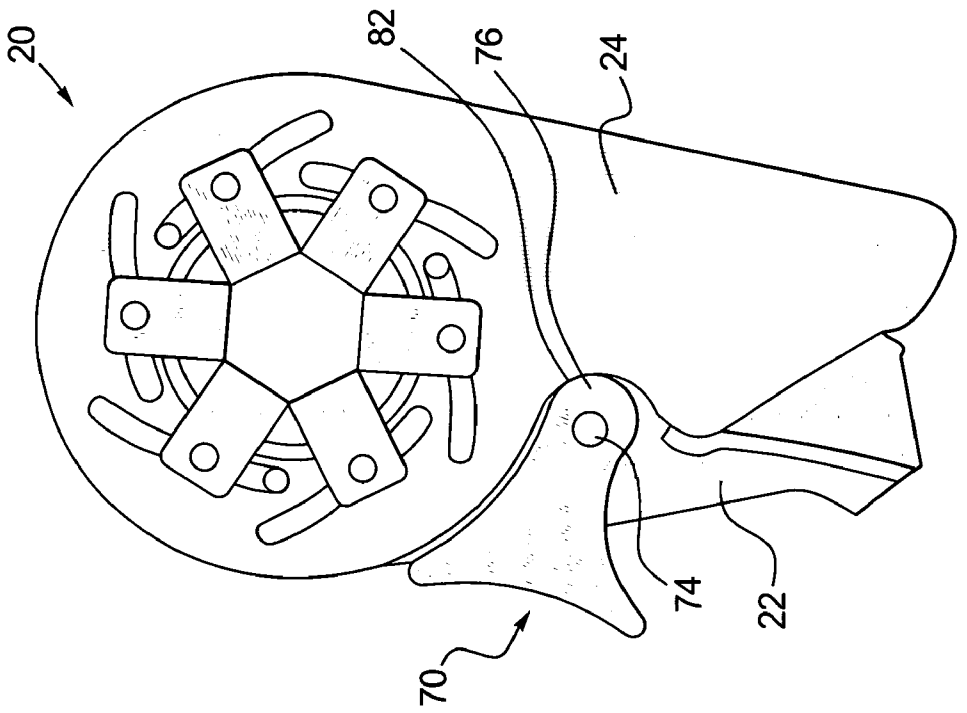


FIG. 6

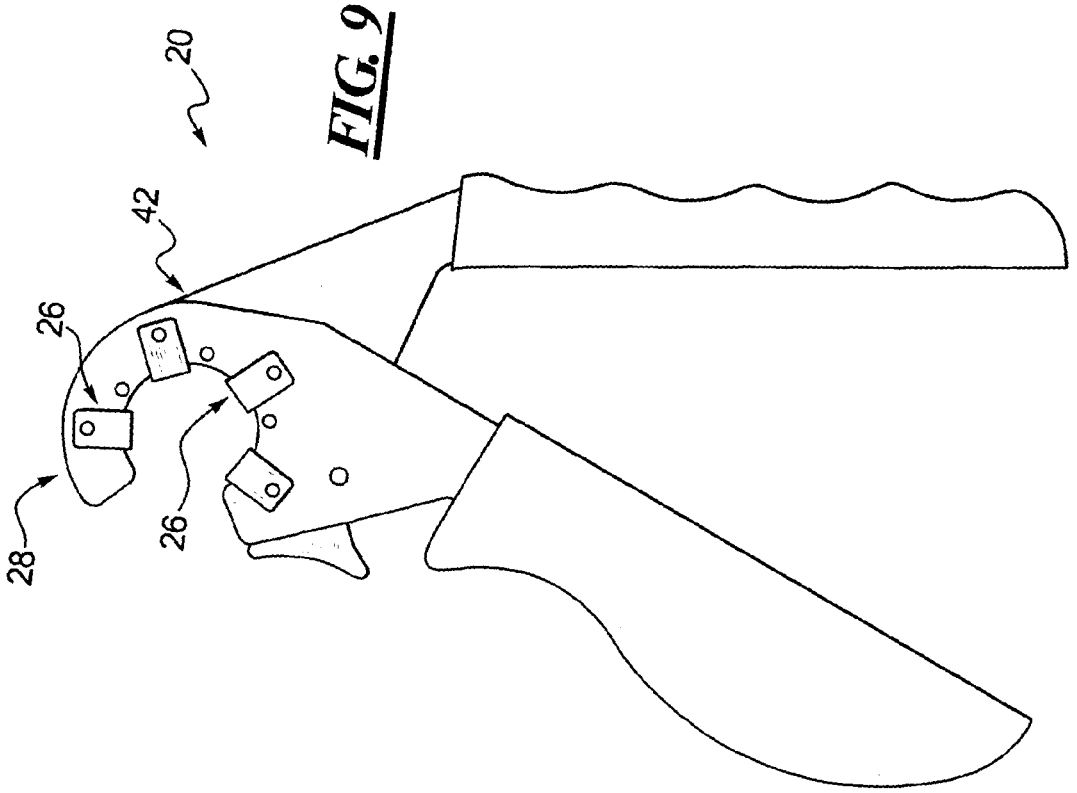


FIG. 9

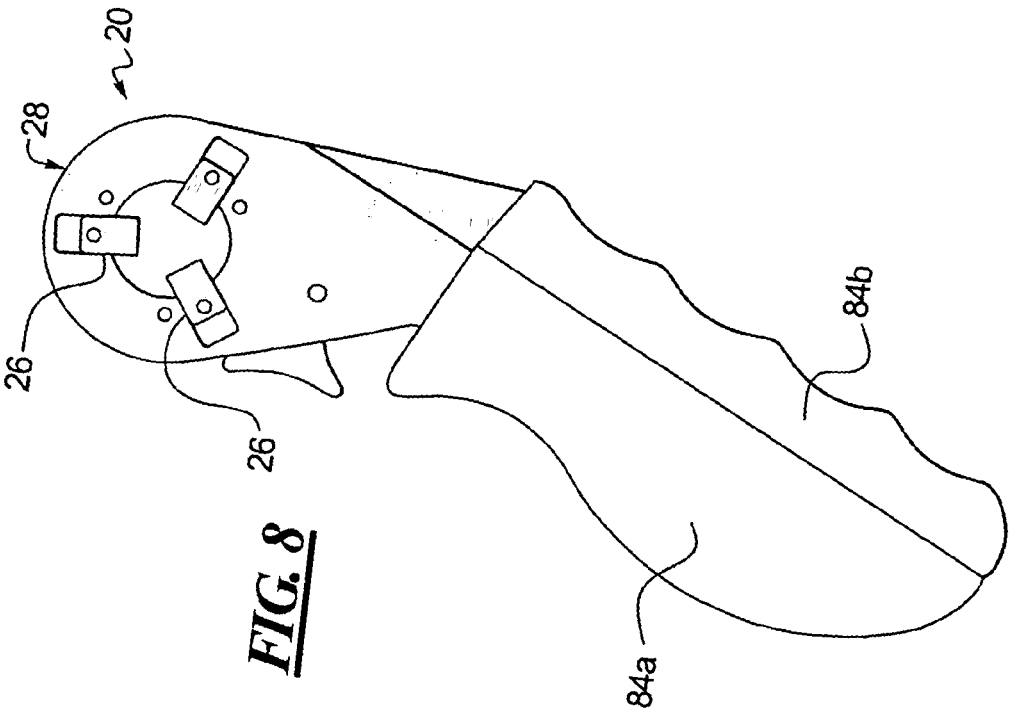
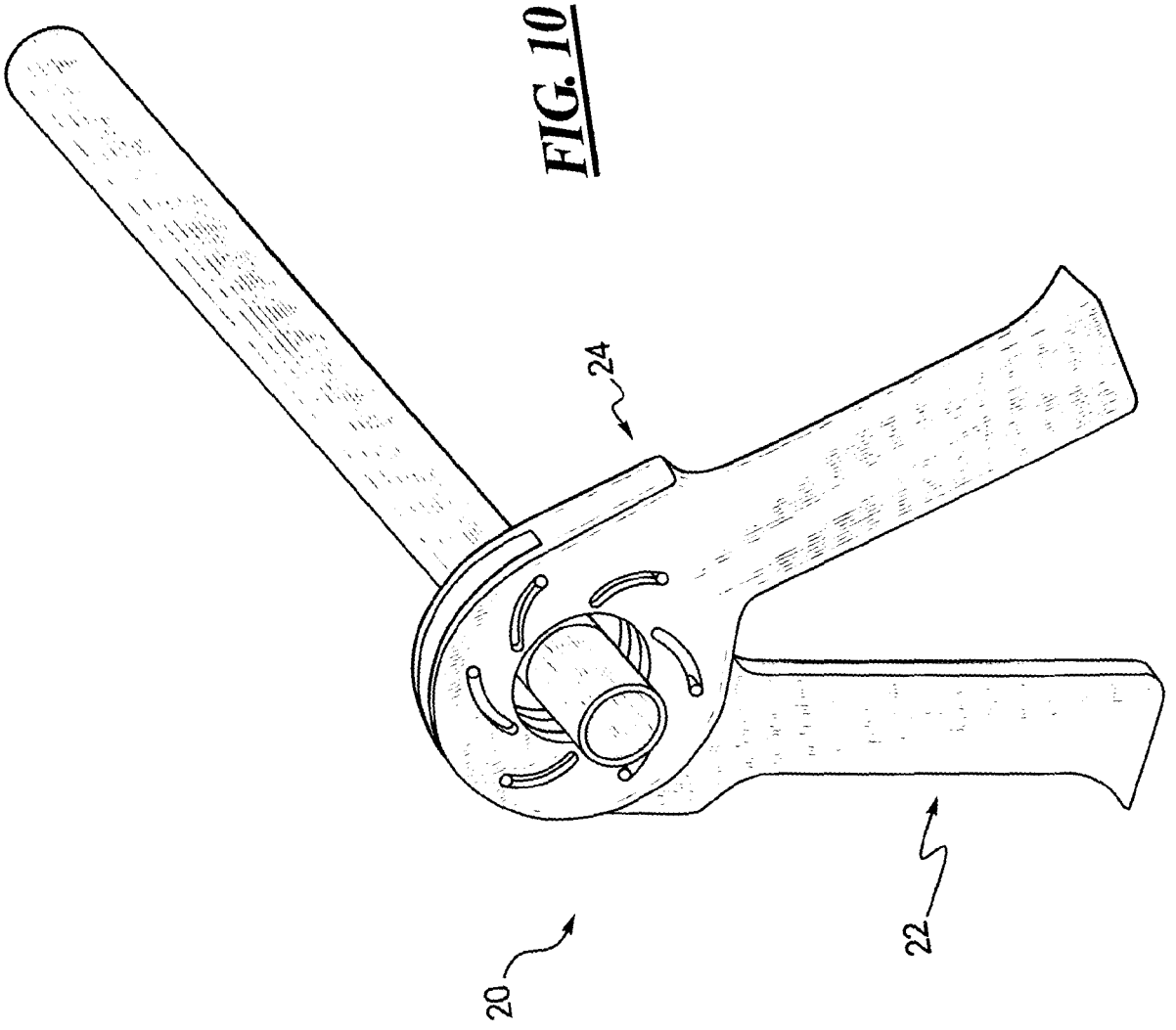


FIG. 8

FIG. 10



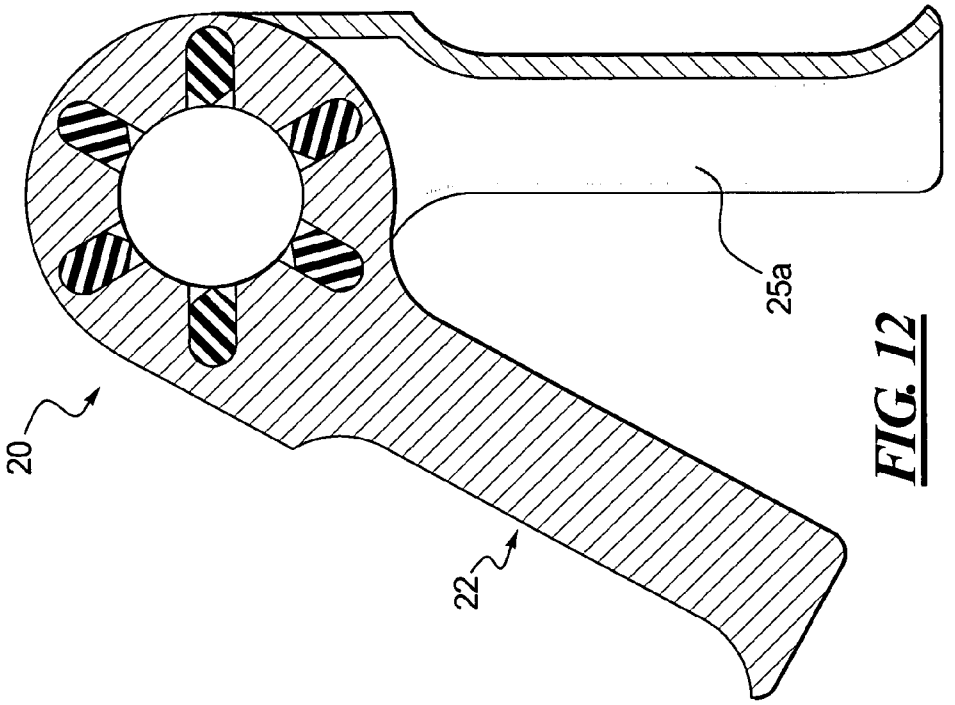


FIG. 12

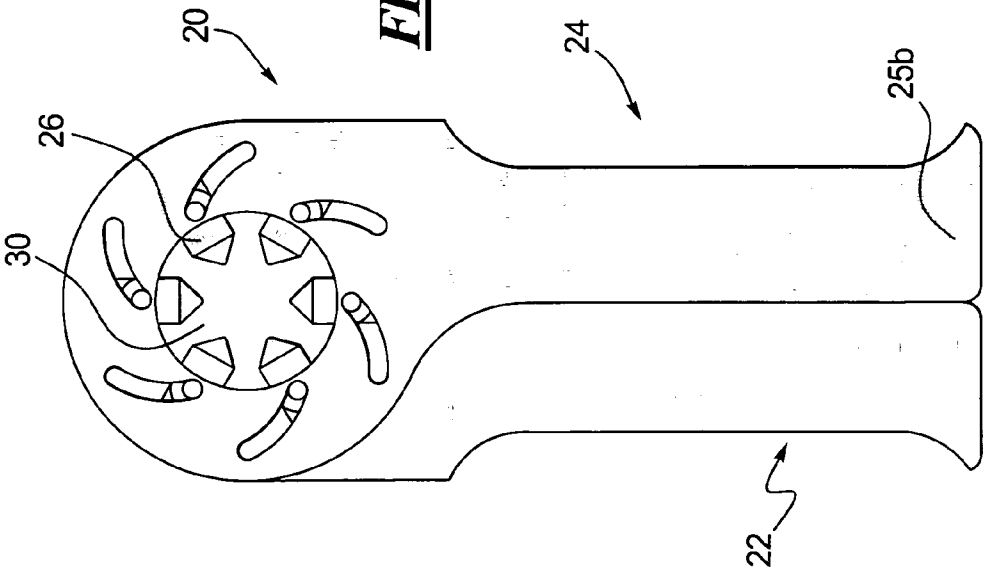


FIG. 11

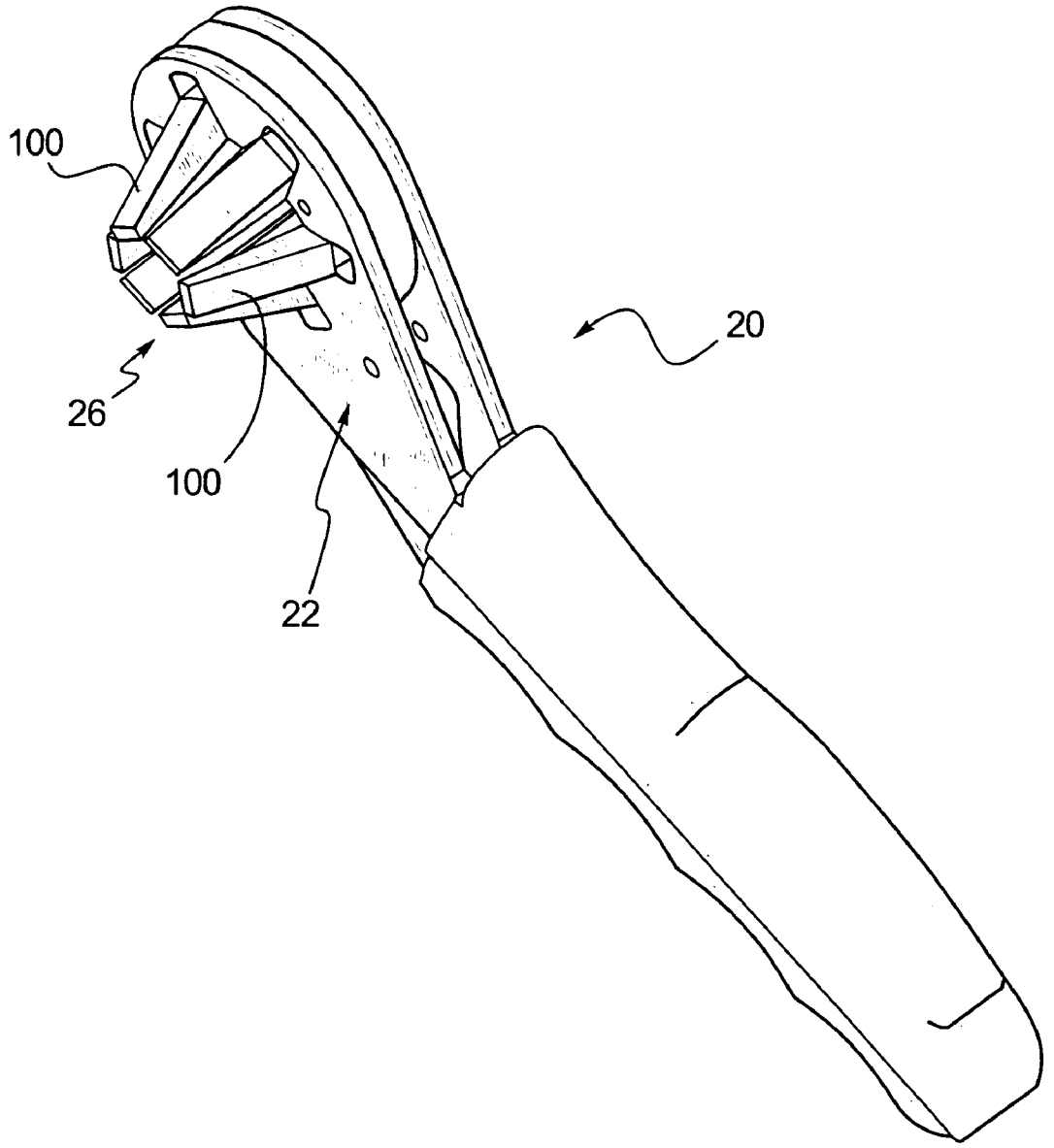


FIG. 13

ADJUSTABLE GRIPPING TOOL

BACKGROUND OF THE INVENTION

This invention pertains to a hand tool and more particularly, to an adjustable gripping tool which, as a result of manual operation, self-energizes, automatically configures to engage differently dimensioned and shaped workpieces and de-energizes upon release of actuating force.

Various types of adjustable gripping tools are known in the art. Specifically, several known adjustable gripping tools are embodied in the form of a "crescent" wrench, an adjustable socket wrench, pipe wrench, vice grips, crimpers, bolt and nut cutters, pipe and tube cutters, and various other "plier-type" gripping tools. A crescent wrench is an adjustable open end wrench that has stationary rotatable screw which engages a toothed rack formed on a first jaw element movable with respect to the second jaw element extending from the first element. The adjustable socket wrench includes a shell housing movable elements, such that movement of the first element with respect to the shell causes the elements to move with respect to the shell in order to engage the workpiece. One cutting tool version has adjustable cutting jaws that when tightened and rotated around a tube score and cut the tube. Another version of the cutting tool uses a blade cutting mechanism. The plier-type devices include a pair of first elements connected in such a manner so as to move at least two jaws toward one another in order to engage the workpiece. The crimping tools provide various functions, such as specialty segmented dies that expand or contract via interaction of a tapered boy with a fixed diameter or a plier-type device crimper with jaws that have been modified as a special head to crimp the workpiece.

Each of the prior art devices have disadvantages. The crescent wrench is not automatically resizable during use. The socket device is limited in its effective range of dimensional capability. In other words, a large number of sockets is needed to service a relatively standard range of workpieces, the workpieces must have a standard configuration and the workpieces must be engaged axially.

The plier-type devices fail to engage the workpiece evenly around or within the circumference with proper offsetting forces and stability which aides in operation of the tool. The plier-type devices also concentrate the applied mechanical forces in a point-loading configuration creating pressure points and stress risers on the workpiece surface.

The tube cutting devices cannot be used with one hand. Another disadvantage of tube cutting devices, in particular, knife blade cutters, is that the tubing is often distorted as a result of the asymmetrical cutting forces applied by the blade against the tube. Other tube cutting devices, such as screw-and-wheel-type tube cutters require continuous rotation of the cutting wheel around the circumference of the tube while simultaneously increasing the force applied by the cutting wheel to the tube in order to increase the cutting depth.

Prior art crimping devices cannot create symmetrically balanced crimps with a simple hand tool. For example, crimping a metal sleeve on a hydraulic hose requires a press and a proper die for proper application. Also all of the previously available gripping tools either loosely hold the workpiece or hold the workpiece in a manner that concentrates and focuses the gripping forces in a point pressure-loading configuration. This concentration of gripping forces is on certain points concentrates the force and serves to

oftentimes deform the workpiece. Also the previously available tools for wrench applications could not be easily sized to the workpiece.

Therefore, there exists a need in the prior art for an adjustable gripping tool which, as a result of manual operation, self-energizes the tool action, may be automatically sized and resized to engage a workpiece, de-energizes upon release of actuation force, that has a broad range of dimensional capability, engages workpieces axially and radially and provides offsetting forces for stability in operation. Beyond the ability to resize the gripping range, the gripping tool of the present invention symmetrically translates the force applied to the gripping tool onto the workpiece in a symmetrically balanced and mechanically advantaged and efficient way. Thus, an even distribution of gripping and rotational force about the workpiece is achieved; whereby allowing for the most efficient distribution of mechanical stress about the workpiece. For any given force required to manipulate the workpiece the present invention will accomplish the work with the minimal distortion of the workpiece by distributing the work force over the largest area of the workpiece. Other advantages of the adjustable gripping tool of the present invention include decreased costs, increased productivity and multi-access engagement of the workpiece resulting in a mechanically advantaged, efficient, even and balanced distribution of working forces.

BRIEF DESCRIPTION OF THE DRAWINGS

In the course of the following detailed description, reference will be made to the attached drawings, wherein like reference numerals identify like parts and in which:

FIG. **1** is an exploded perspective view of an adjustable gripping tool in accordance with the principles of the present invention.

FIG. **2** is a top plan view of the adjustable gripping tool of FIG. **1** disposed in an open or first operative position.

FIG. **3** is a sectioned view of the adjustable gripping tool of FIG. **2** wherein one component of a first element has been removed.

FIG. **4** is a top plan view of the adjustable gripping tool of FIG. **1** disposed in a closed or second operative position.

FIG. **5** is a sectional view of the adjustable gripping tool of FIG. **4** taken along a line passing through a second element of the adjustable gripping tool.

FIG. **6** is a detailed broken-away section view of the adjustable gripping tool of FIG. **6** wherein one element of the first component has been removed.

FIG. **7** is a detailed broken-away section view of the adjustable gripping tool of FIG. **6** wherein the lock mechanism is disposed in a locked or second operative position.

FIG. **8** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principles of the present invention.

FIG. **9** is a top plan view of yet another embodiment of an adjustable gripping tool in accordance with the principles of the present invention.

FIG. **10** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principles of the present invention.

FIG. **11** is a top plan view of the adjustable gripping tool of FIG. **10**, disposed in a closed or second operative position.

FIG. **12** is a sectional view of the adjustable gripping tool of FIG. **11** taken along a line passing through the second element of the adjustable gripping tool.

FIG. **13** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE INVENTION

One principal aspect of the present invention is directed to an adjustable gripping tool for engaging a workpiece to impart work thereto. The gripping tool includes a first element and a second element connected for a relative angular movement which when activated generates movement of at least one gripping or workpiece engaging element. The first element includes a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and at least one gripping element. Each at least one gripping element includes a body portion adapted for engaging a workpiece, an arm portion configured to engage one of the guides and a force transfer element contiguous with the arm portion. The second element includes an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening. Each of the slots has a first section configured to engage one of the force transfer elements such that movement of the second element with respect to the first element simultaneously actuates each at least one first section to contact and move one of the force transfer elements thereby actuating the gripping elements along the guides.

Yet another principle aspect of the present invention is directed to an adjustable gripping tool for engaging a workpiece to impart work thereto which includes a first element and a second element connected for relative angular movement. The second element includes an actuation portion having a plurality of slots. Each of those slots includes a first section and a second section wherein the first and second sections each define divergent paths. The first element includes a gripping portion having a plurality of gripping elements and at least one alignment element. Each gripping element has a force transfer element contiguous therewith. Each of the aligning elements is disposed between a pair of gripping elements. One of the force transfer elements engages one first section and one of the aligning elements engages one second section such that movement of the second element relative to the first element results in the first sections contacting each of the force transfer elements to actuate the gripping elements and the second sections contacting the aligning elements to maintain orientation of the first element with respect to the second element.

FIG. **1** illustrates in an exploded perspective view of the adjustable gripping tool **20** in accordance with principles of the present invention. The adjustable gripping tool **20** primarily includes a first element **22** and a second element **24** connected for relative angular movement. In one embodiment of the present invention, the first element **22** includes a pair of elements **23**A, **23**B disposed on opposing sides of the second element **24**. It is within the teachings of the present invention that the first element **22** may be configured with a single element **23**A or **23**B, or as a pair of elements **23**A, **23**B as may be desired with respect to other design factors of importance to one of skill in the art. The first element **22** includes a first grasping portion **21** and the second element **24** includes a second grasping portion **25**. The relative angular movement between the first element **22** and the second element **24** generates concentric linear movement of the gripping elements **26**.

The first element **22** further includes a gripping portion **28** disposed at one end of the first grasping portion **21** and configured to engage the workpiece (not shown) including a first opening **30**, a plurality of guides **32** extending radially from the first opening **30** and the gripping elements **26**. The gripping elements each include a body portion **34** adapted for engaging the workpiece, an arm portion **36** configured to engage one of the guides **32** and a force transfer element **38** connected to the arm portion **36**. It is within the teachings of the present invention that the gripping elements may be integrally formed in any suitable manner.

In one embodiment of the present invention, the arm portion **36** of the gripping elements **26** further include a pair of arms **37**A, **37**B disposed at opposite ends of the body portion **34** such that the gripping elements **36** are substantially U-shaped. It will be recognized by those of skill in the art that the pair of arms **37**A, **37**B, when so provided engaged the respective guides **32** formed in the first element elements **23**A, **23**B, respectively. The pair of arms **37**A, **37**B each include an aperture **40** aligned such that one of the force transfer elements **38** is contiguous therewith for positioning and actuation of the gripping elements **26** as detailed below.

It is within the teachings of the present invention that the gripping elements may have a smooth or rough face with which to engage the workpiece, as desired. For example, the rough face may have a grooved, serrated, checked or any other suitable finish. Furthermore, the force transfer elements **38** may be configured as pins or other suitable structure to provide the functions as described herein. Moreover, the first element and/or each of the elements thereof may often be referred to as a handle and the second element may often be referred to as a lever. It will be recognized by those of skill in the art that the terms used herein are not of a limiting sense. Rather, these terms are used to broadly describe the structure and function herein.

The second element **24** further includes an actuation portion **42** disposed at one end of the second grasping portion **25** and having a second opening **44** concentric with the first opening **30** and a plurality of slots **46** disposed adjacent the second opening **44**. Each of the slots **46** has a first section **48** configured to engage one of the force transfer elements or pins **38** such that movement of the second element **24** with respect to the first element **22** simultaneously actuates the first sections **48** to contact and move the force transfer elements **38** along a path defined by the first section thereby actuating the gripping elements **26** along the guides **32**. It will be recognized by those of skill in the art that the first sections **48** define a path which generally decreases in terms of radial measurement from a center of the second opening **44** from a first outer end **50** to an inner end **52**. In another embodiment, the paths may generally increase in terms of radial measurement from the center of the second opening **44** such that relative movement between first and second elements generates an outward motion of the gripping elements. Alternatively, the guides, slots and force transfer element may be configured to interact in a number of different ways to move the actuation elements into movement with the gripping or workpiece engaging elements. For example, a pair of slots may be formed in a pair of cooperative second elements where each slot defines an arcuate path and the pair of slots simultaneously act on the force transfer member to effect movement thereof.

In one embodiment, each of the slots **46** further includes a second section **54** extending from the first section **48**. It will be recognized by those of skill in the art that the second section **54** defines a path which is generally consistent in

terms of radial measurement from the center of the second opening **44** from the inner end **52** to a second outer end **56**.

In one embodiment of the present invention, the first element **22** further includes a plurality of aligning elements **58** for engaging the second sections **54** and where the two elements **23**A, **23**B are used for positioning and interconnecting the elements **23**A, **23**B of the first element **22**. Each aligning element **58** is disposed between an adjacent pair of guides **32** and extends parallel to the force transfer element **38**. Apertures **60** are formed in the first elements **23**A, **23**B to receive and engage the aligning elements **58**. In operation, each one of the aligning elements **58** engages one of the second sections **54** so that during relative angular movement between the first element **22** and the second element **24**, or first and second elements, respectively, the first and second openings **30**, **44** remain concentrically aligned. It will be recognized by those of skill in the art that the second sections **54** **46** engage the aligning elements **58** in response to the forces induced by the divergent path of the first sections **48** on the force transfer elements **38**. As a result, not only do the first and second openings **30**, **44** remain concentrically aligned, but the gripping elements **26** are actuated along the guides **32** with equal, likewise displacement.

A spacer **62** may be used to interconnect the elements **23**A, **23**B to define a pocket **64** such that a spring **66** disposed within the pocket contacts the second element **24** in order to dispose the second element is a normally open position (see FIGS. **2** and **3**). The spacer may be connected to each of the elements **23**A, **23**B by press fit pins **66** engaging aligned apertures **68** or any other suitable device or in any other suitable manner.

A lock mechanism **70** is connected to the first element **22** such that operative movement of the lock mechanism **70** from a first operative position (see FIGS. **4** and **5**) to a second operative position (see FIGS. **2** and **3**) secures the first element **22** and second element **24** in any desired angular orientation. The lock mechanism **70** may be connected between the elements **23**A, **23**B by a press fit pin **72** engaging aligned apertures **74** or by any other suitable device or in any other suitable manner. The inner or operative end **76** of the lock mechanism **70** is configured as a cammed or eccentric surface. In one embodiment, this may be achieved by disposing aperture **74** offset from the longitudinal axis of the lock mechanism **70**. Alternatively, an eccentric shaped surface may be defined on the inner or operative end **76** or by any other suitable manner.

When oriented in the first operative position (See FIGS. **4** and **5**), the inner end **76** of the lock mechanism **70** defines a clearance (**82**, see FIG. **6**) with respect to the second element **24**. Movement of the actuating end **78** of the lock mechanism **70** from the first operative position to the second operative position (See FIGS. **2** and **3**) moves the inner end **76** about the aperture **74** such that the operative end **76** binds against the second element **24** thereby securing the first element and second element in a desired angular orientation.

In one embodiment of the present invention, the gripping portion **28** includes six gripping elements **26**. However, it would be recognized by those of skill in the art, that the gripping portion **28** need include only at least two gripping or engaging elements **26** and that any other suitable number of gripping or workpiece engaging elements may be provided.

FIG. **2** illustrates the adjustable gripping tool of FIG. **1** disposed in an open position. The second element **24** is biased from the first element **22** as described above to maintain such open position.

The lock mechanism **70** is disposed in the second operative position securing the first element **22** and second element **24** a desired angular orientation. The adjustable gripping tool **20** of this embodiment is configured such that the gripping portion **28** and the actuation portion **42** are adapted to circumferentially engage the workpiece. However, in FIG. **2**, the gripping elements **26** are disposed such that the arms **36** engage the guides **32** in a manner which is characteristic of the open position of the adjustable gripping tool **20**. The force transfer elements **38** and aligning elements **58** are shown as force transfer elements press fit to the gripping elements **26** and first element **22** respectively. Alternatively, the force transfer elements can be manufactured as a protrusion of the gripping or workpiece engaging element.

FIG. **3** illustrates a section view of the adjustable gripping tool **20** of FIG. **2** wherein one element of the first element **22** has been removed. Element **23**B is shown having spacer **62** connected thereto to define a pocket **64** such that the spring **66** disposed within the pocket **64** contacts the second element **24** to bias the second element **24** in the open position. As described above, the lock mechanism **70** is engaged in the second operative position securing the first element **23**B and second element **24** in the desired open position. Aligning elements **58** are disposed at the inner end **52** of the slot **46** which defines a point of separation between the first section **48** and the second section **54**. The force transfer elements **38** are disposed at the outer end **50** of the first section **48** of the slot **46** as will be shown and described in more detail below.

FIG. **4** illustrates an adjustable gripping tool **20** disposed in a closed position wherein the first element **22** and second element **24** are disposed immediately adjacent. The lock mechanism **70** is disposed in the first operative position, unlocked. The gripping elements **26** have been moved from an open position, as shown in FIGS. **2** and **3**, to a closed position such that the gripping elements are adapted for engaging the workpiece.

FIG. **5** illustrates a section view of the adjustable gripping tool **20** of FIG. **4** taken through the second element where the adjustable gripping tool is disposed in the second operative or closed position. The first element is represented by element **23**B which is disposed immediately adjacent the second element **24**. The force transfer elements **38** have been moved as a result of contact with the first section **48** of the slots **46** from an outer end **50** to an inner end **52**. The aligning elements **58** have been moved from an inner end from the second section **54** of the slot **56** to an outer end **56**. It will be recognized by those of skill in art that the paths defined by the first and second sections **48**, **54** of the slot **46** are divergent. The aligning elements **58** engage the second portion **54** of the slot **46** in order to maintain proper orientation between the first element **22** and the second element **24**. The force transfer elements **38** engage the first portion **48** of the slot **46** such that the generally decreasing diameter dimension of the path defined by the first portion **48** causes the force transfer elements to move closer to the center of the first and second openings **30**, **44**. Accordingly, the gripping elements **26** are likewise actuated along the guides **32** to engage the workpiece. The lock mechanism **70** is disposed in a first operative position. It should also be noted that the slots can be reversed and the action reversed such that the actuation elements are radiating from the center during activation.

FIG. **6** illustrates a detailed broken away view of the adjustable gripping tool **20** of FIGS. **4** and **5**. The lock mechanism **70** is disposed in a first operative or open

position. The lock mechanism **70** is connected to the first element **22** by a pin **74** which is disposed offset from a longitudinal axis of the lock mechanism **70**, such that in this first operative position, a clearance **82** is defined between the lock mechanism operative or inner end **76** and the second element **24**.

FIG. **7** illustrates the adjustable gripping tool **20** of FIG. **6** wherein the lock mechanism **70** has been moved from the first operative position (shown in FIG. **6**) to a second operative position. As a result of movement of the lock mechanism **70** the clearance is eliminated between the operative or inner end **76** and the second element **24**. Accordingly, the lock mechanism **70** binds against the second element **24** such that the first element and second element **24** cannot be moved relative to one another without first releasing the lock mechanism **70**. It will be recognized by those of skill in the art that the pin **74** used to mount the lock mechanism **70** to the first element **22** is most often offset from the longitudinal axis of the lock mechanism **70**. However, an eccentric surface at the inner or operative end **76** may also be formed to enable the same function.

FIG. **8** illustrates another embodiment of the present invention of the adjustable gripping tool **20** wherein only three gripping elements **26** are shown. It is within the teaching of the present invention that the gripping portion **28** only include at least one gripping element **26**. Grips **84**A, **84**B may also be provided for the first element **22** and second element **24** to further facilitate effective actuation of the adjustable gripping tool **20**. The remaining structure and function of this disembodiment of the present invention remains the same as detailed above.

FIG. **9** illustrates yet another embodiment of the present invention directed to an adjustable gripping tool **20**. In this embodiment of the present invention, the gripping portion **28** and the actuation portion **42** are configured penannular. Such configuration enables the wrench **20** to engage the workpiece laterally or in a radial direction. Further, four gripping elements **26** are illustrated in this embodiment. The remaining structural and functional elements and aspects of this embodiment of the present invention remain the same as detailed above.

FIG. **10** illustrates another embodiment of the present invention wherein the adjustable gripping tool **20** is configured as a cutting or scoring device for engaging, for example, a tubular element. In this embodiment, the second element **2**A is configured substantially U-shaped. Such configuration may be achieved by binding, folding or otherwise forming a unitary element as shown in FIG. **10**. It will be recognized by those of skill in the art that the orientation of some of the structural elements in this embodiment have been in comparison to the configuration of the tools above. Otherwise, the operation and function of this embodiment is as described above.

The first and second elements **22**, **24** are connected for relative angular movement in order to generate linear movement of the gripping elements. It is within the teachings of the present invention that the gripping elements may also be configured to score or cut a workpiece. For example, in one embodiment, the gripping elements described above which are configured to engage the workpiece as described above may be replaced with gripping elements configured to perform the scoring or cutting functions.

FIG. **11** illustrates a top plan view of the embodiment of the present invention in FIG. **10** disposed in a closed position. The first and second elements **22**, **24** have been moved toward one another such that the gripping elements **26** extend into the first opening **30** to engage a workpiece (not shown). As shown in FIG. **10**, this embodiment is configured to engage a tubular element, such as a pipe or other suitable workpipe. For example, a polyvinyl chloride ("PVC") pipe may be cut or scored with the sharp-edged gripping elements of this embodiment and not distort the PVC pipe. As a result, in addition to a clean perpendicular cut-off, the PVC pipe is not deformed so that further coupling is problematic. Otherwise, this embodiment functions in accordance with the other tools described above.

FIG. **12** illustrates a sectional view of the adjustable gripping tool **20** of FIG. **10** taken through the first element **22**, where the tool **20** is disposed in an open position. The gripping element **26** disposed within the guides **32** include all the structural elements as described above. However, rather than a U-shaped body, a force transfer element extends from each side of the body portion to engage the slots of the pair of elements **25***a*, **25***b* (**25***b* in FIG. **11**) which comprise the second element **24**.

FIG. **13** illustrates a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present invention. In this embodiment of the present invention, the adjustable gripping tool **20** includes gripping elements **26** which have extensions **100** that extend beyond the first element **22**. The extensions **100** facilitate engaging workpieces disposed in a space-limited location, where access for the entire tool **20** may be difficult or problematic. The remaining structural and functional elements and aspects of this embodiment of the present invention remain the same as detailed above. Alternatively, other structural elements may be formed on the extensions **100** to enable additional functions for the tool **20**, such as crimping, cutting, or any other suitable function.

The inventions is not limited to the details of the apparatus depicted and other modification and applications may be contemplated. For example, the force transfer elements and aligning elements may be changed as desired for other bearing elements. The gripping elements themselves may ha be varied in size, shape, or quantity. And the gripping elements may have a cutter, roller or blade attached to perform cutting or scoring operations. Also, the size, shape and position of the openings may be altered as desired to suit particular applications. Certain other changes may be made in the above-described apparatus without departing from true spirit and scope of the invention here involved. It is intended, therefor that the subject matter of the above depiction shall be interpreted as illustrated and not in a limiting sense.

What is claimed is:

1. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening external thereto, each said at least one slot having a first section configured to engage the force transfer element

of one said at least one grinning element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide.

2. The gripping tool as recited in claim **1**, further including a lock mechanism disposed on the first element operable to secure the first element and second element in a desired angular orientation.

3. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;

wherein the first element includes a pair of elements disposed on opposing sides of the second element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the fist opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide.

4. The gripping tool as recited in claim **3**, wherein a spacer interconnects the elements to define a pocket such that a spring disposed within the pocket contacts the second element so that the second element is normally disposed in an open position.

5. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

wherein the aim portion of the gripping elements further includes a pair of arms disposed at opposite ends of the body portion such that the gripping elements are substantially U-shaped;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide.

6. The gripping tool as recited in claim **1**, wherein the first element further includes a plurality of studs such that one stud is disposed between an adjacent pair of guides and extends parallel to die force transfer elements.

7. The gripping tool as recited in claim **6**, wherein each of the slots further includes a second section extending from the first section, such that one of the studs engages one of the second sections so that during relative angular movement between the first element and the second element the first and second openings remain concentrically aligned.

8. The gripping tool as recited in claim **7**, wherein the first and second sections are divergent.

9. The gripping tool as recited in claim **1**, wherein the gripping portion and actuation portion circumferentially engage the workpiece.

10. The gripping tool as recited in claim **1**, wherein the griping portion and actuation portion are configured penannular.

11. The gripping tool as recited in claim **1**, wherein the gripping portion includes a plurality of gripping elements.

12. The gripping tool as recited in claim **3**, wherein a lock mechanism is connected to the first element between the elements such that movement of the lock mechanism from a first operative position to a second operative position secures the first ement and second element in a desired angular orientation.

13. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular, movement which generates movement of at least one gripping element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide;

wherein the gripping elements performing one function may be replaced with gripping elements performing a different function.

14. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and the at least one gripping element;

each at least one griping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide;

wherein the gripping elements score and cut.

15. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one de extending from the first opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide;

wherein movement of the at least one gripping element is linear.

16. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement which generates movement of at least one gripping element;

the first element including a gripping portion configured to engage the workpiece including a first opening, at least one guide extending from the first opening and the at least one gripping element;

each at least one gripping element including a body portion adapted for engaging the workpiece, an arm portion configured to engage one of said at least one guide and a force transfer element contiguous with the arm portion;

the second element including an actuation portion having a second opening concentric with the first opening and at least one slot disposed adjacent the second opening, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide;

wherein movement of the at least one gripping element in curvilinear.

17. The gripping tool recited in claim **1**, wherein the at least one guide includes a plurality of guides.

18. The gripping tool as recited in claim **1**, wherein each at least one guide extends radially.

19. The gripping tool as recited in claim **1**, wherein each at least one guide extends along a curvilinear path.

20. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement;

the second element including an actuation portion having a plurality of slots, each of the slots including a first section and a second section wherein the first and second sections each define divergent paths;

the first element including a gripping portion having a plurality of gripping elements, each gripping element having a force transfer element contiguous therewith, and at least one aligning element, where one of the aligning elements if disposed between a pair of gripping elements;

wherein one of the force transfer elements engages one first section and one of the aligning elements engages one second section such that movement of the second element relative to the first element results in the first sections contacting each of the aligning elements to actuate the gripping elements and the second sections contacting the aligning elements to maintain orientation of first element with respect to second element.

21. The gripping tool recited in claim **20**, wherein the first element includes a first opening and the second element includes a second opening which are concentrically aligned during relative movement.

22. The gripping tool recited, in claim **20**, wherein a lock mechanism is disposed on the fist element operative to secure the first element and second element in a desired angular orientation.

23. The gripping tool recited in claim **20**, wherein the gripping portion and actuation portion circumferentially engage the workpiece.

24. The gripping tool recited in claim **20**, wherein the gripping portion and actuation portion are configured pen-annular.

25. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement;

the second element including an actuation portion having a plurality of slots, each of the slots including a first section and a second section wherein the first and second sections each define divergent paths;

the first element including a gripping portion having a plurality of gripping elements, each gripping element having force transfer element contiguous therewith, and at least one aligning element, where one of the aligning elements if disposed between a pair of gripping elements;

wherein the gripping elements performing one function may be replaced with gripping elements performing a different function;

wherein one of the force transfer elements engages one first section and one of the aligning elements engages one second section such that movement of the second element relative to the first element results in the first

sections contacting each of the aligning elements to actuate the gripping elements and the second sections contacting the aligning elements to maintain orientation of first element with respect to second element.

26. An adjustable gripping tool for engaging a workpiece to impart work thereto, the tool comprising:

a first element and a second element connected for relative angular movement;

the second element including an actuation portion having a plurality of slots, each of the slots including a first section and a second section wherein the first and second sections each define divergent paths;

the first element including a gripping portion having a plurality of gripping elements, each gripping element having a force transfer element contiguous therewith, and at least one aligning element, where one of the aligning elements if disposed between a pair of gripping elements;

wherein the gripping element can score and cut;

wherein one of the force transfer elements engages one first section and one of the aligning elements engages one second section such that movement of the second element relative to the first element results in the first sections contacting each of the aligning elements to actuate the gripping elements and the second sections contacting the aligning elements to maintain orientation of first element with respect to second element.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

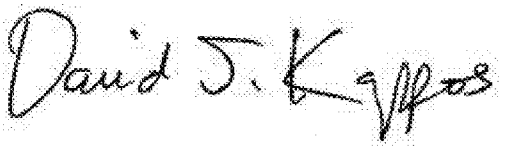
CERTIFICATE OF CORRECTION

PATENT NO. : 6,889,579 B1
APPLICATION NO. : 10/763489
DATED : May 10, 2005
INVENTOR(S) : Daniel P. Brown

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 9, Line 1, Claim 1: Delete "grinning" and replace with "gripping"

Signed and Sealed this
Seventeenth Day of July, 2012



David J. Kappos
Director of the United States Patent and Trademark Office

EXHIBIT B

US007992470B2

(12) **United States Patent**
Brown

(10) **Patent No.: US 7,992,470 B2**
(45) **Date of Patent: *Aug. 9, 2011**

(54) **ADJUSTABLE GRIPPING TOOL**

(75) Inventor: **Daniel P. Brown**, Palos Park, IL (US)

(73) Assignee: **Loggerhead Tools, LLC**, Palos Park, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1071 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/102,966**

(22) Filed: **Apr. 11, 2005**

(65) **Prior Publication Data**

US 2005/0193873 A1 Sep. 8, 2005

Related U.S. Application Data

(63) Continuation-in-part of application No. 10/763,489, filed on Jan. 23, 2004, now Pat. No. 6,889,579.

(51) **Int. Cl.**
B25B 13/18 (2006.01)
B25B 13/48 (2006.01)

(52) **U.S. Cl.** **81/90.2**; 81/90.1; 81/58

(58) **Field of Classification Search** 81/90.2, 81/58, 90.1, 90.3, 90.5, 91.1, 126, 128
See application file for complete search history.

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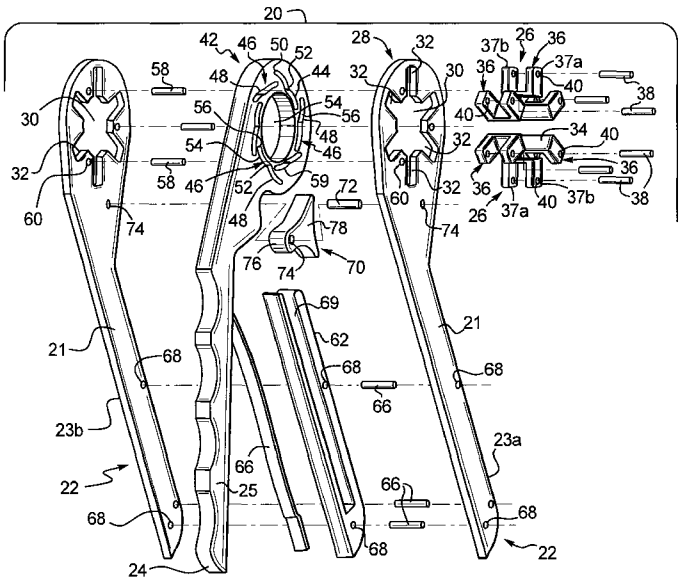
Primary Examiner — David B Thomas
(74) *Attorney, Agent, or Firm* — Vedder Price P.C.

(57) **ABSTRACT**

A self-energizing and de-energizing adjustable gripping tool for engaging a work piece to impart work thereto includes a first element and second element connected for relative movement. The second element includes an actuation portion having a plurality of slots. The first element includes gripping elements which are each associated with a force transfer element which engages one of the slots such that movement of the second element relative to the first element actuates the gripping elements to engage the work piece.

41 Claims, 24 Drawing Sheets



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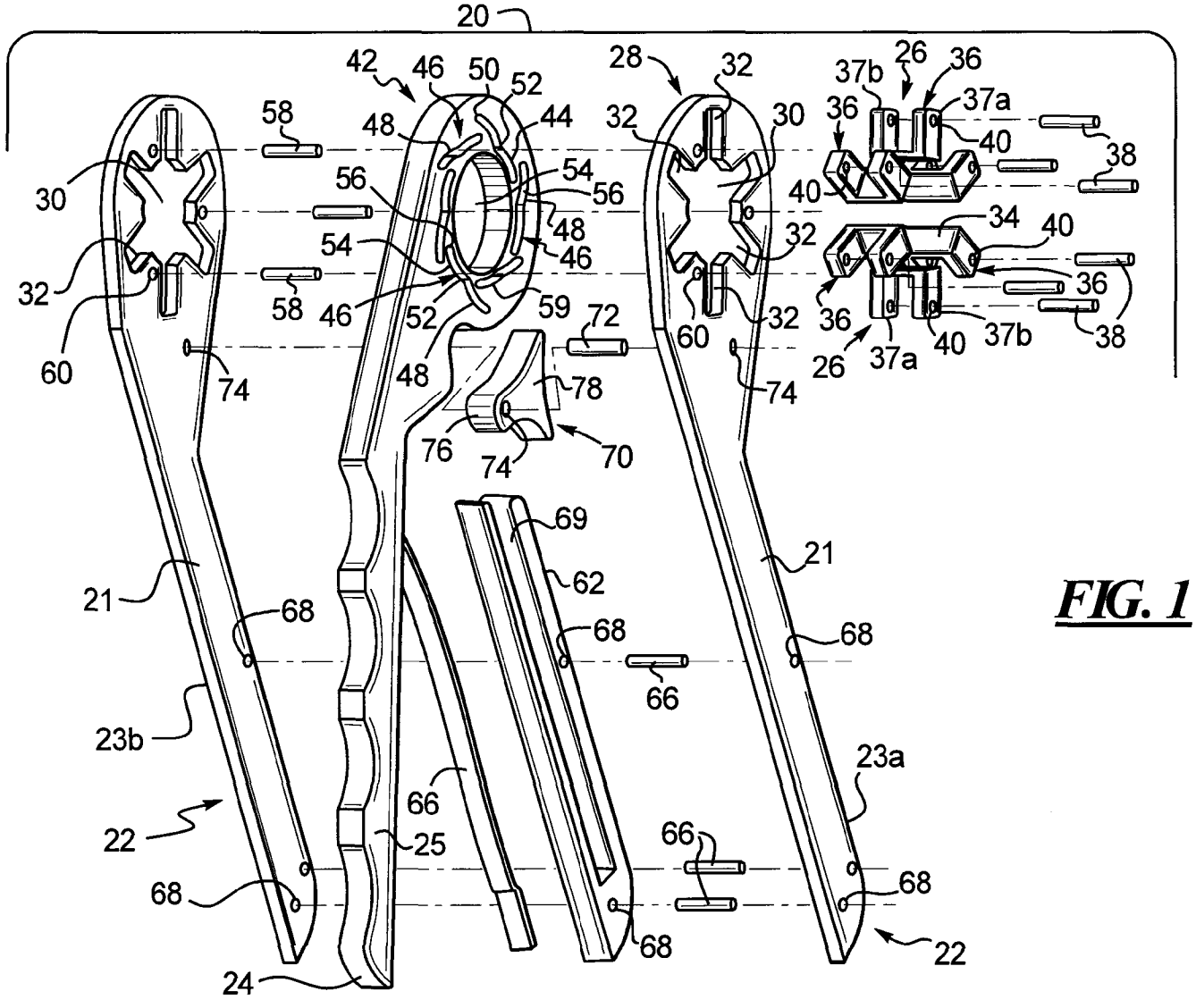
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FIG. 1

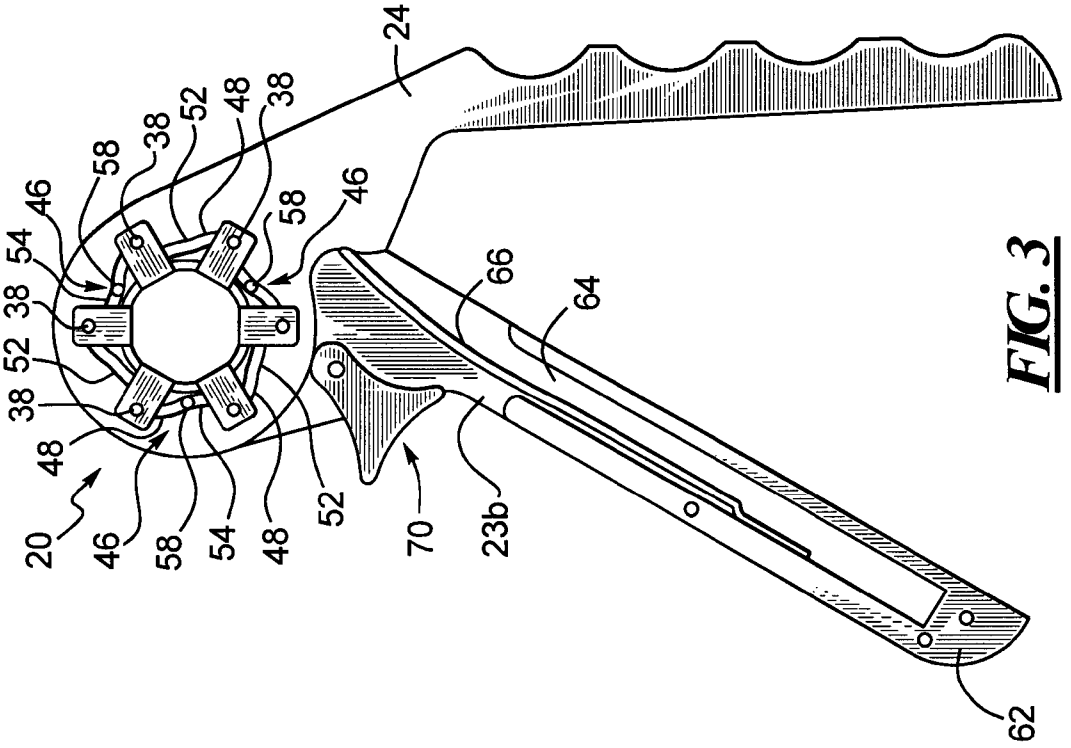
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FIG. 3

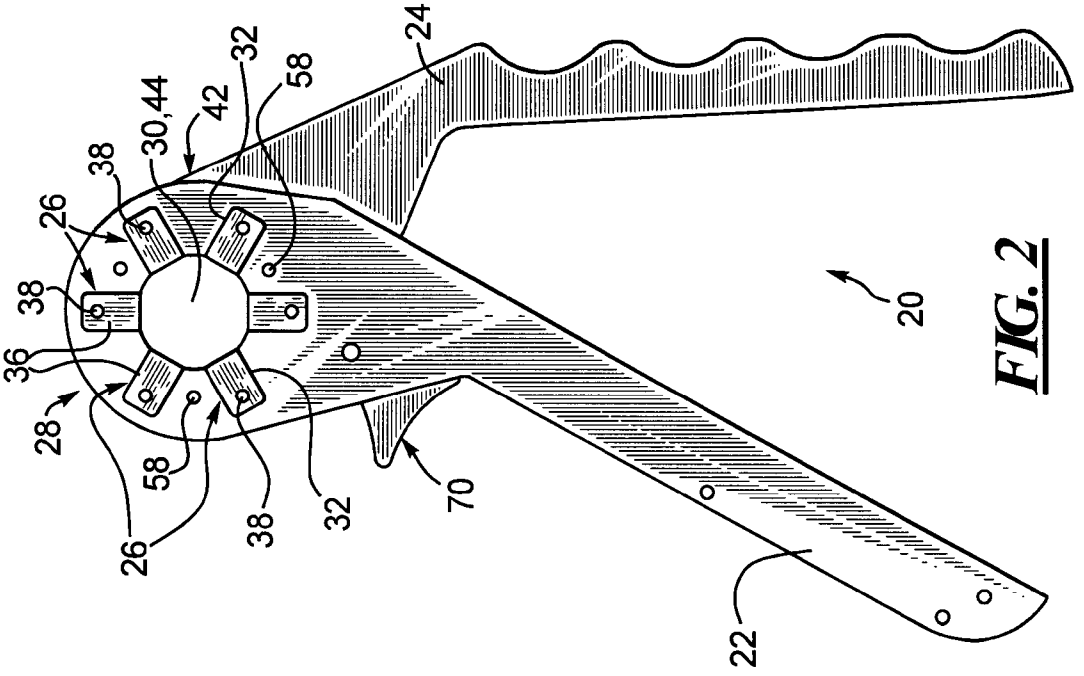
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FIG. 2

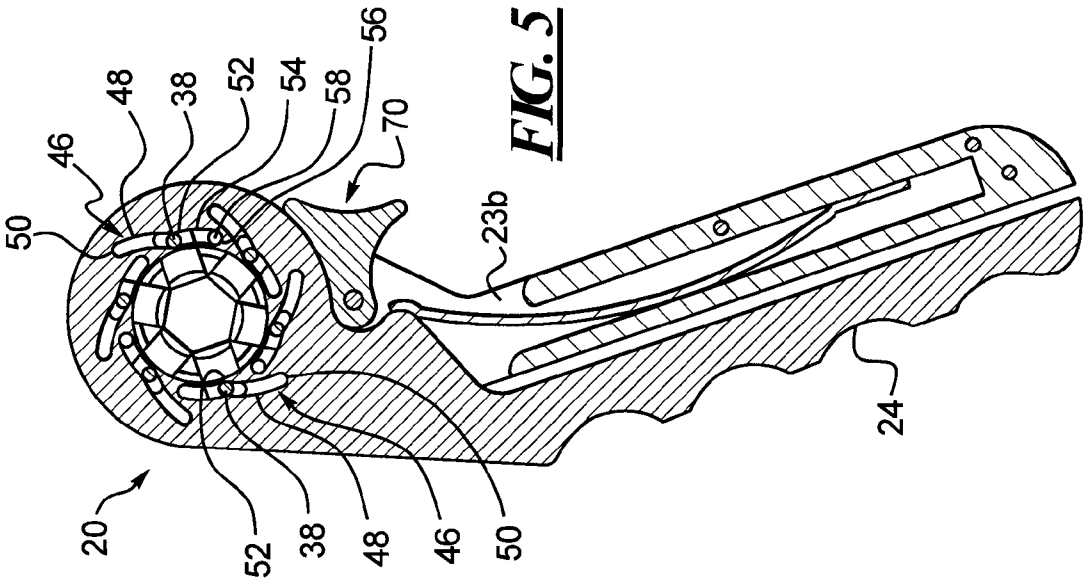


FIG. 5

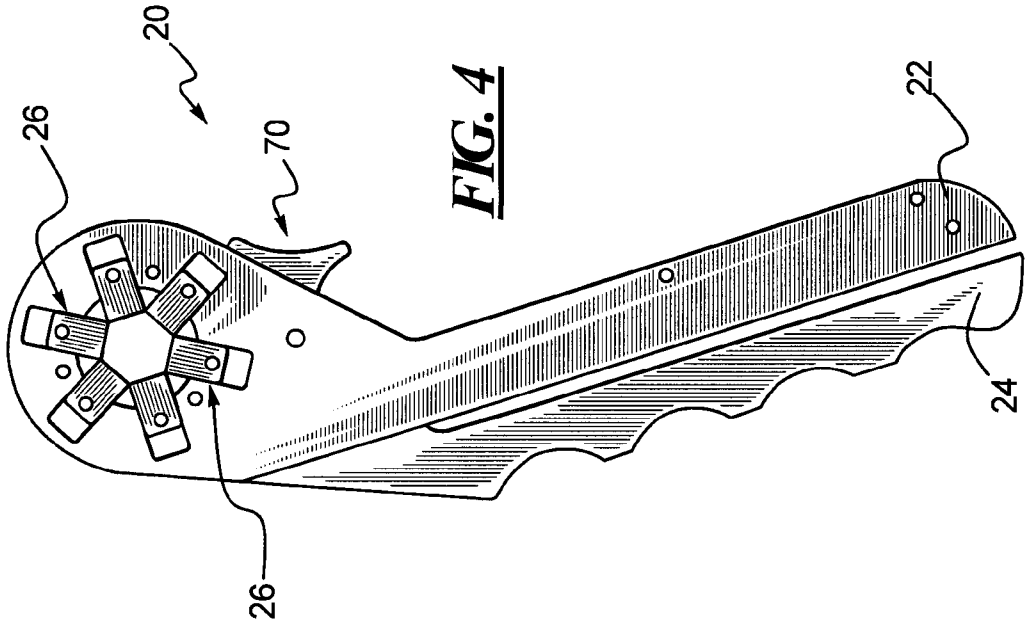


FIG. 4

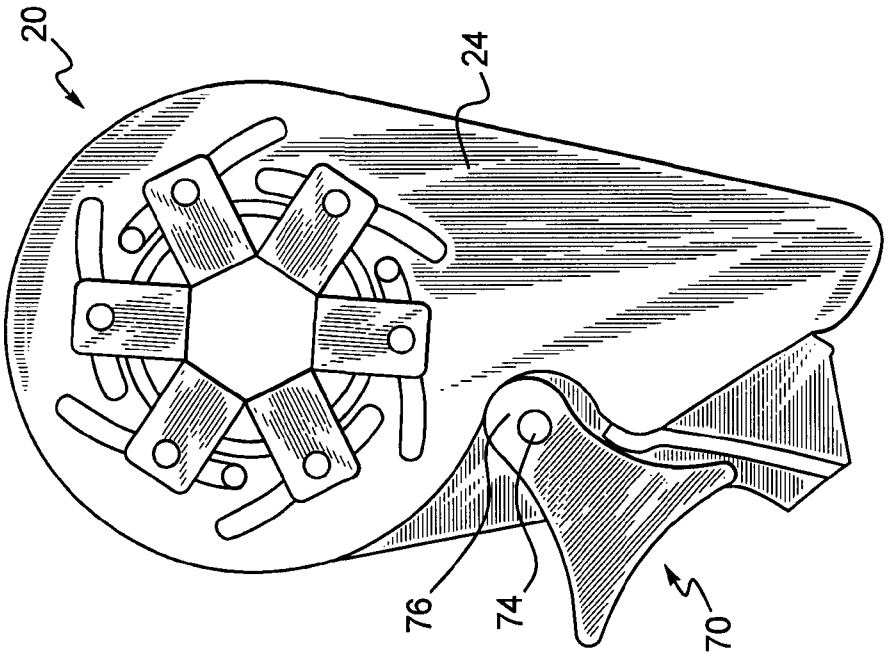


FIG. 7

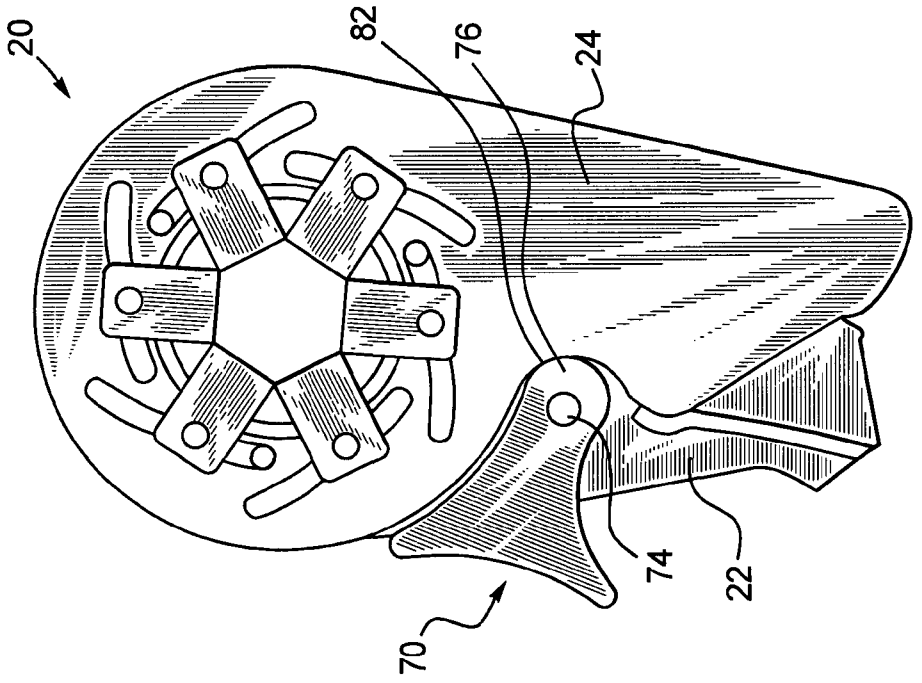


FIG. 6

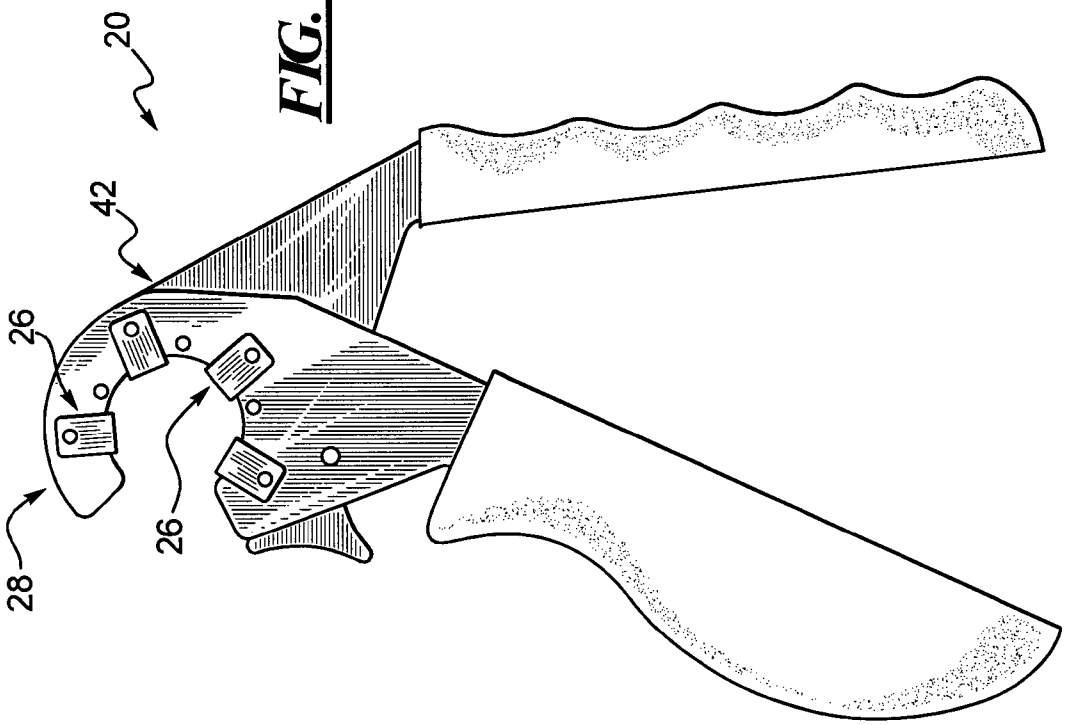


FIG. 9

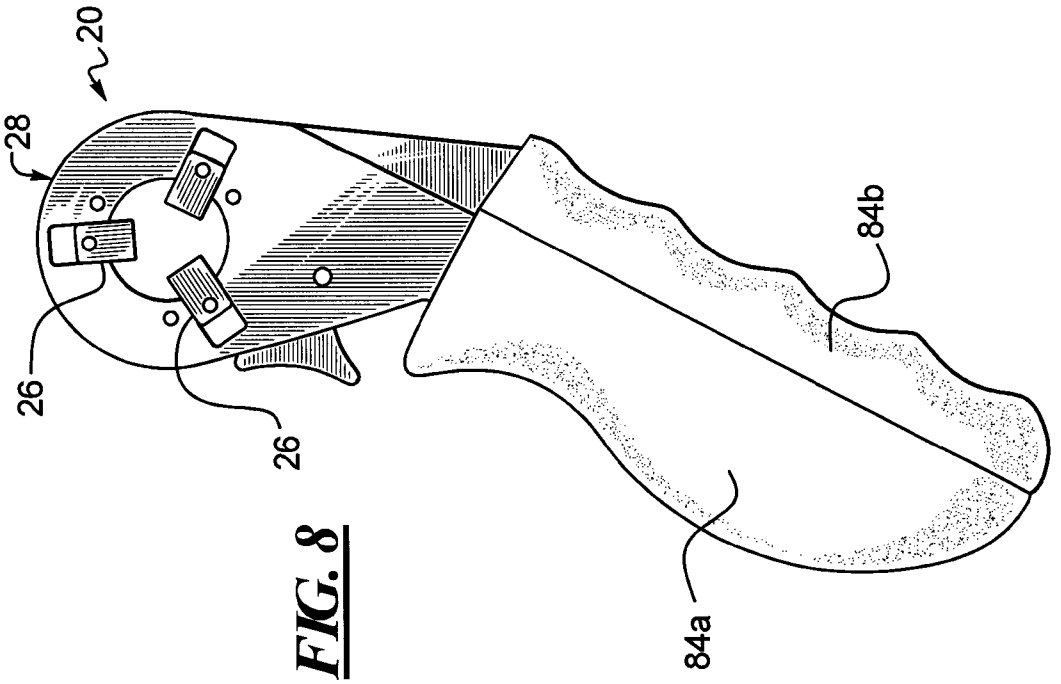
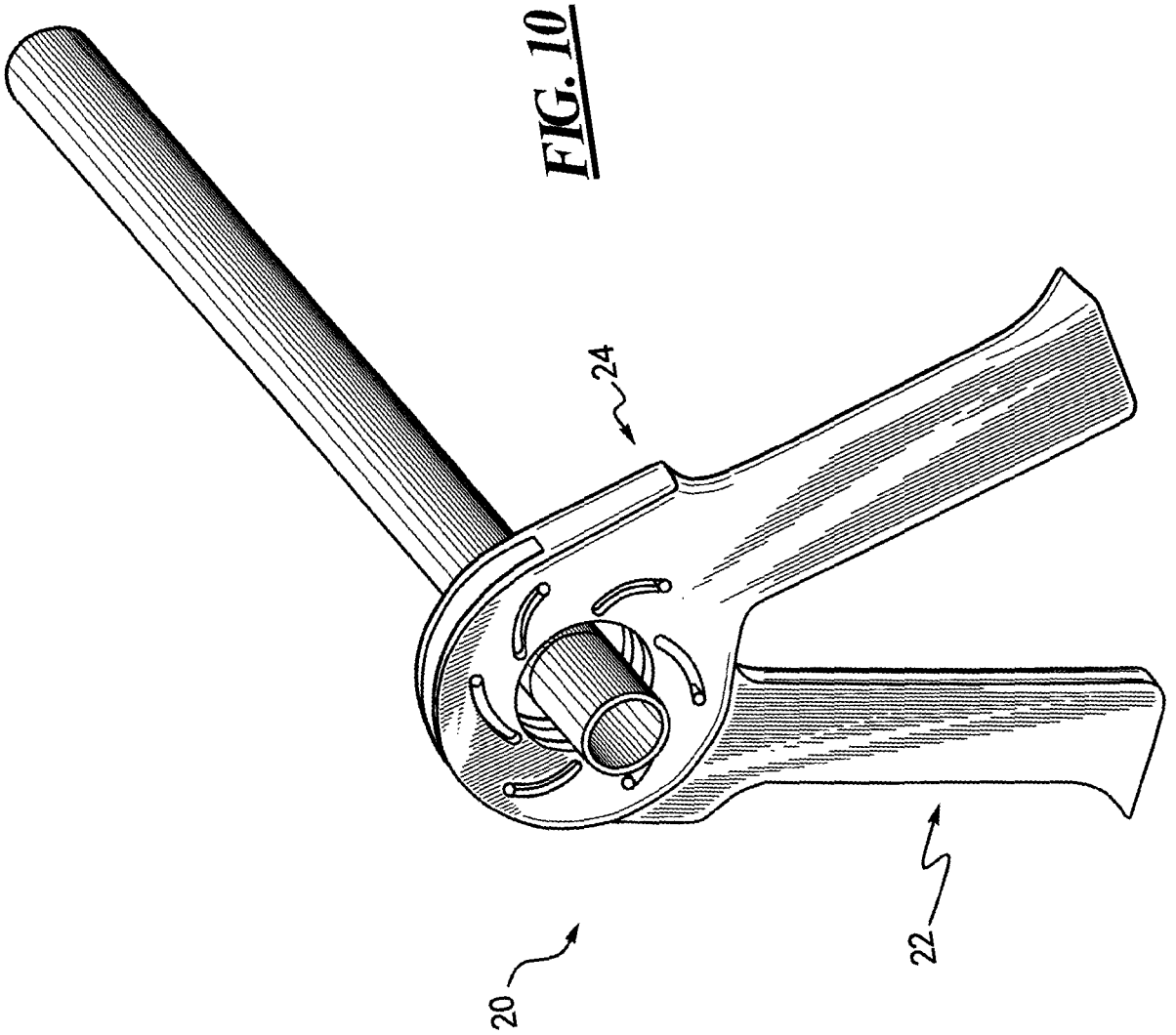


FIG. 8

FIG. 10



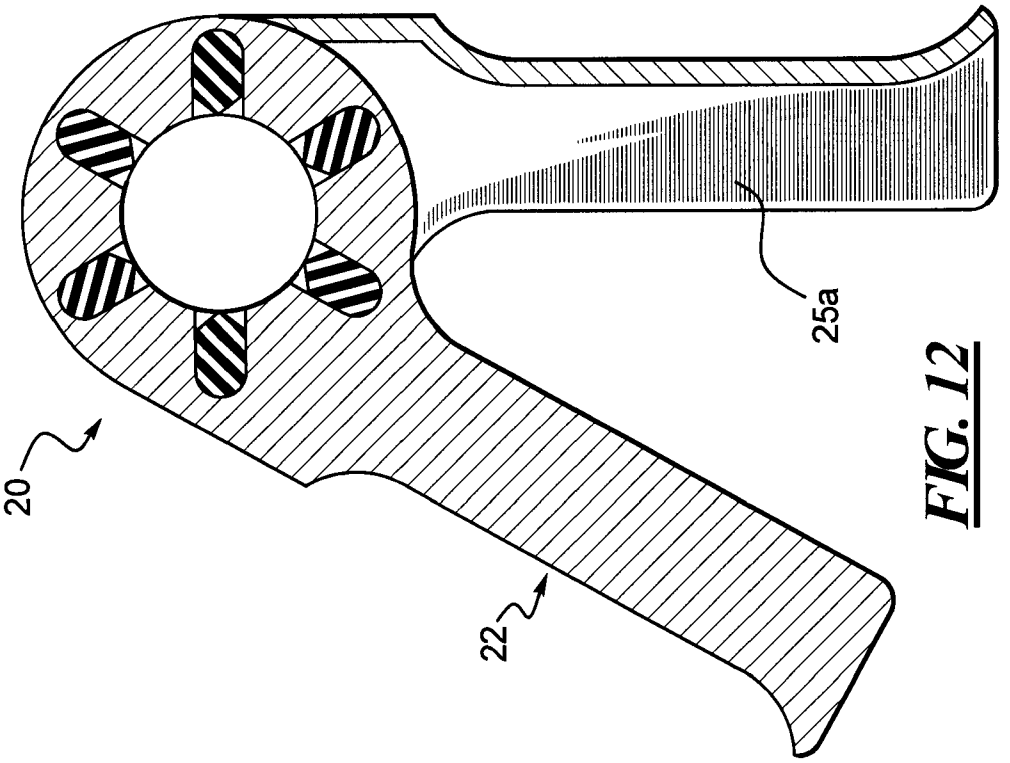
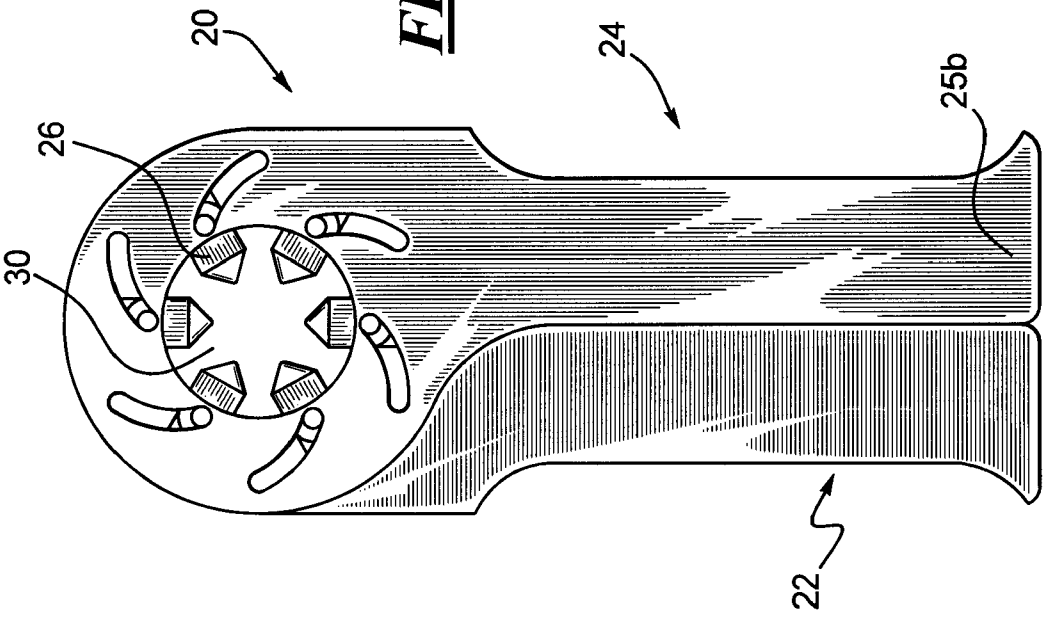


FIG. 12

FIG. 11



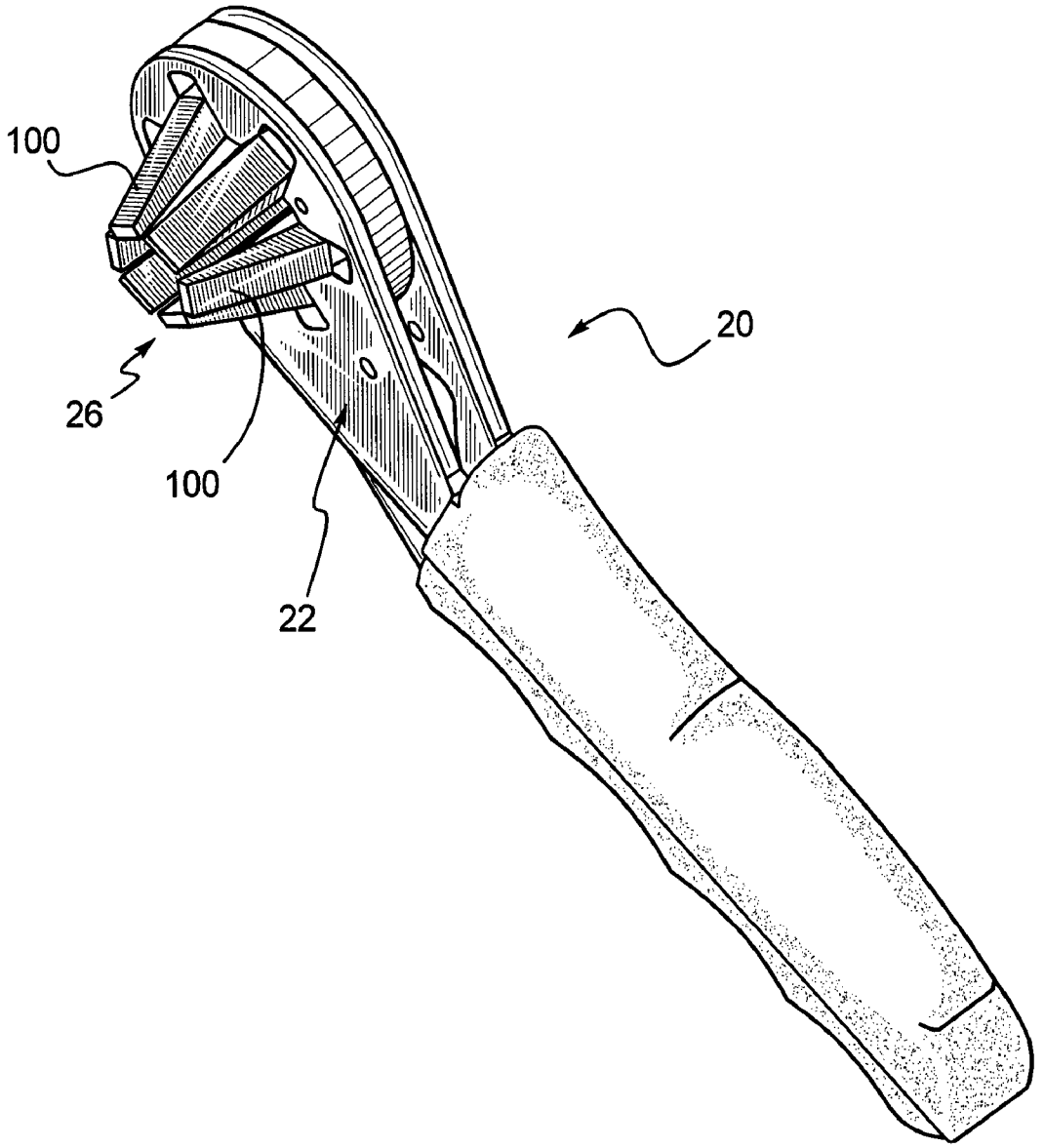


FIG. 13

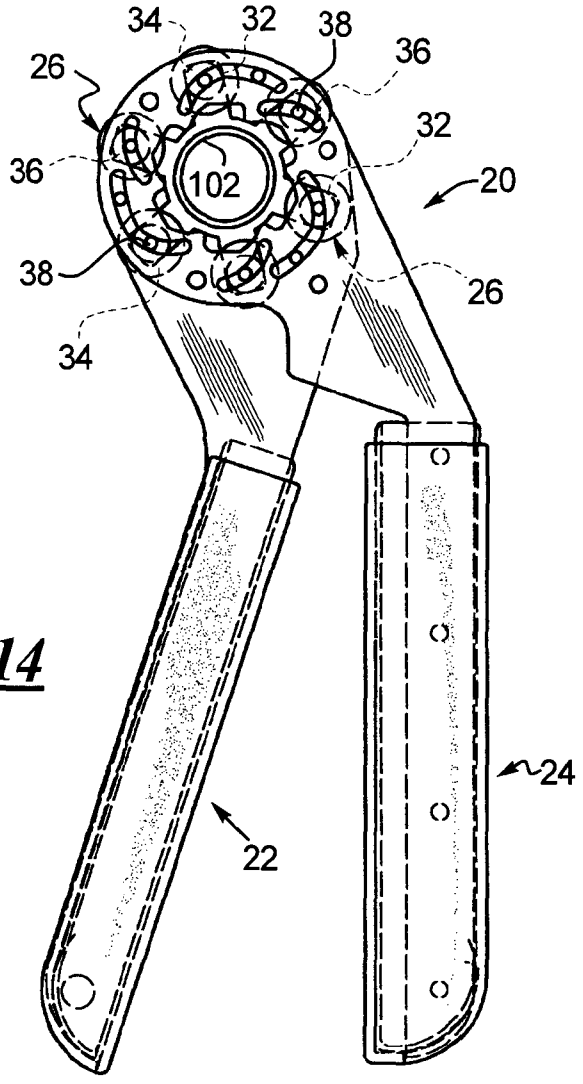


FIG. 14

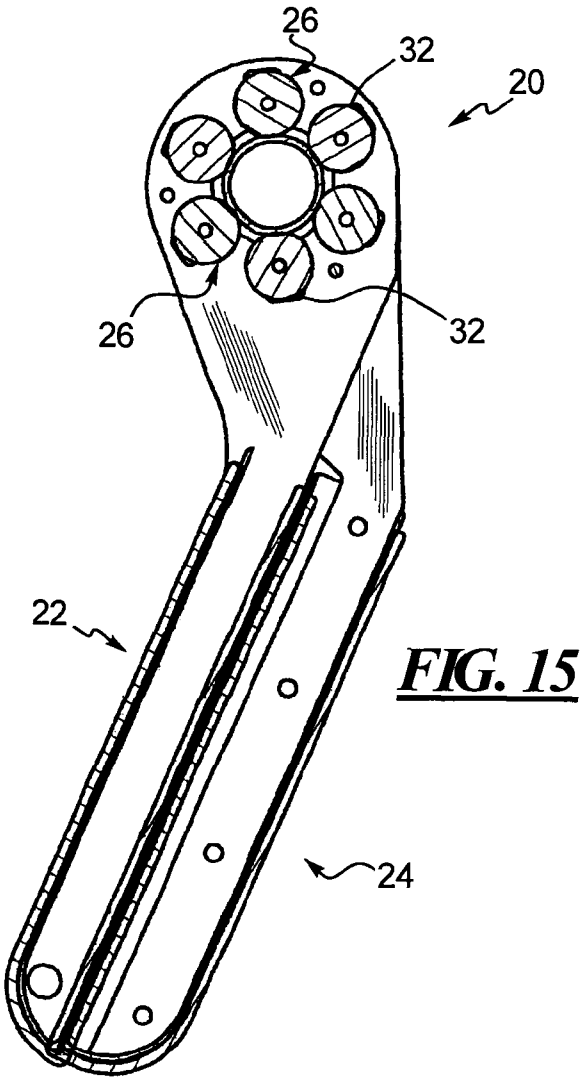
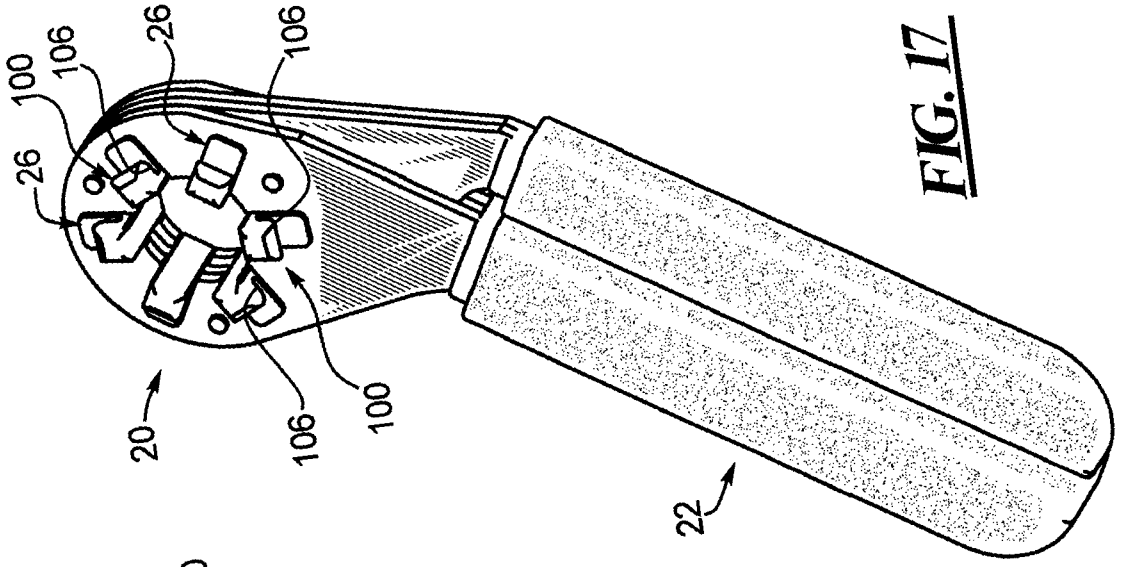


FIG. 15



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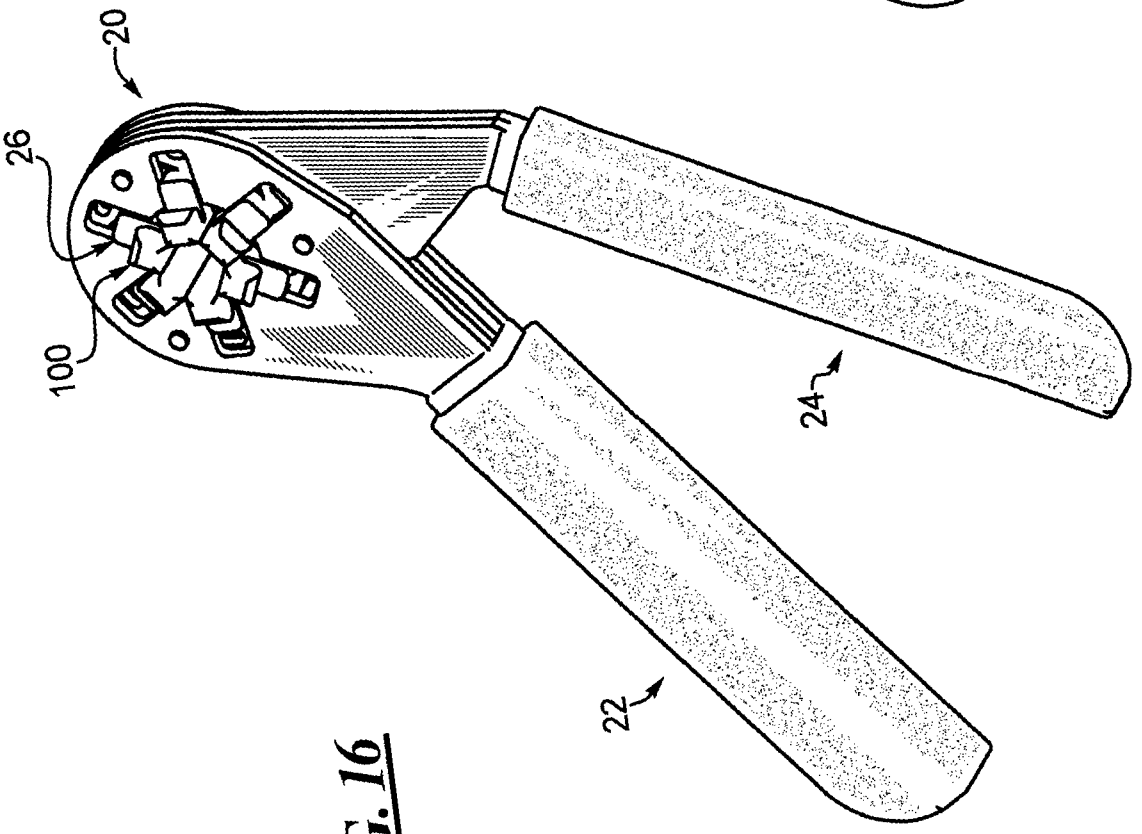
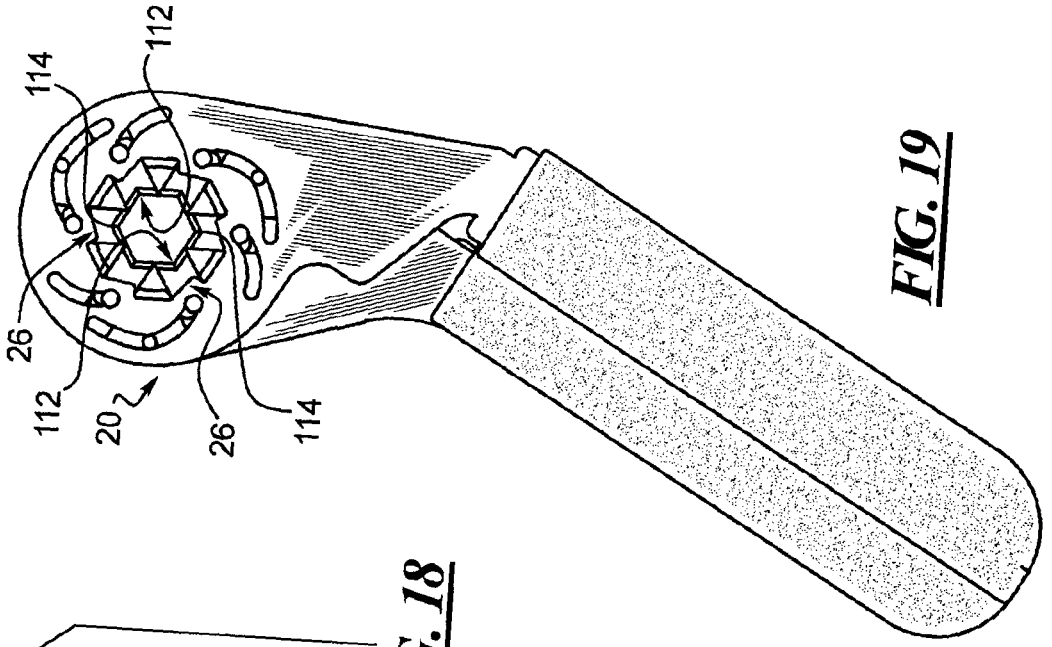


FIG. 16



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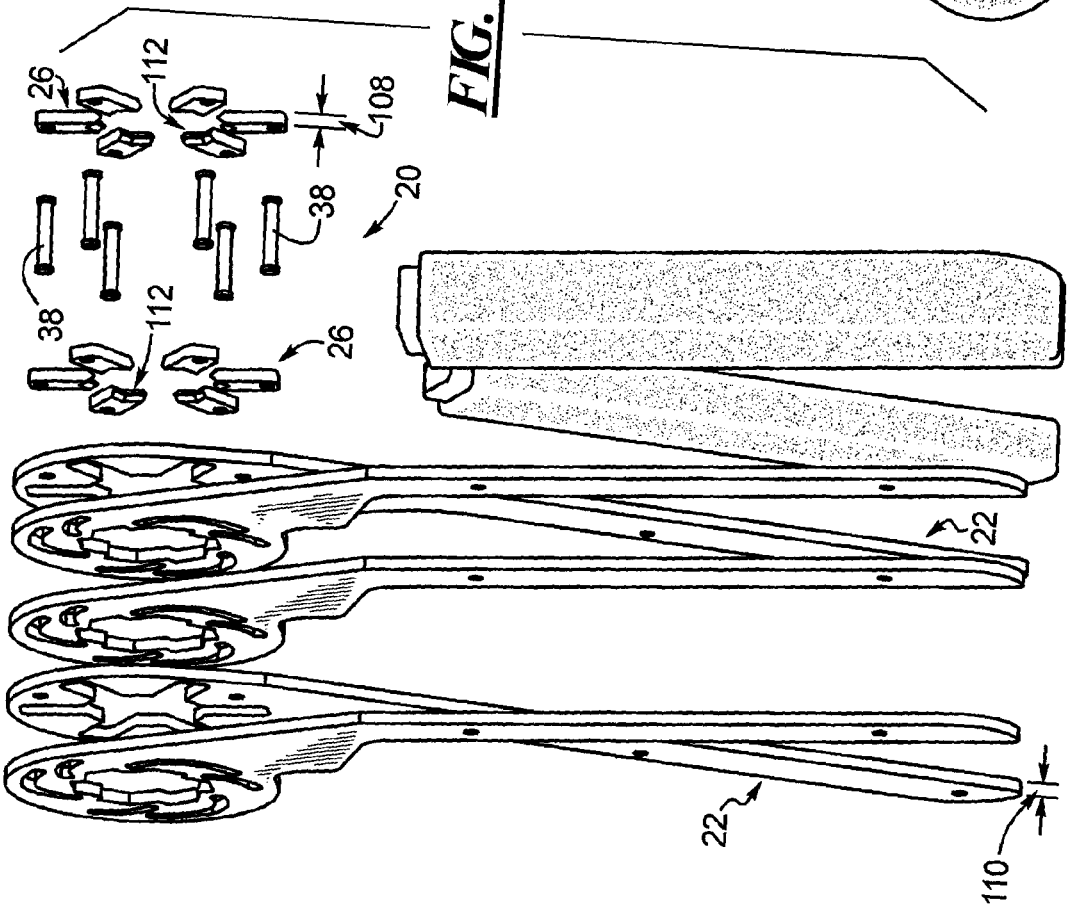
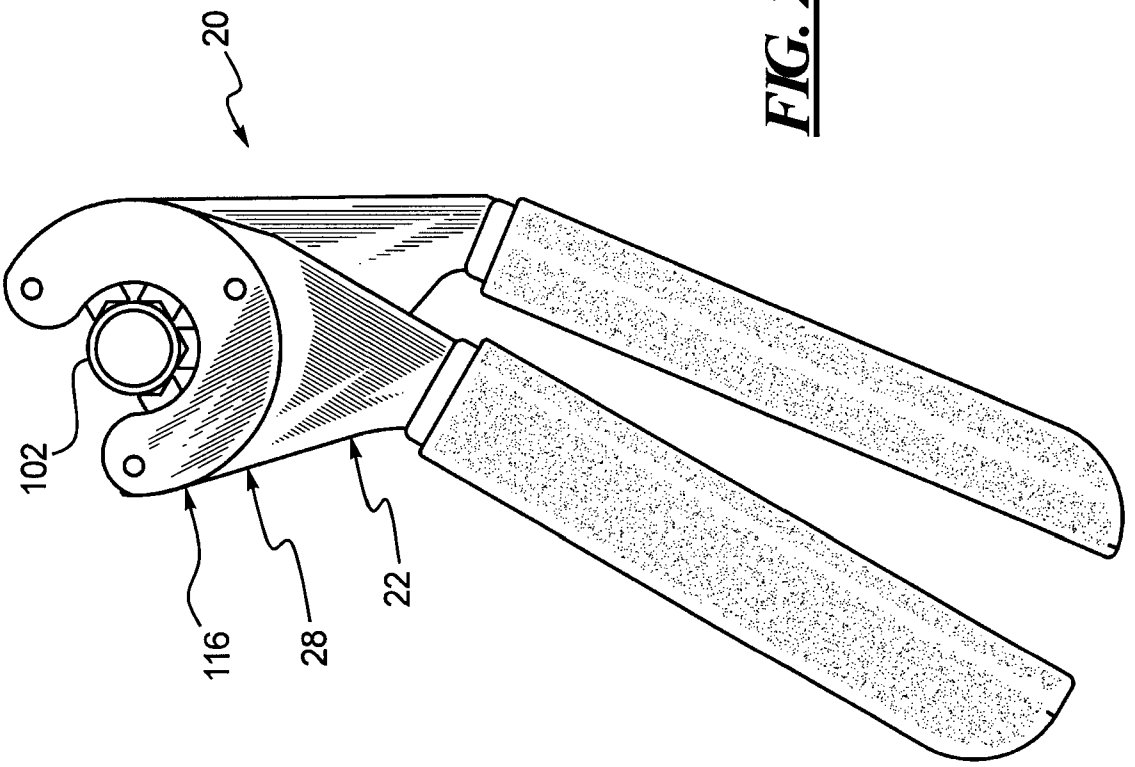


FIG. 18

FIG. 20



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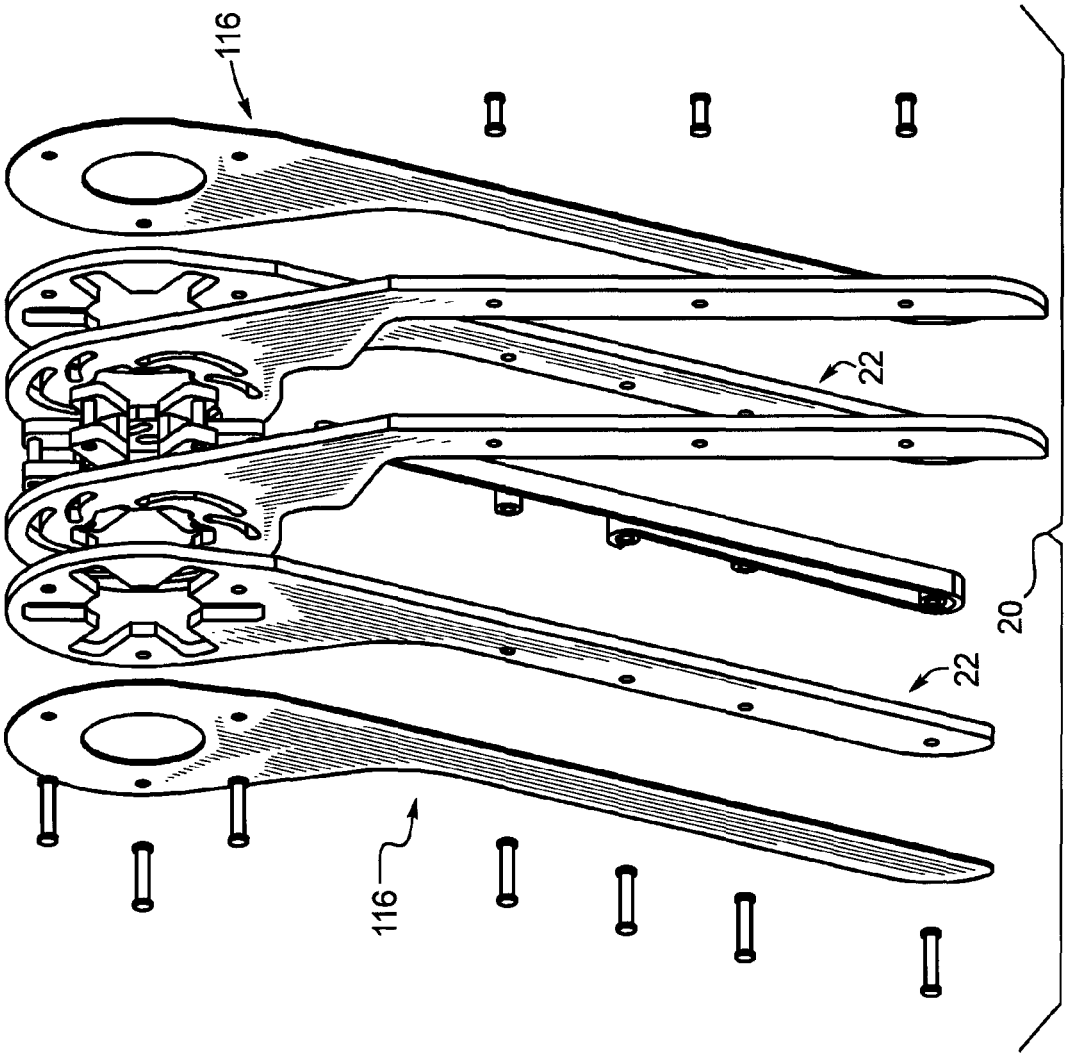

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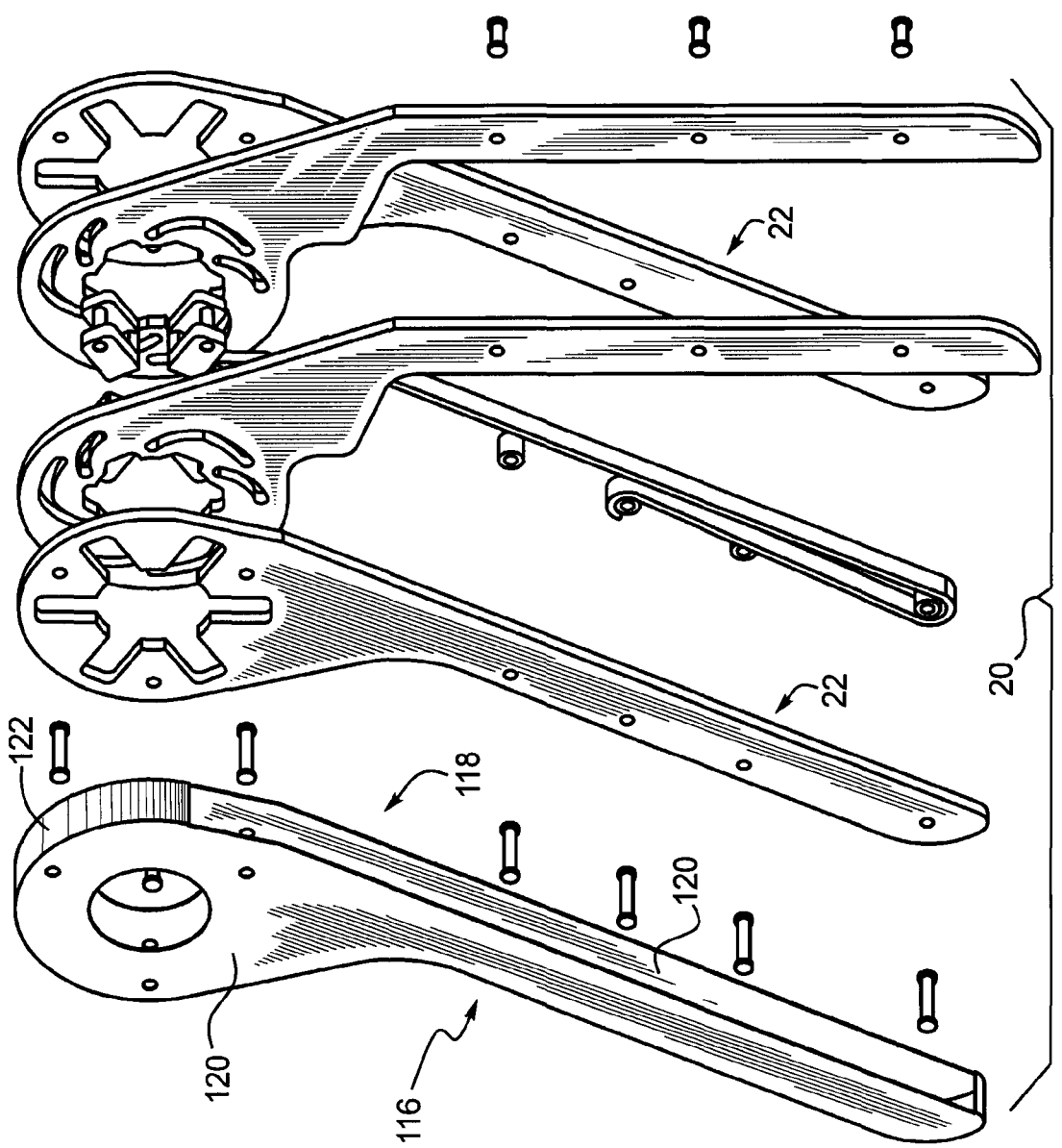

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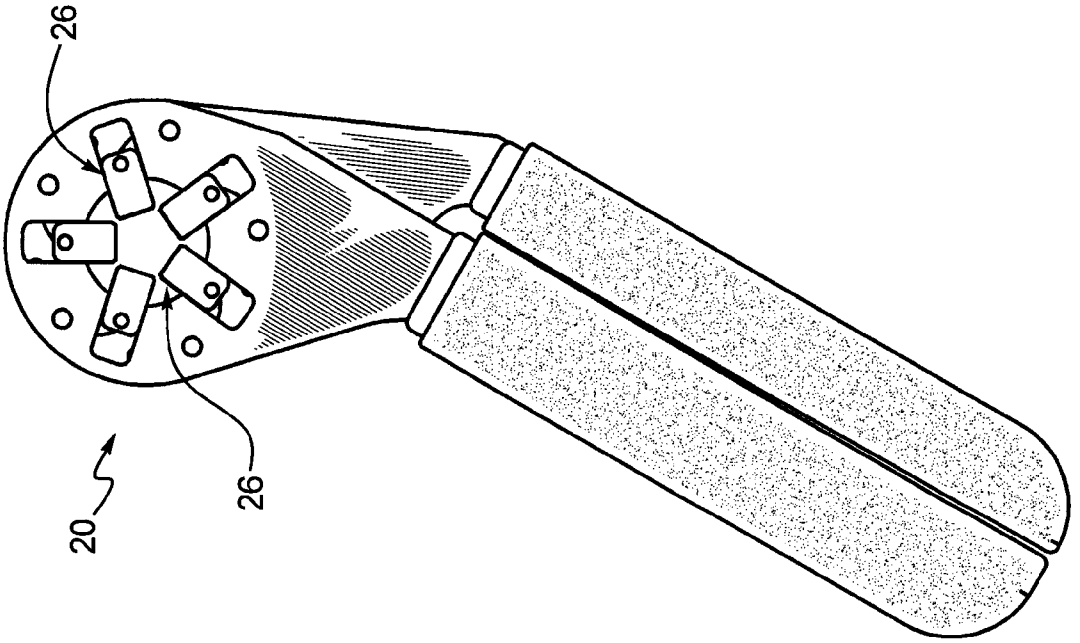


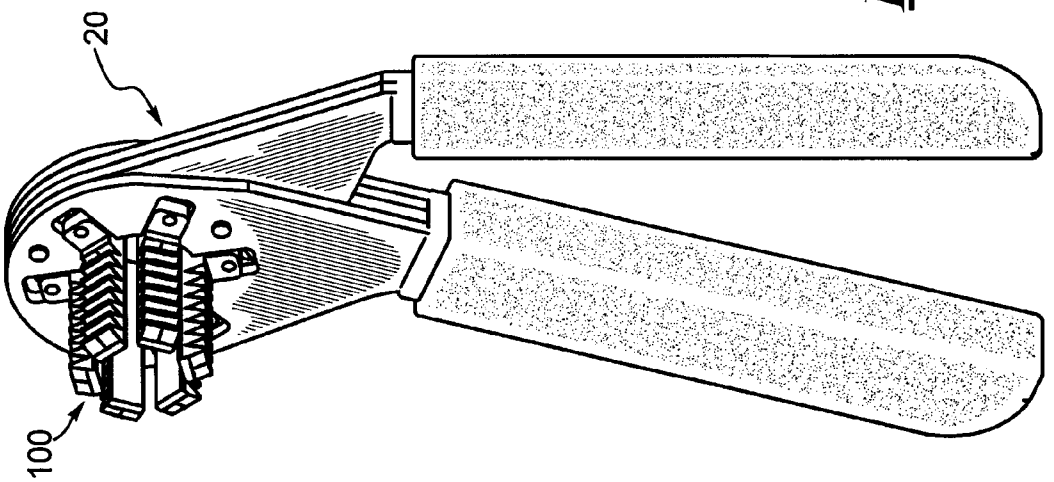
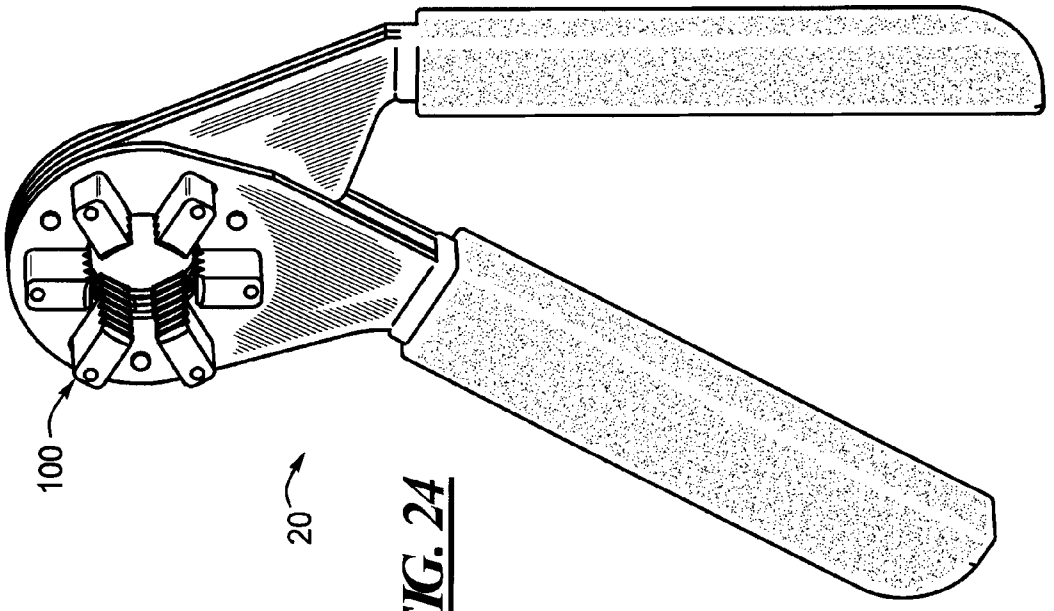


FIG. 25



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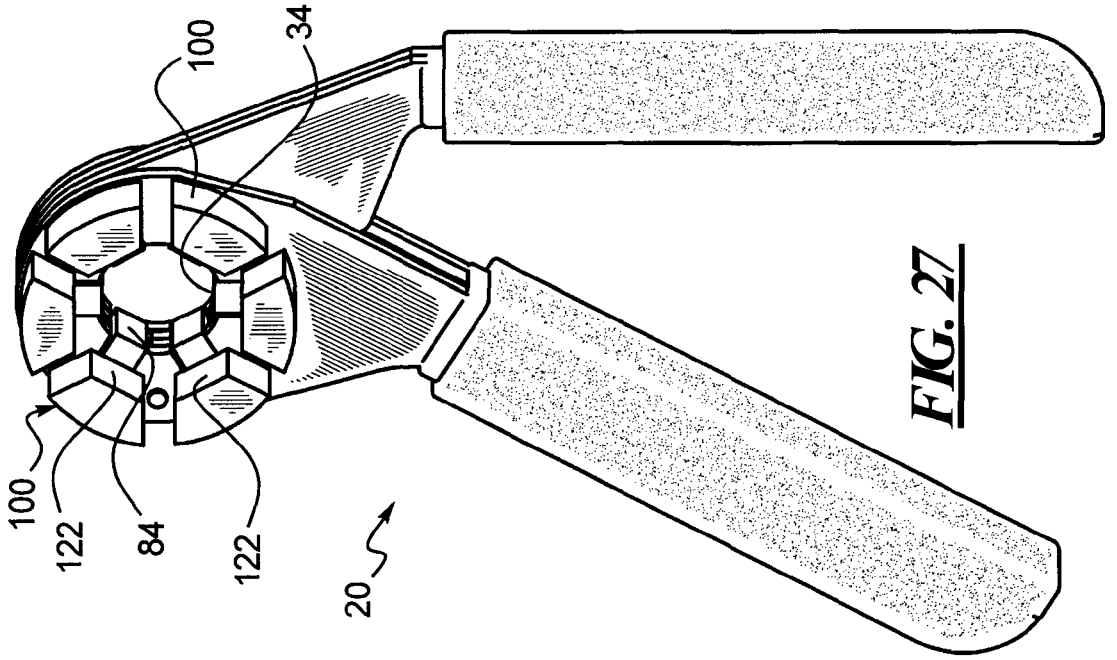


FIG. 27

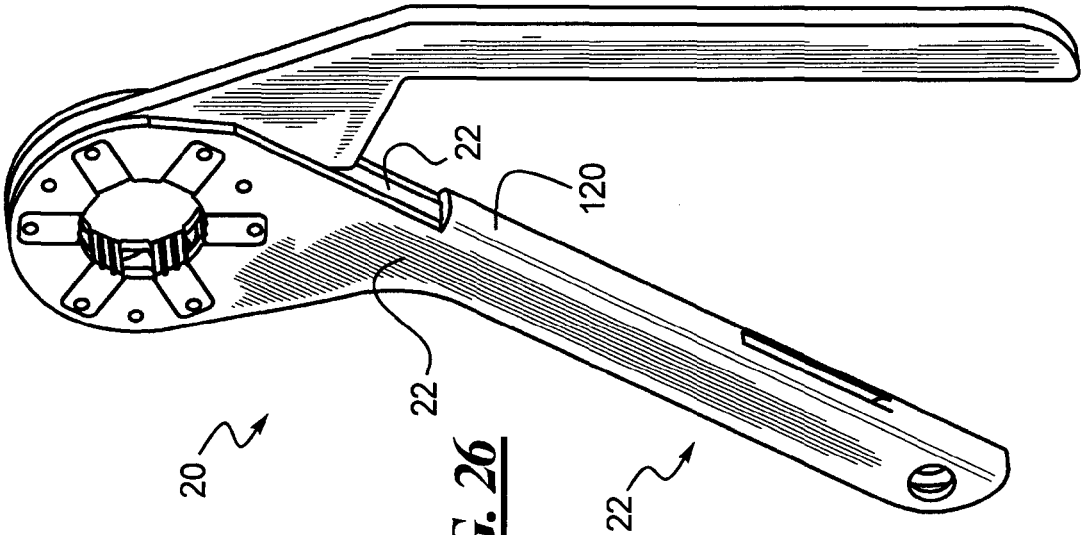
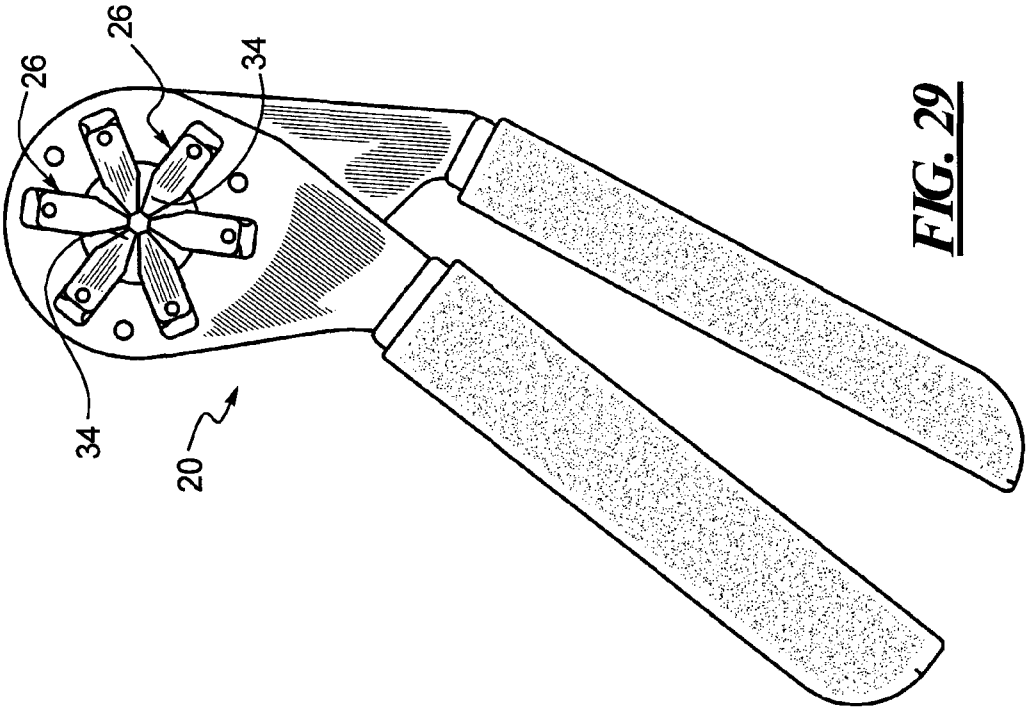


FIG. 26



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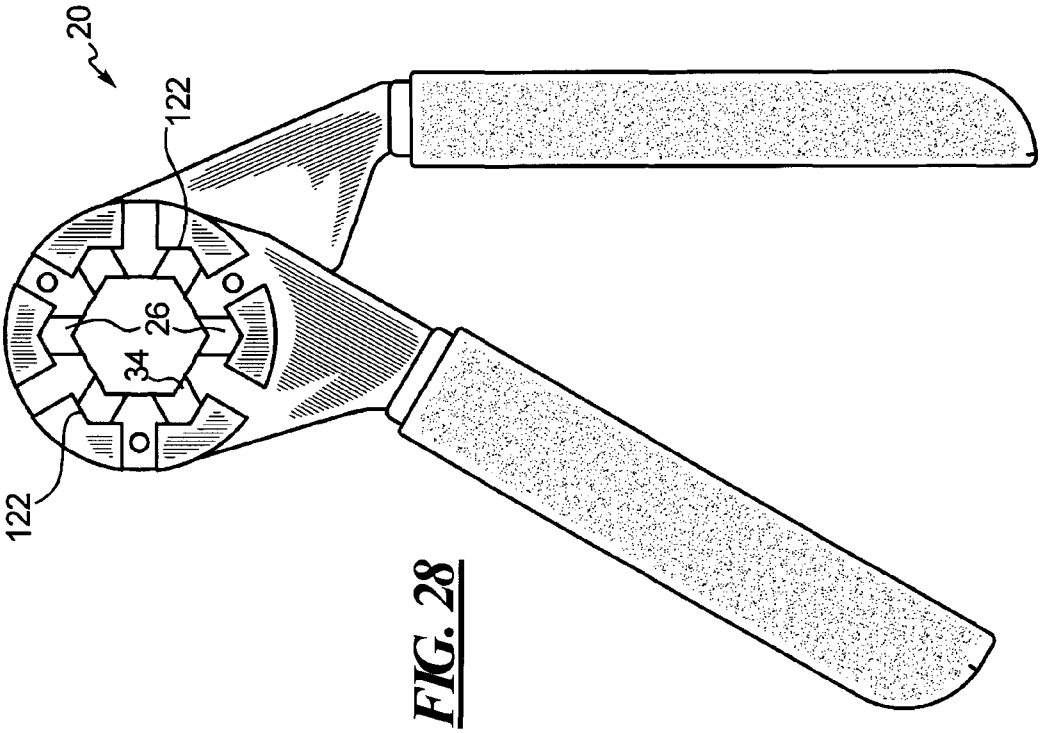

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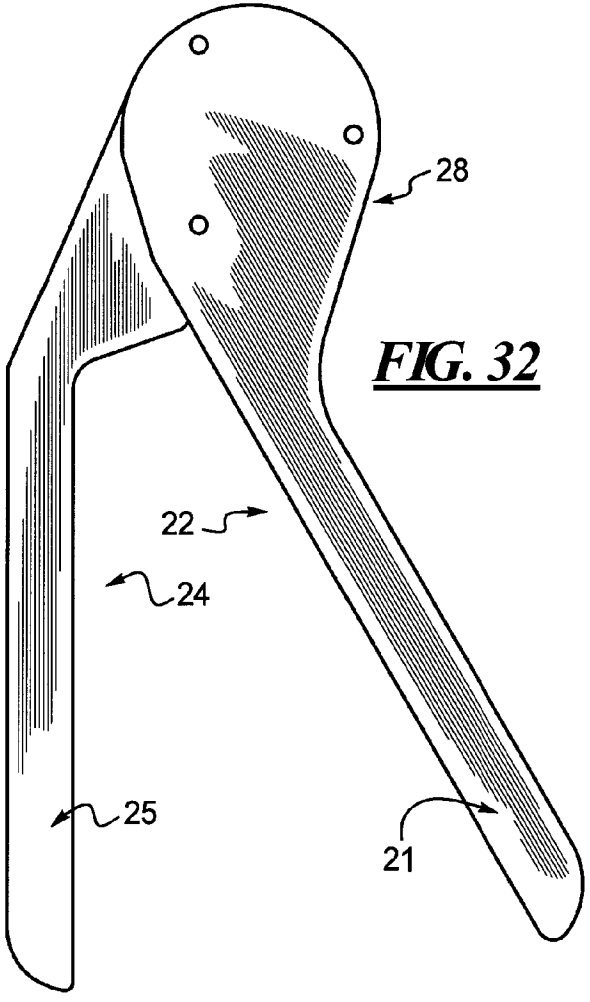


FIG. 32

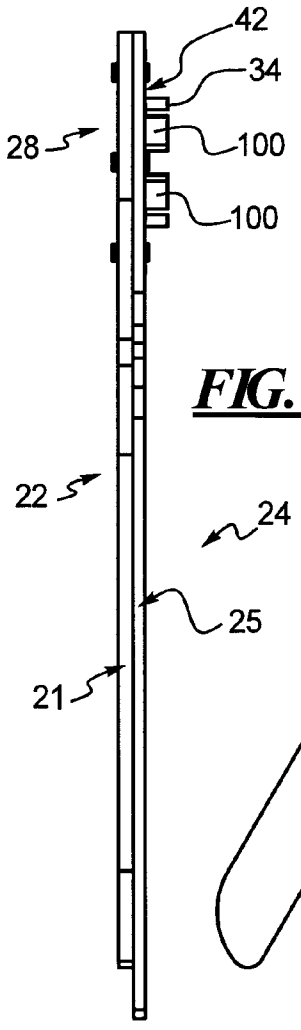


FIG. 31

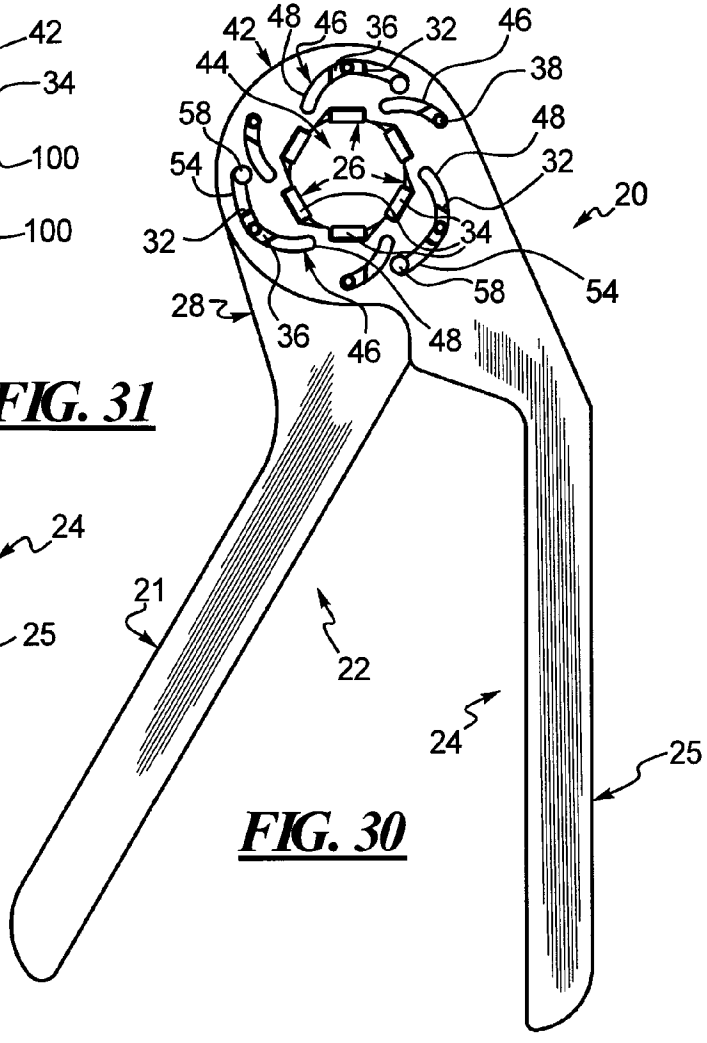


FIG. 30

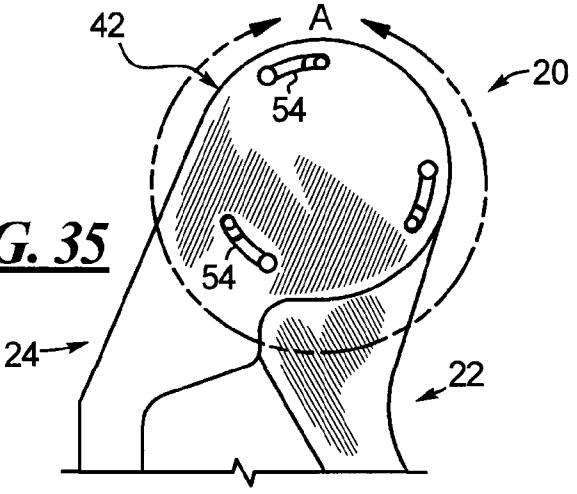


FIG. 35

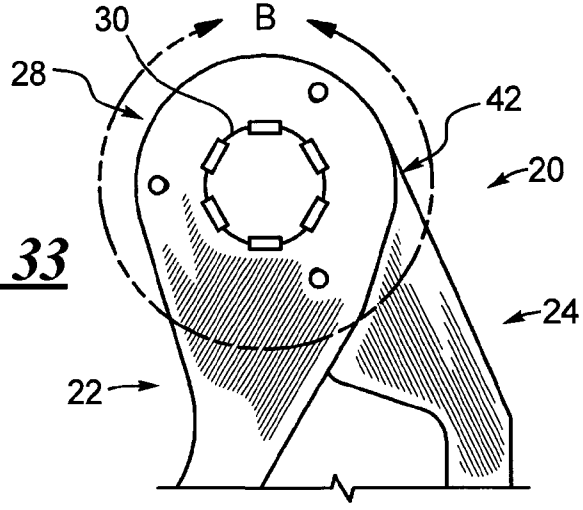


FIG. 33

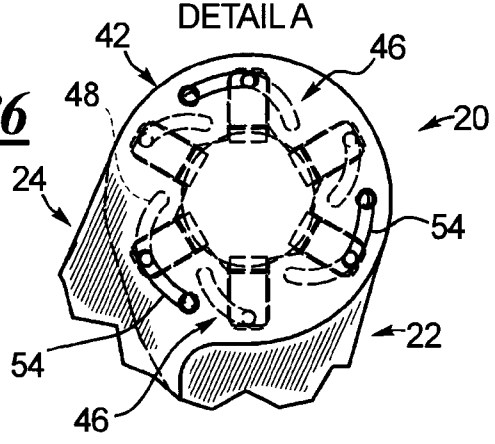


FIG. 36

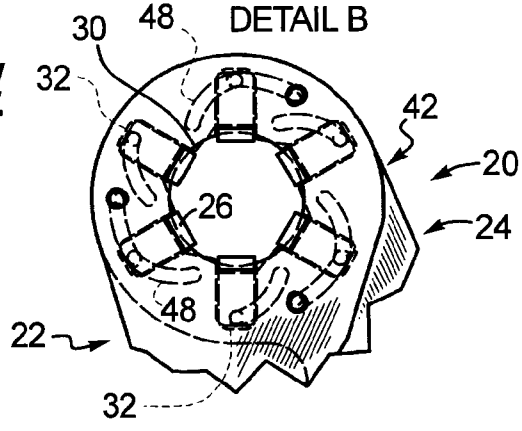


FIG. 34

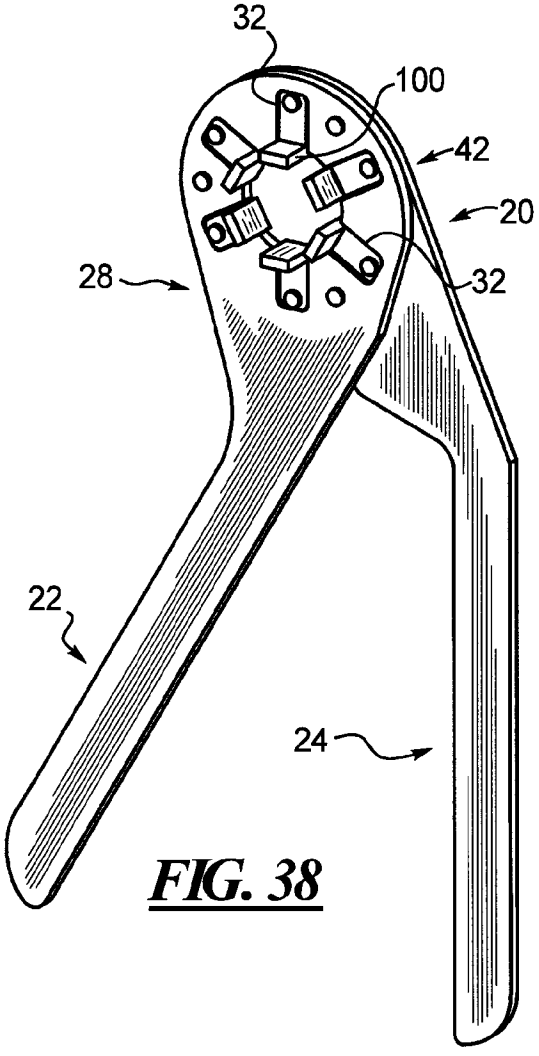
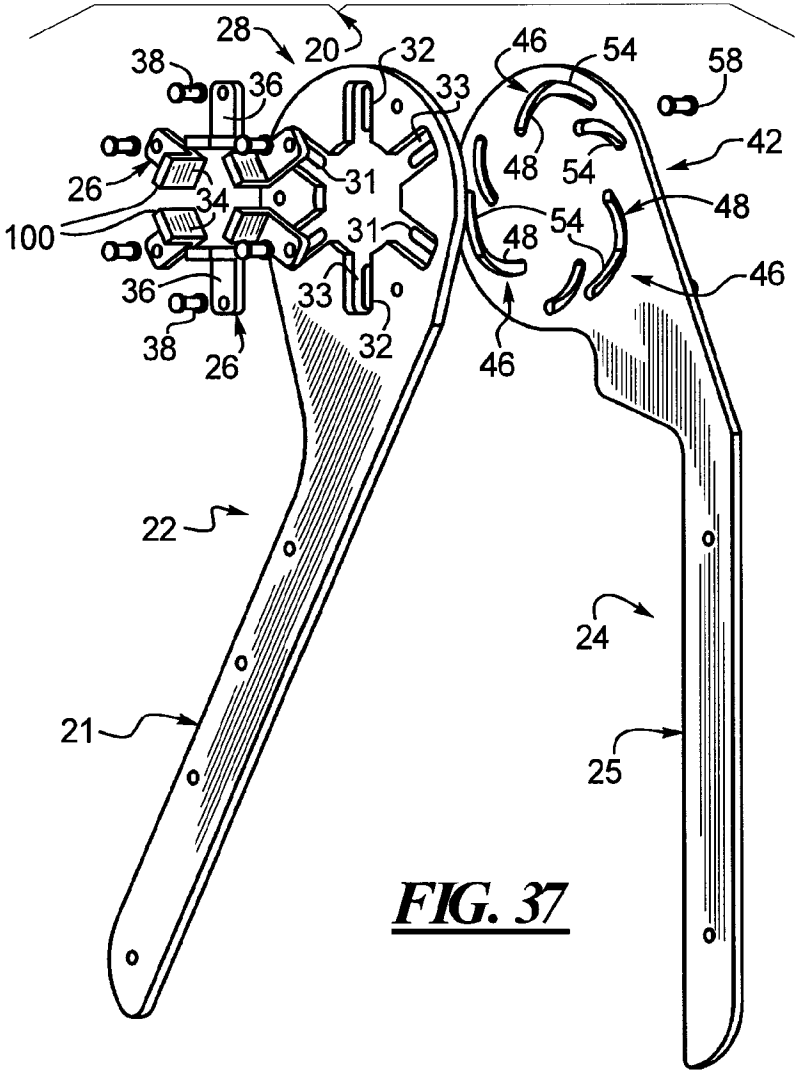

32
100
42
20
28
32
22
24

FIG. 38


28
20
32
38
36
33
46
54
58
42
26
31
48
54
34
100
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48
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33
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25

FIG. 37

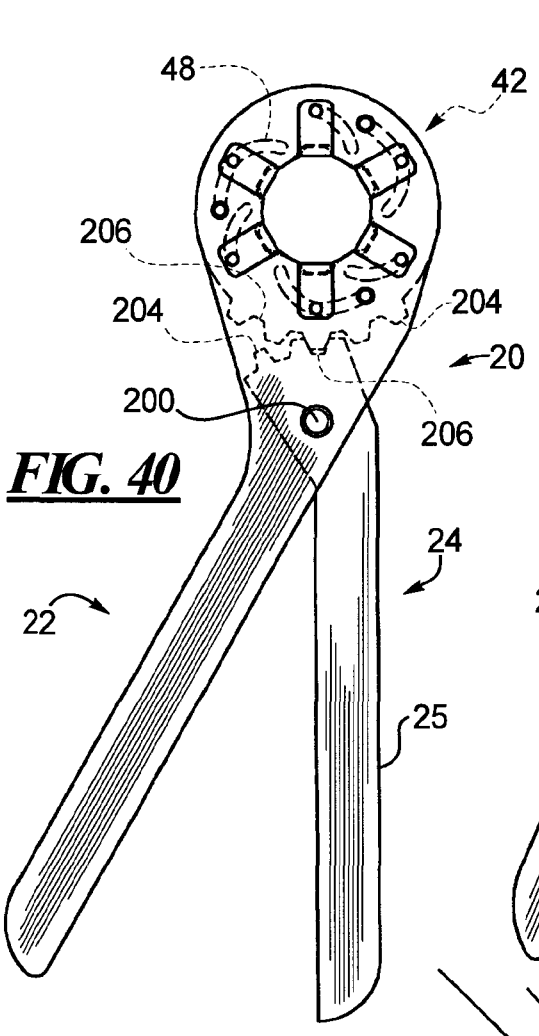
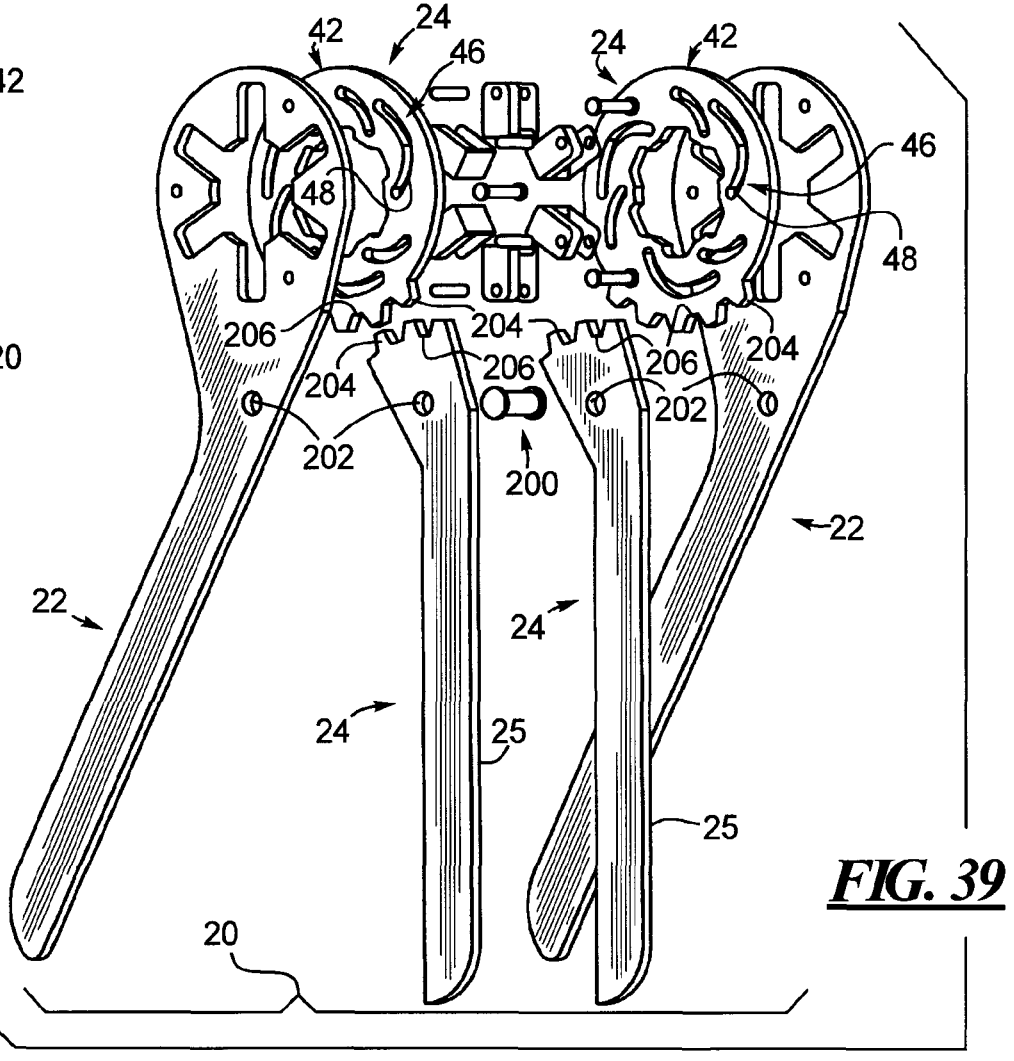

48
42
206
204
204
20
200
206
24
22
25

FIG. 40


42
24
46
24
42
46
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206
204
204
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202
200
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20

FIG. 39

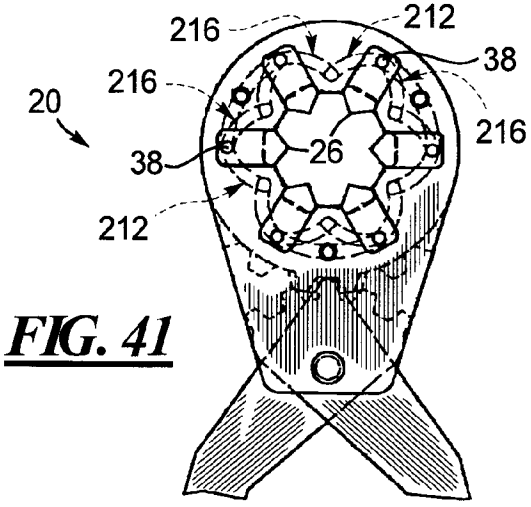


FIG. 41

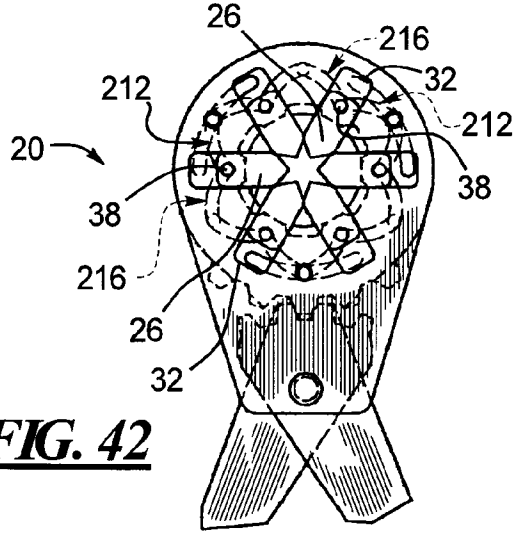


FIG. 42

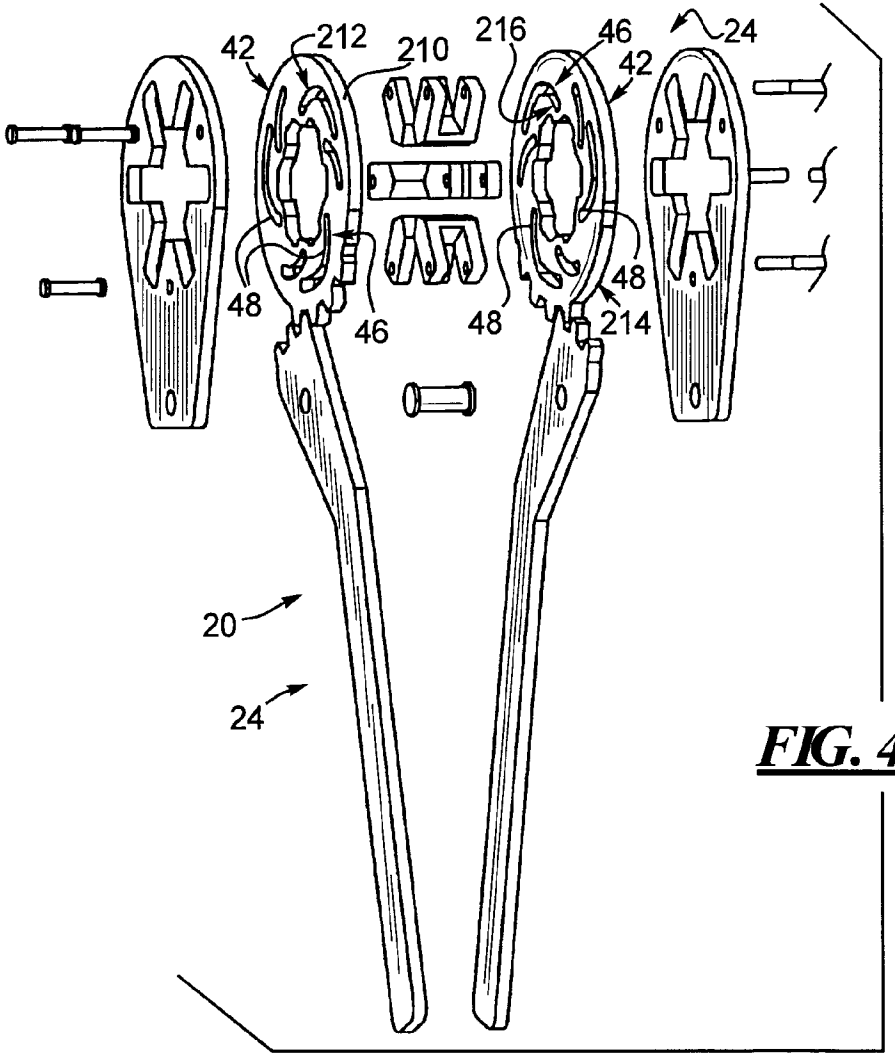


FIG. 43

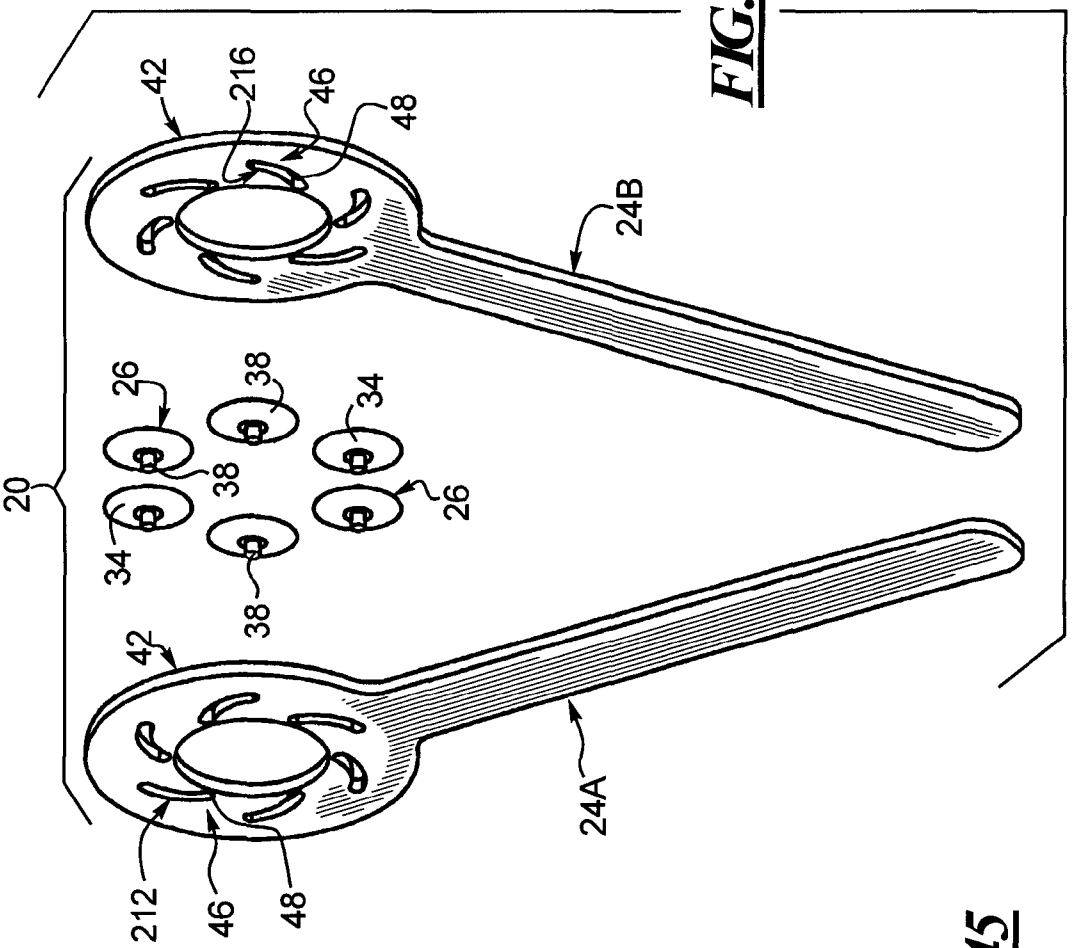


FIG. 46

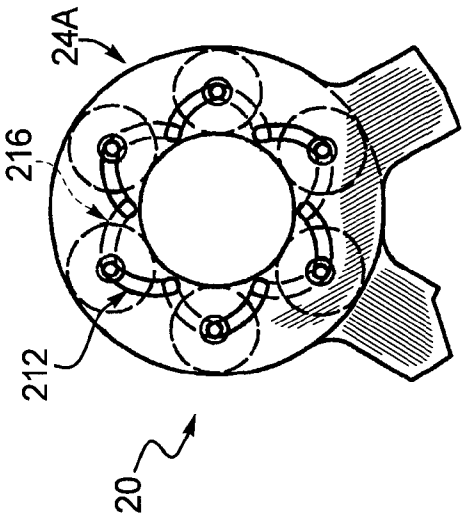


FIG. 44

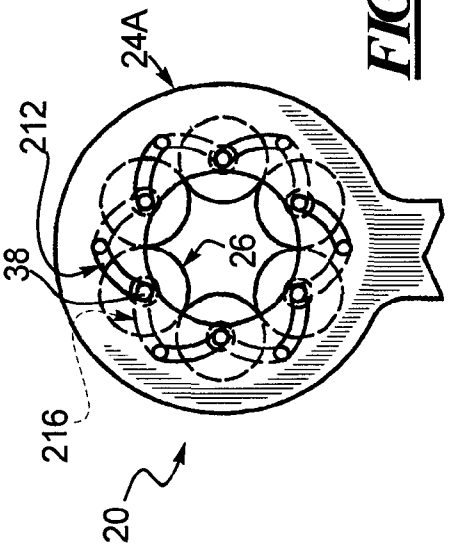


FIG. 45

ADJUSTABLE GRIPPING TOOL

RELATED APPLICATIONS

This application is a continuation-in-part of and claims the benefit of and priority from U.S. application Ser. No. 10/763,489, filed Jan. 23, 2004, now issued as U.S. Pat. No. 6,889,579.

BACKGROUND

This disclosure pertains to a hand tool and more particularly, to an adjustable gripping tool which, as a result of manual operation, self-energizes, automatically configures to engage differently dimensioned and shaped work pieces and de-energizes upon release of actuating force.

Various types of adjustable gripping tools are known in the art. Specifically, several known adjustable gripping tools are embodied in the form of a "crescent" wrench, an adjustable socket wrench, pipe wrench, vice grips, crimpers, bolt and nut cutters, pipe and tube cutters, and various other "plier-type" gripping tools. A crescent wrench is an adjustable open end wrench that has stationary rotatable screw which engages a toothed rack formed on a first jaw element movable with respect to the second jaw element extending from the first element. The adjustable socket wrench includes a shell housing movable elements, such that movement of the first element with respect to the shell causes the elements to move with respect to the shell in order to engage the work piece. One cutting tool version has adjustable cutting jaws that when tightened and rotated around a tube score and cut the tube. Another version of the cutting tool uses a blade cutting mechanism. The plier-type devices include a pair of first elements connected in such a manner so as to move at least two jaws toward one another in order to engage the work piece. The crimping tools provide various functions, such as specialty segmented dies that expand or contract via interaction of a tapered boy with a fixed diameter or a plier-type device crimper with jaws that have been modified as a special head to crimp the work piece.

Each of the prior art devices has disadvantages. The crescent wrench is not automatically resizable during use. The socket device is limited in its effective range of dimensional capability. In other words, a large number of sockets is needed to service a relatively standard range of work pieces, the work pieces must have a standard configuration and the work pieces must be engaged axially.

The plier-type devices fail to engage the work piece evenly around or within the circumference with proper offsetting forces and stability which aides in operation of the tool. The plier-type devices also concentrate the applied mechanical forces in a point-loading configuration creating pressure points and stress risers on the work piece surface.

The tube cutting devices cannot be used with one hand. Another disadvantage of tube cutting devices, in particular, knife blade cutters, is that the tubing is often distorted as a result of the asymmetrical cutting forces applied by the blade against the tube. Other tube cutting devices, such as screw-and-wheel-type tube cutters require continuous rotation of the cutting wheel around the circumference of the tube while simultaneously increasing the force applied by the cutting wheel to the tube in order to increase the cutting depth.

Prior art crimping devices cannot create symmetrically balanced crimps with a simple hand tool. For example, crimping a metal sleeve on a hydraulic hose requires a press and a proper die for proper application. Also all of the previously available gripping tools either loosely hold the work piece or hold the work piece in a manner that concentrates and focuses the gripping forces in a point pressure-loading configuration. This concentration of gripping forces on certain points oftentimes deforms the work piece. Also the previously available tools for wrench applications could not be easily sized to the work piece.

Therefore, there exists a need in the art for an adjustable gripping tool which, as a result of manual operation, self-energizes the tool action, may be automatically sized and resized to engage a work piece, de-energizes upon release of actuation force, that has a broad range of dimensional capability, engages work pieces axially and radially and provides offsetting forces for stability in operation. Beyond the ability to resize the gripping range, the gripping tool of the present disclosure symmetrically translates the force applied to the gripping tool onto the work piece in a symmetrically balanced and mechanically advantaged and efficient way. Thus, an even distribution of gripping and rotational force about the work piece is achieved; whereby allowing for the most efficient distribution of mechanical stress about the work piece. For any given force required to manipulate the work piece the present disclosure will accomplish the work with the minimal distortion of the work piece by distributing the work force over the largest area of the work piece. Other advantages of the adjustable gripping tool of the present disclosure include decreased costs, increased productivity and multi-access engagement of the work piece resulting in a mechanically advantaged, efficient, even and balanced distribution of working forces.

BRIEF DESCRIPTION OF THE DRAWINGS

Certain embodiments are shown in the drawings. However, it is understood that the present disclosure is not limited to the arrangements and instrumentality shown in the attached drawings, wherein:

FIG. **1** is an exploded perspective view of an adjustable gripping tool in accordance with the principles of the present disclosure.

FIG. **2** is a top plan view of the adjustable gripping tool of FIG. **1** disposed in an open or first operative position.

FIG. **3** is a sectioned view of the adjustable gripping tool of FIG. **2** wherein one component of a first element has been removed.

FIG. **4** is a top plan view of the adjustable gripping tool of FIG. **1** disposed in a closed or second operative position.

FIG. **5** is a sectional view of the adjustable gripping tool of FIG. **4** taken along a line passing through a second element of the adjustable gripping tool.

FIG. **6** is a detailed broken-away section view of the adjustable gripping tool of FIG. **6** wherein one component of the first element has been removed.

FIG. **7** is a detailed broken-away section view of the adjustable gripping tool of FIG. **6** wherein the lock mechanism is disposed in a locked or second operative position.

FIG. **8** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principles of the present disclosure.

FIG. **9** is a top plan view of yet another embodiment of an adjustable gripping tool in accordance with the principles of the present disclosure.

FIG. **10** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principles of the present disclosure.

FIG. **11** is a top plan view of the adjustable gripping tool of FIG. **10**, disposed in a closed or second operative position.

FIG. **12** is a sectional view of the adjustable gripping tool of FIG. **11** taken along a line passing through the second element of the adjustable gripping tool.

FIG. **13** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **14** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **15** is a sectional view of the adjustable gripping tool of FIG. **14** taken along a line passing between a first element and a second element.

FIG. **16** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **17** is a perspective view of the adjustable gripping tool of FIG. **16**.

FIG. **18** is an exploded view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **19** is a top plan view of the adjustable gripping tool of FIG. **18**.

FIG. **20** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **21** is an exploded view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **22** is an exploded view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **23** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **24** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **25** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **26** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **27** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **28** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **29** is a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **30** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **31** is side elevation view of the adjustable gripping tool of FIG. **30**.

FIG. **32** is a bottom plan view of the adjustable gripping tool of FIG. **30**.

FIG. **33** is a partial top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **34** is a detailed view of a portion of the adjustable gripping tool of FIG. **33** as defined by line B.

FIG. **35** is a partial bottom plan view of the adjustable gripping tool of FIG. **33**.

FIG. **36** is a detailed view of a portion of the adjustable gripping tool of FIG. **35** as defined by line A.

FIG. **37** is an exploded view of another embodiment of an adjustable gripping too in accordance with the principal aspects of the present invention.

FIG. **38** is a perspective view of the adjustable gripping tool of FIG. **37**.

FIG. **39** is an exploded view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **40** is a top plan view of the adjustable gripping tool of FIG. **39**.

FIG. **41** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **42** is another top plan view of the adjustable gripping tool of FIG. **41**.

FIG. **43** is an exploded view of the adjustable gripping tool of FIGS. **41** and **42**.

FIG. **44** is a top plan view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure.

FIG. **45** is another top plan view of the adjustable gripping tool of FIG. **44**.

FIG. **46** is an exploded view of the adjustable gripping tool of FIGS. **44** and **45**.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT OF THE DISCLOSURE

For the purposes of promoting and understanding the principles disclosed herein, reference will now be made to the preferred embodiments illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope is thereby intended. Such alterations and further modifications in the illustrated device and such further applications are the principles disclosed as illustrated therein as being contemplated as would normally occur to one skilled in the art to which this disclosure relates.

One principal aspect of the present disclosure is directed to an adjustable gripping tool for engaging a work piece to impart work thereto. The gripping tool includes a first element and a second element connected for a relative movement to generate movement of at least one gripping element. The first element includes a gripping portion configured to engage the work piece including at least one guide and at least one gripping element. Each at least one gripping element may include a body portion adapted for engaging a work piece, an arm portion configured to engage one of the guides and/or a force transfer element contiguous with the arm portion. The second element includes an actuation portion generally aligned with the first element and having at least one slot. Each at least one slot has a section configured to engage one of the force transfer elements such that movement of the second element with respect to the first element actuates each at least one section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective at least one guide.

FIG. **1** illustrates in an exploded perspective view of the adjustable gripping tool **20** in accordance with principles of the present disclosure. The adjustable gripping tool **20** primarily includes a first element **22** and a second element **24** connected for relative movement. In one embodiment of the present disclosure, the first element **22** includes a pair of elements **23**A, **23**B disposed on opposing sides of the second element **24**. It is within the teachings of the present disclosure

that the first element **22** may be configured with a single element **23**A or **23**B, or as a pair of elements **23**A, **23**B as may be desired with respect to other design factors of importance to one of skill in the art. The first element **22** includes a first grasping portion **21** and the second element **24** includes a second grasping portion **25**. The first and second grasping portions **21**, **25** are formed substantially as and commonly referred to as a handle of a tool. The relative movement between the first element **22** and the second element **24** generates, in one embodiment, generally linear movement of the gripping elements **26**.

The first element **22** further includes a gripping portion **28**, formed substantially as and commonly referred to a head of a tool, disposed at one end of the first grasping portion **21** and configured to engage the work piece (not shown, see for example only and not by way of limitation FIGS. **10**, **14**, **15** and **20**) including a first opening **30**, a plurality of guides **32** extending radially from the first opening **30** and the gripping elements **26**. It is within the teachings of the present disclosure that the guides **32** may be formed in any suitable configuration. For example, the guides may be formed as groves, channels or any other suitable configuration. Not by way of limitation, but such structural configuration is often guided by manufacturing methods or capabilities. Additionally, the guides **32** may be curvilinear or linear. The gripping elements each include a body portion **34** adapted for engaging the work piece, an arm portion **36** configured to engage one of the guides **32** and a force transfer element **38** contiguous with or preferably connected to the arm portion **36**. It is within the teachings of the present disclosure that the gripping elements may be integrally formed in any suitable manner. It will also be recognized that the gripping elements may be formed in any other suitable manner as desired to achieve any intended purpose or function. Examples of such other configurations or formations will be disclosed below, but shall not be considered limiting in any sense.

In one embodiment of the present disclosure, the arm portion **36** of the gripping elements **26** further includes a pair of arms **37**A, **37**B disposed at opposite ends of the body portion **34** such that the gripping elements **36** are substantially U-shaped. It will be recognized by those of skill in the art that the pair of arms **37**A, **37**B, when so provided engaged the respective guides **32** formed in the first element elements **23**A, **23**B, respectively. The pair of arms **37**A, **37**B each include an aperture **40** aligned such that one of the force transfer elements **38** is contiguous therewith for positioning and actuation of the gripping elements **26** as detailed below.

It is within the teachings of the present disclosure that the gripping elements may have a smooth or rough face with which to engage the work piece, as desired. For example, the rough face may have a grooved, serrated, checked or any other suitable finish. Furthermore, the force transfer elements **38** may be configured as pins or other suitable structure to provide the functions as described herein. Moreover, the first element and/or each of the elements thereof may often be referred to as a handle and the second element may often be referred to as a lever. It will be recognized by those of skill in the art that the terms used herein are not of a limiting sense. Rather, these terms are used to broadly describe the structure and function herein.

The second element **24** further includes an actuation portion **42**, formed substantially as and commonly referred to as a head of a tool, disposed at one end of the second grasping portion **25** and having a second opening **44** preferably concentric with the first opening **30** and a plurality of slots **46** disposed adjacent the second opening **44**. It will be recognized by those of skill in the art that the first and second openings need not be precisely concentric in order to operate as disclosed and provided the intended function. Rather, references to concentric alignment shall include any alignment of the first and second elements which permits operation as disclosed. In one embodiment, each of the slots **46** has a first section **48** configured to engage one of the force transfer elements or pins **38** such that movement of the second element **24** with respect to the first element **22** simultaneously actuates the first sections **48** to contact and move the force transfer elements **38** along a path defined by the first section thereby actuating the gripping elements **26** along the guides **32**. It will be recognized by those of skill in the art that in this embodiment the first sections **48** define a path which generally decreases in terms of radial measurement from a center of the second opening **44** from a first outer end **50** to an inner end **52**. In another embodiment, the paths may generally increase in terms of radial measurement from the center of the second opening **44** such that relative movement between first and second elements generates an outward motion of the gripping elements. Alternatively, the guides, slots and force transfer element may be configured to interact in a number of different ways to move the actuation elements into movement with the gripping or work piece engaging elements. For example, a pair of slots may be formed in a pair of cooperative first and/or second elements where each slot defines an arcuate path that simultaneously act on the force transfer element to effect movement of the gripping element, as described in further detail herein.

In one embodiment, each of the slots **46** further includes a second section **54** extending from the first section **48**. It will be recognized by those of skill in the art that the second section **54** defines a path which is generally consistent in terms of radial measurement from the center of the second opening **44** from the inner end **52** to a second outer end **56**.

In one embodiment of the present disclosure, the first element **22** further includes a plurality of aligning elements **58** for engaging the second sections **54** and where the two elements **23**A, **23**B are used for positioning and interconnecting the elements **23**A, **23**B of the first element **22**. Each aligning element **58** is disposed between an adjacent pair of guides **32** and extends parallel to the force transfer element **38**. Apertures **60** are formed in the first elements **23**A, **23**B to receive and engage the aligning elements **58**. In operation, each one of the aligning elements **58** engages one of the second sections **54** so that during relative movement between the first element **22** and the second element **24**, or first and second elements, respectively, the first and second openings **30**, **44** remain generally aligned. It will be recognized by those of skill in the art that the second sections **54** engage the aligning elements **58** in response to the forces induced by the divergent path of the first sections **48** on the force transfer elements **38**. As a result, not only do the first and second openings **30**, **44** remain generally concentrically aligned, but the gripping elements **26** are actuated along the guides **32** with equal, likewise displacement. It is within the teachings of the present disclosure that the slots **46** may include a third section defined within the first section. The third section facilitates actuating a respective gripping element at a different rate. It will be recognized by those of ordinary skill in that art that such configuration will be advantageous when timing of engagement between the gripping elements and the work piece is desired. For example, a third section may be used in a crimping operation wherein at least one of the slots includes a first section and a third section and at least one of the slots includes a first section. All the gripping elements are initially actuated by the first section of each slot. However, those gripping elements associated with the third section will be moved at a

different rate as dictated by the third section. Such different rate may increase, decrease or maintain the timing of engagement with the work piece. Those gripping elements not associated with the third section continue to move as per the first section. Accordingly, the third section gripping elements hold the work piece while the first section gripping elements further act on the work piece by piercing or any other desired action.

A spacer **62** may be used to interconnect the elements **23**A, **23**B to define a pocket **64** such that a spring **66** disposed within the pocket contacts the second element **24** in order to dispose the second element in a normally open position (see FIGS. **2** and **3**). The spacer may be connected to each of the elements **23**A, **23**B by press fit pins **66** engaging aligned apertures **68** or any other suitable device or in any other suitable manner.

A lock mechanism **70** is connected to the first element **22** such that operative movement of the lock mechanism **70** from a first operative position (see FIGS. **4** and **5**) to a second operative position (see FIGS. **2** and **3**) secures the first element **22** and second element **24** in any desired orientation. The lock mechanism **70** may be connected between the elements **23**A, **23**B by a press fit pin **72** engaging aligned apertures **74** or by any other suitable device or in any other suitable manner. The inner or operative end **76** of the lock mechanism **70** is configured as a cammed or eccentric surface. In one embodiment, this may be achieved by disposing aperture **74** offset from the longitudinal axis of the lock mechanism **70**. Alternatively, an eccentric shaped surface may be defined on the inner or operative end **76** or by any other suitable manner.

When oriented in the first operative position (See FIGS. **4** and **5**), the inner end **76** of the lock mechanism **70** defines a clearance (**82**, see FIG. **6**) with respect to the second element **24**. Movement of the actuating end **78** of the lock mechanism **70** from the first operative position to the second operative position (See FIGS. **2** and **3**) moves the inner end **76** about the aperture **74** such that the operative end **76** binds against the second element **24** thereby securing the first element and second element in a desired orientation. It is within the teachings of the present disclosure that the lock mechanism may be formed with any suitable structure for the desired functionality. For example, in one embodiment, the lock mechanism may include cooperative, complimentary saw-tooth, grooved or geared surfaces that facilitate an interference fit so that the tool may be used to impart work to the work piece with either a clockwise or a counter-clockwise orientation. Any other suitable structure which would facilitate an interference fit would be useful and/or desireable.

In one embodiment of the present disclosure, the gripping portion **28** includes six gripping elements **26**. However, it would be recognized by those of skill in the art, that the gripping portion **28** need include only at least one gripping or engaging element **26** and that any other suitable number of gripping or work piece engaging elements may be provided. In the embodiment with six gripping elements, the adjustable gripping tool may be advantageously used in connection with hex-shaped work pieces where the gripping elements face-load each of the flats of the work piece. Such a configuration is advantageous compared to conventional inventors that point-load a hex-shaped fastener at its corners.

FIG. **2** illustrates the adjustable gripping tool of FIG. **1** disposed in an open position. The second element **24** is biased from the first element **22** as described above to maintain such open position. The lock mechanism **70** is disposed in the second operative position securing the first element **22** and second element **24** a desired orientation. The adjustable gripping tool **20** of this embodiment is configured such that the gripping portion **28** and the actuation portion **42** are adapted to circumferentially engage the work piece. However, in FIG. **2**, the gripping elements **26** are disposed such that the arms **36** engage the guides **32** in a manner which is characteristic of the open position of the adjustable gripping tool **20**. The force transfer elements **38** and aligning elements **58** are shown as force transfer elements press fit to the gripping elements **26** and first element **22** respectively. Alternatively, the force transfer elements can be manufactured as a protrusion of the gripping or work piece engaging element.

FIG. **3** illustrates a section view of the adjustable gripping tool **20** of FIG. **2** wherein one element of the first element **22** has been removed. Element **23**B is shown having spacer **62** connected thereto to define a pocket **64** such that the spring **66** disposed within the pocket **64** contacts the second element **24** to bias the second element **24** in the open position. As described above, the lock mechanism **70** is engaged in the second operative position securing the first element **23**B and second element **24** in the desired open position. Aligning elements **58** are disposed at the inner end **52** of the slot **46** which defines a point of separation between the first section **48** and the second section **54**. The force transfer elements **38** are disposed at the outer end **50** of the first section **48** of the slot **46** as will be shown and described in more detail below.

FIG. **4** illustrates an adjustable gripping tool **20** disposed in a closed position wherein the first element **22** and second element **24** are disposed immediately adjacent. The lock mechanism **70** is disposed in the first operative position, unlocked. The gripping elements **26** have been moved from an open position, as shown in FIGS. **2** and **3**, to a closed position such that the gripping elements are adapted for engaging the work piece.

FIG. **5** illustrates a section view of the adjustable gripping tool **20** of FIG. **4** taken through the second element where the adjustable gripping tool is disposed in the second operative or closed position. The first element is represented by element **23**B which is disposed immediately adjacent the second element **24**. The force transfer elements **38** have been moved as a result of contact with the first section **48** of the slots **46** from an outer end **50** to an inner end **52**. The aligning elements **58** have been moved from an inner end from the second section **54** of the slot **56** to an outer end **56**. It will be recognized by those of skill in art that the paths defined by the first and second sections **48**, **54** of the slot **46** are divergent. The aligning elements **58** engage the second portion **54** of the slot **46** in order to maintain proper orientation between the first element **22** and the second element **24**. The force transfer elements **38** engage the first portion **48** of the slot **46** such that the generally decreasing diameter dimension of the path defined by the first portion **48** causes the force transfer elements to move closer to the center of the first and second openings **30**, **44**. Accordingly, the gripping elements **26** are likewise actuated along the guides **32** to engage the work piece. The lock mechanism **70** is disposed in a first operative position. It should also be noted that the slots can be reversed and the action reversed such that the actuation elements are radiating from the center during activation.

FIG. **6** illustrates a detailed broken away view of the adjustable gripping tool **20** of FIGS. **4** and **5**. The lock mechanism **70** is disposed in a first operative or open position. The lock mechanism **70** is connected to the first element **22** by a pin **74** which is disposed offset from a longitudinal axis of the lock mechanism **70**, such that in this first operative position, a clearance **82** is defined between the lock mechanism operative or inner end **76** and the second element **24**.

FIG. **7** illustrates the adjustable gripping tool **20** of FIG. **6** wherein the lock mechanism **70** has been moved from the first

operative position (shown in FIG. **6**) to a second operative position. As a result of movement of the lock mechanism **70** the clearance is eliminated between the operative or inner end **76** and the second element **24**. Accordingly, the lock mechanism **70** binds against the second element **24** such that the first element and second element **24** cannot be moved relative to one another without first releasing the lock mechanism **70**. It will be recognized by those of skill in the art that the pin **74** used to mount the lock mechanism **70** to the first element **22** is most often offset from the longitudinal axis of the lock mechanism **70**. However, an eccentric surface at the inner or operative end **76** may also be formed to enable the same function.

FIG. **8** illustrates another embodiment of the present disclosure of the adjustable gripping tool **20** wherein only three gripping elements **26** are shown. It is within the teaching of the present disclosure that the gripping portion **28** only include at least one gripping element **26**. Grips **84**A, **84**B may also be provided for the first element **22** and second element **24** to further facilitate effective ergonomic actuation of the adjustable gripping tool **20**. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **9** illustrates yet another embodiment of the present disclosure directed to an adjustable gripping tool **20**. In this embodiment of the present disclosure, the gripping portion **28** and the actuation portion **42** are configured penannular. Such configuration enables the wrench **20** to engage the work piece laterally or in a radial direction. Further, four gripping elements **26** are illustrated in this embodiment. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **10** illustrates another embodiment of the present disclosure wherein the adjustable gripping tool **20** is configured as a cutting or scoring device for engaging, for example, a tubular element. In this embodiment, the second element **24** is configured substantially U-shaped. Such configuration may be achieved by binding, folding or otherwise forming a unitary element as shown in FIG. **10**. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

The first and second elements **22**, **24** are connected for relative movement in order to generate linear movement of the gripping elements. It is within the teachings of the present disclosure that the gripping elements may also be configured to score or cut a work piece. For example, in one embodiment, the gripping elements described above which are configured to engage the work piece as described above may be replaced with gripping elements configured to perform the scoring or cutting functions.

FIG. **11** illustrates a top plan view of the embodiment of the present disclosure in FIG. **10** disposed in a closed position. The first and second elements **22**, **24** have been moved toward one another such that the gripping elements **26** extend into the first opening **30** to engage a work piece (not shown). As shown in FIG. **10**, this embodiment is configured to engage a tubular element, such as a pipe or other suitable work piece. For example, a polyvinyl chloride ("PVC") pipe may be cut or scored with the sharp-edged gripping elements of this embodiment and not distort the PVC pipe. As a result, in addition to a clean perpendicular cut-off, the PVC pipe is not deformed so that further coupling is problematic. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **12** illustrates a sectional view of the adjustable gripping tool **20** of FIG. **10** taken through the first element **22**, where the tool **20** is disposed in an open position. The gripping element **26** disposed within the guides **32** include all the structural elements as described above. However, rather than a U-shaped body, a force transfer element extends from each side of the body portion to engage the slots of the pair of elements **25***a*, **25***b* (**25***b* in FIG. **11**) which comprise the second element **24**.

FIG. **13** illustrates a perspective view of another embodiment of an adjustable gripping tool in accordance with the principal aspects of the present disclosure. In this embodiment of the present disclosure, the adjustable gripping tool **20** includes gripping elements **26** which have extensions **100** that extend beyond the first element **22**. The extensions **100** facilitate engaging work pieces disposed in a space-limited location, where access for the entire tool **20** may be difficult or problematic. The remaining structural and functional elements and aspects of this embodiment of the present disclosure remain the same as detailed above. Alternatively, other structural elements may be formed on the extensions **100** to enable additional functions for the tool **20**, such as crimping, cutting, or any other suitable function. Additionally, the extensions **100** may extend to either side or both and incorporate any of the embodiments set for the below or herein to facilitate any intended function. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **14** illustrates a top plan view of another embodiment of an adjustable gripping tool **20** in accordance with the principal aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** includes gripping elements **26** which are each configured as a cutting wheel that movably engages the work piece **102** to facilitate severing of the work piece **102** by movement of the tool **20** about the work piece **102** after movement of the second element **24** with respect to the first element **22**, as shown in FIG. **15**. As with the other gripping elements described herein, the cutting wheels **26** include a body portion **34** adapted for engaging work piece **102**, an arm portion **36** configured to engage one of the guides **32** and a force transfer element **38** contiguous with or preferably connected to the arm portion **36**. As shown in FIG. **15**, relative movement of the second element **24** with respect to the first element **22** actuates each gripping element or cutting wheel **26** along a respective guide **32** in order to facilitate engagement with the work piece **102**. It is within the teachings of the present disclosure that the gripping elements or cutting wheels **26**, in this embodiment or any other herein, may be configured in any suitable manner or structure in order to achieve any identified or desired purpose and that only at least one gripping element or cutting wheel **26** is necessary and the number of gripping elements or cutting wheels **26** is not limited. Furthermore, the adjustable gripping tool **20** may be configured such that the cutting wheels **26** may be replaceable in the event they dull or break. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIGS. **16** and **17** are perspective views of another embodiment of an adjustable gripping tool **20** in accordance with the principal aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** includes extensions **100** that project from the gripping elements **26** to engage an interior of a work piece (not shown for clarity). The extensions **100** shown in this embodiment are substantially L-shaped and define a pocket **106** between the extension **100** and the gripping element **26** to receive the work piece. When configured as such, the extension **100** of this embodiment, is facilitates a crimping operation. Another feature of this embodiment, is a reverse or divergent operation of the gripping elements **26** upon relative movement of the first element **22** with respect to the second element **24**. Such a configuration enables the gripping elements **26** to engage a first dimension work piece with the first and second elements **22**, **24** disposed in a first operative position (as shown in FIG. **16**) and a second dimension work piece with the first and second elements **22**, **24** disposed in the second operative position (as shown in FIG. **17**), such that the first dimension work piece is smaller than the second dimension work piece (both of which are not shown for clarity). It is within the teachings of the present invention that the adjustable gripping tool **20** as shown in FIG. **16** may be used to engage a single work piece and upon relative movement of the first and second elements **22**, **24** impart a crimping operation upon such work piece and complete such operation upon attaining the configuration as shown in FIG. **17**. It is within the teachings of this disclosure that the extensions **100** may take any other suitable configuration or structure, one such example may be the tap shown in FIG. **25** or a structure wherein the extensions project to both sides of the adjustable gripping tool. and function in the same manner to achieve any desired purpose. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **18** is an exploded view and FIG. **19** is a top plan view, both of another embodiment of an adjustable gripping tool **20** in accordance with the principal aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** includes gripping elements **26** which have a planar configuration. The gripping elements **26** have a thickness **108** that is generally equivalent to a thickness **110** of the respective first element **22** with which such gripping element **26** is associated. Such a configuration of the gripping elements **26** in this embodiment facilitates flexibility of such gripping elements in operation of the gripping tool **20** to engage the work piece. Moreover, gripping elements **26** having a planer configuration are more simple to manufacture various shapes and lengths and to assemble within the adjustable gripping tool **20**.

Another aspect of this embodiment of the present disclosure is that the gripping elements **26** are configured to have a V-shape **112** in the body portion of the gripping element such that the vertex **114** of the V-shape **112** is directed towards the force transfer element **38**. Such configuration facilitates face-loading and corner loading for hex-shaped work pieces or those work pieces with defined corners, as described in more detail above and point loading for those work pieces that are generally cylindrical, tubular or have corners with angles between adjacent sides thereof that are larger than the angle of the sides of the V-shape. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **20** is a top plan view and FIGS. **21** and **22** are exploded views, all of other embodiments of an adjustable gripping tool **20** in accordance with principal aspects of the present disclosure. Each of the embodiments shown in these figures has a common element, a cover plate **116**, connected in any conventional manner to the first element **22** to reinforce and protect the adjustable gripping tool **20**. As shown in FIG. **20**, the cover plate **116** has a penannular configuration and is attached to the gripping portion **28** of the first element **22**. It will be recognized by those skill in art that the cover plate **116** of such configuration facilitates reinforcement of the adjustable gripping tool **20** having a open head or penannular configuration that facilitates radial engagement of a work piece **102**. This embodiment also shows the V-shaped gripping elements of an above-described embodiment for face- or corner-loading the work piece **102**. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

As shown in FIG. **21**, this embodiment of the present disclosure includes a cover plate **116** that has an overall dimension and shape that is generally equivalent to an overall dimension and shape of the first element **22** and is attached over each first element **22**. It will be recognized by those of skill of the art that substantial reinforcement of the entire length of the tool **20**, i.e. gripping and grasping portions, is provided in this embodiment of the present disclosure and that such configuration also provides protection to the operating elements of the adjustable gripping tool. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

As shown in FIG. **22**, the cover plate **116** is configured as a receptacle **118** defined by a pair of cover portions **120** offset by a margin portion **122** to engage outer surfaces of a pair of aligned first elements **22**. In addition to the reinforcing and protection advantages discussed above, this embodiment of the present disclosure further provides an additional level of isolation and protection of the gripping and grasping portions and in particular, the gripping elements, from the effects of an operating environment that may be dusty, dirty or subject to harsh fluids. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **23** is a top plan view of another embodiment of an adjustable gripping tool **20** is accordance with the principle aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** includes the gripping elements **26** configured to engage a non-standard work piece. As used in this disclosure, a non-standard work piece may be a security fastener, or any other type or kind of work piece that does not have a conventional cylindrical, tubular, hex, square or other standard dimension or shape. As discussed many times above, the adjustable gripping tool **20** may have the gripping elements **26** configured in any suitable manner to engage any desired work piece. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIGS. **24** and **25** are perspective views of other embodiments of an adjustable gripping tool **20** in accordance with the principle aspects of the present disclosure. In these embodiments, the gripping elements **26** include extensions **100** which are configured to cooperatively function to facilitate

chasing threads. It will be recognized by those of skill in the art that the gripping elements **26** and extensions **100** may be configured to engage any desired type of thread, for example, pipe threads, standard coarse or fine threads, metric coarse or fine threads or any other conventional or proprietary type of thread configuration. The embodiment shown in FIG. **24** is configured to engage exterior threads formed on a work piece, while the embodiment disclosed in FIG. **25** is configured to engage the interior threads formed on a work piece, both in a manner described above. These embodiments are particularly advantageous over prior art thread chasing devices in that the present embodiments may chase all the threads of the work piece rather than starting at one end of the work piece and proceeding axially which may be difficult or problematic in the event that the initial starting threads are so damaged that the thread chasing device cannot properly engage the work piece threads. The present embodiment overcomes such disadvantage by engaging a substantial portion of the threads of the work piece past an initial engagement point for the threads, as would a conventional thread chaser. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **26** is a perspective view of another embodiment of an adjustable gripping tool **20** in accordance with the principle aspects of the present disclosure. In this embodiment, the first element **22** includes a pair of first elements **22** and a backbone **120** connecting a portion of common edges of the pair of first elements **22**. The pair of first elements **22** and the backbone **20** are integrally formed from a unitary blank of material. This embodiment is advantageous in that manufacture of the first element is efficient, economical and has increased strength. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIGS. **27** and **28** are perspective and top plan views other embodiments of an adjustable gripping tool **20** in accordance with the principle aspects of the present disclosure. In these embodiments, each gripping element **26** includes an extension **100** that projects from the gripping element **26** to define a second body portion **122** adapted for engaging the work piece such that the body portion **34** facilitates a first range of gripping ability and the second body portion **122** facilitates a second range of gripping ability. It will be recognized those of skill in the art that the adjustable gripping tool **20** of these embodiments facilitates a wide range of gripping ability such that a single adjustable gripping tool **20** may replace a considerable number of similar tools. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **29** is a top plan view of another embodiment of an adjustable gripping tool **20** in accordance with the principle aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** includes gripping elements **26** that have been configured such that the body portion **34** of each gripping element **26** facilitates crimping a wire/terminal connection or a rather suitable or like connection. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **30** is a top plan view, FIG. **31** is a side elevation view and FIG. **32** is a bottom plan view, all of another embodiment of an adjustable gripping tool **20** in accordance with the principle aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** primarily includes a first element **22** and a second element **24** connected for a relative movement. The first element includes a first grasping portion **21** and the second element includes a second grasping portion **25**. The first and second grasping portions **21**, **25** are formed substantially as and commonly referred to as a handle of a tool. The relative movement between the first element **22** and the second element **24** generates, in one embodiment, generally linear movement of the gripping elements **26**.

The first element **22** further includes a gripping portion **28**, formed substantially as and commonly referred to as a head of a tool, disposed at one end of the first grasping portion **21**, and configured to engage the work piece (not shown for clarity) including a plurality of guides **32** formed in the grasping portion **28** and the gripping elements **26**. The gripping elements **26** each include a body portion **34**, adapted for engaging the work piece, an arm portion **36**, configured to engage one of the guides **32** and a force transfer element **38** contiguous with or preferably connected to the arm portion **36**. In this embodiment, the guides **32** are formed as grooves in the gripping portion **28** that do not pass completely through the gripping portion, as best shown in FIG. **32**. It is within the teachings of the present disclosure that the guides **32** may be formed as slots, grooves, channels or any other suitable configuration. As discussed in the many embodiments above, it is within the teachings of the present disclosure that the gripping elements may be formed in any suitable manner or configuration.

The second element **24** further includes an actuation portion **42**, formed substantially as and commonly referred to as a head of a tool, disposed at one end of the second grasping portion **25** having an opening **44** and a plurality of slots **46** disposed adjacent the opening **44**. In one embodiment, each of the slots **46** has a first section **48** configured to engage one of the force transfer elements or pins **38** such that movement of the second element **24** with respect to the first element **22** simultaneously actuates the first sections **48** to contact the force transfer elements **38** along a path defined by the first section thereby actuating the gripping elements **26** along the guides **32**. It will be recognized by those of skill in the art that the first sections **48** define a path which generally decreases in terms of radial measurement from a center of the opening **44** from an outer end to an inner end. In another embodiment, the paths may generally increase in terms of radial measurement from the center of the opening **44**, such that relative movement between first and second elements generates an outward motion of the gripping elements originally disposed adjacent the center of the opening **44**. Alternatively, the guides, slots and force transfer elements may be configured to interact in a number of different ways to move the actuation elements into movement with a gripping or work piece engaging elements.

In this embodiment, the body portions **34** include an extension **100** to facilitate increased area of the body portion for gripping the work piece. In one embodiment, the first element **22** may further include a plurality of aligning elements **58** for engaging the second sections **54**. Each aligning element **58** is disposed between an adjacent pair of guides **32** and extends parallel to the force transfer element **38**. In operation, each one of the aligning elements **58** engages one of the second sections **54** during relative movement between the first element and the second element the first and second elements **22**, **24** remain generally aligned. The remaining structural and functional elements and aspects of this embodiment of the

present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **33** is a partial top plan view of another embodiment of an adjustable gripping tool in accordance with the principle aspects of the present disclosure. FIG. **34** is a detailed view of a portion of the adjustable gripping tool **20** of FIG. **33** defined by line B. FIG. **35** is a partial bottom plan view of the adjustable gripping tool **20** of FIG. **33**. FIG. **36** is a detailed view of a portion of the adjustable gripping tool **20** of FIG. **35** as defined by line A. In this embodiment, the adjustable gripping tool **20** primarily includes a first element **22** and a second element **24** connected for relative movement. The first element **22** includes a gripping portion **28** including a plurality of guides **32** (as best shown in FIG. **34**) formed in the grasping portion **28** extending radially from a first opening **30** and the gripping elements **26**.

The second element **24** includes an actuation portion **42** having a plurality of slots **46** formed therein. It is within the teachings of the present invention that the slots **46** may be formed as slots, grooves, channels, any combination thereof or any other suitable configuration. In this embodiment, the slots **46** have a first section **48** that is configured as a groove or channel, while the second sections **54** of the slots **46** are formed completely through the actuation portion **42** as would a conventional slot. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **37** is an exploded view and FIG. **38** is a top plan view, both of another embodiment of an adjustable gripping tool **20** in accordance with the principle aspects of the present disclosure. In this embodiment, the adjustable gripping tool **20** primarily includes a first element **22** and a second element **24** connected for relative movement. The first element **22** further includes a gripping portion **28** formed substantially as and often referred to as a head of a tool, disposed at one end of the first grasping portion **21**, and configured to engage the work piece (not shown for clarity) including a plurality of guides **32** formed in the grasping portion **28** and the gripping elements **26**. The guides **32** are formed as grooves in the grasping portion **28** that do not extend entirely through the first element **22**. A guide slot **31** is disposed within each guide **32** and extends entirely through reduced guide portion of the first element **22**. It is within the teachings of the present disclosure that the guides **32** may be formed in the first element **22** in any suitable manner. The groove-like configuration of the guides **32** provides additional support for the gripping elements **26** in that the floor **33** of the guides, in which the guide slots **31** are formed provides an additional guide surface for the gripping elements **26** and facilitates resistance to twisting of the gripping elements **26**.

The gripping elements **26** each include a body portion **34**, adapted for engaging the work piece and arm portion **36**, configured to engage one of the guides **32** and associated guide floor **33**, and a force transfer element **38** contiguous with or preferably connected to the arm portion **36**. It is within the teachings of the present disclosure that the gripping elements **26** may be formed in any suitable manner or configuration and that the force transfer element be configured in any suitable manner. For example, the force transfer element may be a threaded fastener, rivet, pin, shaft, connector or any other suitable device to perform the intended function. The second element **24** further includes an actuation portion **42**, formed substantially as and commonly referred to as a head of a tool, disposed at one end of the second grasping portion **25** having a plurality of slots **46** formed therein. In one embodiment, each of the slots **46** has a first section **48** configured to engage one of the force transfer elements **38** such that movement of the second element **24** with respect to the first element **22** simultaneously actuates the first sections **48** to contact the force transfer elements **38** along a path defined by the first section thereby actuating the gripping elements **26** along the guides **32** and guide slots **33**.

It will be recognized by those of skill in the art that the first sections define a path which generally decreases in radially measurement from a center of an actuation portion **42** from a first outer end to a second inner end. In another embodiment, the paths may generally increase in terms of radially measurement from the center of the actuation portion **42**, such that relative movement between first and second elements generates an outer motion of the gripping elements originally disposed adjacent center of the actuation portion or gripping portion. Alternatively, the guides, slots, and force transfer elements may be configured to interact in any number of different ways to move the gripping or work piece engaging element.

In this embodiment, the body portion **34** include an extension **100** to facilitate increased area of the body portion for gripping the work piece. In one embodiment, the first element **22** may further include a plurality of aligning elements **58** for engaging a second section of the slots. Each aligning element **58** is disposed between adjacent pair of guides **32** and extends parallel to the fourth transfer element **38** and may be configured as the force transfer elements to provide the intended function. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **39** is an exploded view and FIG. **40** is a top plan view of another embodiment of an adjustable gripping tool **20** in accordance with the principal aspects of the present disclosure. In this embodiment, the second element **24** includes a pair of second elements. Each of these second elements **24** includes an actuation portion **42** including at least one slot **46** having a first section **48**.

The second element **24** further includes a grasping portion **25** operatively coupled to the first element **22**. In this embodiment, a rivet, fastener or other suitable or like device **200** engages the generally aligned apertures **202** of the first and second elements to operatively couple the grasping portion **25** to the first element **22**. It is within the teachings of the present invention that any other suitable device may be used to provide such operative coupling as will be recognized by one of skill in the art.

The grasping portion **25** is operatively associated with the actuation portion **42** in meshing engagement. In this embodiment, meshing engagement is defined by cooperative contact between at least one tooth **204** and at least one groove **206**. It is within the teaching of the present invention that any number of cooperative tooth and groove combinations may be used. For example, in one embodiment one tooth or groove may be formed on the grasping portion **25** and a complimentary groove or tooth may be formed on the actuation portion **42**. In another example, a plurality of teeth or grooves may be formed on the grasping portion **25** and a complimentary groove or teeth may be formed on the actuation portion **42**. Furthermore, it is within the teachings of the present disclosure that gear multiplication/leverage or other mechanical advantage may be designed into such meshing engagement and that any suitable structure to provide the functionality of mechanical leverage for advantage may be used. For example, in one embodiment, different gear ratios may be used to facilitate the desired advantage. The remaining struc-

tural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **41** is a top plan view of another embodiment of adjustable gripping tool **20** in accordance with the principal aspects of the present disclosure. The adjustable gripping tool **20**, as shown in FIG. **41**, is disposed in a first operative position. FIG. **42** is another top plan view of the embodiment of the adjustable gripping tool **20** of FIG. **41** wherein the adjustable gripping tool **20** is disposed in a second operative position. FIG. **43** is an exploded view of the adjustable gripping tool **20** of FIGS. **41** and **42**. In this embodiment, the adjustable gripping tool **20** primarily includes a second element **24** that includes a pair of second elements. Each of the second elements **24** includes an actuation portion **42** including at least one slot **46** having a first section **48**. Each at least one slot first section **48** formed in one of the pair of second elements **210** defines a one path **212** and each at least one slot for section **48** formed in another of the pair of second elements **214** defines another path **216**. The one path **212** has a generally clockwise orientation, in that, as the path extends from an inner end to an outer end, such extension is generally in the direction of clockwise. The another path **216** has a generally counter-clockwise orientation, in that, as the path extends from an inner end to an outer end, such extension is generally in the direction of counter-clockwise. As best shown in FIGS. **41** and **42**, the one path **212** and the another path **216** cooperatively engage the force transfer element of one said at least one gripping element **26** to actuate each said at least one gripping element **26** along respective said at least one guide **32**. It is within the teachings of the present invention that the orientation of the paths defined above is not limiting in any sense, rather such description is a useful for explaining the functional aspects of this embodiment. Essentially, the paths extending in different directions yet cooperatively acting on the force transfer element facilitate increased mechanical advantage against the force transfer element and hence the gripping elements. Accordingly, a more secure grip can be achieved thereby. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

FIG. **44** is a top plan view of another embodiment of an adjustable gripping tool **20** in accordance with the principal aspects of the present disclosure. The adjustable gripping tool, as shown in FIG. **44**, is disposed in a first operative position. FIG. **45** is another top plan view of the embodiment of the adjustable gripping tool **20** of FIG. **44** shown disposed in a second operative position. FIG. **46** is an exploded view of the adjustable gripping tool **20** of FIGS. **44** and **45**. In this embodiment, the adjustable gripping **20** includes a one second element **24**A and an another second element **24**B connected for relative movement which generates movement of at least one gripping element **26**. Each at least one gripping element **26** includes a body portion **34** and a force transfer element **38** contiguous with the body portion **34**. The one second element **24**A and the another second element **24**B each include an actuation portion **42** including at least one slot **46** having a first section **48**. Each at least one slot first section **48** formed in the one second element **24**A defines a one path **212** and each at least one slot first section **48** formed in another second element **24**B defines another path **216**. The one path **212** and the another path **216** cooperatively engage the force transfer element **38** of one said at least one gripping element **26** to actuate each said at least one gripping element **26** into engagement with the work piece. In this embodiment, the one path has a generally clockwise orientation and the another path **216** has a generally counter-clockwise orientation. It would be recognized by those of ordinary skill in the art that the orientation of either of the paths may be reversed to facilitate any desired function. The remaining structural and functional elements and aspects of this embodiment of the present disclosure may be configured as any of the like structure and functional aspects of the other embodiments disclosed herein.

This disclosure is not limited to the details of the apparatus depicted and other modification and applications may be contemplated. For example, the force transfer elements and aligning elements may be changed as desired for other like bearing elements. The gripping elements themselves may be varied in size, shape, surface finish, body configuration, arm configuration or quantity. And the gripping elements may have a cutter, roller or blade attached to perform cutting or scoring operations. Also, the size, shape and position of the openings may be altered as desired to suit particular applications. Further, the first and second elements, gripping elements and other components of the various embodiments of the gripping tool described above may be formed from any suitable material, including without limitation, metal, plastic, composite, natural, synthetic or any other material. Certain other changes may be made in the above-described apparatus without departing from true spirit and scope of the disclosure here involved. It is intended, therefor that the subject matter of the above depiction shall be interpreted as illustrated and not in a limiting sense. The actual scope of the disclosure is intended to be defined in the following claims when viewed in their proper perspective based on the related art.

What is claimed is:

1. An adjustable gripping tool for engaging a work piece to impart work thereto, the tool comprising:

(a) a first element and a second element connected for relative movement which generates movement of at least one gripping element;

(b) the first element including a gripping portion configured to engage the work piece including at least one guide defined in the gripping portion and said at least one gripping element;

(c) each at least one gripping element including a body portion adapted for engaging the work piece, an arm portion configured to engage one said at least one guide and a force transfer element contiguous with the arm portion;

(d) the second element including an actuation portion having at least one slot therein, each said at least one slot having a first section configured to engage the force transfer element of one said at least one gripping element, such that movement of the second element with respect to the first element actuates each at least one first section to contact and move each respective force transfer element thereby actuating each said at least one gripping element along respective said at least one guide, wherein the first element further includes at least one aligning element such that each said at least one aligning element is disposed between an adjacent pair of guides and extends parallel to the force transfer elements.

2. The gripping tool as recited in claim **1**, wherein the first element includes a pair of elements disposed on opposing sides of the second element.

3. The gripping tool as recited in claim **1**, wherein the arm portion of the gripping elements further includes a pair of arms disposed at opposite ends of the body portion such that the gripping elements are substantially U-shaped.

4. The gripping tool as recited in claim 1, wherein at least one of the slots further includes a second section extending from the first section, such that one said at least one aligning element engages one of the second sections so that during relative movement between the first element and the second element the first and second elements remain generally aligned.

5. The gripping tool as recited in claim 4, wherein the first and second sections are divergent.

6. The gripping tool as recited in claim 1, wherein the gripping elements which perform one function may be replaced with gripping elements that perform a different function.

7. The gripping tool as recited in claim 1, wherein the gripping elements score and cut.

8. The gripping tool as recited in claim 1, wherein movement of said at least one gripping element is linear.

9. The gripping tool as recited in claim 1, wherein movement of said at least one gripping element is curvilinear.

10. The gripping tool as recited in claim 1, wherein each said at least one guide extends radially.

11. The gripping tool as recited in claim 1, wherein each said at least one guide extends along a curvilinear path.

12. The gripping tool as recited in claim 1, wherein each at least one gripping element is configured as a cutting wheel that movably engages the work piece to facilitate severing of the work piece by movement of the tool about the work piece after movement of the second element with respect to the first element.

13. The gripping tool as recited in claim 1, wherein each at least one gripping element includes an extension that projects from the gripping element to engage an interior of the work piece.

14. The gripping tool as recited in claim 13, wherein said at least one gripping element is configured to engage a first dimensioned work piece with the first and second elements disposed in a first operative position and a second dimensioned work piece with the first and second elements disposed in a second operative position, such that the first dimensioned work piece is smaller than the second dimensioned work piece.

15. The gripping tool as recited in claim 13, wherein said extension is configured to facilitate a crimping operation.

16. The gripping tool as recited in claim 13, wherein said extension defines a pocket between the extension and the gripping element to receive the work piece.

17. The gripping tool as recited in claim 13, wherein said extension is configured to facilitate chasing threads.

18. The gripping tool as recited in claim 1, wherein each at least one gripping element has a planar configuration.

19. The gripping tool as recited in claim 18, wherein each at least one gripping element has a thickness equivalent to a thickness of the respective associated first element.

20. The gripping tool as recited in claim 1, wherein each at least one gripping element body portion is configured to have a "V" shape where a vertex of the "V" shape is directed toward the force transfer element.

21. The gripping tool as recited in claim 1, wherein a cover plate is connected to the first element to reinforce the tool.

22. The gripping tool as recited in claim 21, wherein the cover plate has a penannular configuration and is attached to the gripping portion.

23. The gripping tools as recited in claim 21, wherein the cover plate has a dimension that is generally equivalent to a first element dimension and is attached over the first element.

24. The gripping tools as recited in claim 21, wherein the cover plate is configured as a receptacle defined by a pair of cover portions offset by a margin portion to engage a pair of first elements.

25. The gripping tool as recited in claim 1, wherein said at least one gripping element is configured to engage a non-standard work piece.

26. The gripping tool as recited in claim 25, wherein the non-standard work piece is a security fastener.

27. The gripping tool as recited in claim 1, wherein said at least one gripping element is configured to cooperatively function to facilitate chasing threads.

28. The gripping tool as recited in claim 1, wherein the first element includes a pair of first elements and a backbone connecting a portion of common edges of the pair of first elements, the pair of first elements and the backbone integrally formed from a unitary blank.

29. The gripping tool as recited in claim 1, wherein the body portion of each at least one gripping element includes an extension that projects from the gripping element to define a second body portion adapted for engaging the work piece such that the body portion facilitates a first range of gripping ability and the second body portion facilitates a second range of gripping ability.

30. The gripping tool as recited in claim 1, wherein the first element and the second element have a penannular configuration.

31. The gripping tool as recited in claim 1, wherein said at least one slot extends partly through the second element.

32. The gripping tool as recited in claim 1, wherein said at least one guide extends partly through the first element.

33. The gripping tool as recited in claim 1, wherein the first element includes a first opening formed in the gripping portion from which the guides extend.

34. The gripping tool as recited in claim 1, wherein the second element includes a second opening formed in the actuation portion such that each said at least one slot is disposed adjacent the second opening external thereto.

35. The gripping tool as recited in claim 1, wherein the first element includes a first opening formed in the gripping portion and the second element includes a second opening formed in the actuation portion such that the first and second openings are generally aligned.

36. The gripping tool as recited in claim 1, wherein the second element further includes a grasping portion operatively coupled to the first element and operatively associated with the actuation portion in meshing engagement.

37. The gripping tool as recited in claim 36, wherein the meshing engagement is defined by cooperative contact between at least one tooth and at least one groove.

38. The gripping tool as recited in claim 1, wherein the second element includes a pair of second elements, each with an actuation portion including at least one slot having a first section, and wherein each at least one slot first section formed in one of the pair of second elements defines a one path and each at least one slot first section formed in another of the pair of second elements defines an another path.

39. The gripping tool as recited in claim 38, wherein the one path has a generally clockwise orientation and the another path has a generally counter-clockwise orientation.

40. The gripping tool as recited in claim 38, wherein the one path and the another path cooperatively engage the force transfer element of one said at least one gripping element to actuate each said at least one gripping element along respective said at least one guide.

41. The gripping tool as recited in claim 1, wherein at least one of said at least one slot includes a third section defined within the first section, such that each gripping element associated with the third section of said at least one of said at least one slot is actuated along respective said at least one guide at a different rate.

* * * * *

EXHIBIT C

Int. Cl.: 8

Prior U.S. Cls.: 23, 28 and 44

United States Patent and Trademark Office

Reg. No. 3,491,690
Registered Aug. 26, 2008

TRADEMARK
PRINCIPAL REGISTER

BIONIC WRENCH

LOGGERHEAD TOOLS LLC (ILLINOIS LTD LIAB CO)
8310 WEST 127TH STREET
PALOS PARK, IL 60464

FOR: HAND TOOLS, NAMELY, WRENCHES, SCREWDRIVERS, BITS, AND MULTIPLE FUNCTION POCKET TOOLS COMPRISED OF SCREWDRIVERS, AND HAND TOOL BITS FOR SALE THROUGH MASS MERCHANDISERS TO RETAIL CONSUMERS, IN CLASS 8 (U.S. CLS. 23, 28 AND 44).

FIRST USE 3-0-2005; IN COMMERCE 6-0-2005.

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT, STYLE, SIZE, OR COLOR.

NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE "WRENCH", APART FROM THE MARK AS SHOWN.

SER. NO. 77-310,739, FILED 10-23-2007.

DORITT L. CARROLL, EXAMINING ATTORNEY

The United States of America

CERTIFICATE OF REGISTRATION

PRINCIPAL REGISTER

The Mark shown in this certificate has been registered in the United States Patent and Trademark Office to the named registrant.

The records of the United States Patent and Trademark Office show that an application for registration of the Mark shown in this Certificate was filed in the Office; that the application was examined and determined to be in compliance with the requirements of the law and with the regulations prescribed by the Director of the United States Patent and Trademark Office; and that the Applicant is entitled to registration of the Mark under the Trademark Act of 1946, as Amended.

A copy of the Mark and pertinent data from the application are part of this certificate.

To avoid CANCELLATION of the registration, the owner of the registration must submit a declaration of continued use or excusable non-use between the fifth and sixth years after the registration date. *(See next page for more information.) Assuming such a declaration is properly filed, the registration will remain in force for ten (10) years, unless terminated by an order of the Commissioner for Trademarks or a federal court. (See next page for information on maintenance requirements for successive ten-year periods.)*

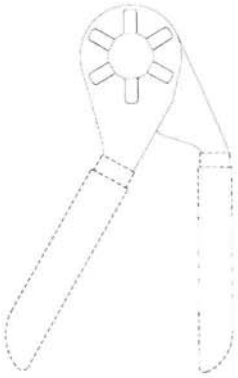
UNITED STATES PATENT AND TRADEMARK OFFICE · DEPARTMENT OF COMMERCE

Jon W. Dudas

Director of the United States Patent and Trademark Office

United States of America

United States Patent and Trademark Office



Reg. No. 4,527,177

Registered May 6, 2014

Int. Cl.: 8

TRADEMARK

SUPPLEMENTAL REGISTER

LOGGERHEAD TOOLS LLC (ILLINOIS LIMITED LIABILITY COMPANY)
8310 WEST 127TH STREET
PALOS PARK, IL 60464

FOR: HAND TOOLS, NAMELY, WRENCHES, IN CLASS 8 (U.S. CLS. 23, 28 AND 44).

FIRST USE 1-0-2005; IN COMMERCE 5-0-2005.

THE MARK CONSISTS OF A THREE-DIMENSIONAL DEPICTION OF A WRENCH HEAD. THE WRENCH HEAD CONSISTS OF A COG-LIKE DESIGN IN THE NATURE OF A CIRCLE WITH SIX RECTANGULAR SLOTS. THE BROKEN LINES DEPICTING THE HANDLES INDICATE PLACEMENT OF THE MARK ON THE GOODS AND ARE NOT PART OF THE MARK.

SER. NO. 85-587,714, FILED 4-3-2012.

KATHERINE CHANG, EXAMINING ATTORNEY

UNITED STATES PATENT AND TRADEMARK OFFICE · DEPARTMENT OF COMMERCE

Michelle K. Lee

Deputy Director of the United States Patent and Trademark Office

EXHIBIT D

Sears Holdings Corporation's Statement Regarding Craftsman Max Axess™ Locking Wrench

We take intellectual property rights very seriously and respect those rights. The allegations made by Mr. Brown simply are untrue and we will vigorously defend against all of the allegations raised in his lawsuit. Despite some visual similarities to other tools on the market, the Craftsman Max Axess™ locking wrench operates in a different way, using a mechanism designed in the 1950s that Mr. Brown expressly argued to the patent office was different from his own design.

As one of the nation's largest private employers with 264,000 associates, Sears believes in America. Sears Holdings Corporation employs more than 30,000 veterans and 1,500 active members of the National Guard/Reserve. Hundreds of millions of Americans invite us into their lives every year: visiting our stores, delivering a product, performing a service, solving a problem, or answering questions through our call center – Americans can and do put their trust in our company and brands. That's not something we take for granted.

Registered in 1927, the Craftsman brand remains one of America's most trusted. Not just any tool can be called Craftsman, ONLY those tools that are best-in-class. All Craftsman hand tools, including the Craftsman Max Axess™ locking wrench, are warrantied for life. We will repair or replace any hand tool that fails to meet customer expectations, a guarantee that's been in place since Craftsman was founded. To ensure customers receive the highest quality and performance standards while also offering the best value, Craftsman continually evaluates from whom and where to source products. For example, Craftsman sources all Craftsman Industrial™ hand tools here in the USA along with many other tools that bear the Craftsman name. The bottom line: no matter where a tool is made, ALL tools must meet the exacting quality standards to be called Craftsman.

In addition to the many Craftsman products sourced in the USA, Diehard automotive batteries are produced here at home. We constantly look for ways to partner with our manufacturers to help bring jobs to America. Through our manufacturing partner Electrolux, more than 1,200 new American jobs will be added at the plant they are building in Memphis, Tenn. This plant will manufacture ranges, wall ovens and cooktops, some of which are under the Kenmore brand for Sears.

Ultimately, Sears chooses products based on our mission to deliver the highest quality, value, and performance to our customers – that's our promise.

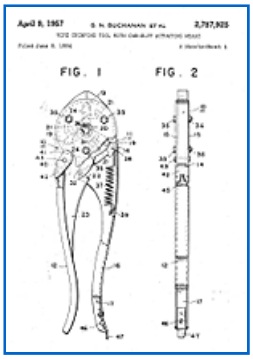
Sears Holdings Corporation
November 14, 2012

back to top

Sears Holdings Corporation

Statement Regarding Craftsman Max Axess™ Locking Wrench

KCD Lab Video



Craftsman's Max Axess™ Locking Wrench is patterned after mechanism designed in 1950s (pdf)

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