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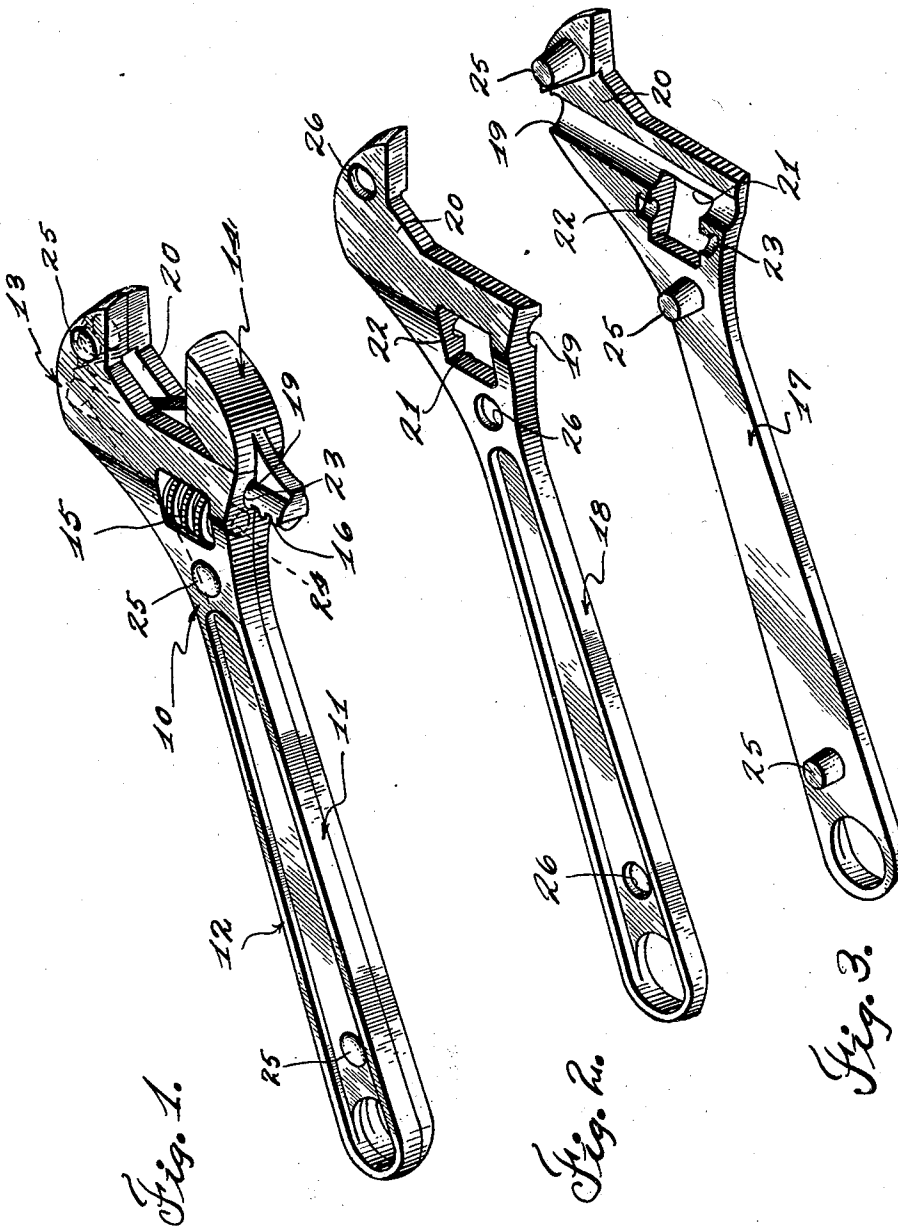
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1,739,715

WRENCH

Filed June 14, 1928

2 Sheets-Sheet 1



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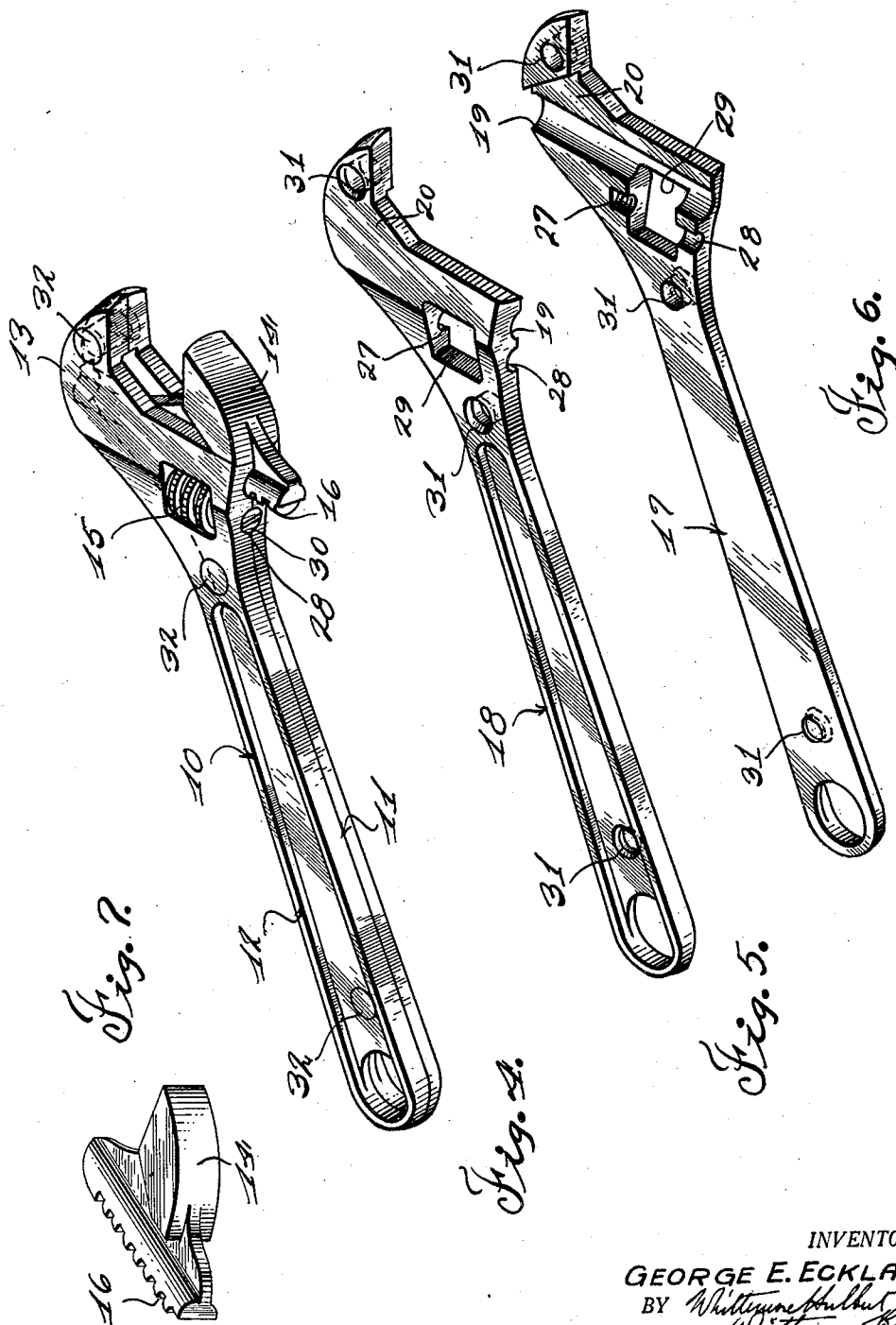
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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

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## WRENCH

Application filed June 14, 1928. Serial No. 285,496.

This invention relates to wrenches and has for an object the provision of a wrench so formed that the necessary machining operations are greatly minimized, thus reducing the cost of production.

In the past it has been the practice to form the body portion of wrenches and particularly those of the crescent jaw type, from a single blank, this blank being drop-forged to form the body portion and to produce a few of the necessary openings for receiving the movable parts of the wrench. With the body portion formed from a single blank, however, it was necessary to subsequently machine the necessary recesses and openings which could not be formed by drop forging. These machining operations not only required considerable time but greatly increased the cost of production. The present invention contemplates the elimination of most of the machining operations by forming the body in two complementary drop forged sections so that all of the necessary recesses and openings can be formed by the forging operations.

With the above and other objects in view the invention consists in certain novel features of construction, combinations and arrangements of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a perspective view of a completely assembled wrench made in accordance with the present invention;

Figures 2 and 3 are views of the complementary body sections of the wrench shown in Figure 1;

Figure 4 is a view of the complete assembly of a slightly modified form of wrench;

Figures 5 and 6 are views of the complementary body sections of the wrench shown in Figure 4;

Figure 7 is a detail view of the movable jaw of the wrench.

Referring now to the drawings, the numeral 10 designates a wrench comprising a body portion 11 forming a handle shank 12 and a stationary jaw 13, the numeral 14 indicating a movable jaw slidable to and from the jaw 13 and operable by means of a thumb screw

15 meshing with teeth 16 formed on the jaw 14. The body portion is formed of a pair of complementary drop forged body sections 17 and 18 respectively, having non-parallel outer and inner surfaces each section being provided with a semi-cylindrical groove 19 and a reduced portion 20 which cooperate with the groove and reduced portion of the other section to form a retaining guideway for the toothed portion of the movable jaw 14. Each body section is also provided with an opening 21 having oppositely disposed semi-annular recesses 22 and 23 which likewise cooperate with like parts of the other section to form opposed bearings for a thumb screw pin 24 and a housing for the thumb screw 15, this screw preferably being loosely mounted upon the pin 24. If desired however the pin may be rigidly secured to the screw to rotate therewith.

By forming the body portion 11 of two sections, all of the above mentioned recesses and openings can be formed during the forging operation thereby eliminating most of the expensive machining operations formerly necessary when the body was made up of a single blank. It is furthermore apparent that the forming of the recesses 22 and 23 in the manner described could only be accomplished by having the body portion formed of two sections.

The sections 17 and 18 may be secured together in various ways such as by welding or brazing the parts together or as disclosed in the drawings by providing cooperating means which not only secure the parts together, but also center the same with respect to each other so as to insure the correct aligning of the recesses and openings. In the present instance the section 17 is provided with the studs 25 projecting from the inner face thereof and the section 18 with the openings 26 through which the studs are adapted to project. The ends of the studs are then upset to provide flattened heads which may be welded if desirable.

In Figures 4 to 6, I have shown a slightly modified form of the invention disclosed in Figures 1 to 3. In these latter views each recess 27 is threaded while the opposite re-

cess 28 extends entirely through the metal from the opening 29 to the exterior of the body whereby the pin 30 may be screwed into the body instead of being inserted as previously described.

5 Another means of fastening the body sections together is also disclosed. In this form countersunk openings 31 are provided in each of the sections 17 and 18, and the sections  
10 are riveted together by means of the rivets 32.

From the foregoing it will be apparent that I have provided a wrench assembly wherein the parts are so formed and assembled as to  
15 eliminate many of the previously necessary operations and have thus greatly lessened production costs by reducing the time and labor necessary in forming the wrenches.

While it is believed that from the foregoing description, the nature and advantages  
20 of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim as my invention is:

1. A two-part wrench of the sliding jaw screw operated type, the parts of which are  
30 adapted to be formed by drop forging, having on their inner faces complementary groove portions for receiving the shank of the sliding jaw and apertured portions for receiving the thumb screw with complementary  
35 recesses forming a journal bearing for the screw pin whereby when the two parts are assembled said thumb screw is held in position thereby to be operable from the outside.

2. A two-part wrench of the sliding jaw screw operated type, the parts of which are adapted to be formed by drop forging, having on their inner faces complementary  
40 groove portions for receiving the shank of the sliding jaw and apertured portions for receiving the thumb screw with complementary recesses forming a journal bearing for the screw pin, lugs projecting from the inner  
45 face of one of said parts engaging registering apertures in the other part and forming the securing means therebetween whereby  
50 said thumb screw is held by the said parts in a position to be operable from the outside thereof.

55 In testimony whereof I affix my signature.

GEORGE E. ECKLAND.