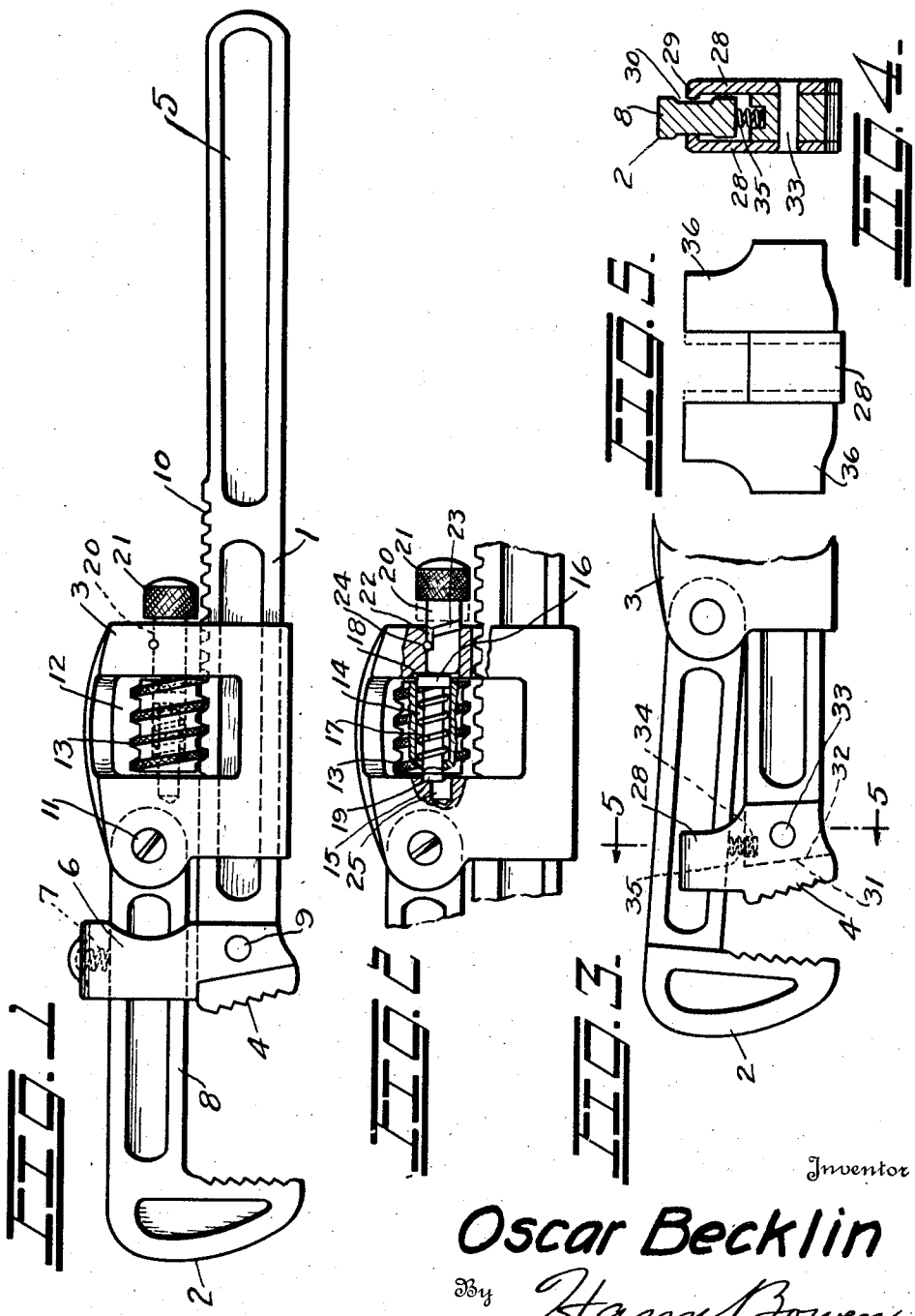
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QUICK SET WRENCH

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QUICK-SET WRENCH

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The invention is a pipe wrench having an adjusting nut engaging threads in the stock in which the nut may readily be thrown out of engagement with the thread.

The object of the invention is to provide a quick set pipe wrench having an adjusting nut engaging threads in the stock.

Another object of the invention is to provide a pipe wrench having a comparatively small adjusting nut.

A further object of the invention is to provide a pipe wrench having a small adjusting nut in which the nut may be readily thrown out of engagement with the thread.

And a still further object of the invention is to provide a simple and efficient pipe wrench of an economical construction.

With these ends in view the invention embodies, a wrench comprising a stock, a lower jaw at the end of the stock, a yoke above the lower jaw, a movable upper jaw pivotally attached to a nut carriage, a nut in the said carriage and means for readily shifting the nut to such a position as will be out of engagement with the thread.

Other features and advantages of the invention will be seen from the following description taken in connection with the drawings, wherein:

Figure 1 is a side view of the wrench.

Figure 2 is a similar view of the nut carriage showing the nut out of engagement with the thread.

Figure 3 is a side view of the head end of the wrench showing an alternate construction.

Figure 4 is a cross section on line 5—5 of Figure 3.

Figure 5 is a detail of the lower jaw forging.

In the drawings the wrench is shown as it would be made, wherein numeral 1 indicates the stock, numeral 2 the upper jaw and numeral 3 the nut carriage.

The stock 1 may be made as shown with the lower jaw of the wrench, which is indicated by the numeral 4 made integral therewith at one end and a handle 5 at the other. Behind the jaw 4 is a yoke 6 having a spring 7 in the upper side thereof that bears against the upper edge of the shank 8 of the upper jaw 2 which passes through the yoke 6. The yoke 6 is rigidly held to the end of the stock by a pin 9, as shown. The upper edge of the stock is provided with teeth 10 which may be of any suitable pitch.

The upper jaw 2 is made as shown and pivotally attached to the carriage 3 by a pin 11. The carriage 3 is made of such a size that it will readily slide over the stock and support the upper jaw. In the central portion of the carriage 3 is an opening 12 in which the nut 13 is mounted. In the central portion of the nut is a recess 14, as shown in Figure 2, with a pin 15 having a head 16 slidably mounted therein and resiliently held outward by a spring 17. It will be noted that the pin 15 is slightly longer than the nut 13 and also slightly longer than the opening 12 so that when the pin is in the position shown in Figure 2 the nut 13 cannot be removed from the carriage. It will also be seen that the inner faces of the carriage are recessed at the points 18 and 19 to permit the ends of the pin 15 to move upward to allow the threads of the nut 13 to move away from the threads of the stock. At the outer end of the carriage is a pin 20 with a knurled head 21, a flat space 22 in one side and a portion of a thread, as indicated by the numeral 23 extending from the end of the flat space. In the end of the carriage is also a pin 24 and it will be observed that when the nut 13 is moved downward into the threads and the pin 20 pushed inward it will force the inner end of the pin 15 into a circular opening 25 and then as it is slightly rotated the thread 23 will engage the pin 24 and force the pin slightly inward so that it will penetrate into the recess 14 of the nut so that it will hold the outer end of the nut permanently and at the same time permit the nut to rotate. It will therefore be observed that with the nut held in this manner the wrench may be readily adjusted by turning the nut. This will therefore provide a very convenient form of pipe wrench which may be adjusted similar to a monkey wrench.

In the design shown in Figure 3 the carriage may be similar to that shown in Figure 1 and the upper jaw 2 pivoted to it in a

similar manner. In this design the lower jaw 4 is made detachable and provided with upwardly extending sides 28 that turn slightly inward at their upper end forming projections 29 that fit into recess 30 in the sides of the shank 8 of the upper jaw 2. The inner portion of the lower jaw is provided with an inclined surface 31 that engages a similar inclined surface 32 at the end of the stock so that the jaw may be rigidly held against the end of the stock by a pin 33, as shown in Figure 4. In this design the upper side of the stock is provided with a recess 34 having a spring 35 in it to hold the upper jaw upward, as shown in Figure 3. The wrench is otherwise similar to that shown in Figure 1 and may be used in a similar manner. The jaw 28 may be forged as shown in Fig. 5, and the sides 36 bent to the position shown in the dotted lines.

It will be understood that changes may be made in the construction without departing from the spirit of the invention, one of which changes may be in the design of the jaws as it is understood that this adjusting means may be used on any type of wrench, another may be in the use of other means for resiliently holding the upper jaw to the lower jaw, another may be in the use of other means for attaching the upper jaw to the carriage and still another may be in the use of other means for releasing the adjusting nut.

The construction will be readily understood from the foregoing description. To use the device the wrench may be assembled as shown and it will be observed that it may ordinarily be used by turning the nut 13 for adjustment of the jaws and it may also be readily set by giving the head 21 a slight turn to the left, then setting the jaws and then pushing the pin inward and giving the head a slight turn to the right which will force the pin 15 into place and rigidly hold the nut.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. In a wrench, a fixed jaw, a handle extending from the said jaw, a movable jaw, a shank extending from the said movable jaw, a yoke extending upward from the said fixed jaw through which the shank of the movable jaw passes, means in the said yoke for resiliently holding the said shank, a cap slidable in the said handle to which the shank of the movable jaw is pivotally attached, a nut slidably mounted in the said cap having threads adaptable to engage teeth in the said handle, an independent pin within the said nut, the ends of which are adaptable to engage recesses in the said cap, a spring within the said nut for resiliently holding the pin upon which the nut is mounted toward the rear of the nut, and another pin rotatably mounted in the said cap and adaptable to move forward as it is rotated to form a bearing for the end of the said nut and at the same time force the said independent pin within the nut forward and into a recess to form a bearing at the other end of the nut.

2. In a wrench of the class described, said wrench having a fixed and movable jaw with the movable jaw held in a cap slidable on the said fixed jaw, a nut in the said cap, an independent pin within the said nut, and another pin adaptable to engage the said independent pin to force the independent pin into a recess in the said cap to form a bearing at one end while the pin forms a bearing at the other end.

3. In a wrench holding means, an adjusting nut, an independent pin upon which the said nut is mounted, said pin being adaptable to engage recesses in a member in which the said nut is mounted, resilient means within the said nut for holding the pin in one direction, and another pin rotatably mounted in the said member adaptable to engage the independent pin to force the said independent pin into a recess at the other end and at the same time adaptable to extend into the said nut to form a bearing for one end thereof.

4. In a wrench holding means, a nut mounted in a recess in a movable member of the said wrench, an independent pin in the said nut adaptable to extend into recesses in the said movable member, resilient means within the said nut for holding the independent pin toward one end, and another pin rotatably mounted in the said movable member adaptable to move into the said nut as it is rotated to form a bearing for one end of the nut and to force the said independent pin into a recess in the said movable member to form a bearing at the other end of the nut, the recesses of the said movable member being elongated and the independent pin mounted in the recesses adaptable to move to permit the said nut to move away from its center when released by the said rotatably mounted pin.

In testimony whereof I affix my signature.

OSCAR BECKLIN.