

B. C. WILDMO.

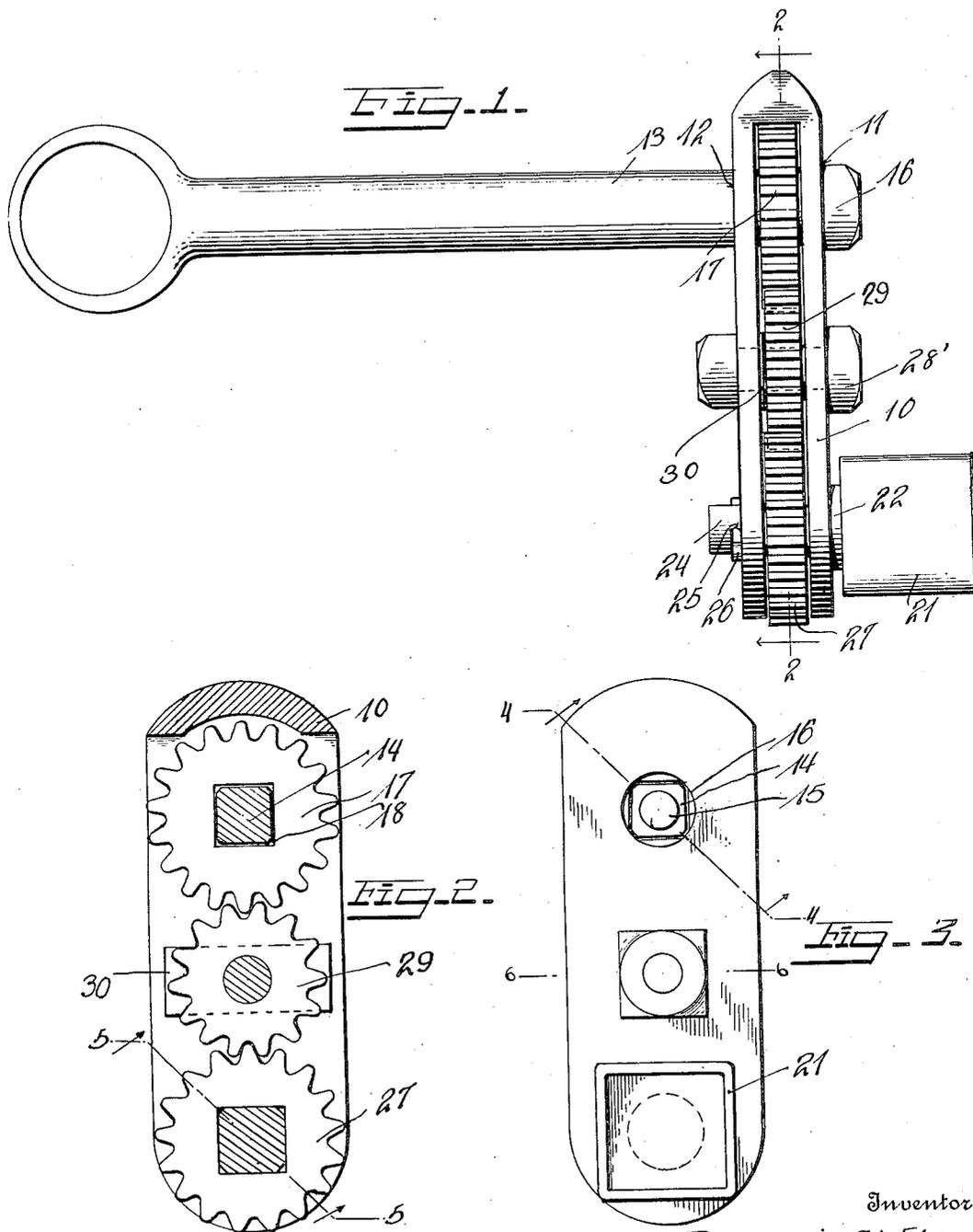
WRENCH.

APPLICATION FILED JUNE 7, 1910.

1,042,736.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.



Witnesses  
*Ernest Crocker*  
*Henry D. Bright*

Inventor  
*Benjamin C. Wildmo*

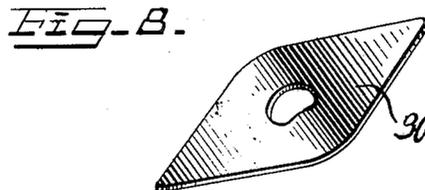
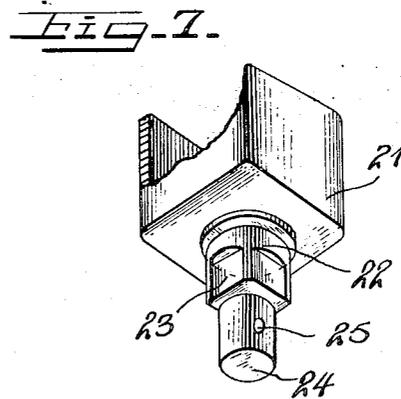
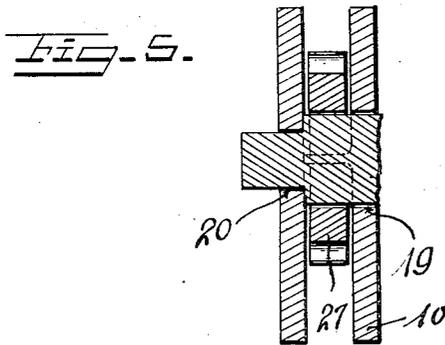
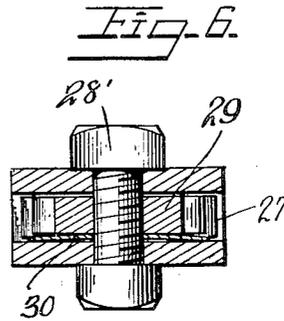
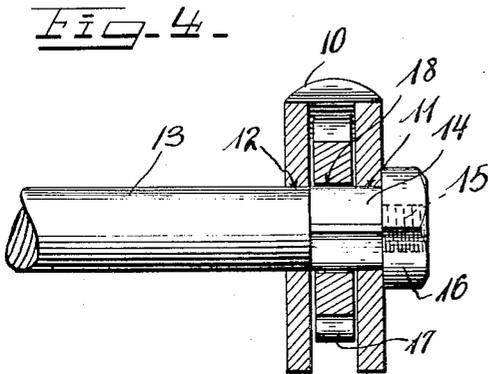
*[Signature]*  
 Attorney's

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2 SHEETS—SHEET 2.



Witnesses  
*Ernest Crocker*  
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# UNITED STATES PATENT OFFICE.

BENJAMIN C. WILDMO, OF BERNER, MINNESOTA.

## WRENCH.

1,042,736.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed June 7, 1910. Serial No. 565,475.

To all whom it may concern:

Be it known that I, BENJAMIN C. WILDMO, a citizen of the United States, residing at Berner, in the county of Clearwater, State of Minnesota, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to wrenches.

The object of the invention resides in the construction of a wrench especially adapted for tightening nuts on the teeth of threshing machine cylinders.

To this end the invention comprises a frame in which is mounted a rotatable nut receiving socket and a rotatable handle together with connections between the socket and handle whereby the rotation of the handle will be transmitted to the socket. The wrench is further arranged and constructed so that the handle thereof is adapted to be positioned on the same side of the frame as the socket or on the opposite side thereof as the particular nature of the work may require.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which,

Figure 1 is a side view of a wrench constructed in accordance with the invention; Fig. 2, a section on the line 2—2 of Fig. 1; Fig. 3, an end view of the wrench with the securing nut of the handle removed; Fig. 4, a section on the line 4—4 of Fig. 3, a fragment of the handle being shown in elevation; Fig. 5, a section on the line 5—5 of Fig. 2; Fig. 6, a section on the line 6—6 of Fig. 3; Fig. 7, a detail perspective view of the reversible nut receiving socket partly broken away; and Fig. 8, a detail perspective view of the spring for frictionally holding the gears of the wrench against accidental rotation.

Referring to the drawings, the wrench is shown as comprising a U-shaped plate 10 which has formed in its respective arms near its bight portion circular apertures 11 and 12. Rotatably mounted in said apertures 11 and 12 is a handle 13, one end of which is squared as at 14; said squared end being disposed between the arms of the plate

10 and in the apertures 11 and 12. The squared end 14 of the handle terminates in a reduced threaded portion 15 upon which is mounted a nut 16. A gear 17 is disposed between the arms of the plate 10 and provided with a squared aperture 18 through which the squared end of the handle 13 extends whereby the gear 17 and the handle 13 are adapted for rotation in unison. The diameters of the squared portion 14 of the handle are substantially equal to the diameters of the aperture 18 in the gear 17, but as the diagonals of the apertures 18 are greater than the diameter of the aperture 11 and the diameter of the aperture 12 the longitudinal edges of the squared portion 14 are suitably flattened so as to permit said handle to project through the apertures 11 and 12; said flattened edges forming a bearing for the handle upon the wall of the aperture 11.

Formed in the same arm of the plate 10 with the aperture 11, near the outer end of said arm is another aperture 19 of circular formation, while an aperture 20 in alignment with the aperture 19, but of smaller diameter than the latter is formed in the other arm of the plate 10. A nut engaging socket 21 is provided with a longitudinally extending stem 22 having a squared intermediate portion 23 and a reduced cylindrical outer end 24. The stem 22 is mounted for rotation in the apertures 19 and 20, the inner portion of the stem being disposed in the aperture 19, the squared portion 23 being disposed between the arms of the plate 10 and the reduced cylindrical terminal 24 being disposed in the aperture 20 and extending beyond the outer face of the adjacent arm of the plate 10. The projecting portion 24 is provided with a transverse aperture 25 through which is inserted a lock pin 26 for securing the nut engaging socket against disengagement from the plate 10. A gear 27 is provided with a squared aperture through which projects the squared portion 23 of the stem of the nut receiving socket; said nut receiving socket and gear being thus adapted for rotation in unison.

Passing through the sides of the plate 10, intermediate of the handle 13 and the nut receiving socket 21 is a bolt 28 upon which is rotatably mounted an idler gear 29 meshing with the gears 17 and 27. A bowed spring 30 is pierced by the bolt 28 and is confined between one side of the idler gear

29 and the adjacent face of one of the arms of the plate 10. The spring 30 is of sufficient strength to bear against the gear 29 and prevent said gear and the gears associated therewith from rotation during the application of the wrench to the desired nut.

From the construction previously described and particularly by reference to Fig. 4 it will be apparent that the handle 13 is adapted for operative connection with the plate 10 and gear 17 when disposed on the same side of the plate as the socket 21 or on the opposite side thereof.

What is claimed is:  
 15 A wrench comprising a U-shaped plate, a nut receiving socket provided with a longitudinally extending stem rotatably mounted in the arms of the U-shaped plate, a gear mounted on said stem for rotation there-  
 20 with and disposed between the arms of the U-shaped plate, an idler gear journaled between the arms of the U-shaped plate and meshing with said first named gear, the

arms of said U-shaped plate being provided with alining circular apertures of equal diameters, a handle provided with a squared terminal having its longitudinal edges flattened to form bearing surfaces whereby the squared terminals may be inserted in the openings in the arms of the plate from either side of the latter so as to position the handle on the same side of the frame as said nut receiving socket or on the opposite side of said frame, and a gear disposed between the arms of said U-shaped plate having a squared aperture through which the squared terminal of the handle projects, said last named gear meshing with the idler gear.

In testimony whereof, I affix my signature, in presence of two witnesses.

BENJAMIN C. WILDMO.

Witnesses.  
 OLUF BERGLUND,  
 H. C. WIDNESS.