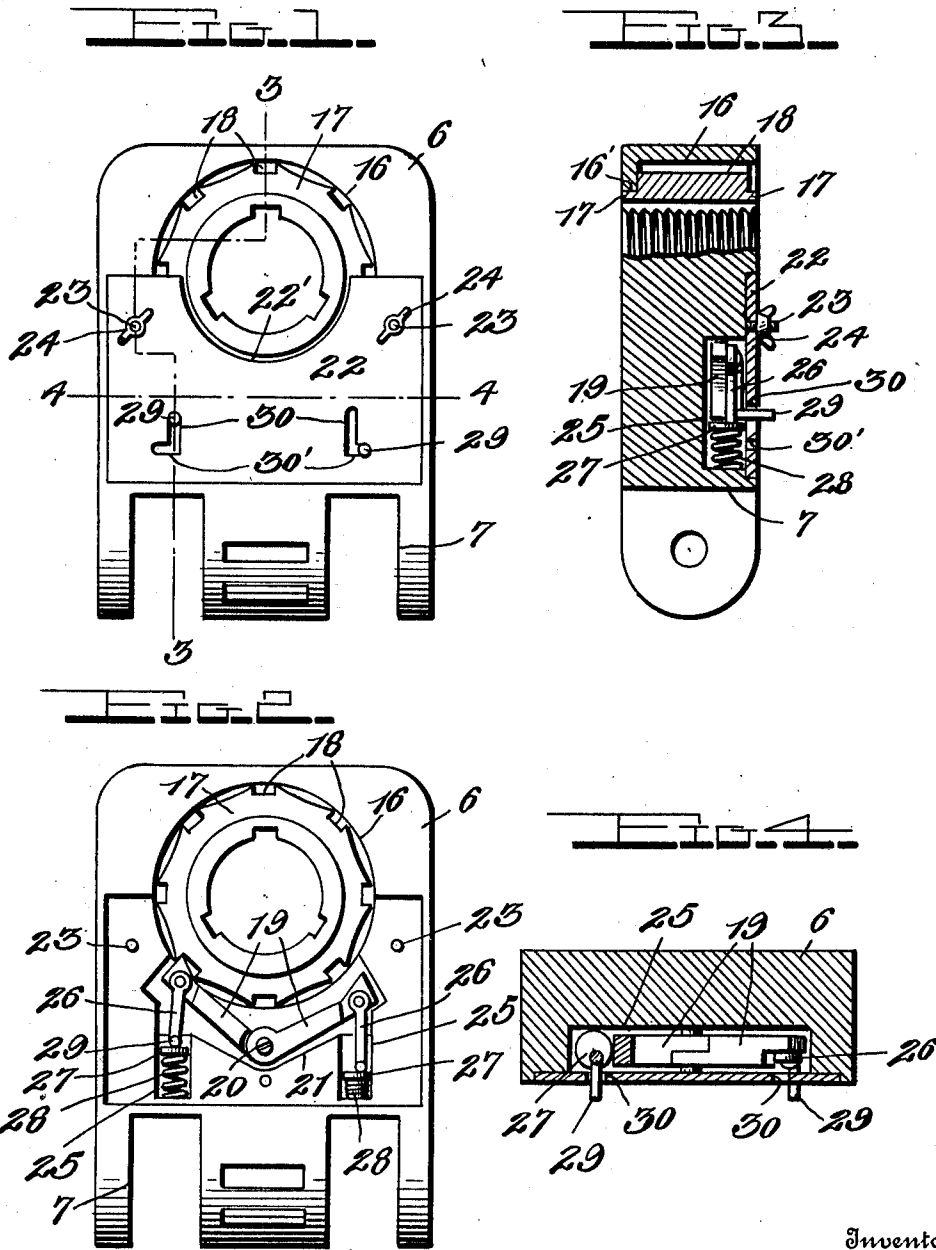


L. H. LOUIS.
 RATCHET DIE STOCK.
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1,021,155.

Patented Mar. 26, 1912.



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RATCHET DIE-STOCK.

1,021,155.

Specification of Letters Patent.

Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that I, LAWRENCE H. LOUIS, a citizen of the United States, residing at Alamosa, in the county of Conejos and State of Colorado, have invented certain new and useful Improvements in Ratchet Die-Stocks, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to ratchet die stocks and has for one of its objects to provide means for rotatably mounting the die in the stock whereby said die may be easily and quickly removed from the stock when
15 desired.

Another object of the invention resides in the provision of simple and efficient means for locking the die in the stock in either direction of movement of the latter.

20 Another and more specific object of my invention is to provide a stock and means for removably securing a die therein, a pair of pivoted spring pressed pawls to coact with the die and lock the same in the stock
25 for movement therewith, and means for independently moving the pawls and holding the same in an inoperative position.

With the above and other objects in view, the invention consists of the novel features
30 of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a ratchet
35 die stock embodying my improvements; Fig. 2 is a similar view, the cover plate for retaining the die in the stock being removed; Fig. 3 is a section taken on the line 3—3 of Fig. 1; and Fig. 4 is a section taken
40 on the line 4—4 of Fig. 1.

Referring in detail to the drawing 6 designates a body or operating member which is provided in one end with recesses 7 to receive portions of a suitable handle, (not
45 shown).

The body or operating member 6 is preferably of rectangular form and is provided with a die receiving opening 16. One end of this opening is provided with an annular
50 flange 16' for engagement by a shoulder 17' formed upon one end of the die 17, as clearly shown in Fig. 3. The other end of the die is provided upon its periphery with a plurality of spaced notches 18. A pair of pivotally mounted pawls 19 are adapted to
55 engage in the notches 18 of the die and lock

the same in the member 6 for rotative movement upon the pipe or other element being operated upon, in either direction of movement of the body member. These pawls
60 are mounted upon a screw 20 and are arranged in the recess 21 formed in one face of the member 6. The screw 20 also serves to secure the cover plate 22 upon the member
65 6, said plate extending over and protecting the pawls and the parts associated therewith. This plate is preferably countersunk in the face of the operating member and is provided with openings to receive the threaded
70 studs 23 which are fixed in the body of said member. Wing nuts 24 are threaded upon these studs to rigidly clamp the cover plate in position. A pair of longitudinal recesses
75 25 are also formed in the face of the operating member which communicate with opposite ends of the recess 21. In these latter recesses the links 26 are arranged which at one of their ends are pivoted to the outer
80 ends of the pawls 19, the other ends of said links being connected to the plates 27 which are movably disposed in the longitudinal recesses 25. Coiled springs 28 are arranged
85 between the closed ends of the recesses 25 and the plates 27 and normally act to force the links 26 outwardly and engage the ends of the pawls 19 in the notches 18 of the die. A right angularly extending finger-piece
29 is formed upon the inner end of each of the links 26 and projects through a slot 30
90 provided in the cover plate 22. One end of each of the slots 30 is extended at right angles as indicated at 30' and into these portions of the slots the finger-pieces 29 are adapted to be moved to hold the pawls 19
95 in retracted positions and the springs 28 under tension.

As will be noted from reference to Fig. 1 the die 17 is provided at one end with a reduced portion, and the semicircular edge
100 portion 22' of the cover plate 22 extends over the edge of the opening 16 in the body member 6 in close proximity to the periphery of this reduced portion. Thus the cover plate serves to prevent longitudinal movement of the die in the member 6 while at the
105 same time the die may be easily and quickly removed and replaced by another of different form, by simply detaching the plate 22.

From the foregoing it is thought that the construction and operation of my improved
110 die stock will be apparent. The device is comparatively simple, compact and durable

in the construction and arrangement of its parts and provides a tool of great serviceability and convenience in practical use. While I have described the body member as being provided with the recesses 7 in one of its ends, it will of course be obvious that these recesses may be eliminated and the body member attached to a suitable operating handle in any ordinary or approved manner. It will further be understood that the above description relates to the preferred embodiment of the invention and that the same is susceptible of considerable modification in the construction and arrangement of the various elements without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. A tool of the character described comprising a body member, a threading die removably arranged in said member, said die having a plurality of peripheral notches, one face of the body member being recessed, said body being provided with additional recesses, a pair of pivotally mounted pawls and operating means therefor arranged in the latter recesses, a cover plate arranged in the first named recess of said body member, and retaining means for said plate, said pawl operating means including finger pieces movably disposed through said cover plate.

2. A tool of the character described comprising an operating member, a die rotatably arranged in said member provided with a plurality of spaced notches in its periphery, one face of said member being recessed, a plate countersunk in the face of said member and covering said recess, said plate engaging upon the end of the die to prevent its longitudinal movement in said member, a fastening screw for said plate, a pair of pawls pivoted at one of their ends upon said

screw, the other end of said pawls being adapted for engagement in the notches in said die, links pivoted to the free ends of the pawls, and springs arranged in the recessed face of said member engaging said links to normally force the pawls into the notches of said die and lock the die in said member for unitary movement therewith in either direction of movement of the body bar.

3. A device of the character described comprising an operating member, a die removably arranged in said member and rotatable therein, one face of said member being provided with a plurality of angularly extending communicating recesses, said die having a plurality of spaced notches in its periphery, a pair of pawls arranged in one of the recesses in said member to engage in the notches of said die and lock the die in the member for unitary movement therewith in either direction of movement of the body bar, links connected to the free ends of said pawls and disposed in the remaining recesses of said member, springs arranged in said recesses normally forcing the pawls into the notches of said die, a cover plate countersunk in the face of said member disposed over said pawls and engaging with one end of the die to prevent its longitudinal movement in said member, said plate having a pair of L-shaped slots therein, and finger-pieces fixed to said links extending through said slots and movable in the same to retract the pawls and hold the same out of engagement in the notches of the die.

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

LAWRENCE H. LOUIS.

Witnesses:

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E. M. BODINE.