

W. C. COLE.
WRENCH.
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1,030,232.

Patented June 18, 1912.

Fig. 1.

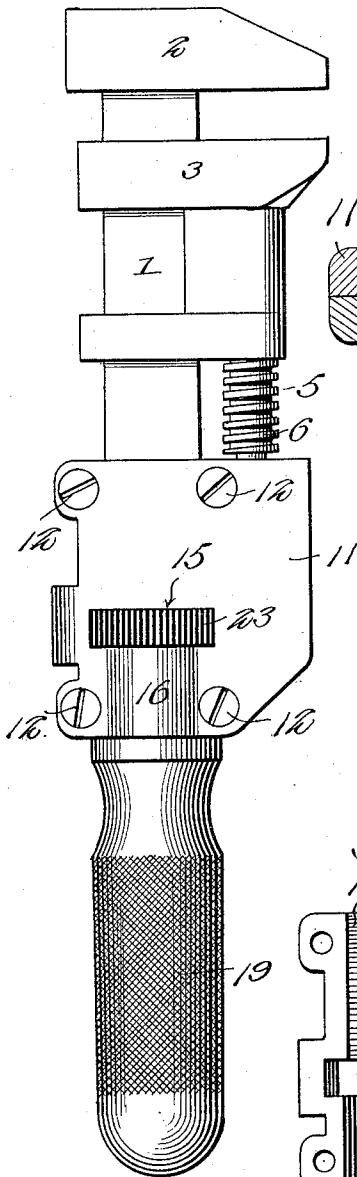


Fig. 2.

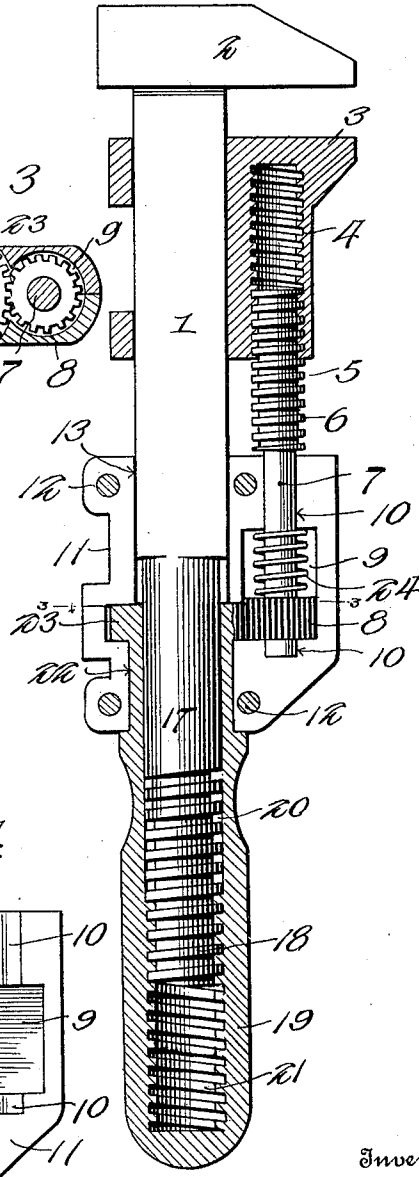


Fig. 3.

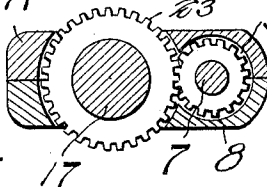
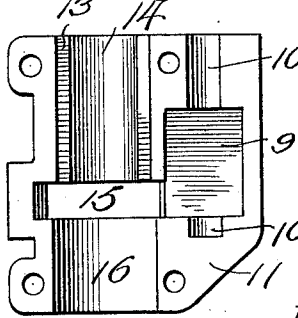


Fig. 4.



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WRENCH.

1,030,232.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM C. COLE, a citizen of the United States, residing at Baltic, in the county of Houghton and State of Michigan, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches of that class known as monkey wrenches, and the primary object of the invention is the construction of a wrench of this character wherein both of the jaws are moved simultaneously one toward the other or retracted one away from the other, so as to provide a quick acting wrench.

Another object of the invention is to provide a wrench of this class which is of a comparatively simple construction, which is strong and durable and which will securely and effectively clasp the article engaged between the jaws.

With the above and other objects in view, which will appear as the description progresses, the invention resides in the novel construction and combination of elements hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a wrench constructed in accordance with the present invention. Fig. 2 is a similar view, one of the plates of the housing being removed and one of the jaws as well as the handle of the device being shown in section. Fig. 3 is a transverse sectional view upon the line 3—3 of Fig. 2. Fig. 4 is a perspective view of one of the housing sections or plates.

In the accompanying drawings, the numeral 1 designates the shank of the wrench. This shank 1 is, for the greater portion of its length, of a substantially cross sectionally rectangular formation and the said shank has one of its ends provided with a jaw 2.

The numeral 3 designates the second jaw of the device. This jaw 3 is provided with a suitable passage so that the same may be received upon the shank 1 for slidable movement thereon. The jaw 3 is further provided with a longitudinally extending bore 4, the latter being threaded and the said threads are adapted to receive similar threads provided upon a longitudinally extending member 5. This member 5 is circular in cross section and from its threaded portion 6, the member is reduced to provide the non-threaded extension 7. This non-

threaded extension is provided adjacent its free end with a toothed wheel 8 and the said non-threaded extension 7 as well as the toothed wheel 8 is adapted to be received within suitable pockets or bearings 10 and 9 respectively, provided within a housing 11. This housing 11 comprises a pair of plates or members, each of which is of a similar construction and the said members are retained one upon the other, through the medium of removable securing elements 12. The members comprising the housing are formed with a substantially rectangular depression 13 parallel with the longitudinally extending bearings and pockets 9 and 10. The inner horizontal wall of the depressions 13 is centrally formed with an arcuate depression or passage 14, the purpose of which will be presently set forth. The plates forming the housing at the terminal of the rectangular depression or passage 13 are each provided with a transverse opening 15 and the said plates are further formed each with a semicylindrical passage 16 which communicates with the transverse opening 15. The rectangular shank 1 is formed with a cylindrical extension 17, and the said extension is formed adjacent its ends with threads 18.

The numeral 19 designates the handle of the device. This handle 19 has its outer face preferably milled so that the said handle may be easily rotated and the handle is formed with a circular bore 20, the lower portion of which being threaded, as at 21 and the said threads are adapted for co-action with the threads 18 formed upon the extension of the shank 1. The handle 19 is preferably cylindrical in cross section and the forward portion of the said handle is formed with a reduced portion 22, the same being of a length equaling the length of the semicylindrical openings of the plates of the housing. The extremity of the handle 19 is preferably integrally formed with an enlarged toothed wheel 23, the same being adapted to fit within the transverse opening 15 of the housing and to project a suitable distance therethrough so that the teeth of the said heel may be readily grasped from the sides of the housing and the handle revolved so as to slide the jaw 2 toward or away from the housing 11. The toothed wheel 23 is adapted to mesh with the toothed wheel 8, and it will be noted that by the rotation of the handle 19 the jaws 2 and 3

will be caused to move simultaneously either toward or away from each other as desired. Surrounding the non-threaded extension 7 of the member 5 and contacting one face of the toothed wheel 8 and one of the walls of the pocket 10 is a helical spring 24, the latter serving as a means for forcing the said wheel within proper alinement with the wheel 23, and allowing the wheel to be dis-
10 engaged from the wheel 23.

From the above description, taken in connection with the accompanying drawings, the advantages of the device will be apparent to those skilled in the art to which
15 the invention appertains, and while I have illustrated and described the preferred embodiment of the invention, as it now appears to me, it is to be understood that minor details of construction and proportion which
20 fall within the scope of the following claim may be resorted to without departing from the spirit of the invention.

Having thus described the invention, what I claim is:—

25 In a wrench of the class described, including a pair of jaws, one of said jaws having a shank which is provided with an inner threaded portion, a handle having a threaded bore which is adapted to engage with the

threaded extension of the shank, the second 30 jaw being mounted for slidable movement upon the shank of the first named jaw, said second jaw having a threaded bore, a housing comprising a pair of elements upon the shank and surrounding the outer portion of
35 the handle, said housing being provided with pockets, the upper portion of the handle being formed with a toothed annular element arranged within one of the pockets of the housing, a threaded element also ar- 40 ranged within the housing and co-acting with the threaded bore of the movable jaw, said member having its portion arranged within the housing non-threaded and being
45 provided with a toothed annular member which is adapted to co-act with the toothed portion of the handle, and a spring member adapted to exert a pressure to normally force the threaded member co-acting with
50 the jaw to bring its annular toothed element into coöperation with the annular toothed element provided upon the handle.

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

WILLIAM C. COLE.

Witnesses:

WILLIAM MAYNARD,
THOS. C. BUZZO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."