

E. J. DOUGLAS.
 SCREW DRIVER ATTACHMENT.
 APPLICATION FILED JULY 26, 1909.

951,526.

Patented Mar. 8, 1910.

Fig. 1.

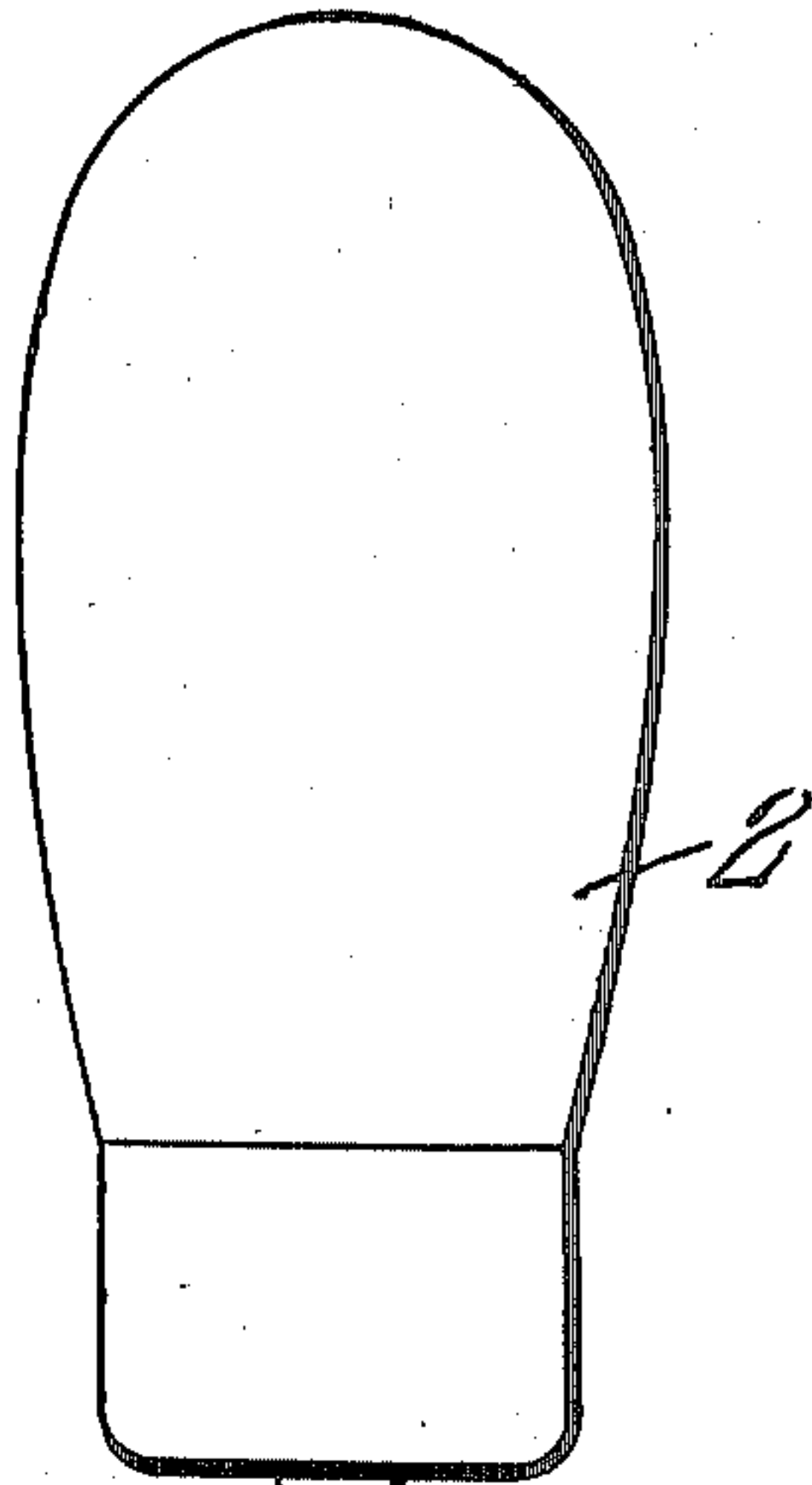


Fig. 2.

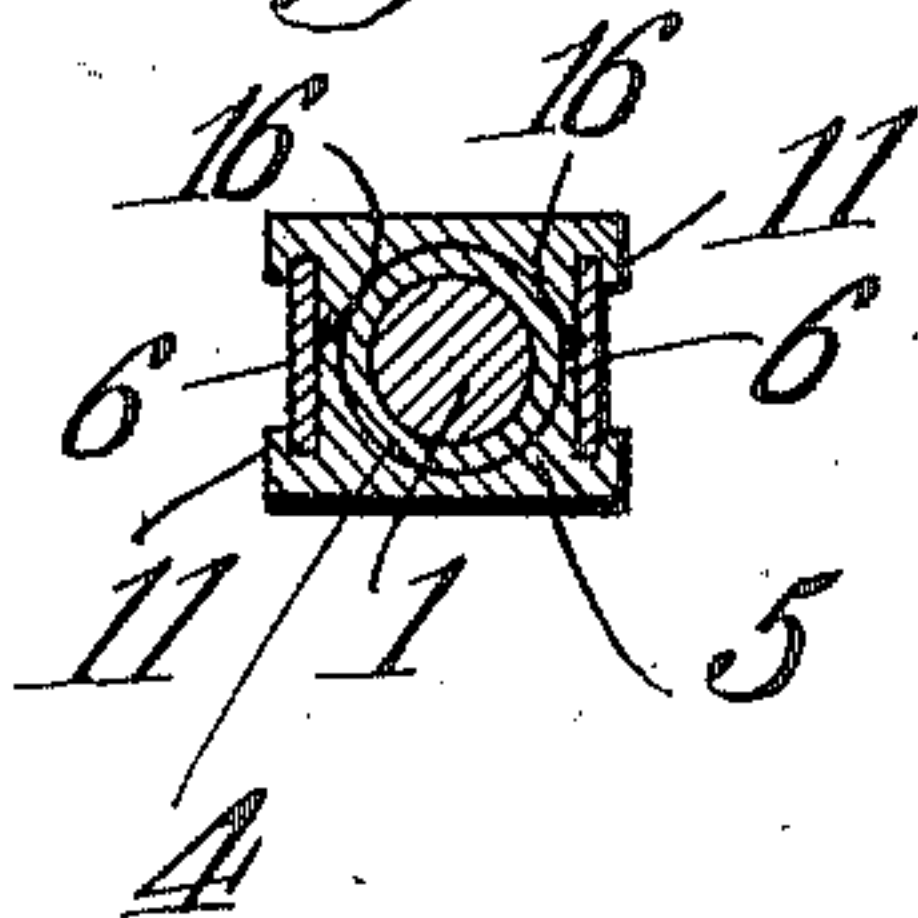


Fig. 3.

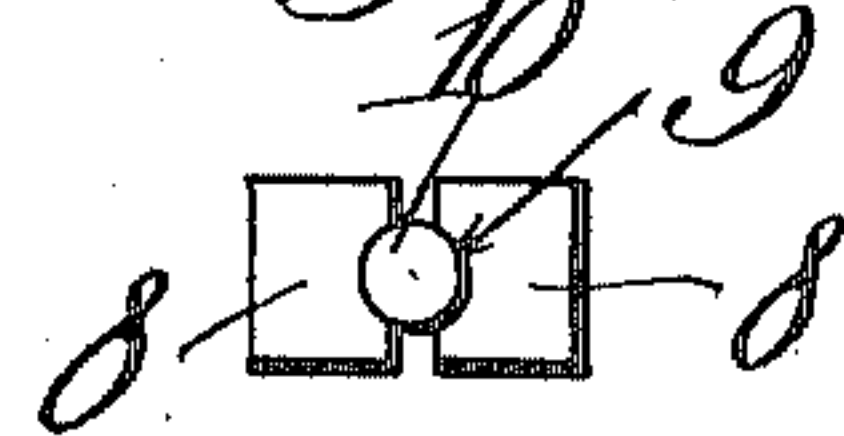
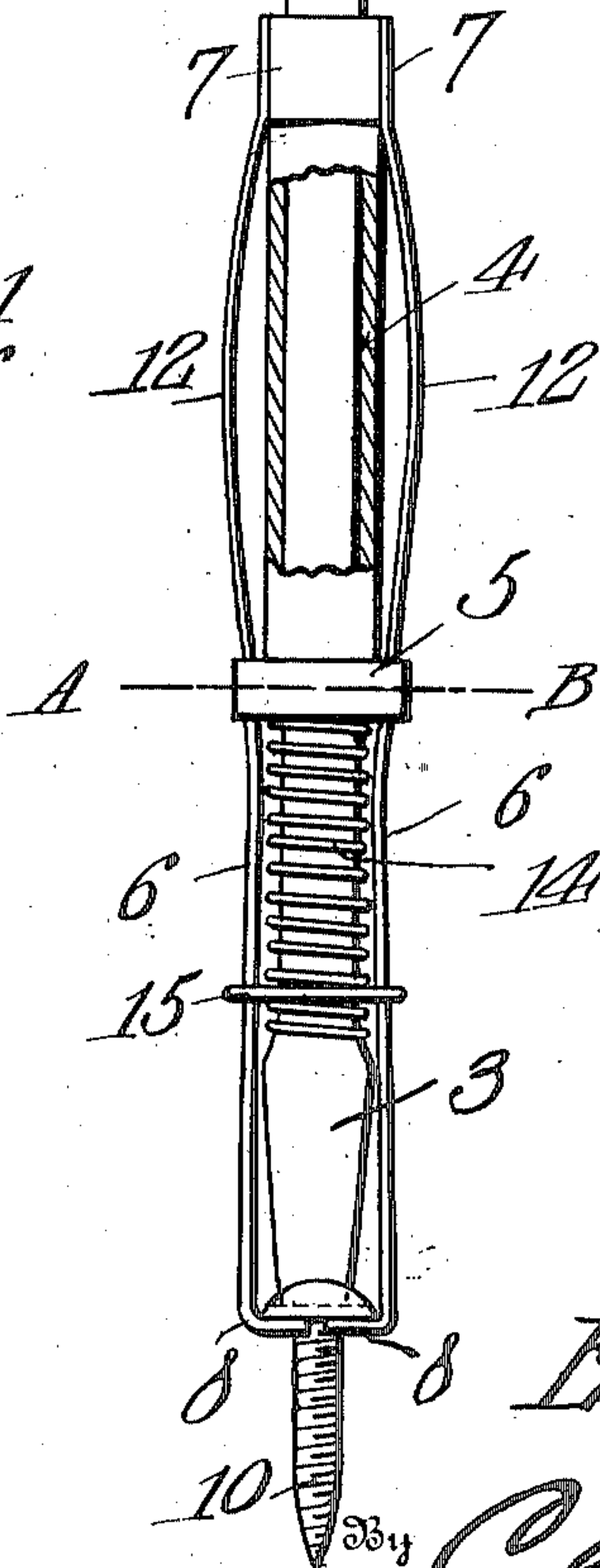
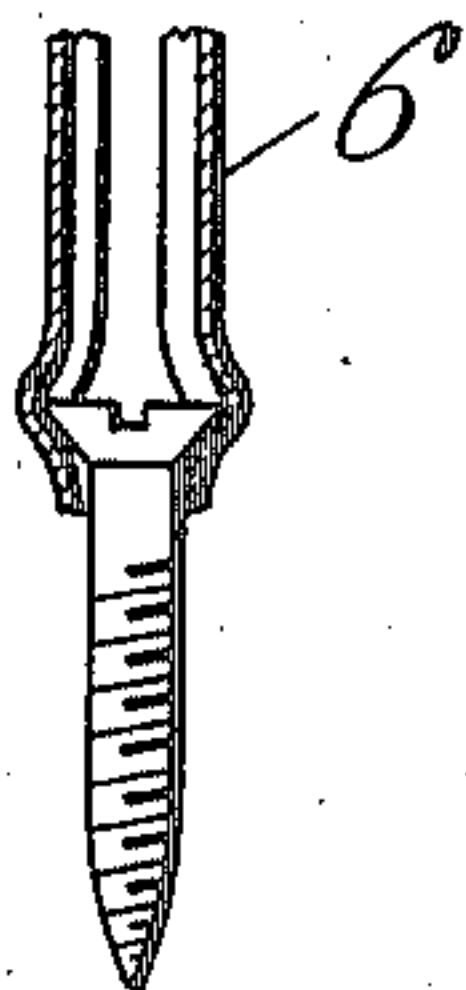


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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SCREW-DRIVER ATTACHMENT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELMER J. DOUGLAS, a citizen of the United States, residing at South Albany, in the county of Orleans and State of Vermont, have invented a new and useful Screw-Driver Attachment, of which the following is a specification.

The objects of the invention are, generally, the provision in a merchantable form, of a device of the above mentioned class, which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of resilient arms adapted to be assembled with a screw-driver to engage a screw to hold the same against the bit of a screw-driver; novel means being provided whereby the arms may be assembled, slidably, with the shank of the screw-driver; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter fully described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood, that, within the scope of what hereinafter thus is claimed, divers changes in the form, proportions, size, and minor details of the structure may be made, without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings, in which:

Figure 1 shows my invention in side elevation, parts being broken away better to illustrate the structure, and a screw being held in contact with the bit of the screw-driver by the device of my invention. Fig. 2 is a transverse section on the line A—B of Fig. 1; Fig. 3 is an end elevation of the device, and Fig. 4 is a detail view of the lower end of the device showing the construction of the jaws adapted for use in holding screws having conical heads.

In carrying out my invention, I provide primarily, a shank 1 provided at its upper extremity with a handle 2 and at its lower extremity with a bit 3. Slidably mounted upon the shank 1 intermediate the handle 2 and the bit 3 is a tube 4. I further provide

a pair of resilient arms 6 adapted to be mounted upon either side of the tube 4 longitudinally thereof, the upper extremities 7 of the arms being rigidly assembled by soldering or otherwise, with the upper end of the tube 4. The lower extremities of the arms 6 are inbent toward each other, as denoted by the numeral 8 and the extremities of these inbent portions are notched, as denoted by the numeral 9. The lower end of the tube 4 is provided with a head 5 having oppositely disposed, parallel faces 16 to receive the intermediate portions of the arms 6. The arms 6 are fulcrumed upon these flat faces 16, and the head is provided with inwardly projecting fingers 11 adapted to engage the arms 6 and to hold them in place upon the flat faces 16. Owing to the manner in which the device is operated, sufficient space is allowed to intervene the fingers 11 and the faces 16 so that the arms 6 may have a slight play therebetween. The portions 12 of the arms 6, which are located between the head 5 and the upper extremity of the tube 4 are oppositely convexed to space the portions 12 of the arms from the tube 4 upon which they are mounted.

Inclosing the shank 1 between the bit 3 and the head 5 is a helical compression spring 14, the lower end of which bears against the laterally extending bit 3, the upper extremity of the spring bearing against the head 5 and against the lower extremity of the tube 4 which extends through it. Slidably mounted upon the arms 6 between the head 5 and the inbent ends 8, is an annular keeper 15.

In practical operation, the portions 12 of the arms 6 are seized and pressed toward the tube 4, whereby the inbent ends 8 of the arms will be spaced apart. The tubular member 4 may then be slid downward along the shank 1, to position the inbent ends 8 of the arms below the lower extremity of the bit 3. When the hand is removed from the portions 12 of the arms, the notches 9 in the portions 8 of the arms will engage the screw 10, the spring 14 causing the tube to move upward upon the shank 1, whereby the portions 8 of the arms will be drawn into contact with the head of the screw, the lower extremity of the bit 3 engaging the kerf in the screw-head. The screw may then be rotated to place and when the head of the screw engages the material into which the

screw is being driven, the notches 9 will move free from the screw permitting the latter to be driven full length into the material. The resiliency of the arms 6 will automatically hold them in contact with the screw, but if desired, the keeper 15 may be slid downwardly along the arms to augment their grip upon the screw.

It will be observed that the jaws of the device as illustrated in Figs. 1, 2 and 3 are adapted principally for holding or gripping screws having rounded head, and in Fig. 4 of the drawings there is illustrated a slight modification of the structure shown in the other three figures in which Fig. 4 the jaws 6 are adapted to grip a screw having a conical head, the gripping terminals of the jaws or arms having the same general contour as the exterior surfaces of the screw head to be gripped.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:—

1. A device of the class described comprising a shank provided with a bit; a tubular member slidably mounted upon the shank; resilient arms rigidly mounted at one end upon the tube and at their other ends inbent toward each other and notched in the extremities of their inbent portions, the intermediate portions of the arms being fulcrumed upon the tube, the arms being spaced from the tube between their fulcrum points and their points of rigid attachment to the tube; and a compression spring inclosing the shank and having terminal abutment against the bit and against the tube.

2. A device of the class described comprising a shank provided with a bit; a tubular member slidably mounted upon the shank; resilient arms rigidly mounted at

one end upon the tube and at their other ends inbent toward each other and notched in the extremities of their inbent portions; a head rigidly assembled with the tube, the intermediate portions of the arms being fulcrumed upon the head, the head being provided with inwardly extending fingers to engage the arms, the arms being spaced from the tube between the head and their points of rigid attachment to the tube; and a compression spring inclosing the shank and having terminal abutment against the bit and against the head.

3. A device of the class described comprising a shank provided with a bit; a tubular member slidably mounted upon the shank and provided at its lower extremity with a head; resilient arms rigidly mounted at their upper ends upon the upper end of the tube, and at their lower ends inbent toward each other and notched in the extremities of their inbent portions; the intermediate portions of the arms being fulcrumed upon the head, the head being provided with inwardly projecting fingers to engage the arms, the arms being spaced from the tube between the head and the upper end thereof; a compression spring inclosing the shank and having terminal abutment against the bit and against the head; and an annular keeper slidably mounted upon the arms intermediate the head and the inbent portions of the arms.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ELMER J. DOUGLAS.

Witnesses:

WILLARD F. AMES,
ELWIN L. GRAVES.