

J. L. DUNNING.
 SCREW DRIVER.
 APPLICATION FILED JUNE 5, 1909.

950,318.

Patented Feb. 22, 1910.

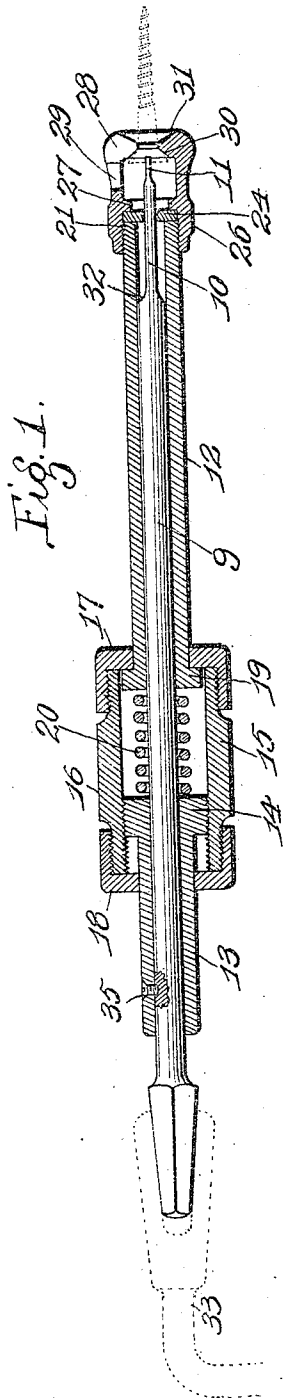


Fig. 1.

Fig. 5.

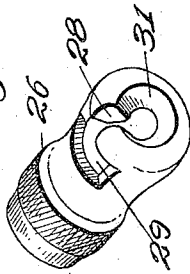


Fig. 4.

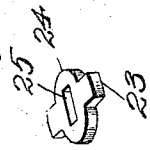


Fig. 3.

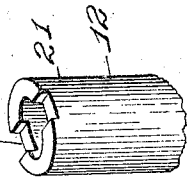


Fig. 2.

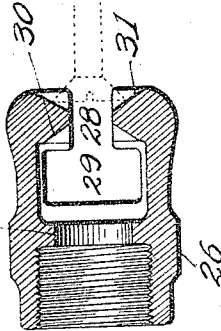


Fig. 8.

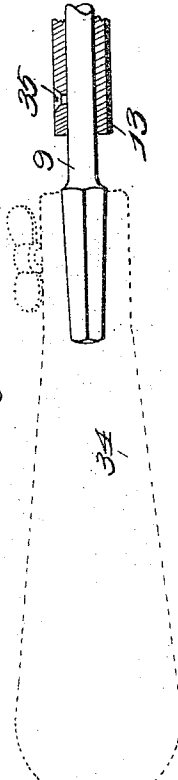


Fig. 7.

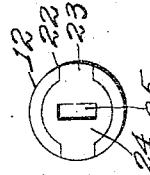
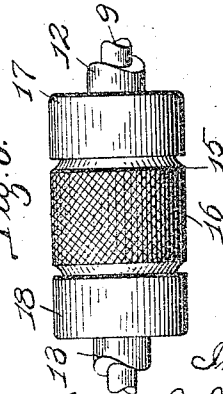


Fig. 6.



Witnesses
 W. B. Stein
 L. A. S. Mc Intyre

Inventor
 James L. Dunning
 by Hopkins & Cich's Attys.

UNITED STATES PATENT OFFICE.

JAMES L. DUNNING, OF CLAYTON, MISSOURI.

SCREW-DRIVER.

950,318.

Specification of Letters Patent.

Patented Feb. 22, 1910.

Application filed June 5, 1909. Serial No. 500,253.

To all whom it may concern:

Be it known that I, JAMES L. DUNNING, a citizen of the United States, and resident of Clayton, Missouri, have invented certain new and useful Improvements in Screw-Drivers, of which the following is a specification.

My invention relates to improvements in screw-drivers.

The object of my invention is to construct a screw-driver having a means for supporting a screw preparatory to applying the same in the article and for readily removing the tool from the screw after the same has been set, then bringing the driving end of the tool in contact with the head of the screw for inserting the screw in the article.

In the drawings—Figure 1 is a central sectional view of my complete invention. Fig. 2 is an enlarged detail sectional view of the clutch. Fig. 3 is a detail perspective view of the end of the tube made use of and in which is inserted a stop. Fig. 4 is a detail perspective view of the stop made use of. Fig. 5 is a detail perspective view of the adjusting sleeve. Fig. 6 is a plan view of the adjusting sleeve made use of in carrying out my invention. Fig. 7 is an end view of the tube showing the stop in position. Fig. 8 is a view of a portion of the tool shank showing the same when supported in a hand handle.

In the construction of my invention I provide a screw-driver consisting of a shank 9, its driving end provided with a flattened portion 10 and the driving point 11. This shank is supported in a tube 12 and a tool sleeve 13. The tool sleeve 13 is provided with a head 14, its periphery being screw-threaded, said screw-threads meshing with a corresponding internal screw-thread formed on the adjusting sleeve 15. The center portion of the outer surface of the adjusting sleeve is knurled as indicated by the numeral 16 and the ends of said sleeve are externally screw-threaded, on which are inserted the caps 17 and 18. The cap 18 is for the purpose of limiting the movement of the head 14 when the adjusting sleeve is manipulated.

The tube 12 is provided with a flange 19 which is somewhat smaller in diameter than the opening in the sleeve and said flange contacts with the inner surface of the cap 17 and is thereby held in position. Between the head 14 and flange 19 and within the

adjusting sleeve 15 and encircling the shank 9 is a spring 20, the object of this spring 20 being to govern the movement of the tube 12. The tube 12 has its end 21 provided with recesses 22 in which are inserted flanges 23 of the stop 24. The stop 24 is provided with a central elongated opening 25 through which the flattened portion 10 of the tool passes and the purpose of the flanges 23 is to prevent the stop from turning, thereby retaining the tool in position.

On the end 21 of the tube 12 is placed a clutch 26 on the inner surface of which is formed a flange 27 which contacts with the stop 24, retaining the same in position against the end of the tube 12. The clutch 26 is also provided with a slot 28 of sufficient size to admit the insertion of various sizes of screws and in the body of the clutch and formed at right angles to the slot 29 is an elongated opening 29 which is of sufficient size to admit the heads of the screws. The front surface or contacting edge of the clutch has two countersunk surfaces 30 and 31, the surface 30 located on the interior and with which contacts the head of the screw when the same is in a position as shown by dotted lines in Fig. 1, and the object of the countersunk surface 31 is to permit the tool to be placed over the head of the screw in the position as shown by dotted lines in Fig. 2 and thereby act as a guide and permit the driving point to lodge within the slot formed in the screw head by the mere turning of the tool.

When it is desired to insert the screw into the clutch preparatory to setting the screw in the article, the operator manipulates the adjusting sleeve, causing the head 14 of the tool sleeve to contact with the cap 18, thereby permitting the tube 12, together with the clutch and parts to move forward so that the driving point 11 of the tool is on a line flush with the end of the tube. The screw is then inserted into the clutch and by again operating the adjusting sleeve in an opposite direction, the tool is brought forward so that the driving end contacts with the head of the screw, thereby binding it against the countersunk surface 30 by the contacting of the driving end 11. After the screw has been set, the operator by operating the adjusting sleeve removes the tool from the screw and then by bringing the outer countersunk surface 31 in contact with the screw head and by pressing forward on the clutch, the spring-

is permitted to compress and the tool advances forward so that the driving edge automatically seats itself in the slot of the screw head and by the tension of the spring which retains the clutch in contact with the head, it will prevent the tool from leaving the screw even if the driving head should leave the slot.

Should for any reason the operator desire to project the driving head beyond the contacting surface of the clutch, this can be accomplished by drawing the tube rearwardly, compressing the spring and permitting the flattened portion to operate through the slot 25 of the stop and project a suitable distance, this distance being regulated by means of the shoulder 32 formed on the shank 9, which shoulder comes in contact with the stop 24.

The tool as shown in Fig. 1 has been designed for the purpose of inserting the same into a brace indicated by dotted lines 33, and in Fig. 8 I show the same tool inserted in a hand handle, indicated by dotted lines 34. The tool sleeve 13 is held in its rigid and adjusted position on the shank by means of the

set screw 35 and by means of this screw the entire device is supported in position on the screw-driver.

Having fully described my invention, what I claim as new and desire to have secured to me by the grant of Letters Patent, is:

A screw driver comprising a driving tool in combination with a set tool sleeve; a sliding sleeve mounted on the driving tool; an adjusting sleeve located between the sliding sleeve and tool sleeve, and arranged to be adjusted thereon; a spring located around the driving tool within the adjusting sleeve and arranged to communicate with the sliding sleeve; a clutch having a recess and a double countersunk surface for retaining the screw in position while the same is being inserted in the article, substantially as described.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

JAMES L. DUNNING.

Witnesses:

ALFRED A. EICKS,
WALTER C. STEIN.