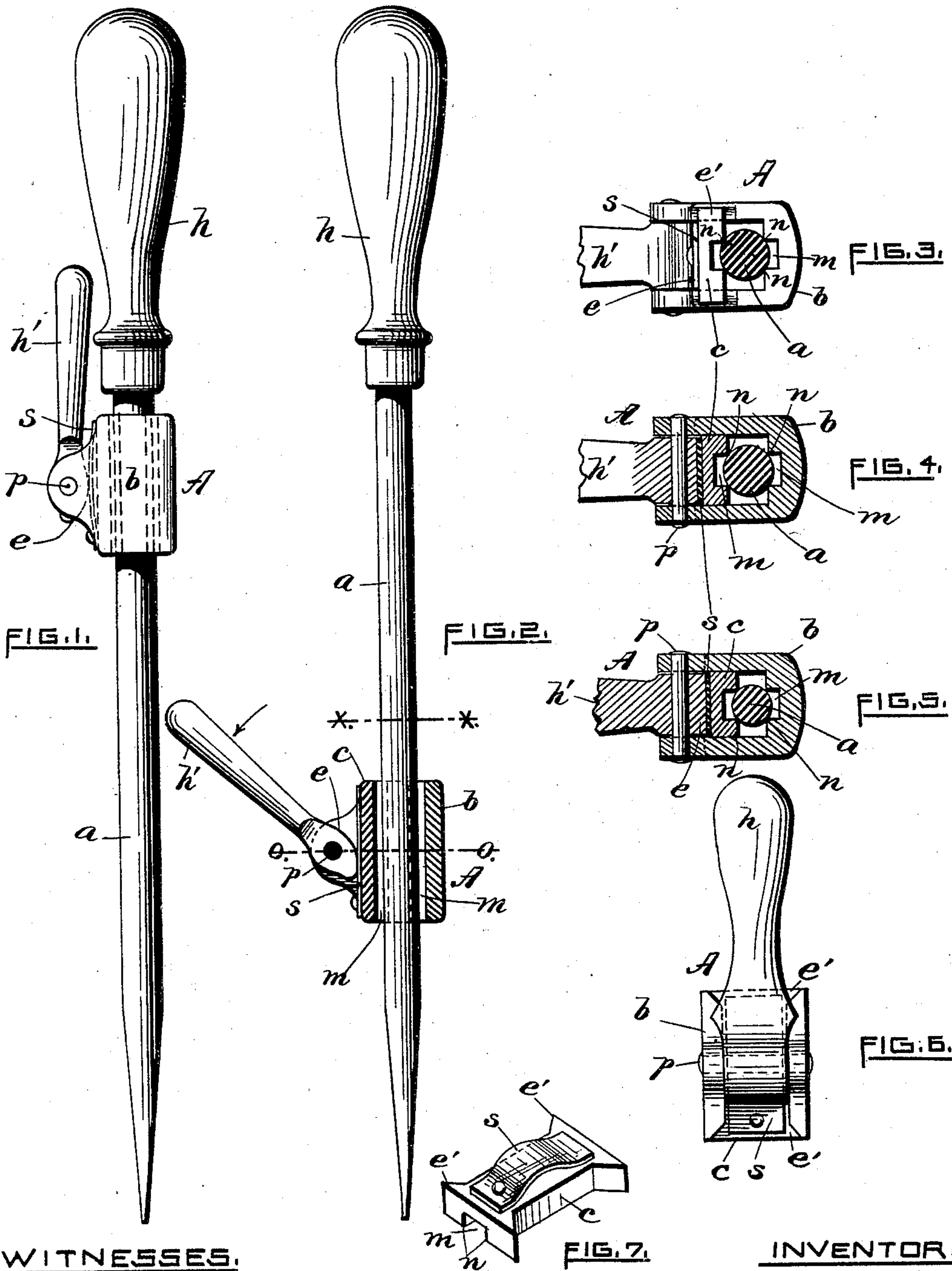


(No Model.)

M. J. BARTLETT.  
WRENCH FOR SCREW DRIVERS.

No. 432,928.

Patented July 22, 1890.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## WRENCH FOR SCREW-DRIVERS.

SPECIFICATION forming part of Letters Patent No. 432,928, dated July 22, 1890.

Application filed March 12, 1889. Serial No. 302,994. (No model.)

*To all whom it may concern:*

Be it known that I, MARCUS J. BARTLETT, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Wrenches for Screw-Drivers; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The improvement forming the subject of my present invention consists of a wrench or "dog" adapted to be adjustably secured to the blade of a screw-driver, the object of the invention being to provide screw-drivers with means whereby the power or force used, as in driving-screws, may be exerted to a much greater degree than drivers unprovided with the improvement.

It frequently happens that in order to send a screw home or in loosening it the operator is accustomed to employ a wrench, the jaws of which have the blade of the driver held firmly between them, thereby forming an auxiliary lever. Such employment of the wrench is not only inconvenient, but in case the shank portion of the screw-driver blade be cylindrical its application is obviously precluded.

In the drawings herewith, Figure 1 represents a side elevation of an ordinary screw-driver provided with my improved wrench or dog, the latter being frictionally held in position adjacent to the driver-handle, corresponding to non-use. Fig. 2 is a similar view, the wrench being in position as in use, the frame or holder being cut longitudinally through the center. Fig. 3 is a horizontal sectional view enlarged, taken through  $x x$  of Fig. 2. Fig. 4 is the same taken through  $o o$ . Fig. 5 is a cross-sectional view similar to Fig. 4, but showing a smaller screw-driver-blade shank. Fig. 6 is a front view of the wrench detached, and Fig. 7 is a perspective view of the gripping-clamp.

A description of my screw-driver attachment and the manner of its operation is substantially as follows: I would first state that

$a$  designates the blade portion of an ordinary screw-driver adapted at its lower end to engage a screw, as common, and  $h$  is the handle portion, the blade as drawn being round cross-sectionally.

$A$  indicates the device as a whole.

$b$  is the lever-frame, made of steel or other suitable material,  $U$  shape in cross-section, and having in front ears, through which a pin  $p$  passes. The sides of the frame are separated by a distance somewhat exceeding the width or diameter of the driver-blade  $a$ . The inner rear vertical side is grooved out, as  $m$ , thereby forming the two edges  $n$ , which in use firmly engage the blade in conjunction with the similarly-grooved movable gripping-clamp  $c$ , mounted in front. The depth and arrangement of said grooves are such that the device will readily accommodate various sizes and forms of blades. (See Figs. 4 and 5.) The clamp  $c$  is slightly enlarged at the ends, as  $e'$ , the frame  $b$  being correspondingly shaped to receive it, (see Figs. 3 and 6,) thereby preventing the clamp from accidental displacement. To the outer face of the clamp is secured a spring  $s$ , which is interposed between the clamp and the cam-shaped end  $e$  of the wrench-handle  $h'$ , pivoted upon the pin  $p$ .

The device may be readily applied to the screw-driver by inserting the blade longitudinally through it when the handle  $h'$  is in a vertical position. When the wrench is not in use, it may be removed from the driver, or it may be allowed to remain upon it contiguous to the handle  $h$ , as shown in Fig. 1, the spring  $s$  then bearing against the arm or lever-handle  $h'$ , the tension being sufficient to cause the clamp  $c$  to engage the blade and maintain the whole in position. The screw-driver at the same time may be used in the regular manner, if desired.

Whenever my improvement is called into use, it is first pushed along the blade to the necessary point desired. The handle  $h'$  is then grasped firmly and swung downwardly (see arrow direction, Fig. 2) until the necessary frictional contact of the angular edges  $n$  with the blade  $a$  is effected, followed immediately by turning the whole axially, the handle  $h'$  affording a convenient lever for the purpose. I would state that the sharp edges  $n$  act as



teeth to grip the surface of the blade. It is obvious that the gripping-surfaces may be otherwise produced—as, for example, by corrugating or otherwise roughening them. In  
5 fact, smooth surfaces practically fulfill the requirements.

The device may be readily used as a frictional ratchet-wrench by simply loosening or releasing the clamp *c* from the blade and causing it to regrasp the blade after vibrating the  
10 wrench around the screw-driver a short angular distance, the operation being repeated, as desired.

I claim—

15 1. The wrench attachment for screw-drivers hereinbefore described, consisting of the U-shaped sliding frame *b*, adapted to receive and engage the driver-blade, a cam-lever pivoted to said frame and adapted to vibrate in  
20 a plane cutting the blade longitudinally, and

a spring-clamp *c*, interposed between the blade and the said cam-lever, all arranged and adapted for operation substantially as set forth.

2. The combination, with a screw-driver 25 blade, of the wrench A, hereinbefore described, consisting of the U-shaped sliding frame *b*, frictionally engaging the blade, the cam-lever *h'*, pivoted to said frame and adapted to vibrate in a plane cutting the blade longi- 30 tudinally, and a spring-clamp *c*, engaging the driver-blade and interposed between it and the cam-lever, substantially as hereinbefore described, and for the purpose set forth.

In testimony whereof I have affixed my sig- 35 nature in presence of two witnesses.

MARCUS J. BARTLETT.

Witnesses:

CHARLES HANNIGAN,  
GEO. H. REMINGTON.