

No. 689,806.

Patented Dec. 24, 1901.

J. R. HOUTS.  
WRENCH.

(Application filed Dec. 26, 1899.)

(No Model.)

Fig. 1.

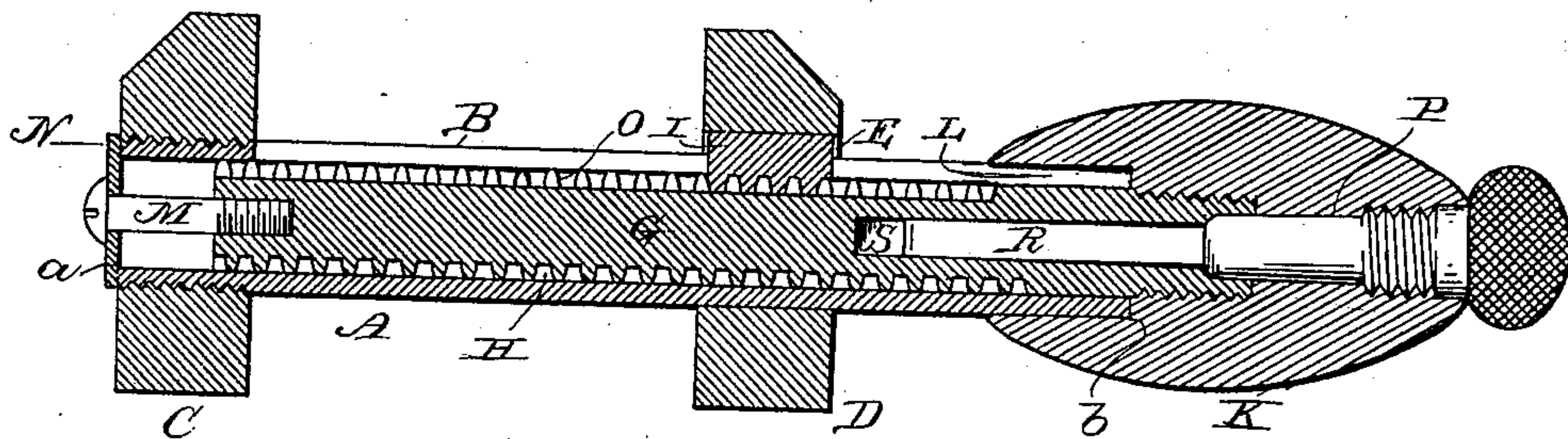
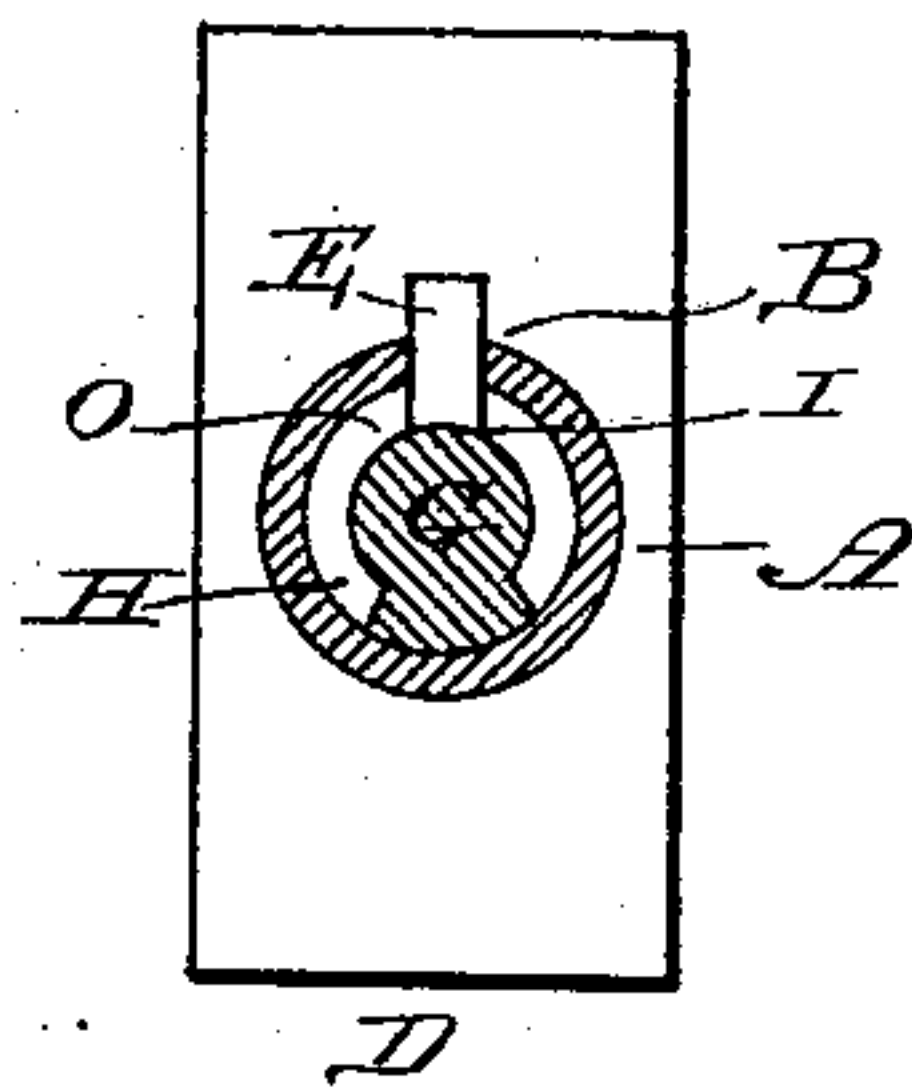


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN R. HOUTS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 689,806, dated December 24, 1901.

Application filed December 26, 1899. Serial No. 741,638. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN R. HOUTS, a citizen of the United States, and a resident of Washington, in the District of Columbia, have  
5 invented certain new and useful Improvements in Nut-Wrenches for Bicycles, &c., of which the following is a specification.

The object of my invention is to provide a light, cheap, and simple wrench which is  
10 highly efficient for bicycle and similar purposes.

In the accompanying drawings, Figure 1 is a longitudinal central sectional view of a wrench embodying my improvements. Fig.  
15 2 is a transverse sectional view of the same.

The hollow cylindrical barrel A of the wrench is of suitable length and diameter, is open at both ends, as at *a b*, has a slot B on its upper side, communicating with its interior, and is provided at its outer end with the head or jaw C, which latter is of the usual form. A sliding jaw D is placed on the barrel and is formed with a spline E, which enters the slot B and extends slightly into the  
25 barrel, as shown.

G represents a screw-shank which fits in and extends through the barrel and is provided with the screw-thread H, which engages a similar thread I, made in the inner side  
30 of the spline, so that by turning the screw-shank the jaw C may be moved back or forth upon the barrel, as will be readily understood. The handle K is secured to the outer end of the screw-shank, and its inner end is  
35 provided with a cylindrical recess L, which forms a socket to receive the end of the barrel, as shown.

When the parts of the wrench are assembled, the outer end of the screw-shank extends to the outer end of the barrel, and said screw-shank is then secured against being withdrawn therefrom by a swivel-screw M and washer N. A longitudinal groove O is made in one side of the screw-shank, which  
45 extends throughout the entire length thereof and interrupts the screw-thread thereon, this groove being of suitable size to receive the projecting end of the spline on the movable wrench-jaw, and thereby when the screw-shank is turned so as to cause the groove to coincide with the said spline the movable jaw is free to be moved back and forth upon the barrel without turning the screw, hence enabling the said movable jaw to be quickly ad-  
55 justed by hand. By then turning the screw-

shank by means of its handle the screw-thread thereon by engaging with the screw-thread on the spline will move the jaw D sufficiently to cause the nut or other object on which the wrench is being used to be firmly  
60 grasped and compressed between the heads or jaws of the wrench.

To add to the efficiency of my improved wrench and provide a combined tool which will suffice also for the purposes of a screw-  
65 driver, I provide the handle K with a central cylindrical opening P, which is interiorly threaded for a suitable distance, and provide a screw-driver R, which is adapted to be received into said opening, the shank of the  
70 screw-driver extending into a cylindrical opening S, made in the screw-shank to receive it. The screw-driver is provided near its head with screw-threads, which engage the threaded interior of the handle K, and there-  
75 by the screw-driver may be securely held in place in the wrench when not in use.

Having thus described my invention, I claim—

1. The wrench comprising the fixed head, 80 the hollow barrel extending therefrom, and having the longitudinal slot in one side, in combination with the sliding jaw or head, on said barrel, and having the spline in the said slot, and the screw-shank, swiveled in the  
85 barrel, engaging the said spline, and having the handle at one end, the said screw-shank having the longitudinal groove on one side, interrupting the screw-threads thereon, and adapted to receive the spline, for the purpose  
90 set forth, substantially as described.

2. In a wrench, the combination of a hollow barrel having a longitudinal slot, a fixed head on said barrel, a sliding jaw or head on said barrel and having a spline operating in  
95 the slot therein, and a screw-shank revoluble in the barrel and secured against endwise movement therein, said screw-shank engaging the spline on the sliding jaw or head and having a longitudinal groove interrupting the  
100 screw-threads thereon and adapted to receive the said spline, substantially as described.

Signed at Washington, District of Columbia, this 11th day of November, 1899, in the presence of two subscribing witnesses.

JOHN R. HOUTS.

Witnesses:

J. W. GARNER,  
ARTHUR BROWNING.