

(No Model.)

J. H. LANE.
WRENCH.

No. 442,190.

Patented Dec. 9, 1890.

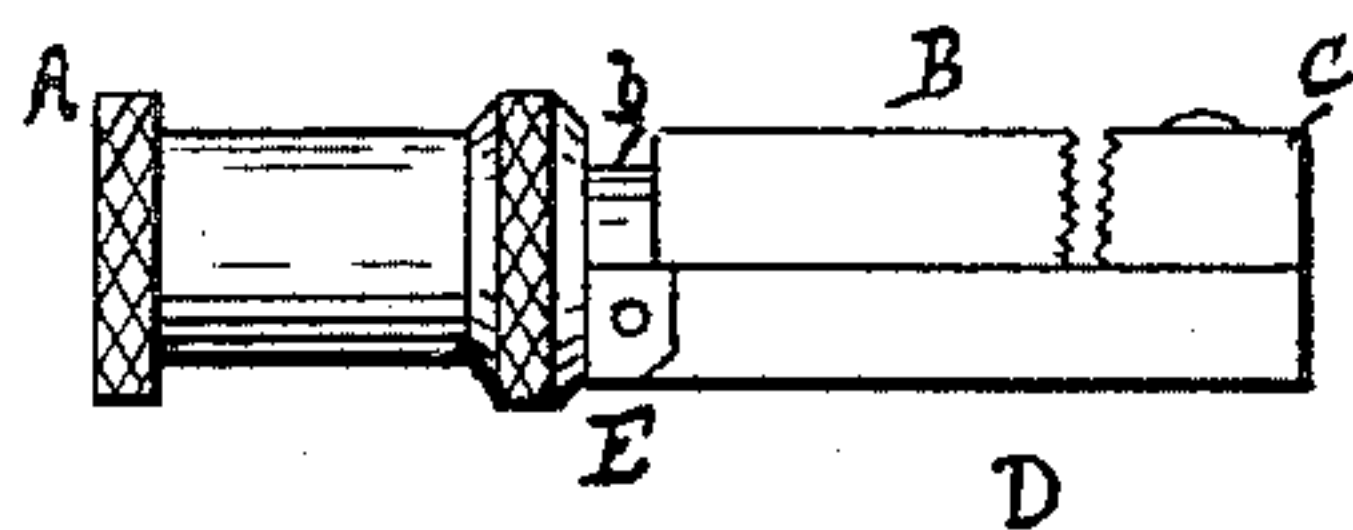


FIG. 1

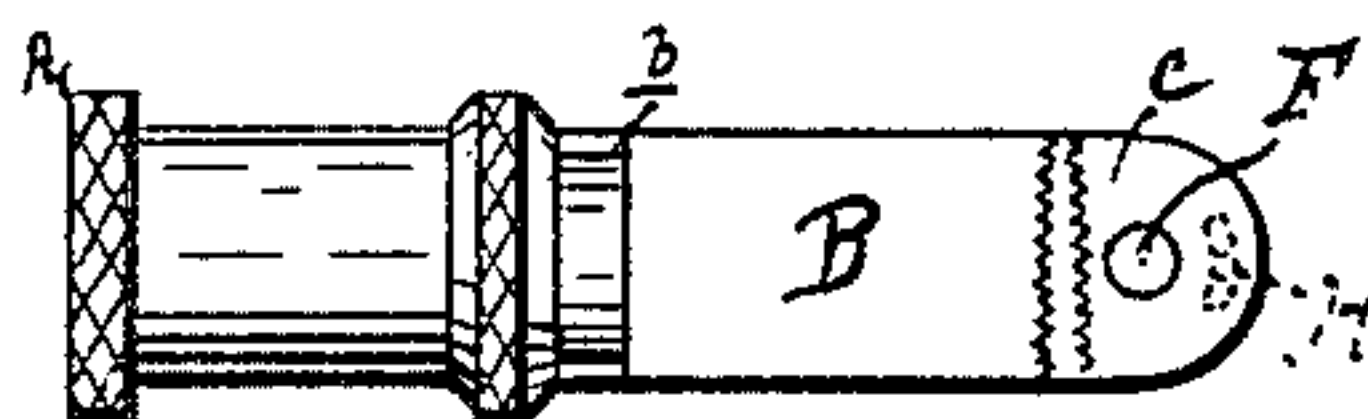


FIG. 2

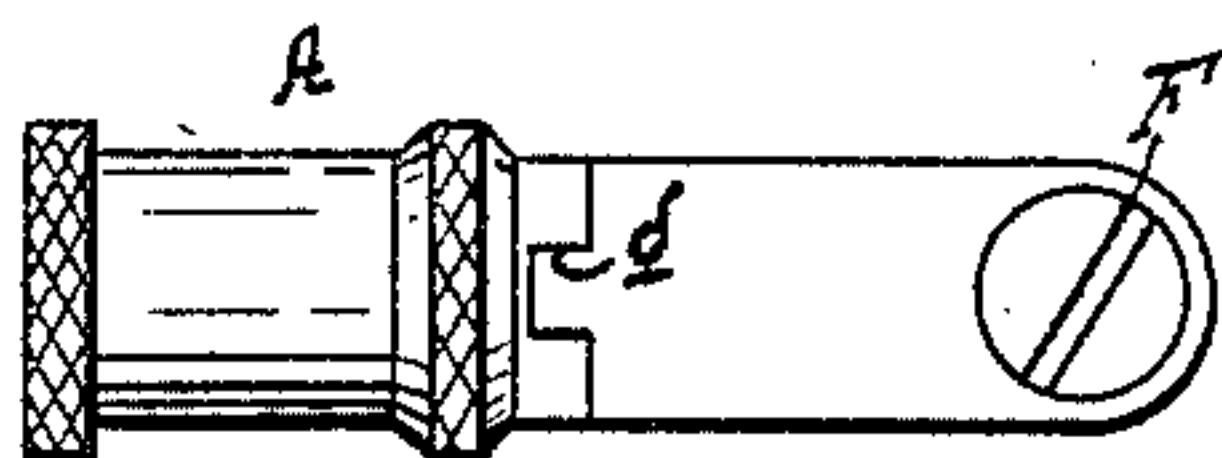


FIG. 3

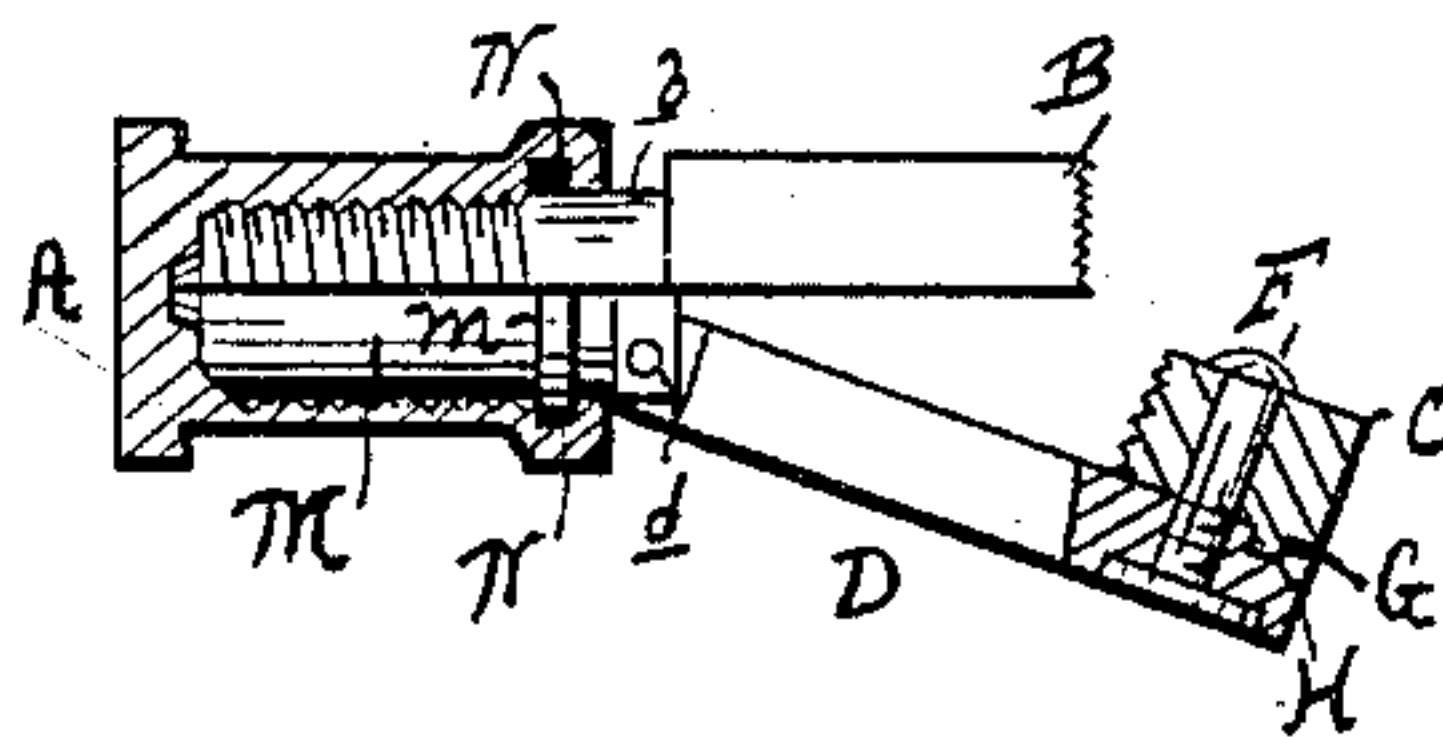


FIG. 4

Witnesses
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Application filed April 4, 1890. Serial No. 346,598. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. LANE, of Jackson, in the county of Jackson and State of Michigan, have invented a new and useful
5 Improvement in Wrenches, of which the following is a specification.

My invention relates to wrenches; and the object of my improvements is to provide a wrench for tightening the spokes of bicycle-
10 wheels, and that is adapted to grasp a straight or conical nipple. I attain this object in the device shown in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a
15 plan view looking from the top. Fig. 3 is a plan view looking from the bottom; and Fig. 4 is a side elevation, partly in section, the jaws being drawn apart.

Similar letters refer to similar parts through-
20 out the several views.

A is a sleeve closed at one end and provided with internal screw-threads. N is an annular groove formed in the internal surface of said sleeve near its open end.

25 The sleeve A forms the handle of the wrench. One jaw of said wrench consists of the rectangular head B, provided with a semi-cylindrical shank *b*. The other of said jaws consists of the rod D and the head C, said
30 head being pivoted to said rod at its upper surface at its end by means of the screw F.

G is a lug extending downward from the lower surface of the head C into a slot H, formed in the rod D. The slot H has the
35 shape of the arc of a circle whose center is the screw F. The lug G limits the turning motion of the head C by striking against the ends of the slot H. The rod D is pivoted at
40 *d* to the semi-cylindrical shank M.

m is a semi-annular lug or projection extending from the shank M near its end, and adapted to extend into the annular groove N to prevent any longitudinal movement of said
45 shank in the sleeve A without preventing the turning of said sleeve.

The various parts of the above-described device are adjusted and secured in place as follows: The shank M is placed within the sleeve A, the semi-annular projection *m* ex-
50 tending into the annular groove N. The shank *b* is placed within the sleeve A, with its flat surface against the flat surface of the

shank M, its screw-threads engaging with the screw-threads of the sleeve A. Said sleeve is then turned, drawing in the shank *b*. The
55 operation of the above-described device is as follows: The heads B and C being adjusted to a proper distance apart, the rod D is turned about its pivot *d* to the position shown in Fig. 4. The object to be grasped is placed
60 between the end of the head B and the side of the head C, and clamped between said heads by turning the rod D about the pivot *d* toward the head B. If the part grasped by the wrench is of a conical form, the head
65 C will turn about the screw F until its grasping-surface bears squarely against the surface of the object grasped. When it is desired to secure a new hold upon the object grasped by the wrench, the handle A is turned
70 backward about the pivot *d*, the hold of the wrench being thereby loosened.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

75 1. The combination of the internally-screw-threaded sleeve A, provided with the annular groove N, the head B, provided with a semi-cylindrical shank having screw-threads adapted to engage with the internal screw-threads of
80 the sleeve A, the semi-cylindrical shank M, provided with a lug adapted to extend into the groove N, the rod D, pivoted to the shank M, and the head C, secured to the rod D at its upper surface at the end, substantially as
85 shown and described.

2. The combination of the internally-screw-threaded sleeve A, provided with the annular groove N, the head B, provided with a semi-cylindrical shank having screw-threads
90 adapted to engage with the internal screw-threads of the sleeve A, the semi-cylindrical shank M, provided with a lug adapted to extend into the groove N, the rod D, pivoted to the shank M, and the head C, pivotally se-
95 cured to the rod D at its upper surface at the end, and provided with a lug adapted to strike against the rod D to limit the pivotal movement of the head C, substantially as shown and described.

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Witnesses:

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