

No. 831,162.

PATENTED SEPT. 18, 1906.

J. K. HORD.

WRENCH.

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Fig. 1.

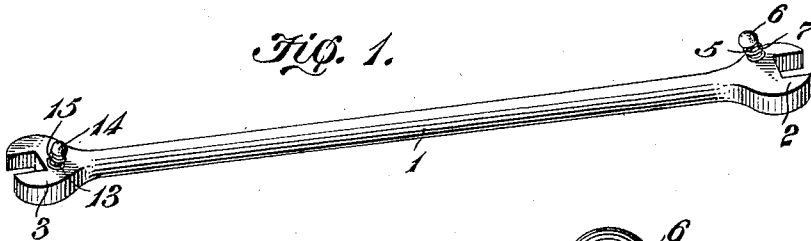
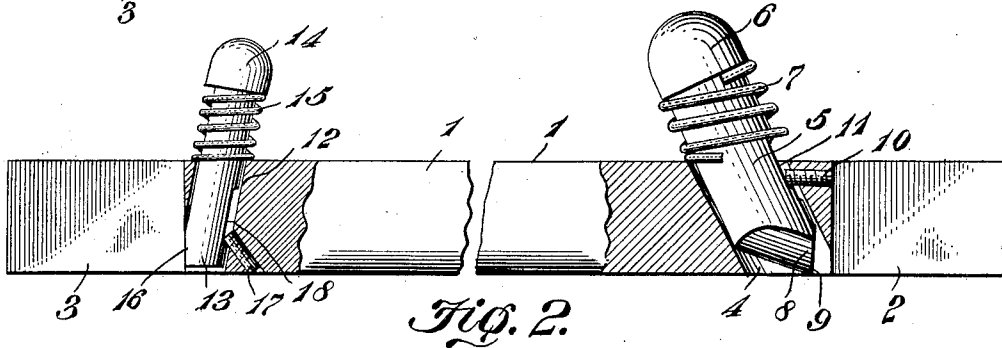


Fig. 2.

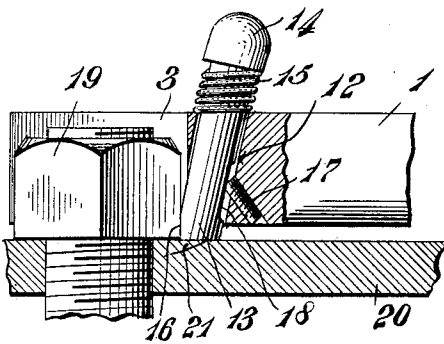


Fig. 3.

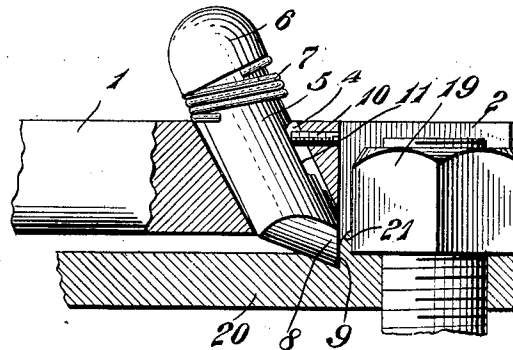


Fig. 4.

Fig. 5.

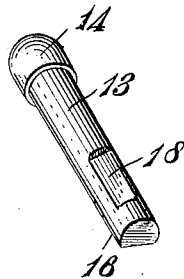
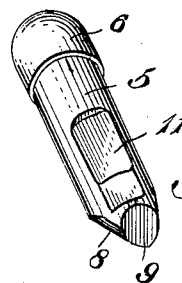


Fig. 6.



WITNESSES:

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN K. HORD, a citizen of the United States, residing at Silver City, in the county of Yazoo and State of Mississippi, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to wrenches; and its object is to provide a wrench with which is combined means for upsetting metal for the purpose of holding a nut against rotation after it has been turned into desired position by means of the wrench.

A still further object is to provide a wrench having means whereby metal which has been upset in this manner can be cut away or removed so as to permit the nut to be unscrewed.

With the above and other objects in view the invention consists of a wrench having a jaw at each end adapted to embrace a nut, so that the same may be readily turned. A passage is formed through the wrench adjacent each jaw, and in one of these passages is a spring-supported plunger so shaped that when driven downward it will cut into the surface against which the nut has been turned and if said surface be of metal will upset it, so as to overlap the nut and prevent it from rotating. Another plunger is mounted adjacent the other jaw of the wrench, and this is so shaped that by placing the jaw upon the locked nut and then striking the plunger with a hammer the upset portion will be cut away, so as to permit the nut to be unscrewed. The wrench is particularly adapted for tightening and locking the nuts of rail-joints, and by utilizing the same the nuts can be tightened and then securely locked simply by striking the proper plunger, so as to upset a portion of the metal of the fish-plate to cause it to overlap the nut and hold it.

The invention also consists of certain other novel features of construction and combinations of parts, which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings is shown the preferred form of my invention.

In said drawings, Figure 1 is a perspective view of the wrench. Fig. 2 is a section through the ends thereof, the plungers being shown in their normal positions. Fig. 3 is a section through one end of the wrench and showing the position of the plunger while upsetting metal to lock a nut. Fig. 4 is a similar view through the other end of the wrench

and showing the position of the other plunger while flattening the upset metal, and Figs. 5 and 6 are detail views of the two plungers.

Referring to the figures by numerals of reference, 1 is a shank having jaws 2 and 3 at the ends thereof, said jaws being similar and so shaped as to embrace a nut. Extending obliquely through the jaw 2 is a passage 4, said passage being located close to one side of the jaw, and within the same is slidably mounted a plunger 5, having a head 6, against which bears one end of a spring 7, mounted on the jaw. The other end of the plunger is beveled, as shown at 8, to form a rounded cutting edge 9, disposed in a plane nearly parallel to the longitudinal center of the plunger. Said plunger is loosely mounted within the passage and is limited in its movement by a screw 10, which projects into an elongated recess 11, formed within the plunger. Another passage 12 extends obliquely through the other jaw 3, and the lower end of this passage opens through one wall of said jaw. A plunger 13 is mounted within this passage 12 and has a head 14 at its outer end, a spring 15 being interposed between said head and the jaw for the purpose of supporting the plunger. The lower portion of the plunger is beveled to form a straight cutting edge 16, adapted to move within that portion of the passage extending through the wall of jaw 3. The plunger is limited in its movement by a screw 17, which projects into the passage 12 and into an elongated recess 18, formed within the plunger.

In using the wrench the jaw 2 is first placed upon a nut 19, and by turning the wrench said nut can be screwed tightly against the fish-plate 20. After its limit of movement has been reached the plunger 5 is driven toward the fish-plate by striking it with a heavy hammer. As the lower end of this plunger is beveled and as the entire plunger is loosely mounted within its passage 4 it will be obvious that when the plunger is forced inward against the fish-plate it will slide toward the nut as it cuts into the fish-plate, and therefore a portion of the metal of the fish-plate will be raised or upset to form a lug 21, which will overlap the nut and prevent it from unscrewing. Should it be desired to remove the nut, the other jaw of the wrench is placed thereon, so that the plunger 13 will rest upon the lug 21. Said plunger is then driven inward by means of a heavy hammer and

will remove the lug from the path of said nut, which can then be unscrewed.

While I have shown the two plungers connected to the same shank, it will of course be understood that two separate tools may be made, one being provided with the upsetting plunger and the other with the plunger 13.

By utilizing a device such as herein described it becomes unnecessary to employ nut-locks and practically no more time is necessary for tightening the nuts and locking them than is usually necessary for tightening them alone.

What is claimed is—

- 15 1. The combination with a wrench; of an upsetting-tool slidably mounted within the wrench adjacent the jaw thereof.
2. The combination with a wrench, of a spring-supported upsetting-tool slidably
20 mounted therein adjacent the jaw.
3. The combination with a wrench; of a spring-supported upsetting-tool slidably mounted therein adjacent the jaw thereof, and means for limiting the movement of the
25 tool.
4. The combination with a shank having

similar jaws at the ends thereof, of an upsetting-tool slidably mounted adjacent one of the jaws, and a cutting-tool slidably mounted adjacent the other jaw.

5. In a wrench the combination with a shank having similar jaws at the ends thereof, an upsetting-tool slidably mounted within and extending through the wrench adjacent one jaw, and a cutting-tool slidably mounted within and extending through the wrench adjacent the other jaw.

6. In a wrench the combination with a shank having similar jaws at the ends thereof; of a spring-supported upsetting-tool extending through the wrench adjacent one of the jaws, and a spring-supported cutting-tool extending through the wrench adjacent the other jaw.

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

JOHN K. HORD.

Witnesses:

F. L. GORDON,
J. K. LAMBERT.