F. M. STURGIS.

WHEELWRIGHT'S TOOL.

APPLICATION FILED MAR. 24, 1908.

931,160. Patented Aug. 17, 1909.

Fig. 1.

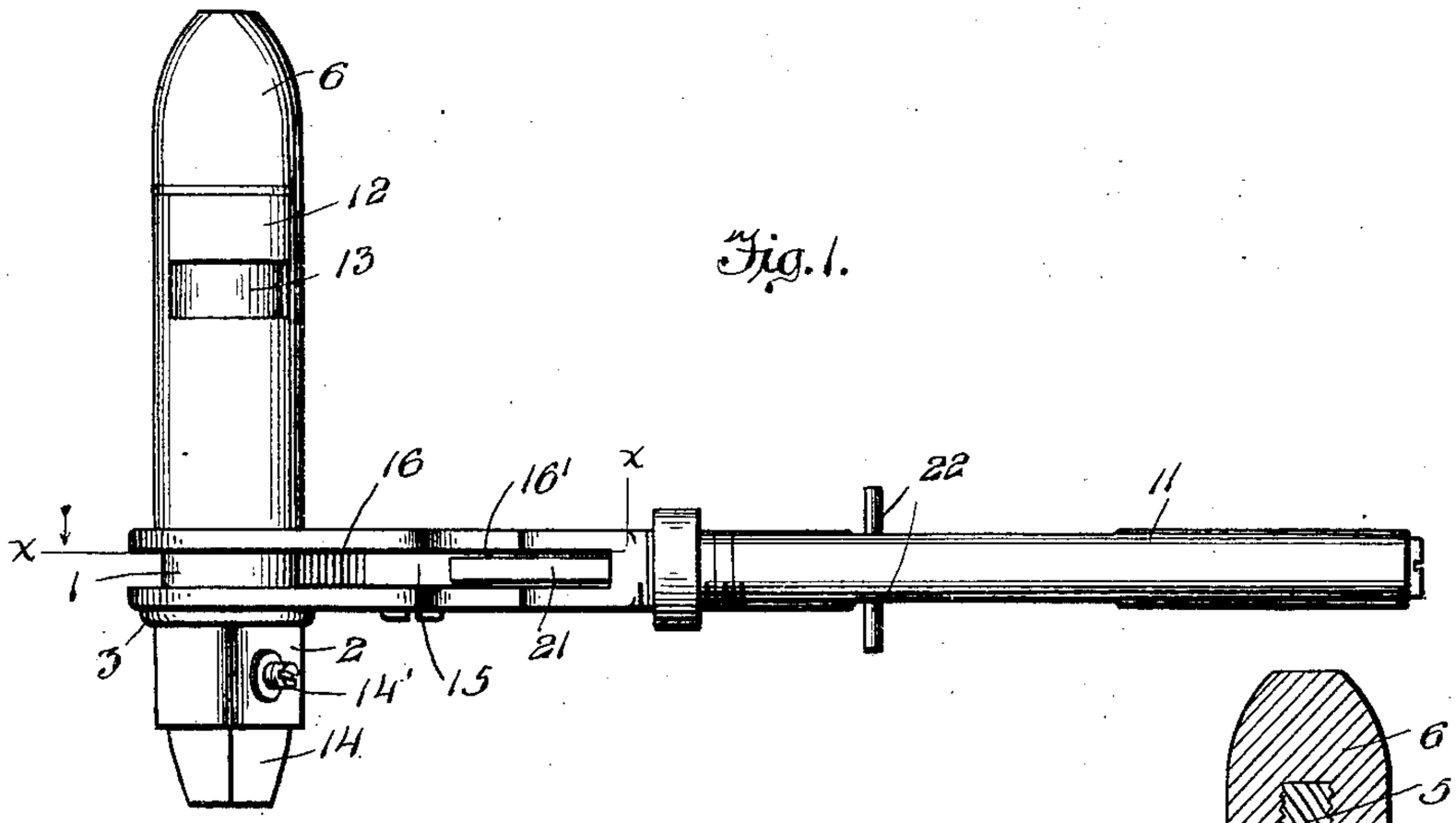
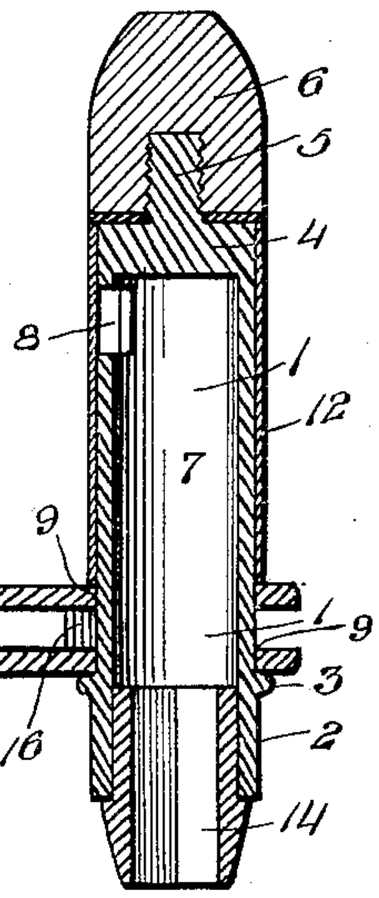


Fig. 2.



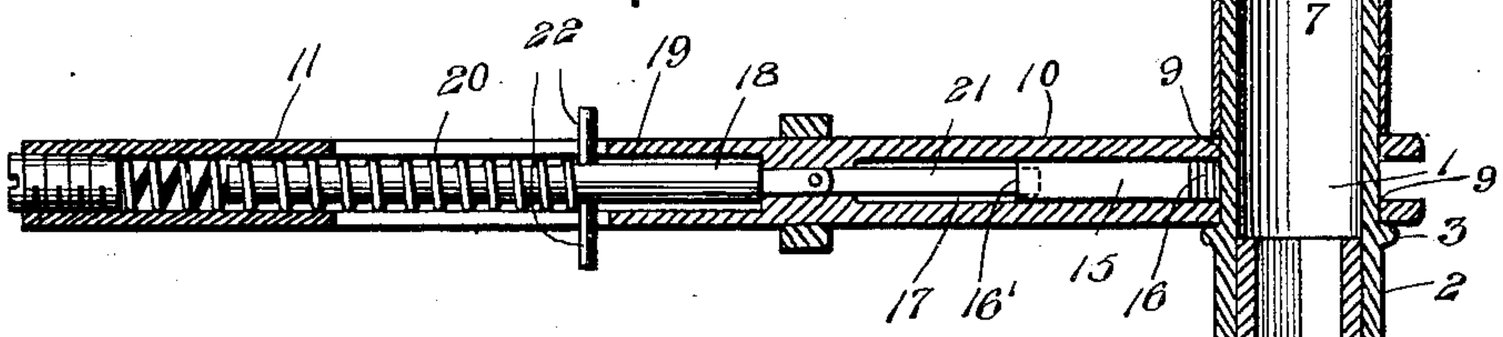
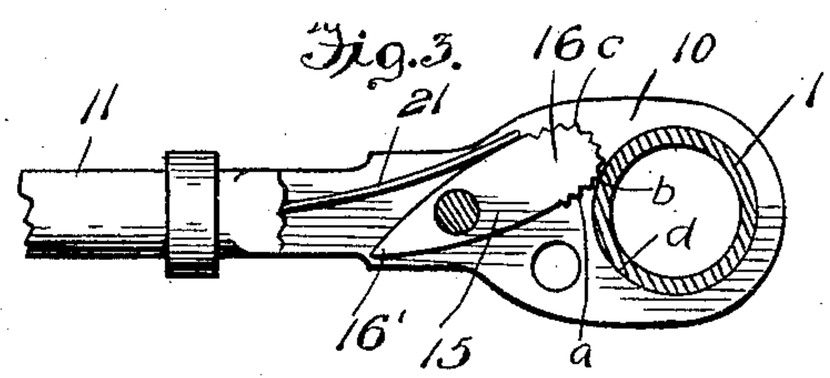


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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WHEELWRIGHT'S TOOL.

No. 931,160. Specification of Letters Patent. Patented Aug. 17, 1909.

Application filed March 24, 1908. Serial No. 422,939.

To all whom it may concern:

Be it known that I, FRANCIS M. STURGIS, a citizen of the United States, residing at Shelbyville, in the county of Shelby and State of Illinois, have invented certain new and useful Improvements in Wheelwrights' Tools, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in wheelwrights' tools, and has special reference to a new and improved tool, whereby nuts, may be quickly secured upon or removed from bolts in securing tires to and removing them from wheels.

To this end, my invention consists of a tool, comprising essentially a hollow cylindrical body carrying the nut engaging end, which communicates with the hollow body portion, so that when removing nuts, they are allowed to enter the body, the said body being operably connected with a ratchet and lever, whereby the body may be revolved in either direction to tighten or loosen the nut.

To clearly illustrate my invention, attention is invited to the accompanying drawings, in which:—

Figure 1 is a side elevation of the complete tool. Fig. 2 is a section through the cylindrical body and lever. Fig. 3 is a section on line X—X, Fig. 1.

Referring to the drawings:—The numeral 1 designates the hollow body portion, having the rectangular end 2, and the exterior annular shoulder or collar 3, the purpose of which will presently appear. This body is provided with the solid head 4, having the centrally arranged threaded lug 5, for the reception of the knob or thumb piece 6. The cylindrical bore 7, of the body portion forms a receptacle for the nuts as they are removed, the slot or opening 8, formed near the head, forming a means whereby the nuts may be removed. This cylindrical body 1 is rotatably mounted within the alined openings 9, of the frame 10, which is carried by the lever or handle 11. Mounted upon the body between the knob and the frame, is a sleeve 12, which is provided with a slot or opening 13, which is adapted to be rotated when desired to aline the opening 13 with the opening 8 to release the loose nuts within the receptacle. Mounted removably within the rectangular end 2, is the nut engaging sleeve 14, which is held in place by means of the set screw 14. By this construction, it will be seen that the nut to be tightened or loosened is placed within the sleeve 14. In order that the body 1 may be revolved in the desired direction, I mount between the frame, the pivoted ratchet 15, which consists of the toothed end 16, and the taperingly pointed end 16′. The slot 17 of the frame, is of sufficient size to allow the ratchet to make a complete turn, so that the portion *a* of the toothed end 16 may engage the body at *b*, while the portion *c* of the toothed end 16 will engage the body at *d*, thus when the lever is rotated in one direction the body 1 will be rotated, while when it is moved in the opposite direction the ratchet will move without affecting any movement of the body 1. In order to hold the teeth of the ratchet in engagement with the body 1, I employ the pin 18, which is slidingly mounted in the bore 19, of the lever, the spring 20, normally holding the ratchet engaging end 21, in engagement with one side of the tapering end of the ratchet, while the lugs 22, provide a means whereby the pin is drawn into the lever to allow the position of the ratchet to be shifted. It is therefore evident that I provide a device, which can be easily and quickly operated to tighten or loosen nuts from bolts, and a tool which is especially adapted to wheelwrights when assembling tires upon wheels.

What I claim, as new is:—

The herein described wheelwright's tool, comprising a cylindrical body, a hollow nut engaging end removably mounted in one end thereof, a sleeve rotatably mounted upon the upper portion of the body, said body and sleeve having openings adapted to be alined, a removable knob secured to the upper end of the body for holding the sleeve in place upon the body, a frame having a pair of members separated by a space, each one of which is rotatably journaled upon the body below the lower end of the sleeve, a hollow

handle carried upon the other end of the frame, a spring mounted in said handle, a pin slidingly mounted in the handle and actuated by the spring, and a double acting ratchet actuated by the pin and adapted to engage the exterior of the body in the space between the members of the frame.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS M. STURGIS.

Witnesses:
J. G. Root,
Chas. J. Taylor.