

(No Model.)

F. B. WELLS.
WRENCH.

No. 497,618.

Patented May 16, 1893.

Fig. 1

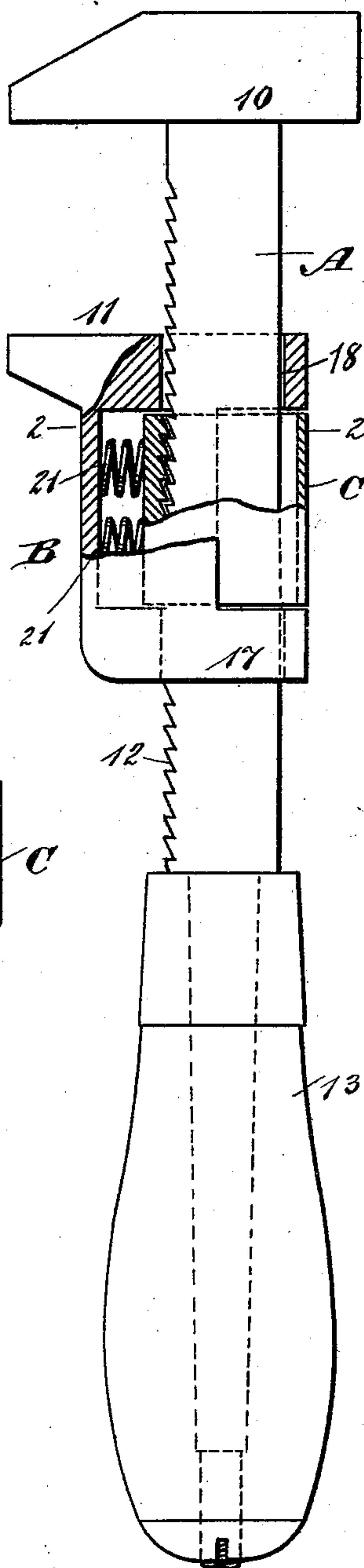


Fig. 2

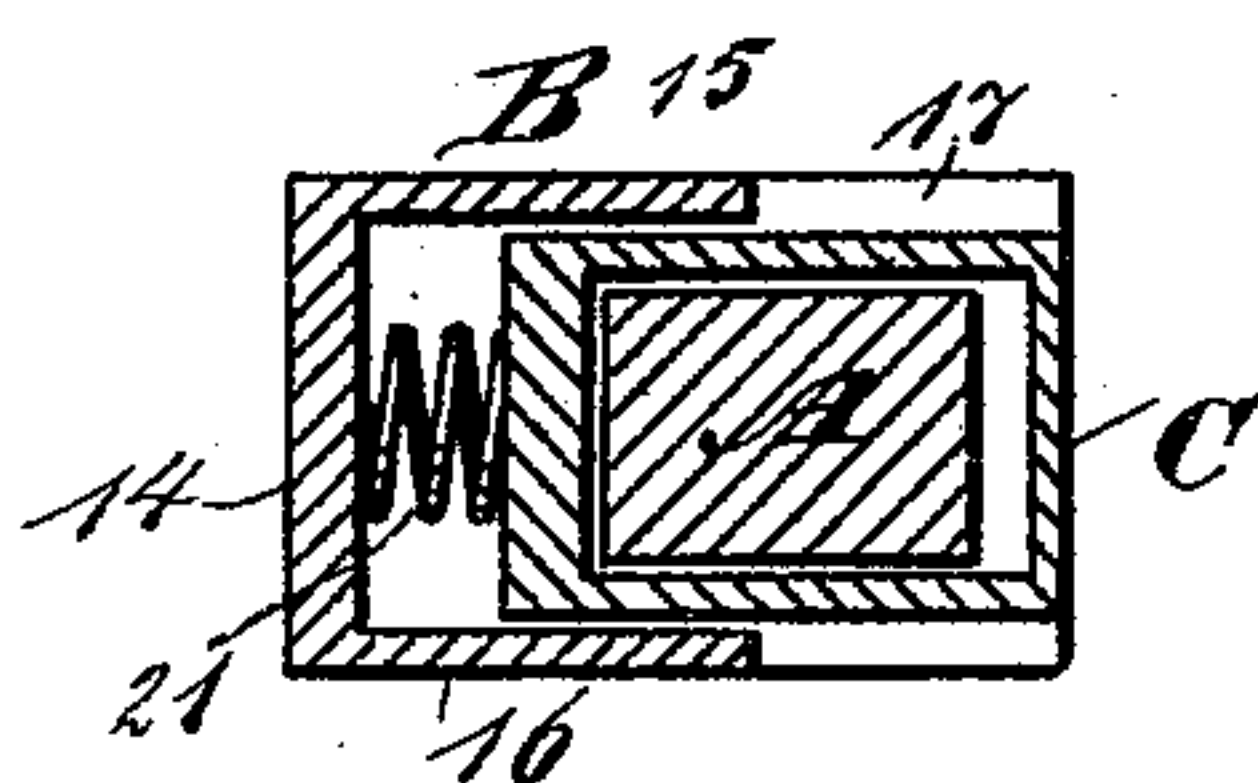
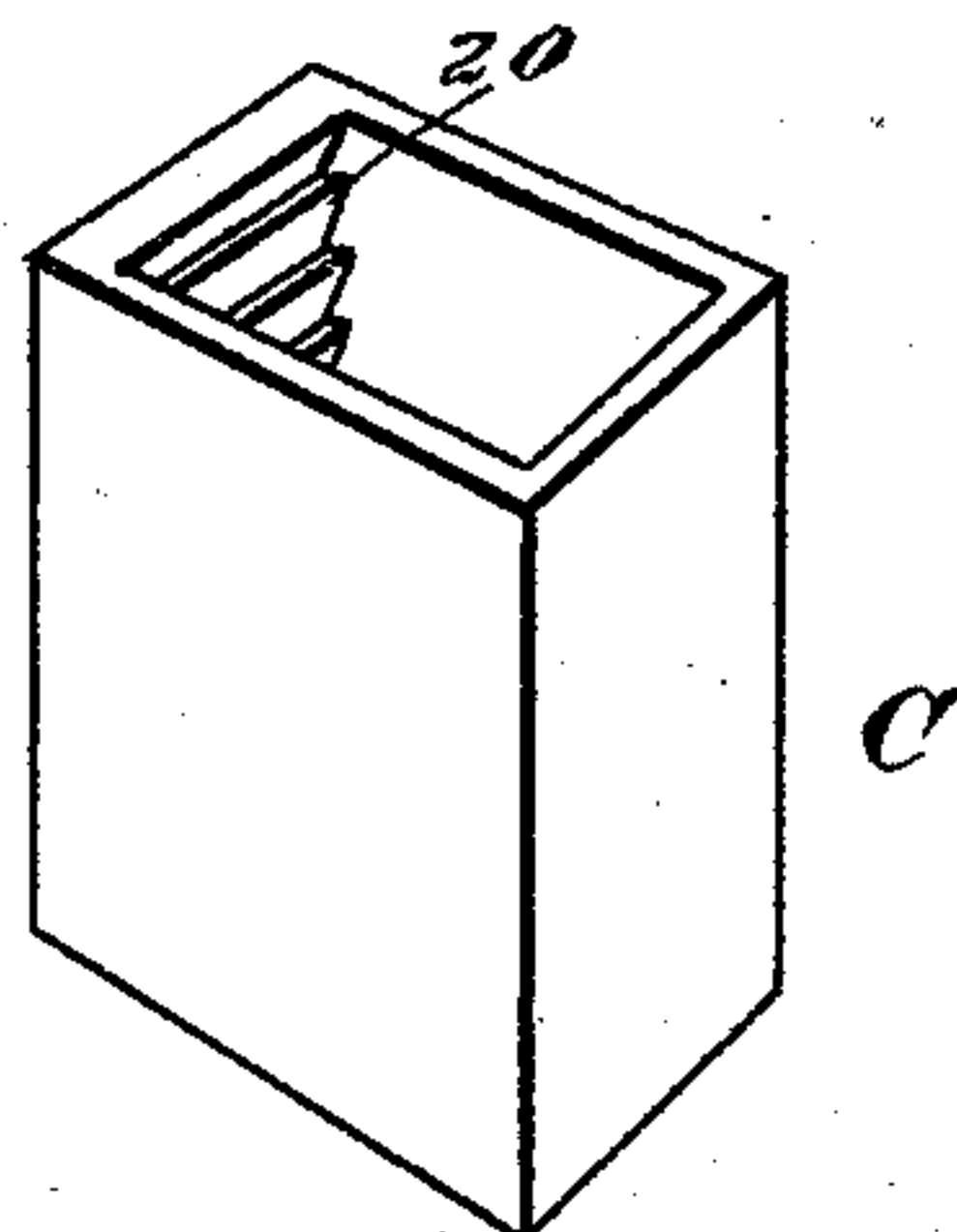


Fig. 3



WITNESSES:
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FREDERICK B. WELLS, OF MONTREAL, CANADA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 497,618, dated May 16, 1893.

Application filed October 1, 1892. Serial No. 447,551. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK B. WELLS, of Montreal, in the Province of Quebec and Dominion of Canada, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and has for its object to construct a wrench which will be exceedingly simple and durable, comprising virtually but three parts, and to so group the parts that they may be operated with but one hand, thus leaving the other hand of the operator free, and permitting the wrench to be used in places inaccessible to wrenches requiring the use of both hands of the operator in order to be operated properly.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a partial side elevation and partial sectional view of the wrench. Fig. 2 is a horizontal section taken transversely of the wrench, practically on the line 2—2 of Fig. 1; and Fig. 3 is a perspective detail view of the locking sleeve of the wrench.

The parts comprising the wrench consist of a shank A, which carries the upper jaw 10 at its upper end, a frame B, having sliding movement upon the shank and carrying at its upper end the lower jaw 11, and a locking sleeve C, carried by the frame. The shank A, is provided upon one face with a series of teeth 12, and the lower end of the shank is preferably solidly introduced into a handle 13 of any approved construction.

The frame B, which has sliding movement upon the shank, comprises a front bar 14, two side bars 15 and 16, and a bottom bar 17, the lower jaw 11 constituting the upper part of the frame. The lower jaw and likewise the bottom bar 17, are provided with openings 18 in longitudinal alignment, the said openings corresponding in contour to the cross sectional contour of the shank A; and the open-

ings are of sufficient size to permit the frame to move freely up and down the shank. The teeth 12 of the shank are upon what I term the front face thereof.

The frame B, carries as has heretofore been stated, a locking sleeve C. This sleeve is of rectangular contour both interiorly and exteriorly, and the shank A passes through the sleeve, the opening in the sleeve being of much greater length, and also of greater width than the corresponding portion of the shank. The sleeve is fitted in the frame B between the jaw 11 and the bottom plate or bar 17, and the sleeve is capable of lateral movement to and from the front and rear of the frame, between its sides 15 and 16, as shown in the cross section, Fig. 2.

Upon the front inner face of the locking sleeve C, a series of teeth 20, is located, and these teeth incline in an opposite direction to the teeth formed upon the shank, the teeth in the sleeve being adapted for locking engagement with the teeth upon the shank; and the two sets of teeth are normally held in this engagement by means of springs 21 of any approved construction, which are located within the sliding frame B, and have bearing against the front outer surface of the locking sleeve, and against the front inner surface of the sliding frame.

The operation of this wrench is apparent, and is accomplished in the following manner: When it is necessary to adjust the lower jaw toward or from the upper one, the wrench is held in one hand, and the thumb of that hand is made to exert pressure against the back of the locking sleeve, forcing it forward against the tension of the springs 21, and thereby carrying the teeth of the locking sleeve out of engagement with the teeth on the shank A: at the same time the thumb may be utilized to slide the sliding frame and sleeve B upward or downward upon the shank to obtain the desired adjustment of the jaws. When this adjustment is obtained, by releasing the sleeve from pressure the springs immediately act to throw the sleeve into locking engagement with the shank, and this locking engagement is firm and positive. The wrench may be employed to turn any nut for which a wrench of like size is capable of being used.

As has heretofore been stated the wrench

may be expeditiously and conveniently manipulated by one hand, and it is therefore especially adapted for use in tightening nuts in locomotives and cars, located where it is almost impossible to reach said nuts by means of a wrench needing both hands of the operator for its manipulation. The wrench is also particularly adapted for use upon machinery connected in any wise with live electric wires, since as but one hand is needed to operate it dangers of fatal shocks will be avoided.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A wrench, consisting in the shank A, provided with the fixed jaw 10 and having its front face provided with upwardly beveled teeth 12, the frame B, sliding on the shank

provided with the lower jaw 11 cut away at its sides and rear between its upper and lower ends and recessed between its two side bars 15—16, the sleeve C upon the shank and exposed through the opening in the rear of the frame for operation by the finger of the operator, springs interposed between the sleeve and the front bar 14 of the frame; the sleeve being provided with internal downwardly beveled teeth interlocking with the teeth 12 and permitting the jaw 11 to be freely slid toward the jaw 10 and to be slid oppositely by pressing on the rear wall of the sleeve to disengage said teeth, substantially as set forth.

FREDERICK B. WELLS.

Witnesses:

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