A. W. OFFINEER.

WOODWORKER'S CLAMP.

APPLICATION FILED APR. 22, 1908.

927,067.

Patented July 6, 1909.

2 SHEETS—SHEET 1.

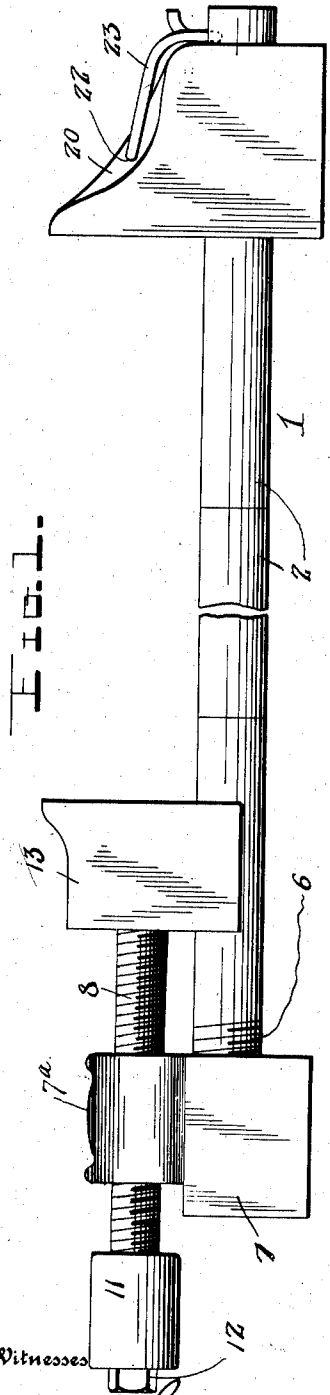


Fig. 1.

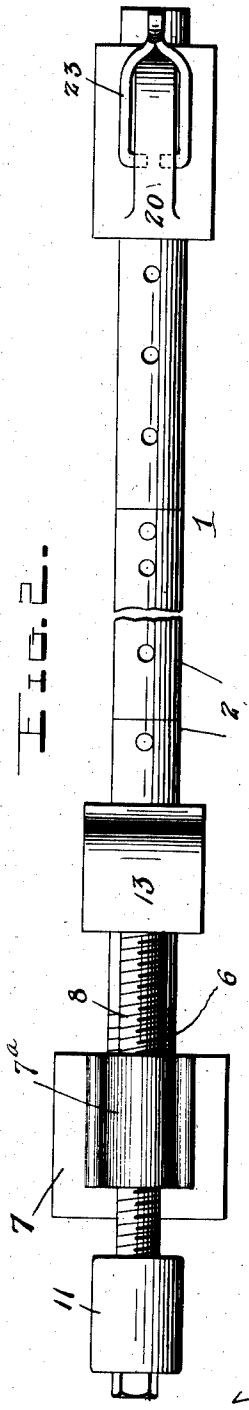


Fig. 2.

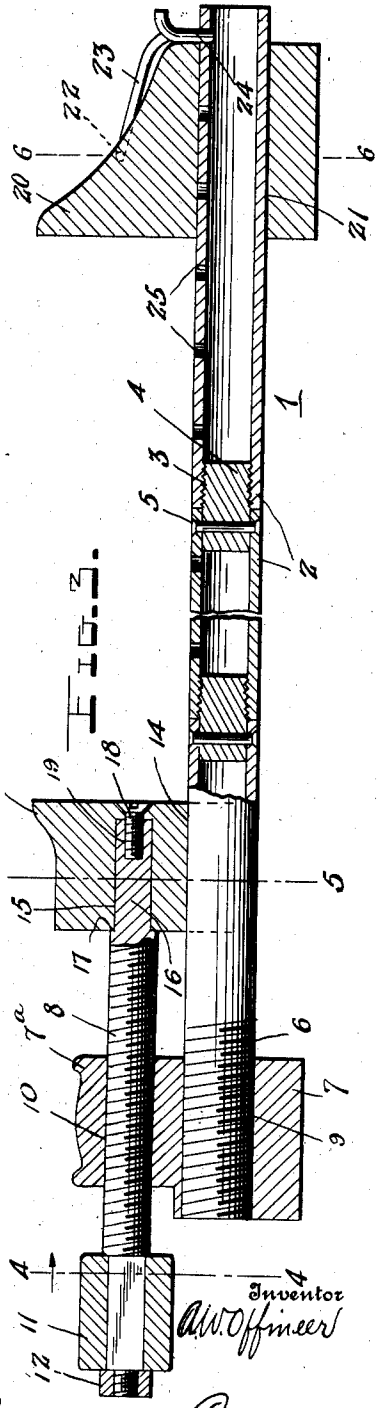


Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

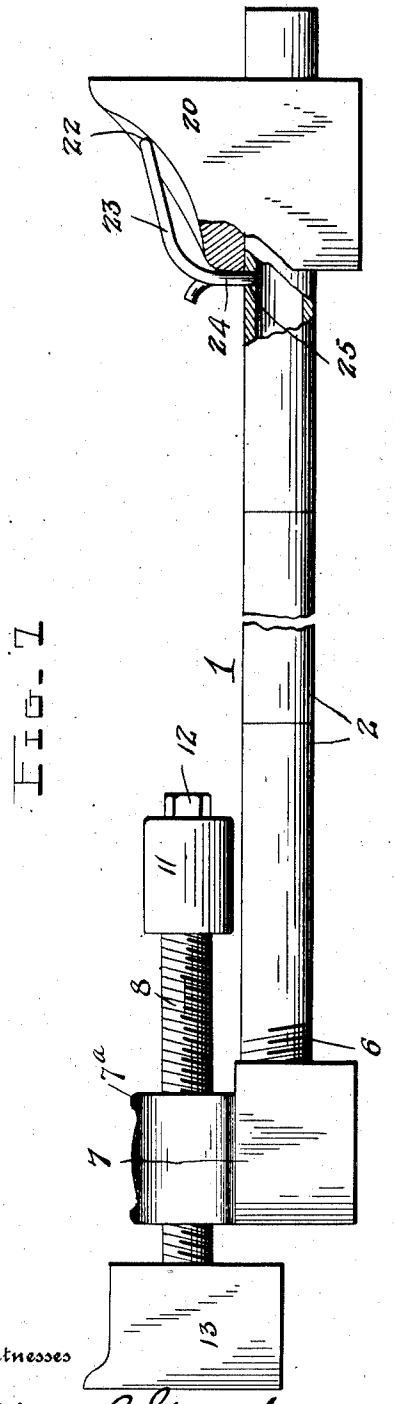


FIG. 7

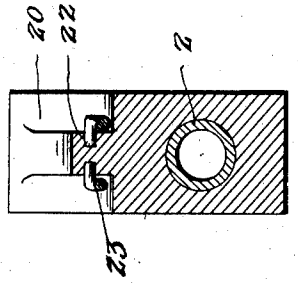


FIG. 6

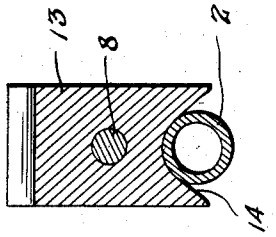


FIG. 5

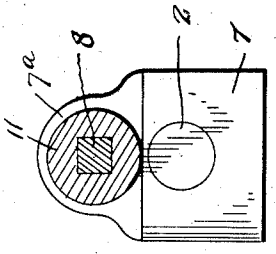


FIG. 4

Witnesses

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UNITED STATES PATENT OFFICE.

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WOODWORKER'S CLAMP.

No. 927,067. Specification of Letters Patent. Patented July 6, 1909.

Application filed April 22, 1908. Serial No. 428,577.

To all whom it may concern:

Be it known that I, ABNER W. OFFINEER, a citizen of the United States, residing at Versailles, in the county of Morgan and State of Missouri, have invented certain new and useful Improvements in Woodworkers' Clamps, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in woodworkers' tools and more particularly to an adjustable and extensible work clamp which may be converted into an expanding device.

One object of the invention is to provide a clamp of this character which will be light in construction and at the same time strong and durable and convenient.

Another object of the invention is to provide an improved clamp of this character which may be readily reversed to convert it into an expander.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved clamp; Fig. 2 is a plan view; Fig. 3 is a longitudinal section; Figs. 4, 5 and 6 are transverse sections taken, respectively, on the planes indicated by the lines 4—4, 5—5 and 6—6 in Fig. 3; and Fig. 7 is a side elevation showing the device reversed to convert it into an expanding tool.

In the drawings 1 denotes the body of the tool which is preferably in the form of a cylindrical tube and composed of a plurality of detachable sections 2 so that said body may be lengthened or shortened as may be found necessary or desirable. The detachable connection between the adjacent ends of the tubular sections 2 is preferably effected by screwing one into the other, and each of said sections has one of its ends internally screw threaded, as at 3, and its other end provided with a plug 4 which has a cylindrical inner end secured by a rivet or similar fastening 5 and a projecting outer screw threaded end to engage the screw threads 3 in the adjacent end of the abutting section, as clearly shown in Fig. 3.

One of the sections 2, which I will term the innermost one, is externally screw threaded at one end, as shown at 6, to screw into a head block or nut 7 which carries the adjusting screw 8 of the clamp. Said block or nut 7 is formed with lower and upper screw threaded openings 9, 10 which converge slightly toward each other so that the screw 8 which is arranged in the upper opening 10 will have a slight downward and inward inclination. The other threaded opening 9 receives the externally threaded end 6 of the innermost section 2. Owing to the threaded engagement of said section with the block 7 it will be seen that the latter may be turned at any desired angle upon the body and may be adjusted longitudinally thereon to a slight extent. The upper portion of the nut or block 7 is reduced and shaped to provide a handle 7^a.

The screw 8 has one of its ends reduced and squared or flattened to receive a hand piece 11 which is retained upon the screw by a nut 12 screwed upon the reduced threaded extremity of said flattened or squared end. The other end of the screw has detachably swiveled upon it a work engaging head 13. The latter is in the form of a substantially rectangular block having one of its edges or ends concaved, as shown at 14, to receive and slide upon the body 1 and in its intermediate or central portion is formed a cylindrical socket 15 to receive the reduced cylindrical end 16 of the screw 8. The reduction of the end 16 of the screw forms a shoulder 17 to engage the head 13 and to limit its inward movement. Outward movement of the head 13 is prevented and the latter is retained upon the end 16 of the screw 8 by a screw 18 passed through a central opening in the bottom of the socket 15 and into a screw threaded socket 19 formed in the end of the reduced portion 16 of the screw 8, as clearly shown in Fig. 3. The head of the screw 18 is flush with the adjacent face of the head 13 so that it will not mar the work engaged by said head. By swiveling the head 13 in this manner it will be seen that it may be readily removed so that the screw 8 may be reversed in the block or nut 7 to adapt the device for use as an expanding tool, as presently explained.

20 denotes a work engaging foot piece or block adjustably and reversibly mounted on the outer portion of the body 1. Said foot or foot piece 20 has a bore or opening 21 to receive the body and pivoted to it at 22 is a yoke 23 provided with a locking projection or finger 24 adapted to drop into any one of

a longitudinal series of openings 25 formed in the sections 2 of the body 1. When the yoke or frame 3 is elevated the foot piece 20 may be adjusted longitudinally upon the body and locked at any desired point by dropping the projection 24 into one of the openings 25. When said yoke is elevated the foot piece may be slid off of the end of the body and reversed to adapt the tool for use as an expander.

In operation, when the invention is to be used as a work clamp the body is made the desired length by coupling a sufficient number of the sections 2 and the foot piece is then adjusted to the desired point upon the body, as above explained. The work is placed between the foot piece and the head 3 and the screw 8 may be turned by rotating the handle 11 to cause the head to clamp the work against said foot piece. When the invention is to be used as an expander the foot piece and the screw 8 are reversed, as clearly shown in Fig. 7.

While I have shown and described in detail the preferred embodiment of my invention it will be understood that I do not wish to be limited to the precise construction set forth and that various changes in the form, proportion and minor details may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention what I claim is:

1. A device of the character described comprising a body having a plurality of tubular sections each one having one of its ends internally screw threaded, a plug secured in the opposite end of certain of the sections of the body and having its projecting end externally screw threaded to engage the threads of the next adjacent section whereby the body may be increased or decreased in length, a longitudinally adjustable foot piece upon one end of the body, a nut upon the other end of the body, an adjusting screw in said nut and a clamping head swiveled upon said screw and slidable longitudinally of the body.

2. A device of the character described comprising a body formed with a longitudinal row of seats adjacent to one of its ends, a nut at its other end, a longitudinally arranged screw in said nut, a clamping head swiveled upon said screw, a foot piece formed with an opening to receive the body and formed upon its top with a rib having oppositely disposed pivot seats in its side faces, and the swinging locking member 23 having one of its ends provided with spaced arms having inwardly bent extremities to engage said seats and serve as pivots, the opposite end of said member being formed with the finger 24 to enter the seats in said body.

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

ABNER W. OFFINEER.

Witnesses:
WILL L. STEPHENS,
A. L. ROSS.