H. OTTO.

WORK HOLDER.

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1,270,653.

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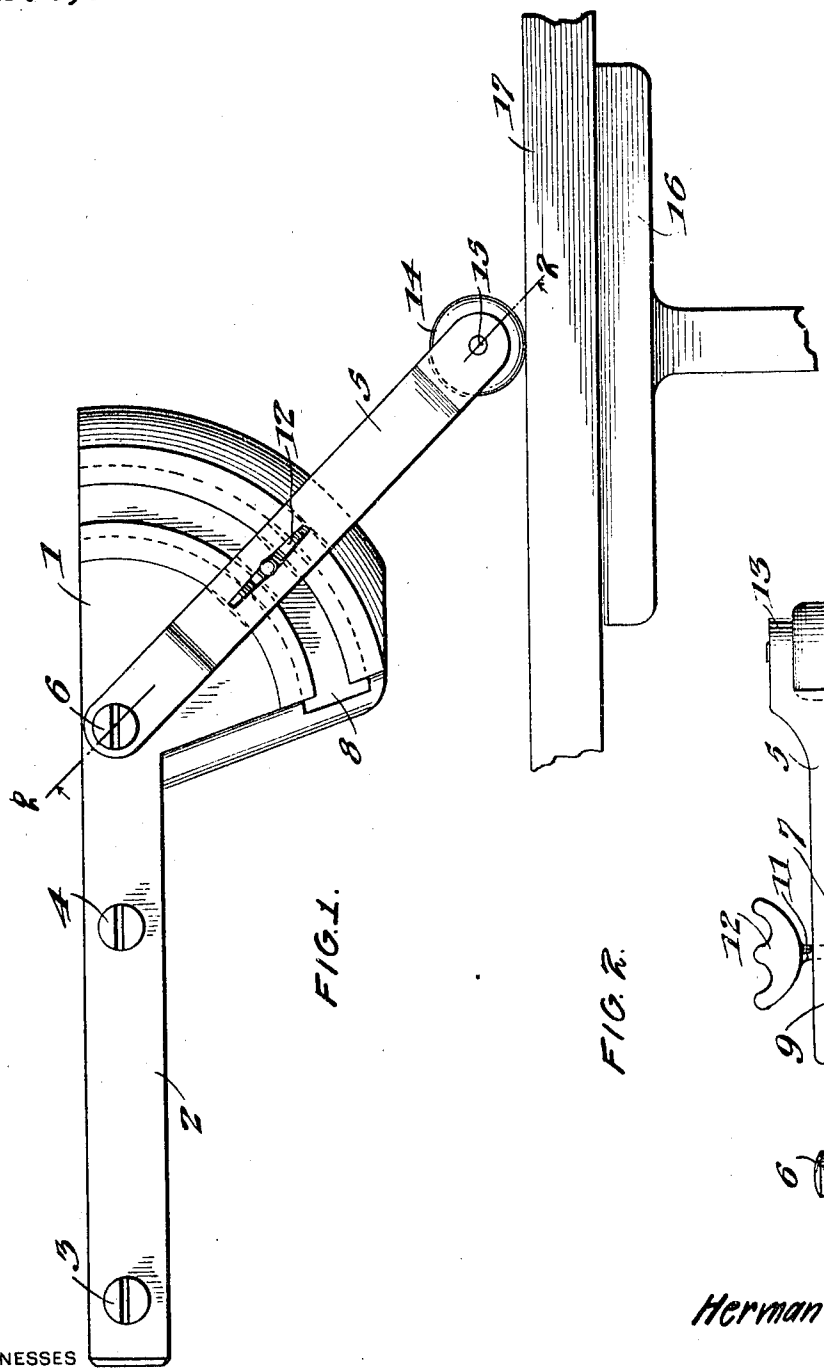

FIG. 1.

FIG. 2.

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WORK-HOLDER.

1,270,653. Specification of Letters Patent. Patented June 25, 1918.

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To all whom it may concern:

Be it known that I, HERMAN OTTO, a citizen of the United States, residing at Grass Lake, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Work-Holders, of which the following is a specification.

This invention relates to an improvement in work holders, and particularly to a device of this character intended for use upon saw tables, with jointers, shapers, and the like, to hold timbers or strips in the proper fitting engagement against the gage.

An object of my invention is to provide a device of the character set forth which can be fitted for use upon machines now already installed in mills and the like, or which might be fitted to the machine when the same is being manufactured, which structure is of such character that a timber or other stock to be worked upon is held tightly pressed against the work gage, while at the same time any irregularities in the thickness of the stock will be compensated for.

A further object is to so construct the parts that adjustment can be made with the greatest facility and without danger to the operator even when the machine is in use.

With the above and other objects in view, which will be in part described and in part understood from the specification, drawings, and claims, my invention consists in certain novel features of construction and combination of parts which will be hereinafter more fully set forth.

In the drawings:—

Figure 1 is a view in plan showing the device as it would be fitted for use; and,

Fig. 2 is a detail view showing parts sectioned on the line 2—2 of Fig. 1.

A base member 1, which is made to have the body thereof substantially sector-shaped has an arm 2 extending from the angle thereof and provided with openings for the reception of screws 3 and 4, or of other suitable fastening means by which the base member is mounted and secured rigidly in place upon the work supporting table or bed of the wood working machine. This base member has a holding arm 5 swingingly mounted thereon by means of a pivot screw or bolt 6, this pivotal connection being established substantially at the apex of the sector-shaped body of the base member. As is better shown in Fig. 2, the base member 1 has a substantially arc-shaped thickened portion 7 at the edge thereof, and a T-shaped slot 8 is formed in this thickened portion in the form of an arc around the pivot screw or bolt 6 as a center. The holding arm 5 is recessed on its lower side as shown at 9, to fit substantially over the thickened portion 7 of the base member, and a substantially T-shaped rib portion 10 is provided to be received and to move in the T-shaped slot 8. A clamp screw 11, which has a winged head 12 is fitted through a threaded bore provided through the lever 5 and through the rib 10, this clamping screw being thus so disposed that when turned down into the bore of the holding lever, the lower end thereof will engage against the base member at the bottom of the track way or slot 8 and in consequence the arm 5 will be clamped and securely locked in any desired adjustment. The outer end of the holding lever or arm 5 is bifurcated as shown at 13, and a bearing roller 14 is mounted within this bifurcated end to be capable of revoluble movement on the pin of shaft 15. To compensate for variations in the thickness of the stock being held, it is perhaps preferable that this bearing roller 14 be of live rubber, although other more or less flexible material might be employed.

In use, the work holder will be mounted upon the table or bed of a wood working machine substantially in the relation shown in Fig. 1, where the arm 5 will extend toward the work gage 16, and after the timber or piece of stock as indicated at 17 has been fitted against the gage 16, the clamp screw 11 will be released and the arm 5 is swung to bring the bearing roller 14 firmly against the outer side of the stock, following which the clamp screw is again turned to lock the holding arm 5 in this set position. As the work moves against the gage 16, the roller 14 will hold the same firmly pressed thereagainst and where the timber or stock is warped or otherwise distorted, the same relative portions thereof will be presented to the cutter or other tool operating upon the stock, substantially throughcut the entire length of the piece.

From the foregoing it will be seen that I have provided a work holder which can be fitted for use upon saw tables, upon jointers, shapers, and other wood working machines, and which structure is of such character that while it can be cheaply manufactured

and can be installed without materially altering or mutilating the structure of the machine, will yet perform a very efficient action in holding the stock to be worked upon properly pressed against the work gage.

While I have herein shown and described only one specific form and construction of the device of my invention, it will be understood that changes and variations might be made in the form and arrangement of the parts, that they might be mounted upon and fitted to a machine in other ways than herein set forth, and that mechanical refinements might be resorted to in adapting the device for particular uses, in view of which fact I wish to be limited only to such points as may be set forth in the claims.

I claim:—

1. A work holder of the class described comprising a base, a holding arm pivotally mounted upon said base, a thickened portion formed on said base and extending above the same, said thickened portion provided with a substantially T-shaped slot formed therein, said arm provided with a cut out portion fitting around and over said thickened portion, and means carried by said arm and working in said slot for locking said holding arm in a set position.

2. A work holder of the class described comprising a base, said base provided with a substantially arch-shaped outwardly extending rib portion formed upon the outer face thereof, said arch-shaped rib portion provided with a substantially inverted T-shaped slot extending centrally thereof, a holding arm pivotally mounted upon said base and provided with a notched portion formed upon the under face thereof and fitting snugly around said rib portion of said base for constituting a reinforcement for said arm, said arm provided with an integral inwardly extending T-shaped portion fitting in said T-shaped slot for constituting a guide for said arm, and a clamping screw passing through said T-shaped portion and engaging the inner face of said substantially T-shaped slot for firmly locking said holding arm in a set position upon said base.

3. A work holder of the class described comprising a base, a holding arm pivotally mounted on said base, a thickened portion formed on said base and projecting therefrom, said thickened portion provided with a substantially inverted T-shaped slot formed therein extending throughout the entire length thereof, said arm provided with a cut out portion upon the inner face thereof, said cut out portion fitting snugly around said thickened portion of said base and constituting an efficient means for relieving strain from the pivot point of said holding arm when pressure is brought to bear upon the outer end thereof, a substantially T-shaped projection carried by said holding arm and fitting within said substantially T-shaped slot, a roller carried by the outer end of said holding arm, and a clamping screw passing through said substantially T-shaped projection and engaging the inner face of said slot for firmly binding said holding arm in a set position upon said base.

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

HERMAN OTTO.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."