

J. SAWYER.
WORK CLAMP.
APPLICATION FILED MAR. 10, 1914.

1,188,015.

Patented June 20, 1916.

2 SHEETS—SHEET 1.

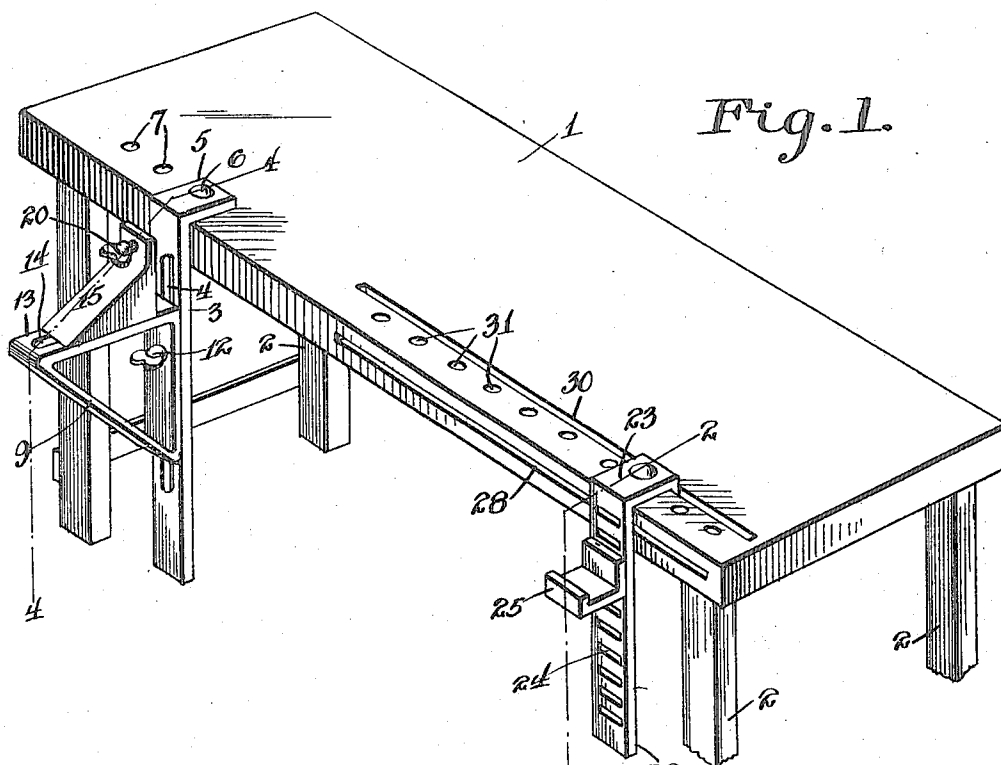


Fig. 2.

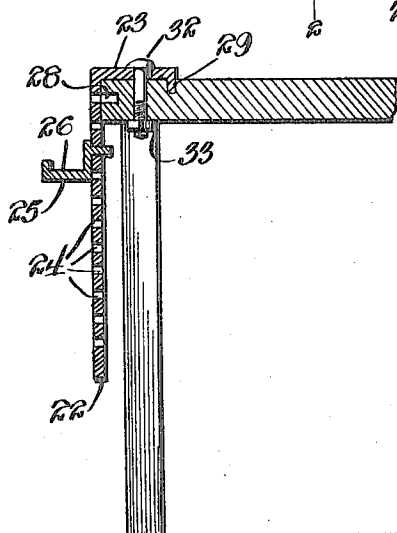
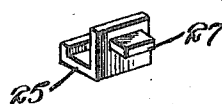


Fig. 3.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 4.

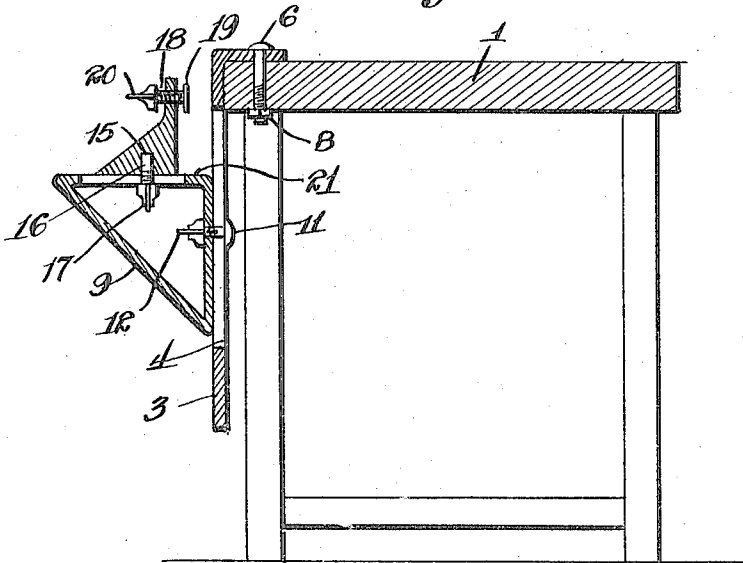


Fig. 5.

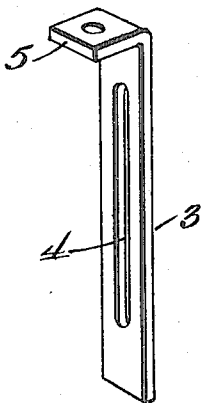


Fig. 6.

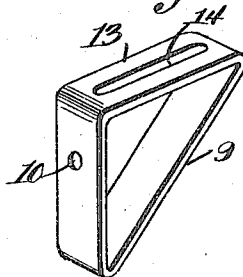
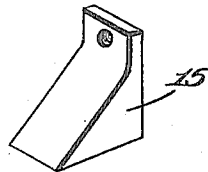


Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES SAWYER, OF CRYSTAL SPRINGS, FLORIDA.

WORK-CLAMP.

1,188,015.

Specification of Letters Patent. Patented June 20, 1916.

Application filed March 10, 1914. Serial No. 823,756.

To all whom it may concern:

Be it known that I, JAMES SAWYER, a citizen of the United States, residing at Crystal Springs, in the county of Pasco and State of Florida, have invented certain new and useful Improvements in Work-Clamps, of which the following is a specification.

The object of my invention is to provide a work-clamping device wherein gripping or clamping action is employed to hold the work in place, and wherein the device is provided with means for supporting the work, which means may act as a support or not, in accordance with the size and character of the material to be clamped.

A further object of the invention is to provide means for supporting the free end of the work in the desired relation in which that end of the work which is gripped by the clamp, is supported.

Other objects and features of the invention will be more fully described in connection with the accompanying drawings and will be more particularly pointed out and ascertained in and by the appended claims.

In the drawings: Figure 1 is a perspective view of the device of my invention applied to a bench in the form of a table. Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is a detail view. Fig. 4 is a sectional view on line 4—4 of Fig. 1. Fig. 5 is a detail detached view of a hanger, employed in my invention. Fig. 6 is a perspective view of a support. Fig. 7 is a perspective view of a clamping member.

Like characters of reference designate similar parts throughout the different figures of the drawings.

I have shown the device of my invention applied to a bench in the form of a table having a table top 1 and supporting legs 2.

My improved clamp comprises a hanger 3 which is longitudinally slotted at 4, and the upper end of which is bent at right angles, as indicated at 5, to the body portion of said hanger. The angle end 5 is adapted to extend over the top of the table or bench 1 and be held in longitudinally adjusted positions by means of a bolt 6 adapted to be extended through holes 7. The clamping device of my invention will usually be located in a given position and frequent adjustment will usually not be necessary and therefore I have shown the bolt 6 provided with a common form of nut 8.

I adjustably mount upon the hanger 3 a

supporting member which may be in the form of a triangular frame 9. The supporting frame 9 is provided with an opening 10 for attachment of the frame 9 to the hanger 3 by means of a bolt 11 and a thumb-nut 12. The slot 4 provides for vertical adjustment of the supporting frame 9 within necessary limits. The top 13 of said frame 9, is slotted at 14, for adjustable anchorage thereon of a clamping member 15, shown more particularly in Fig. 7. The clamping member 15 is provided with a threaded stud 16 which projects through the slot 14 and which may be held in adjusted positions by a thumb-nut 17. If desired, I may provide the clamping member 15 with a clamping screw 18 having a clamping disk 19 and adapted to be adjusted by a thumb-nut 20.

It will be readily seen that vertical adjustment of the frame 9 and horizontal adjustment of the clamping member 15, provide means for clamping any size of stock to be dressed between the clamping member 15 and the hanger 3 for the desired projection of the stock above the working surface of the bench 1. When the stock is heavy, or when downward pressure is exerted thereon, a part 21, of the frame 9, may act as a support if the frame is adjusted into the desired position. Thus it will be seen that I have provided an improved clamp wherein it is not necessary to rely wholly upon the clamping action in order to support the stock for various dressing operations thereon as the clamp 19 may act merely to hold the stock from lateral movement. This is particularly advantageous where it is desired to bore a hole or otherwise operate upon finished stock which would be injured or have its surface appearance impaired by clamping action sufficient to support and also hold the stock in position.

In cases where the stock to be operated upon is of considerable length, and where it may be necessary to dress an edge throughout the length of the stock, I provide supporting means which is adjustable on the bench 1, to or from the improved clamp, and which is also adjustable vertically and parallel with the improved clamp just described.

As shown, 22 designates a hanger which is provided with a bent terminal end 23 which is adapted to rest upon the top of the bench or table 1. A plurality of openings 24 afford adjustment on the hanger 22 of a work support in the form of a bracket 25.

The bracket 25 is provided with a work-receiving and supporting portion 26, and also with a lug 27 adapted to be projected into any one of the openings 24 to anchor the bracket in any desired vertical position. The lug 24 projects through the openings a sufficient extent to effectively support the bracket 25 without any additional fastening means in view of the fact that the clamping device securely holds the work against movement away from the bench or table. I may slot the bench or table 1, as indicated at 28, for longitudinal adjustment of the hanger 22 of the table 1, toward or from the clamping device.

The hanger 22 is provided with a terminal bent end 29 which is movable in a longitudinal slot 30 of the table or bench 1. By this means the hanger 22 may be freely adjusted toward or from the clamping device at any desired position and it will hold itself in the position to which it has been adjusted. However, if it is desired to lock the hanger 2 in an adjusted position, I may provide a plurality of holes 31 through which a bolt 32 may be projected. In cases where it is desired to lock the bolt 32, I will provide a nut 33 thereon for this purpose.

It will be seen that I have provided a wide range of adjustment, both laterally and vertically, for the devices constituting my invention, but if the range of adjustment should prove insufficient for stock of great length and small cross section, it would be an easy matter to insert supporting blocks of wood upon the bracket 25 and upon the supporting portion 21 to obtain an additional height of work support.

I believe that the utility and advantages of my invention will be fully understood from the foregoing description and while I have herein shown and described one specific embodiment thereof, I do not wish to be limited thereto except for such limitations as the claims may import.

I claim:—

1. In a work clamp, a bench, a clamp device mounted adjacent one end of the bench, said bench having a first groove and a second groove formed therein, that portion of the bench between said grooves being pro-

vided with openings, a hanger, a terminal portion formed upon the hanger to fit the first mentioned groove, the latter affording a guide means therefor during adjustment, the hanger being further provided with a series of openings, the uppermost of the openings being in registry with said second groove, an adjustable support member provided with an extension adapted to fit any one of the mentioned openings formed in the hanger, and means carried by the hanger and adapted for fitting engagement with one of the mentioned openings in the bench to anchor the hanger in an adjusted position, substantially as described.

2. In a work clamp, a bench, a clamp device for the work mounted on one portion of the bench, said bench having a first groove formed in the top face thereof adjacent and parallel with one of the longitudinal edges and a second groove formed in the mentioned longitudinal edge, that portion of the bench between the mentioned grooves being provided with uniformly spaced openings, a hanger comprising a strip of material depending from the bench and bent to slide upon the edge thereof toward and from the clamp device, a terminal portion formed upon the hanger to fit the first mentioned groove, the latter affording a guide means therefor during adjustment, the hanger being further provided with a series of uniformly spaced openings, the uppermost of the mentioned openings being in registry with the marginal groove aforesaid, and a support member adjustable vertically relatively to the hanger, the said support member being provided with an extension adapted to fit any one of the mentioned openings formed in the hanger, and means carried by the hanger and adapted for fitting engagement with one of the mentioned openings in the bench to anchor the hanger in adjustable position on said bench, substantially as described.

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

JAMES SAWYER.

Witnesses:

W. H. BROPHY,

Mrs. C. A. MUTISPAUGH.

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