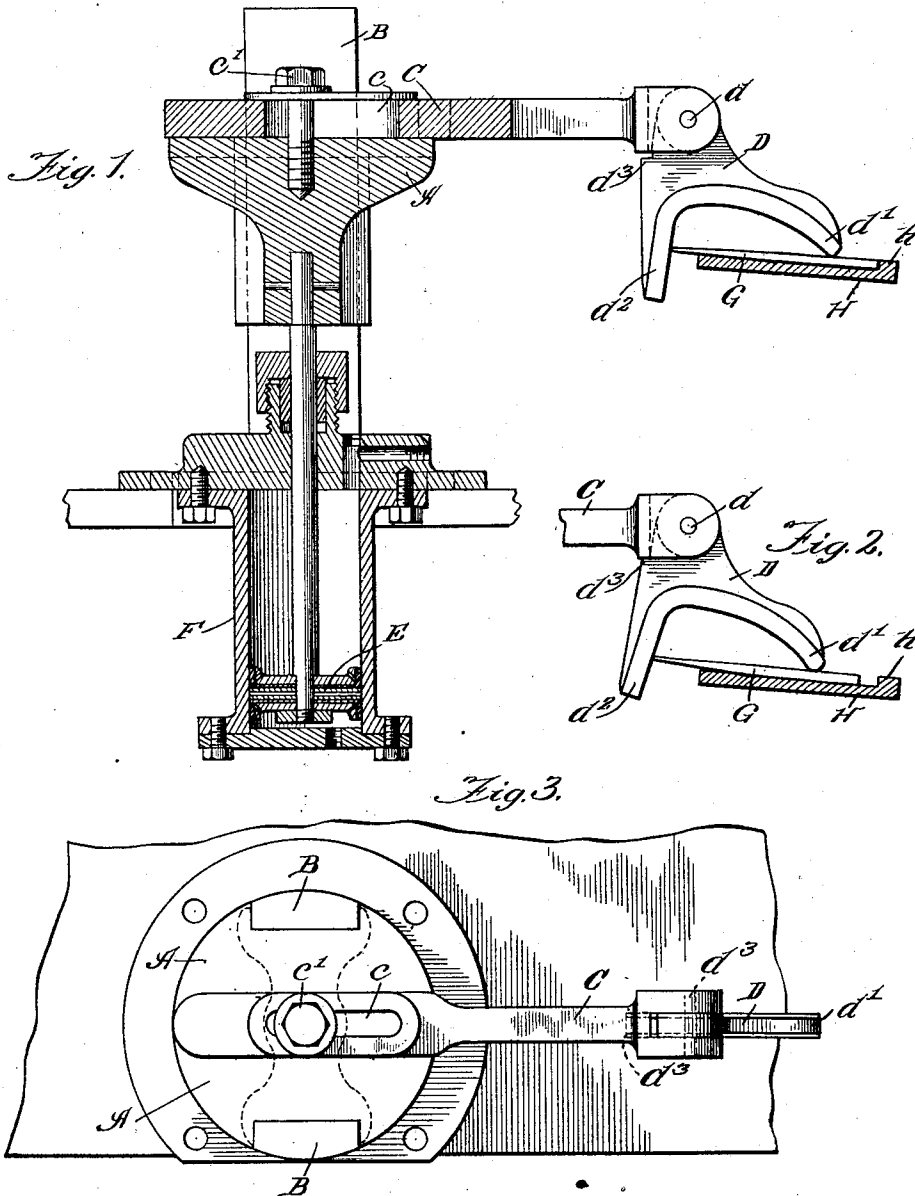


J. TEDELL.
WORK HOLDER.

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1,033,491.

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Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN TEDELL, OF MOLINE, ILLINOIS, ASSIGNOR TO ROCK ISLAND PLOW COMPANY,
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WORK-HOLDER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN TEDELL, a citizen of the United States of America, and resident of Moline, Rock Island county, Illinois, have invented a certain new and useful Improvement in Work-Holders, of which the following is a specification.

My invention relates to mechanism for holding an article in place while any suitable or desired operation is being performed thereon.

An object of my invention is to provide an improved work clamp which will automatically adjust the article in proper position before acting to firmly hold it in place on the table or other means of support provided for this purpose.

Another object is to provide an improved work-holding mechanism which will not only hold the article down, but also against lateral displacement.

Another object is to provide a powerful work-holding mechanism, preferably operated by fluid pressure of some sort, of such character as to afford unobstructed and convenient access to the article being operated upon.

To these and other useful ends my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings—Figure 1 is a vertical section of a work-holding machine embodying the principles of my invention, the work clamp, shown in side elevation, being in position to hold the article in place. Fig. 2 is a side elevation of the said work clamp, showing the same in the act of moving the article into correct position before clamping it in place. Fig. 3 is a plan of the machine shown in Fig. 1.

As thus illustrated, my invention comprises a vertically reciprocating cross-head A that moves up and down on the ways B, which latter are supported in any suitable manner. This cross-head is provided with an arm C bolted to the top thereof, which arm extends horizontally in the direction of the work. This arm C has a longitudinal slot e for the bolt e^1 by which it is secured upon the top of the cross-head A. In this way the said arm can be adjusted longitudinally

and also turned in different directions, to suit the requirements of different kinds of work. A work-clamp D is pivoted at d upon the end of said arm, the latter being preferably bifurcated for this purpose. The said work-clamp is formed with engaging arms d^1 and d^2 , the former extending horizontally, and the latter downward. At its rear the said work-clamp is also provided with a shoulder d^3 which engages the arm to limit the backward swing of the clamp. The portion d^1 is in the nature of a finger, and the portion d^2 may be regarded as a thumb.

Any suitable means can be employed for operating the cross-head A. As shown, the cross-head is operated by a piston E in a cylinder F, the latter being located below the head. The piston can be actuated by compressed air or other motive fluid.

In use, the work, such as a flat article G, is laid on a table H or other support. Then the piston is controlled to move the clamp D downward. If the article is not exactly in the right position, the thumb d^2 engages the edge of said article and shoves it over toward the gage h , as shown in Fig. 2. This is by reason of the leverage exerted when the finger d^1 engages the top of the article. Thus the clamp automatically positions the work before clamping it firmly in place. During such time the work is not only held down, but also against lateral displacement.

My improved work-holding machine or mechanism can be used for various purposes. For example, I find it very satisfactory as a clamp for share-trimming dies in the manufacture of plows.

During the operation of the machine the clamp D acts as a lever, the fulcrum being at d^1 , the power being applied at d , and the thumb d^2 performing the desired operation of moving the work into correct position.

What I claim as my invention is:

1. In a work-holder, a support provided with a gage, a pivoted clamp provided with a finger adapted to bear upon the work, a thumb for moving the work over against the gage, and means for operating the clamp.
2. In a work-holder, an arm, a clamping member pivoted on the end of said arm, and

means for operating said arm, a work support provided with a gage, said clamping member comprising a thumb portion and a finger portion rigid with said thumb portion and extending at an angle thereto, and means whereby in the operation of said clamp the finger portion first bears on the work to thereby cause the thumb portion to

bear against the side of the work to move same over against said gage. 10

Signed by me at Moline, Illinois, this sixth day of May, 1910.

JOHN TEDELL.

Witnesses:

H. DETTENS,
LUCIA TULLER.

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