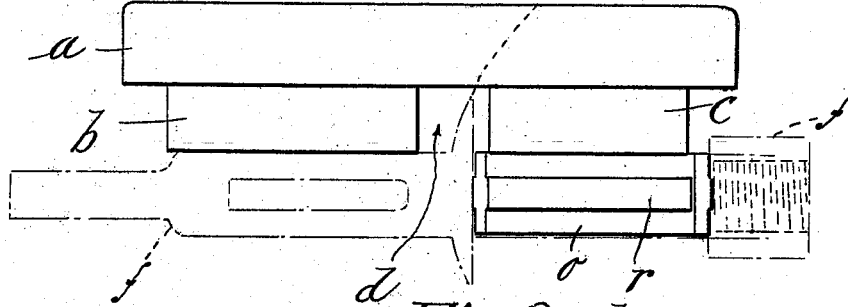


J. H. WESSON.  
 REVOLVER FRAME CLAMP.  
 APPLICATION FILED MAY 8, 1907.

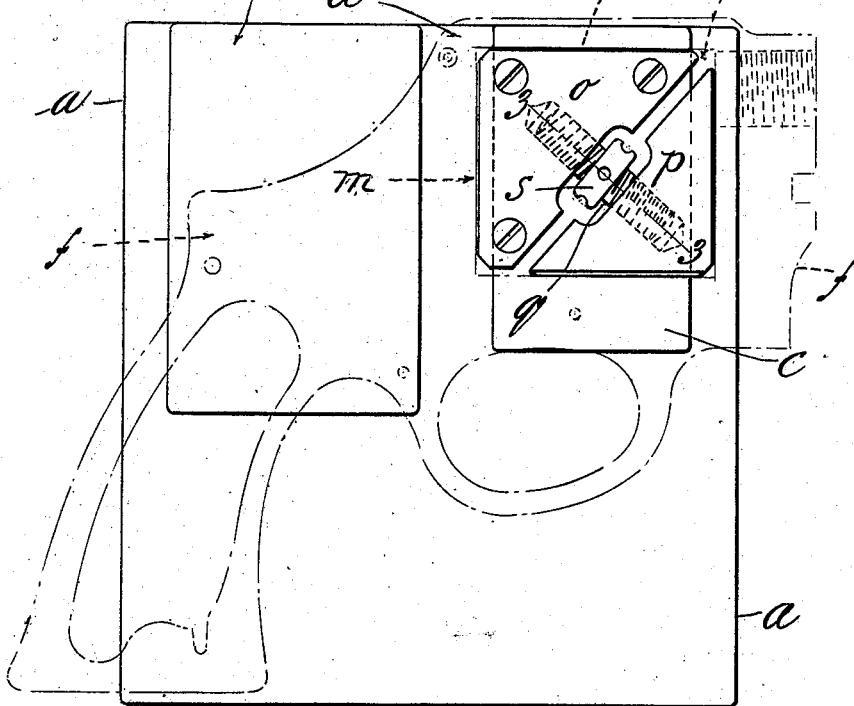
923,915.

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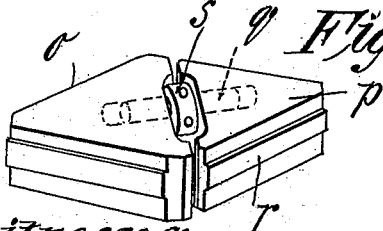
*Fig. 1. g*



*Fig. 2. k h*

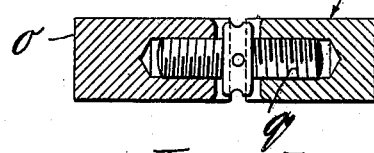


*Fig. 4.*



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 H. L. Sprague  
 H. J. Craig

*Fig. 3. p*



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# UNITED STATES PATENT OFFICE.

JOSEPH H. WESSON, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO SMITH & WESSON, INCORPORATED, OF SPRINGFIELD, MASSACHUSETTS, A CORPORATION.

## REVOLVER-FRAME CLAMP.

No. 923,915.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed May 8, 1907. Serial No. 372,618.

*To all whom it may concern:*

Be it known that I, JOSEPH H. WESSON, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Revolver-Frame Clamps, of which the following is a specification.

This invention relates primarily to the construction of revolvers, and has special reference to a work-holding device and the method of using the same, by means of which certain operations on the unfinished frame of a revolver may be made in a manner which insures great accuracy, the construction and use of the device permitting the convenient gaging of the work as it progresses; the essential novelty of the device residing in the embodiment therein of means whereby two rectangular base lines in the frame shall be used together to determine the position of the frame during successive operations thereon, whereby every cut made in the frame, or every hole bored therein, shall be made with relation to these base lines, the work-holding device being so constructed as to permit the easy removal and reclamping of the frame therein in exactly the same position as before relative both to the horizontal and the vertical plane.

Heretofore it has generally been the practice to use work-holding devices for revolver-frames, in which the latter is clamped in any convenient way without reference to the use of the same base for successive operations, and therefore it has been necessary that the workman should use the utmost care in adjusting the frame in its holding device, and as it is necessary to remove and replace the frame a number of times, it is clear that the chances for error are greatly multiplied in the absence of means to invariably adjust it relative to two rectangularly disposed bases, such as are used in the method and means described herein.

The invention has been fully illustrated in the drawings forming part of the specification, in which,—

Figure 1 is a side elevation of a work-holding device in which the invention has been embodied in its preferred form. Fig. 2 is a plan view of the same showing in dotted lines the frame of a revolver in its proper position therein. Fig. 3 is a sectional elevation of the actual clamping elements of

the device removed from their base or support, on the line 3—3 of Fig. 2. Fig. 4 is a perspective view of the clamping elements removed from their base or support.

Referring now to the drawings, *a* (Figs. 1 and 2) indicates a base-plate on which are secured (or which may be integral therewith) two blocks *b* and *c* of equal height or thickness, and so disposed as to leave a space or groove *d* between them. If desired, these blocks may be in one piece with the groove cut therein. These blocks, together with the base-plate, are planed off true, the upper surface of the blocks and the bottom of the plate being parallel. The upper surface of the blocks *b* and *c* supports the frame *f*, the latter being milled off on both sides as a preliminary operation, the recoil-plate *g* being located in the groove between the blocks when the frame is in a position ready for clamping. Another operation performed on the frame preparatory to those which are made thereon by means of the clamping device, is the cutting of the rectangular cylinder-opening *h*, and two adjoining sides of the opening are the ones which are preferably used as the base-lines from which all the work on the frame is laid out for such operations as are performed thereon while the frame is secured in the work-holding device or clamp. These base-lines are indicated by *k* and *m*.

The clamping devices proper consist of the two blocks *o* and *p* the former being fixed to the block *c* and the latter having a sliding movement on the block *c* toward and from the fixed clamp-block *o*, the latter and the movable block *p* being triangular in form and constituting, when in proper relative position, a diagonally divided rectangular structure, the movable part of which (the block *p*) is diagonally movable relative to the fixed block *o*, in a line at right angles to the line of division between the two blocks. The said movement of said loose block *p* relative to the block *o* is effected by a right and left-hand screw *q* threaded into each of the blocks quite loosely to the end that the block *p* (when forced into the angle of the cylinder-opening opposite the corner formed by the sides *k* and *m*,) will readily find its seat without binding the screw *q*.

Preferably, the blocks *o* and *p* are made with the narrow flat rib *r* running circum-

ferentially around the outer edges thereof, this rib constituting the actual bearing surface of the blocks against the border of the cylinder opening. By thus narrowing the contact surface between the blocks and the border of the cylinder opening, the possibility of throwing the frame out of position horizontally when it is being secured in the holding device is practically eliminated. If the entire surface of the edge of the blocks *o* and *p* should bear on the border of the cylinder opening, the slightest variation in the plane of said borders would cause the frame to be rocked or tipped on the blocks *b* and *c* (on which it rests loosely until clamped) when the clamping device is operated; but, as stated, by narrowing this bearing surface as described so that the bearing point extends but a relatively short distance each side of the central longitudinal plane of the frame, possible disturbance of the frame during the clamping operation is eliminated.

The preferred manner of actuating the screw *q* is to enlarge the central portion thereof between the blocks *o* and *p*, as shown at *s*, and drill some holes therein to permit the turning of the screw by means of a pin, whereby the block *p* may be set up firmly to its seat in the angle of the cylinder opening. Obviously, the making of the screw *q* with a right and left-hand thread is merely for the purpose of attaining a quicker adjustment of the clamping device than would be possible were only one end of the screw *q* threaded into one of the blocks, *o*, *p*, and the other end provided with a rotative bearing on the other block.

What I claim, is:—

1. A work-holding device for revolver frames consisting of a base-piece, a fixed block and a movable block, together constituting a rectangular structure to fit the cylinder-opening in a revolver frame, and means interposed between the blocks to force the movable block away from the fixed block to grip the frame at opposite points in said cylinder opening, the fixed block being permanently secured to the base-piece.

2. A holding device for revolver frames having the following elements; a base-plate, right angular shaped blocks permanently secured thereto and spaced from each other, one of the blocks being a fixed block and the other a movable block mounted thereon, means interposed in the space between the blocks and engaging said last named blocks for operating the movable block relative to the fixed one, whereby when the cylinder-opening in a revolver frame is brought into engagement with said fixed and movable blocks the frame will be clamped, and at the same time secured to the base-plate, as described.

3. A holding device for revolver frames comprising the following elements: a base-plate, right-angular shaped blocks secured thereto and of equal height or thickness, means interposed between the blocks for laterally spacing one block from the other, whereby when the cylinder opening of a revolver-frame is brought into engagement with the blocks, the frame will be secured to the base-plate, the laterally spacing means comprising a right and left-handed thread engaging threaded openings in the right-angular shaped blocks, and located in the spacing between the blocks.

4. A work-holding device for revolver frames having a fixed block and a movable block, together constituting a rectangular structure to fit the cylinder opening in a revolver frame, the fixed and movable blocks being circumferentially provided with a narrow rib to engage the wall portion of said opening, means interposed between the blocks to force the movable block away from the fixed block to uniformly grip the frame in the cylinder, whereby any movement of the frame in a horizontal plane is eliminated, the fixed block being secured to a permanent structure or base-plate, the rib being located at equal distances from the top and bottom portions of the block.

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Witnesses:

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