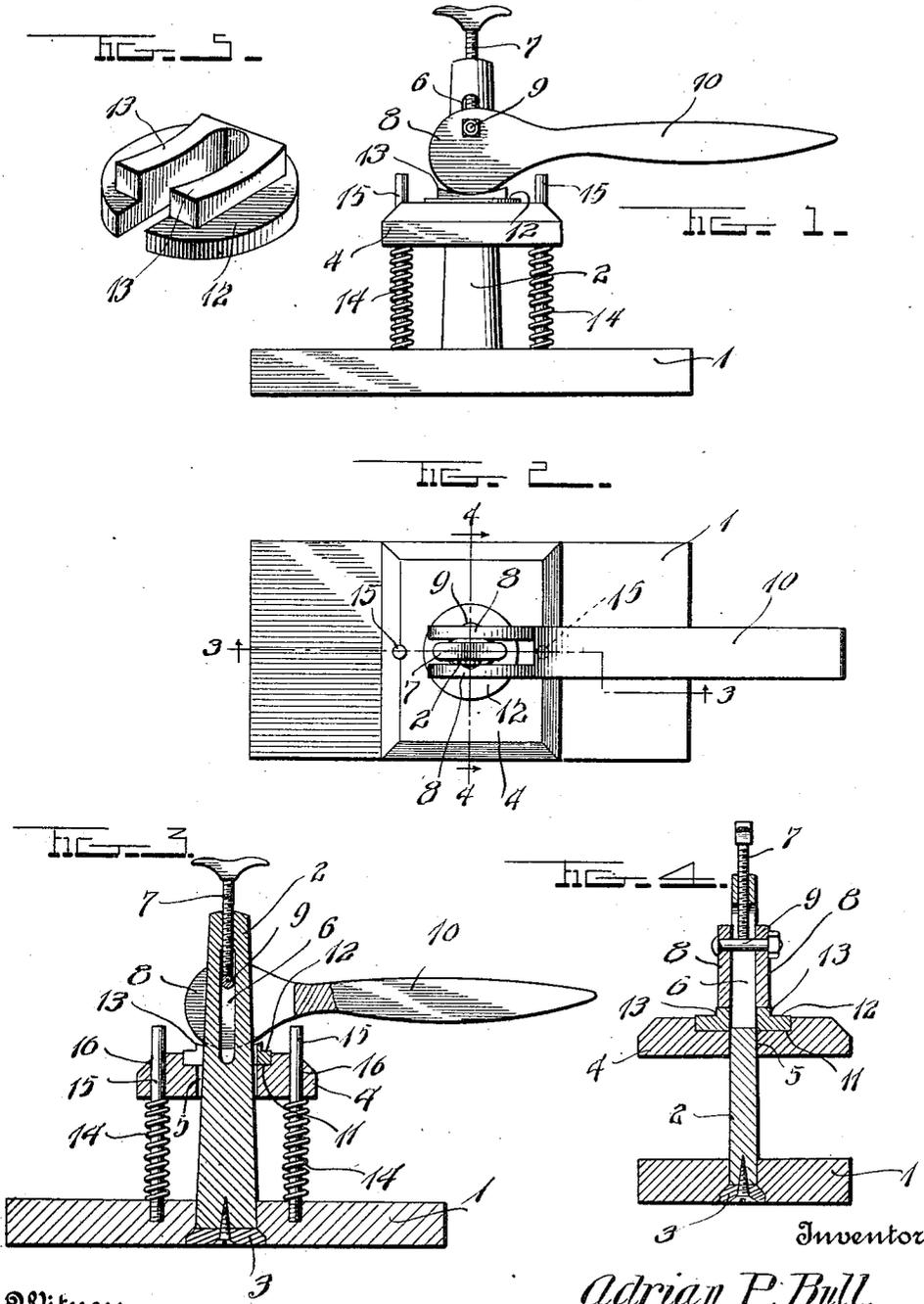


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 CAM CLAMP.  
 APPLICATION FILED MAY 23, 1918.

1,297,539.

Patented Mar. 18, 1919.



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# UNITED STATES PATENT OFFICE.

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## CAM-CLAMP.

1,297,539.

Specification of Letters Patent.

Patented Mar. 18, 1919.

Application filed May 23, 1918. Serial No. 236,156.

*To all whom it may concern:*

Be it known that I, ADRIAN P. BULL, a citizen of the United States, residing at Ravenna, in the county of Portage and State of Ohio, have invented certain new and useful Improvements in Cam-Clamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in clamps and more particularly to those used principally by pattern makers, it being my object to provide a comparatively simple and inexpensive clamp of this class which will hold work of different thicknesses to equal advantage without the necessity of using chips and the like between the stock and one of the jaws as is now commonly done.

With the foregoing general object in view, the invention resides in the novel construction of the clamp hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawing which forms a part of this application and in which:

Figure 1 is a side elevation of the clamp;

Fig. 2 is a top plan view;

Fig. 3 is a vertical longitudinal section on the plane of the line 3—3 of Fig. 2;

Fig. 4 is a vertical transverse section on the plane designated by the line 4—4 of Fig. 2; and

Fig. 5 is a perspective view of the removable plate upon which the cam operates to depress the jaw.

In the drawing above briefly described, the numeral 1 designates a base from which a preferably flat standard 2 extends, any suitable means 3 being employed for securing the standard to the base. A rectangular jaw 4 is provided with a central opening 5 receiving the standard 2 in such a manner as to permit said jaw to slide toward and away from the base, and directly above the jaw 4 the outer end of the standard 2 is provided with a longitudinal slot 6 into whose outer end a set screw 7 projects, said set screw being threaded in the standard as shown clearly in Figs. 3 and 4. The furcations 8 of a bifurcated cam straddle the standard 2 above the wall 4 and are provided with a fulcrum pin 9 located eccentrically and extending through the slot 6, the position of said fulcrum pin in the slot being controlled by the set screw 7, so that the cam and jaw

may be adjusted toward and away from the base 1 according to the thickness of the work to be clamped. Any suitable handle 10 may be provided for operating the cam, but said handle is by preference in the form of a straight arm as shown.

The back or upper side of the jaw 4 has formed therein a preferably circular socket 11 in which a bifurcated plate 12 is removably received, the furcations of said plate straddling the standard 2 as seen clearly in Figs. 3 and 4. The upper side of plate 12 is provided with lugs 13 upon which the furcations 8 of the cam operate to force the jaw 4 toward the base 1, against the tension of a pair of coiled springs 14 which raise said jaw as soon as the cams are released. These springs preferably surround pins 15 rising rigidly from the base 1 with their upper ends received slidably in openings 16 in the jaw, and since the springs in question exert a constant upward thrust on said jaw, the lugs 13 are held in contact with the furcations 8 of the cam so that the plate 12 is held against accidental removal from the socket 11. Whenever required, this plate may be removed and one having larger lugs 13 may then be substituted, so that the jaw 4 may be depressed to a greater extent than that allowed by adjusting the set screw 7 downwardly to the maximum. Also, by inserting a plate such as 12 with relatively thin lugs 13 the clamp may be opened a greater distance than would otherwise be possible.

In use, the work is clamped between the jaw 4 and the base 1 by first suitably adjusting the cam by means of the set screw 7, and then depressing the lever 10. The clamp may remain in this condition until the work is shaped as required, whereupon raising of the handle will allow the springs 14 to release the clamp. Whenever it is required, another plate having either thicker or thinner lugs 13 is substituted for the plate 12 previously used, according to the thickness of the work to be clamped.

From the foregoing, taken in connection with the accompanying drawing, it will be obvious that although my invention is of comparatively simple and inexpensive nature, it will be highly efficient and in every way desirable. Since probably the best results are obtained from the details shown and described, they are by preference followed, but within the scope of the invention as claimed, considerable latitude is allowed

for making such minor changes as occasion may dictate. Furthermore, it is to be understood that the use of the device is not limited to any particular field.

5 I claim:

1. A work clamp comprising a base, a standard extending from said base and having a longitudinal slot, a jaw slidable on said standard, a cam for forcing said jaw toward  
10 said base, said cam having a fulcrum positioned slidably in said slot, and a set screw threaded in the outer end of said standard and projecting into said slot with its inner end bearing against said fulcrum, whereby to  
15 adjust the latter in said slot according to the thickness of the work.

2. A work clamp comprising a base, a

standard extending from said base, a jaw slidable on said standard and having in its back a socket through which said standard  
20 passes, a bifurcated plate received removably in said socket with its furcations straddling said standard, and a bifurcated cam whose furcations straddle said standard and are fulcrumed thereto, said furcations oper-  
25 ating upon the furcations of said plate to force said jaw toward said base.

In testimony whereof I have hereunto set my hand.

ADRIAN P. BULL.

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."