

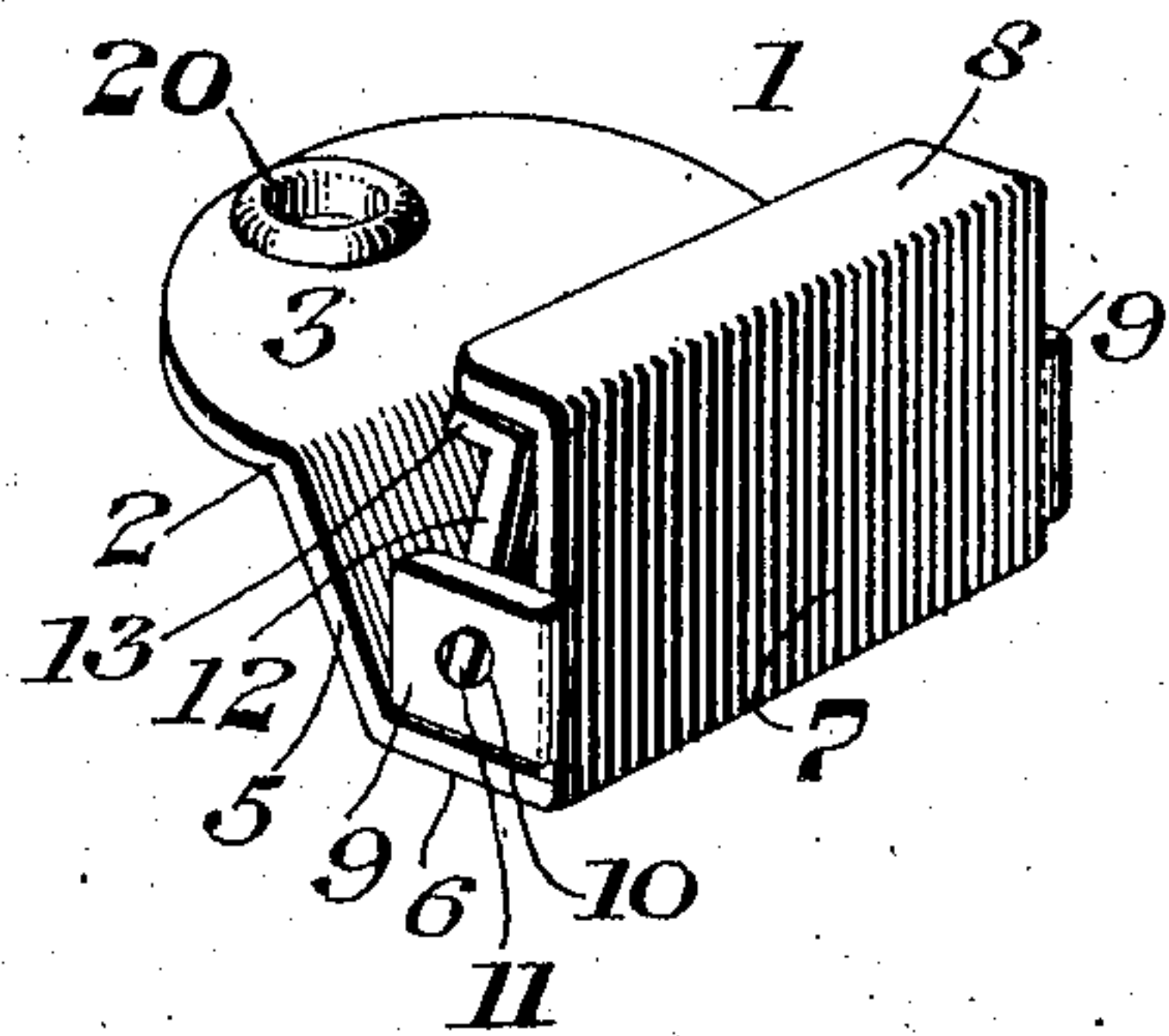
No. 790,013.

PATENTED MAY 16, 1905.

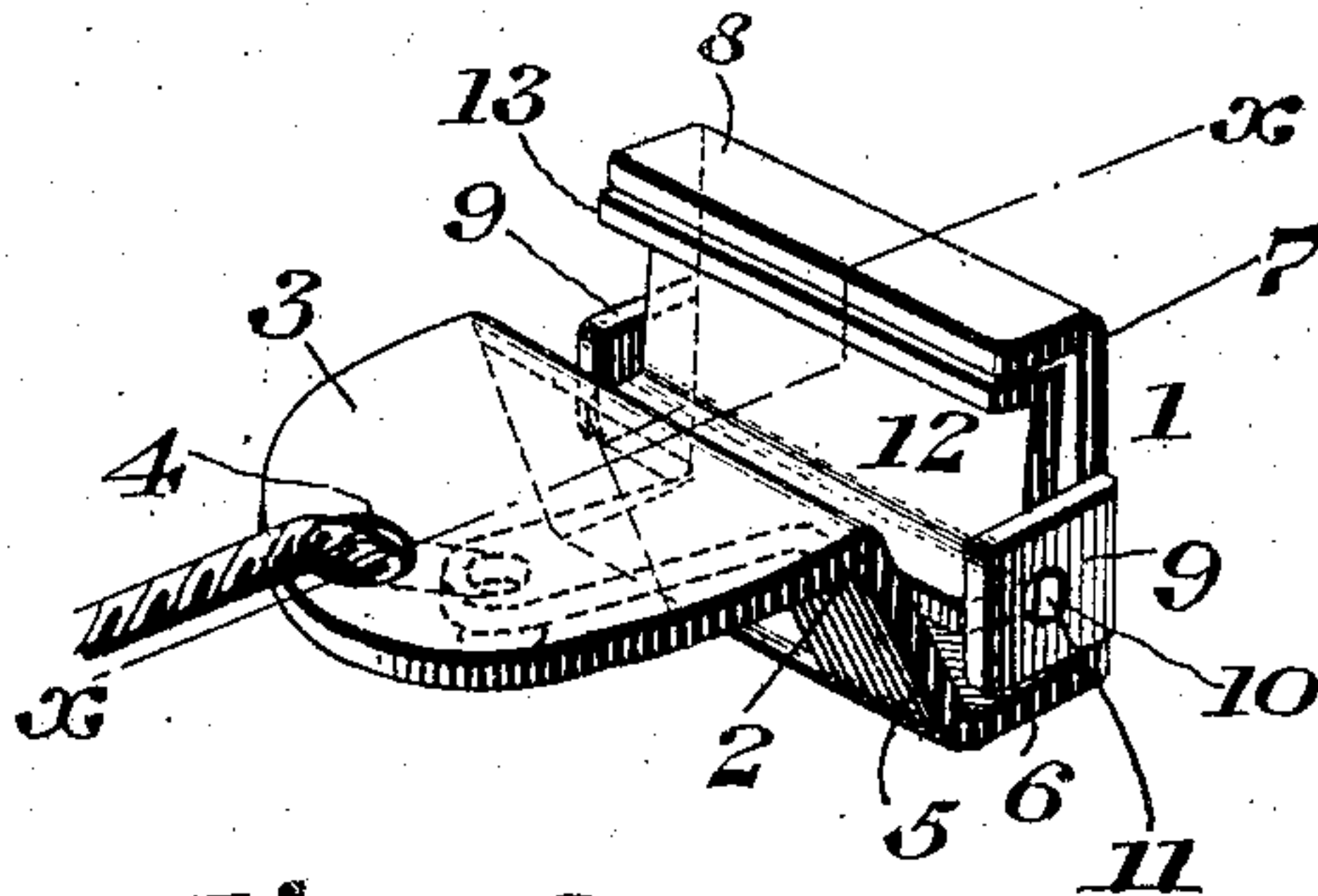
D. SWOPE.  
CLAMP.

APPLICATION FILED JAN. 27, 1905.

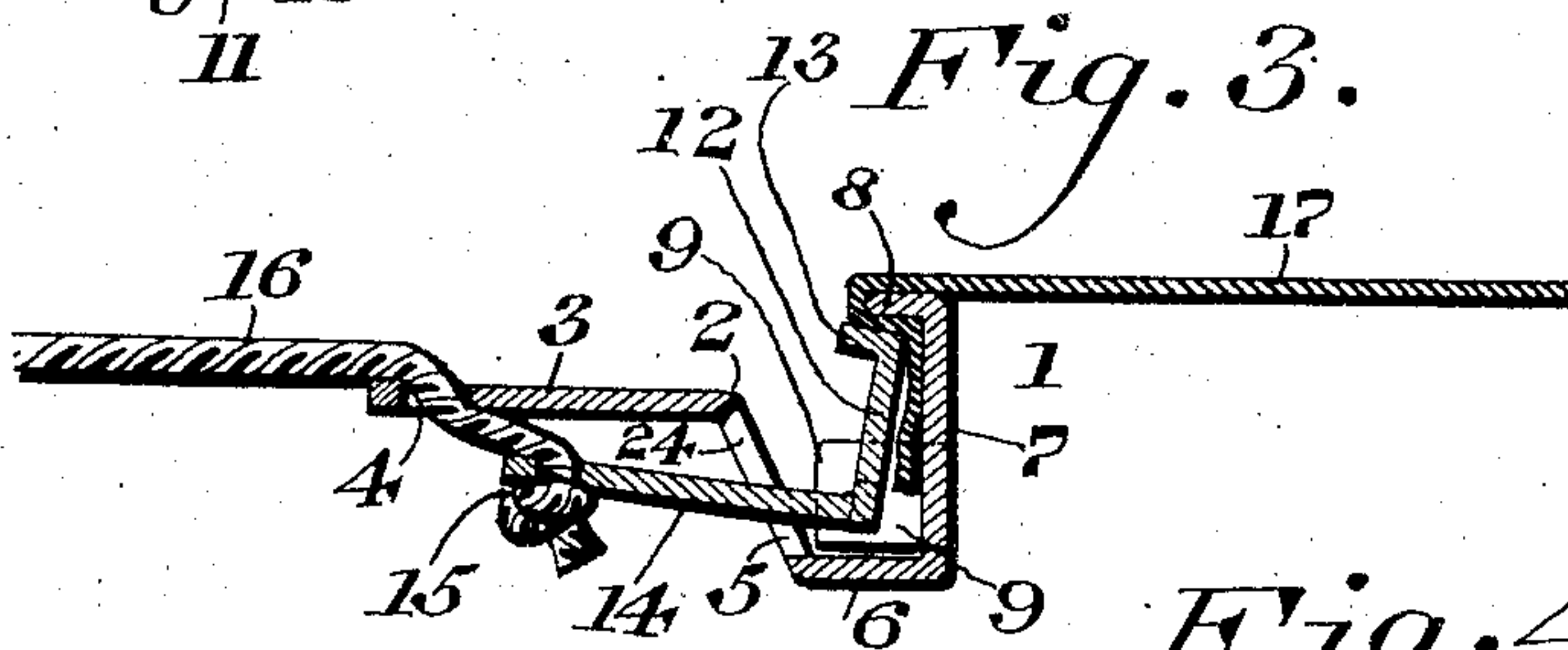
*Fig. 1.*



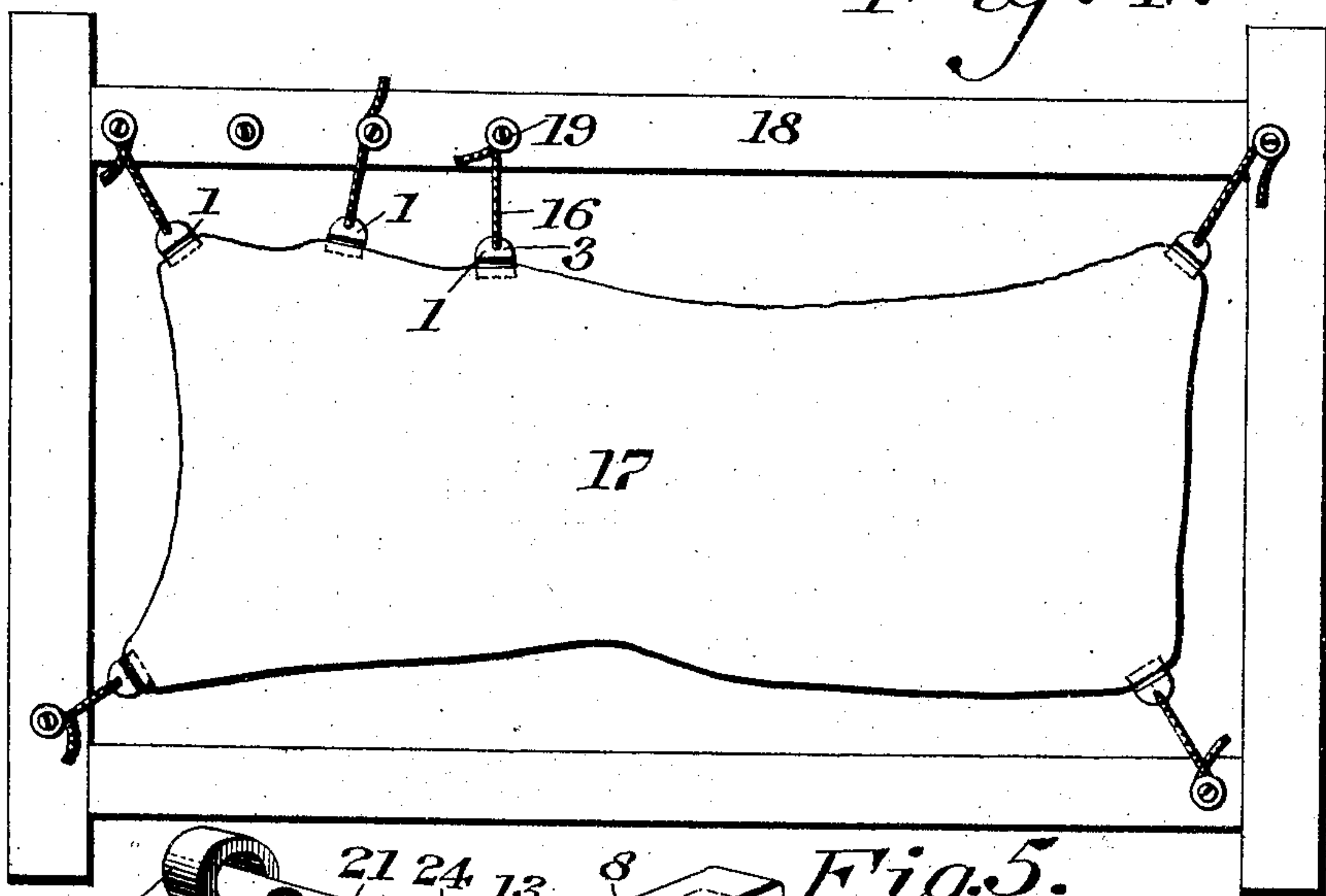
*Fig. 2.*



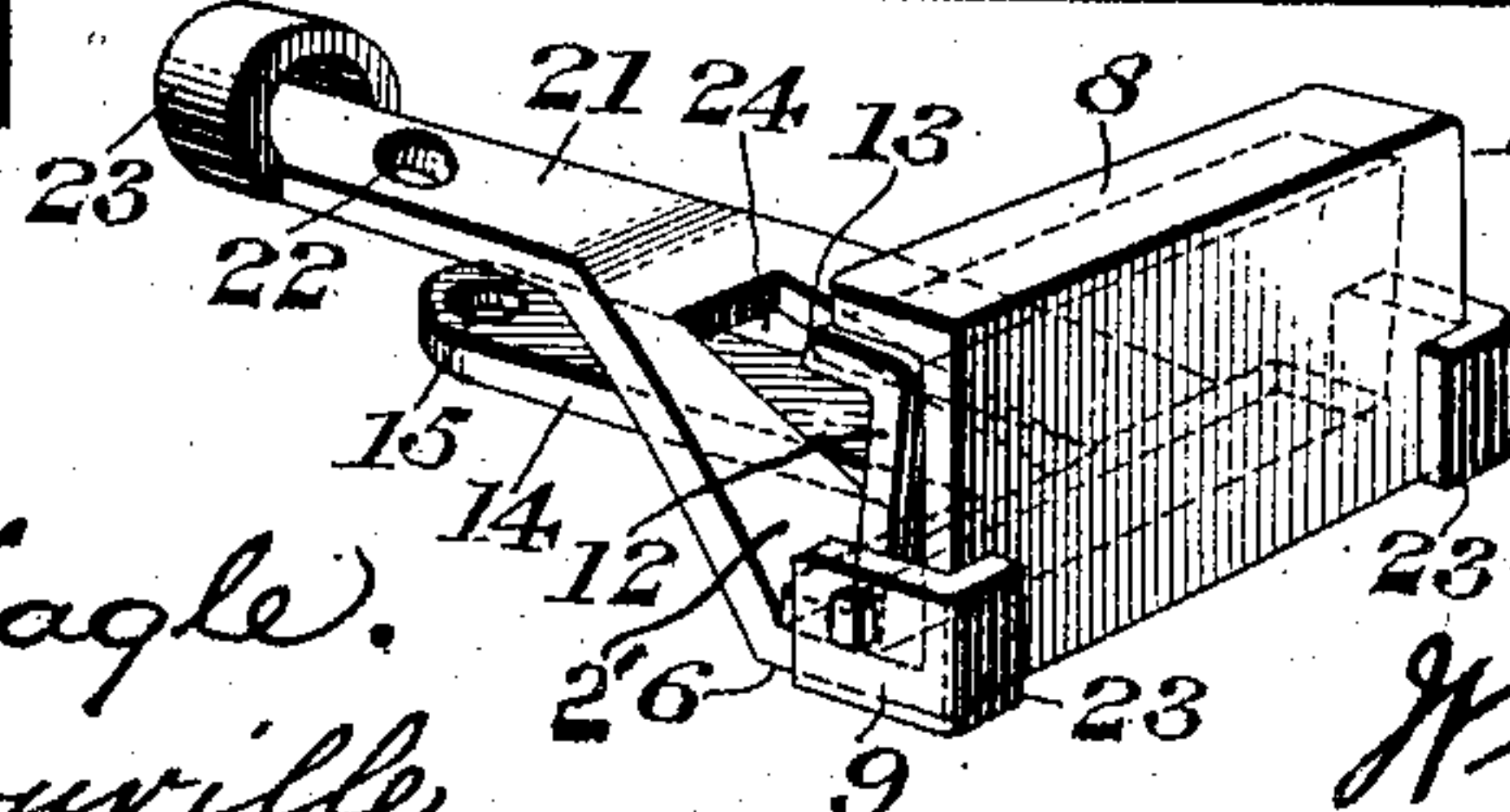
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

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## CLAMP.

SPECIFICATION forming part of Letters Patent No. 790,013, dated May 16, 1905.

Application filed January 27, 1905. Serial No. 242,887.

*To all whom it may concern:*

Be it known that I, DAVID SWOPE, a citizen of the United States, residing at Merchantville, in the county of Camden, State of New Jersey, have invented a new and useful Clamp, of which the following is a specification.

My invention relates to a novel construction of a clamp or fastener which is adapted for stretching skins, hides, or fabrics taut or for holding or suspending various materials or articles.

The invention further consists of novel features whereby when the device is used for stretching skins the entire operative mechanism is below the surface of the skin or hide, so that in the operation of enameling or otherwise treating the skin the workman can work to the extreme edge of the skin without loss of time, as the clamp is of such construction as to offer no obstruction to free manipulation of every portion of the surface of the leather during the finishing treatment.

To the above ends my invention consists, broadly, of a novel construction of clamping device wherein the clamping-jaws are adapted to be wholly below the skin or hide to be treated when the device is in use, provision being further made for the employment of a suitable fastening device whereby the clamp firmly grips and holds the hide, skin, or other article until manually released without any injury to the same.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents a perspective view of a clamp for hides, skins, or other articles embodying my invention. Fig. 2 represents another perspective view of the same. Fig. 3 represents a section on line *xx*, Fig. 2, showing the position the parts assume with respect to the hide or other material to be stretched. Fig. 4 represents a plan view showing the clamps in use and secured to the stretching-frame. Fig. 5 represents a perspective view of another embodiment of my invention.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates my novel construction of clamp, the same consist-

ing of the lower or body portion 2, comprising the rear extension or finger-piece 3, having the eye 4 therein.

5 designates a forward extension from the piece 3, which is prolonged forwardly at 6 and extended upwardly at 7 and terminates in the backwardly-deflected lip or jaw 8.

9 designates ears extending from the member 7, although it is evident that the same may project from the member 6, if desired.

10 designates bearings in the ears 9, said bearings receiving the preferably square journals 11 of the member 12, which terminates in the lip or jaw 13, the latter being below the jaw 8.

14 designates a finger-piece projecting rearwardly from the member 12 and through the opening 24 and having the eye 15 therein, through which is passed the cord or other flexible connection 16, which latter passes through the eye 4 of the finger-piece 3, it being apparent that the finger-piece 14 is of somewhat less length than the finger-piece 3, so that the eye 15 is somewhat in advance of the eye 4, whereby any pull upon the cord 16 will cause the jaws 8 and 13 to assume substantially the position seen in Fig. 3.

17 designates the skin, hide, or other material to be stretched, the latter being retained within the frame 18, having the fastening devices 19, to which the cord 16 is adapted to be secured. I have deemed it unnecessary to enter into any detailed description of the fastening devices 19, since any of the conventional or approved forms now known may be employed.

I desire to call particular attention to the manner in which the skin, hide, or other material is clamped between the jaws 10 and 8, since it will be apparent that the surface of the same is taut throughout its entire portion and that the operator can work entirely to the extremity of the same, as will be clearly understood from Fig. 3.

The operation is as follows: In practice the tanned (or as the case may be the dyed) skin is placed within the frame 18, provided with the requisite number of fastening devices 19. The clamps 1 are applied to the edges of the skin at the requisite points, after which the



cords 16 are drawn tightly around the fastening devices 19, moving one jaw substantially in the direction of the length of the other member, whereupon the hide is stretched to the desired extent, it being apparent that until the tension of the cord or other flexible connection 16 is released the article or material held between the jaws 8 and 13 cannot possibly pull out or become detached, and that said jaws will hold the same firmly without injury, and that the necessity of punching holes in the material or otherwise mutilating the same to adapt the jaws to be brought into engagement therewith is obviated.

While my novel device will be found useful in leather factories for stretching hides, and it may also be used for stretching fabrics of various kinds and for holding and suspending various materials or articles, and as it is simple in construction it may be cheaply manufactured and sold at comparatively low cost. It is apparent that when used in leather-factories for stretching leather it obviates the necessity of making holes in the same, as is required when the old-fashioned toggle or fastener is used. It further takes up less room, and, as will be clear from the construction seen in Fig. 3, it allows the finisher to work clear to the edge of the leather without loss of time, as the fastener is of such form as to offer no obstruction to free manipulation during the finishing treatment.

It sometimes happens in the operation of treating or enameling the skin that some of the enamel gets into the jaws of the clamp and after baking it is difficult to open the clamps, and to obviate the disadvantages of this feature I have formed the finger-pieces 3 and 14 on both the clamp members, which are made sufficiently long to form a handle, so as to enable the workman to conveniently manipulate the same for the purpose of opening the jaws. These finger-pieces have the further evident function of affording bearing for the cord 16.

It will be apparent that changes may be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

If desired, I may employ an eyelet 20 to reinforce the hole or eye 4 and to prevent undue wear on the cord or other flexible connection 16.

If desired, I may in lieu of the construction seen in Figs. 1 to 3, inclusive, employ the construction seen in Fig. 5, wherein the finger-piece 21, which corresponds to the finger-piece 3, is provided with the slot or opening 22 and terminates in the eye 23, it being apparent that the cord or other flexible connection extends from the eye 15, through the opening 22, and thence through the eye 23. 24 designates an aperture in the body portion

2', and it will be evident that this aperture may be of any desired size or shape, the only requirement being that there be connecting-walls between the finger-piece and the transverse end of the jaw portion.

As shown in Fig. 5, I may construct the member 7 with the ears 9, as indicated therein, said ears being struck up from the member 6 and deflected, as indicated at 23, whereby a very rigid and efficient construction is produced.

It will be evident that the eyelet 20 may be dispensed with, if desired; but I prefer to use the same or its equivalent. It will also be apparent that, if desired, I may construct the portion of the flexible connection 16 which passes through the eye 4 or eyelet 20 of wire cord or cable without departing from the spirit of my invention.

It will be apparent that by the novel construction, location, and manner of operation of the clamping-jaws 8 and 13 the same can close with equal facility on either thin or thick leather and that the action of the juxtaposed portions of the jaws against the material passing over the upper jaw makes a tight and effective hold independent of the tension arising from the pull on the cord or other flexible connection 16. It will further be apparent that this construction enables a great saving in the use of leather over other devices now in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A clamp consisting of two members, one of which has a depressed intermediate portion and an upwardly-extending member having a rearwardly-extended upper jaw, the other member of said clamping device consisting of an upwardly-extending member located at the rear of said first-mentioned member and having a rearwardly-extending jaw located below said first-mentioned jaw, whereby when the clamp is in position, said upper jaw is covered by the material to be stretched.

2. A clamp consisting of two members one of which has a depressed intermediate portion and an upwardly-extending member having a rearwardly-extended upper jaw, a rearwardly-extending finger-piece projecting from said member, the other member of said clamping device consisting of an upwardly-extending member located at the rear of said first-mentioned member and having a rearwardly-extending jaw located below said first-mentioned jaw, whereby when the clamp is in position, said upper jaw is covered by the material to be stretched and a rearwardly-extending finger-piece for said last-mentioned jaw.

3. A clamp consisting of two members one of which has an upwardly-extending member having a rearwardly-extended upper jaw, a rearwardly-extending finger-piece projecting



from said member, the other member of said clamping device consisting of an upwardly-extending member located at the rear of said first-mentioned member and having a rearwardly-extending jaw located below said first-mentioned jaw, whereby when the clamp is in position, said upper jaw is covered by the material to be stretched, a rearwardly-extending finger-piece for said last-mentioned jaw in combination with a connection secured to one of said finger-pieces and passing through the other of said finger-pieces.

4. A clamp consisting of two members, one comprising a finger-piece, a forwardly-projecting member secured thereto, and an upwardly-projecting member having a rearwardly-extended jaw and a second member consisting of a finger-piece having an upright member and a rearwardly-extending jaw, eyes in said finger-pieces and a connection secured in one of said eyes and passing through the other of said eyes.

5. A clamp composed of a plurality of members, one of said members having the finger-piece 3, the forward depressed extensions 5 and 6, the upwardly-extending member 7 and the rearwardly-extending jaw 8, and the other member of said clamp being composed of the finger-piece 14, the upwardly-extending member 12 and the rearwardly-extending jaw 13, eyes in said finger-pieces, said eyes being adapted for the reception of a flexible connection.

6. A clamp composed of a plurality of members, one of said members having the finger-piece 3, the forward extensions 5 and 6, the upwardly-extending member 7, and the rearwardly-extending jaw 8 substantially parallel to the finger-piece, and the other member of said clamp being composed of the finger-piece 14, the upwardly-extending member 12 and the rearwardly-extending jaw 13 in combination with eyes in said finger-pieces, said eyes being adapted for the reception of a flexible connection.

7. A clamp consisting of two members, one of which has a depressed intermediate portion and an upwardly-extending member having a rearwardly-extending upper jaw; the other member of said clamping device lying in part within the depressed portion of the first member and consisting of an upwardly-extending

member located at the rear of said first-mentioned member and having a rearwardly-extending jaw located below said first-mentioned jaw, whereby when the clamp is in position, said upper jaw is covered by a material to be stretched, eyes in the extremities of said members and a flexible connection passing through said eyes.

8. In a clamp, a plate having a fixed jaw projecting beyond the face thereof and an intermediate apertured depressed portion, a pivoted member passing through the aperture and having a jaw substantially inclosed by the fixed jaw when in clamping position and means for causing the jaws to clamp an object.

9. In a clamp, a plate having a depressed portion and a transverse end terminating in a rearwardly-extending fixed jaw, a movable plate lying in part within the depressed portion and terminating in a jaw substantially inclosed within the fixed jaw and cooperating therewith when in clamping position to hold the material clamped, and means passing through both of the plates for causing the rear parts of said members to approach each other to operate the jaws and clamp the material.

10. A clamp consisting of two members, one of which has a rearwardly-projecting apertured portion, a forwardly-projecting portion, a front transversely-extending portion extending beyond the body of the plate and a rearwardly-extending clamping-jaw, the other member being pivoted within the first member and having a jaw lying substantially within the jaw of the first member when in clamping position, in combination with means for drawing the jaws together.

11. A clamp consisting of a lower member having a jaw, an upper member having a jaw and pivoted relatively to the other member in such a manner that the jaws approach each other substantially in the direction of the length of one of the members, and one of said members having a divided intermediate portion, and a flexible connection engaging the two members to clamp the jaws.

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Witnesses:

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