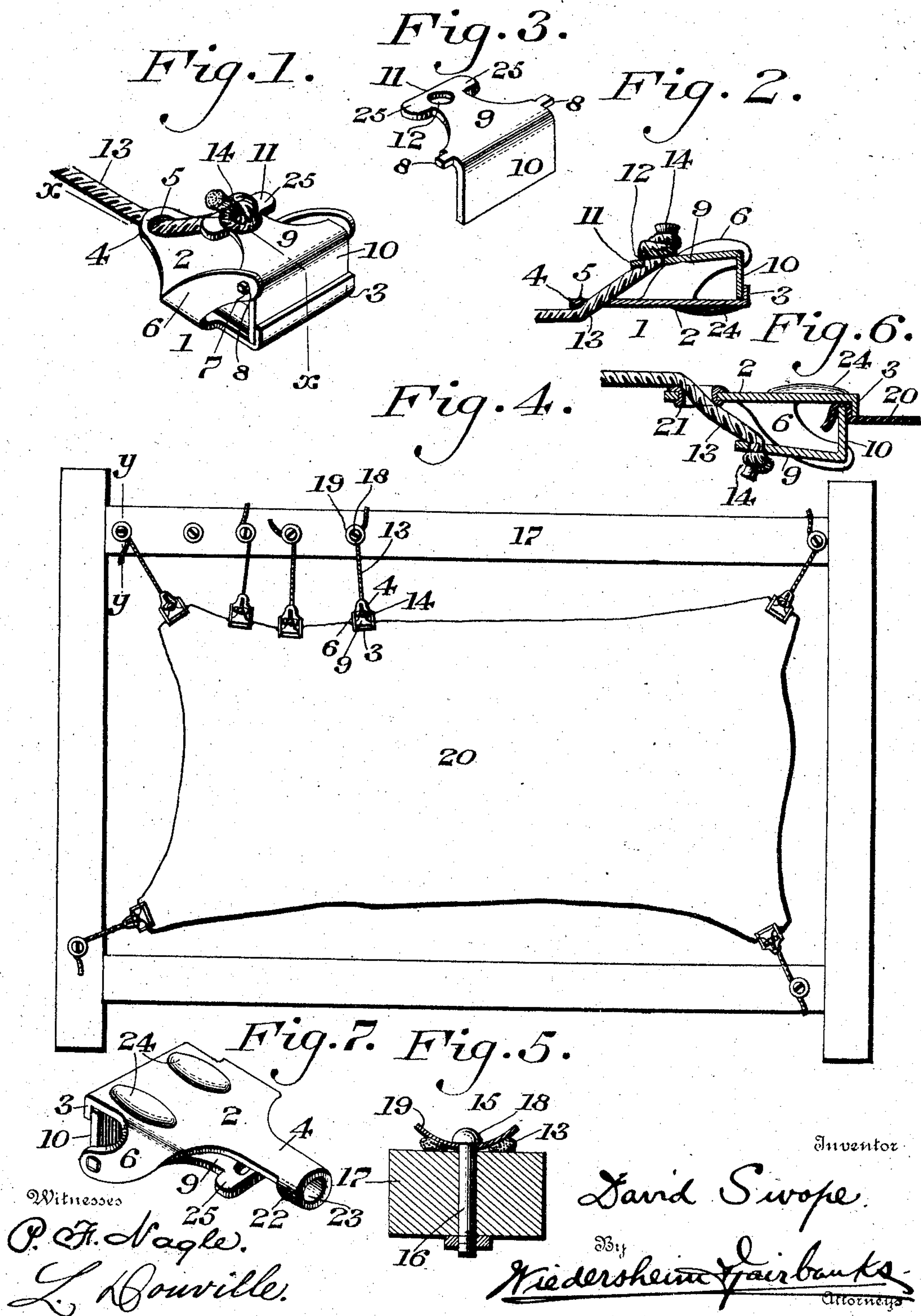


No. 790,012.

PATENTED MAY 16, 1905.

D. SWOPE.  
CLAMP.

APPLICATION FILED JAN. 27, 1905.





# UNITED STATES PATENT OFFICE.

DAVID SWOPE, OF MERCHANTVILLE, NEW JERSEY.

## CLAMP.

SPECIFICATION forming part of Letters Patent No. 790,012, dated May 16, 1905.

Application filed January 27, 1905. Serial No. 242,886.

*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 the novel construction of a clamp for stretching hides or skins and which is adapted to take the place of the customary toggle which has been heretofore used for the most part in the stretching operation, wherein the hides must be perforated along their edges to insert the short toggle-strings, which are tied at one end to the toggles and at the other end tacked to the frame.

The object of my present invention is to produce a strong and efficient clamp which can be manufactured at a minimum expense and is not liable to get out of order and which can be readily applied to the hide and is so constructed that the pull on the clamp will stretch the hide and more tightly clamp the same.

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

Figure 1 represents a perspective view of a clamp embodying my invention. Fig. 2 represents a section on line *xx*, Fig. 1. Fig. 3 represents a perspective view of one of the clamping-jaws removed. Fig. 4 represents a plan view showing the clamps in use and secured to the stretching-frame. Fig. 5 represents a sectional view on line *yy* of the stretching-frame. Fig. 6 represents a sectional view of the clamp in normal position. Fig. 7 represents a perspective view of a modification.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates my novel construction of clamp, the same consisting of the lower member, body, or plate 2, which has at its forward extension the upwardly-turned lip or jaw 3 and at its rearward extension the finger-piece 4, which permits of convenient manipulation, said finger-piece having the eye 5 therein. When I speak of the "length" of the jaw or jaws, it will be understood that I mean the distance in what

was before turning the jaw the length of the plate.

6 designates ears projecting upwardly and in the present instance forwardly from the body 2, said ears having the preferably round bearings 7 therein, in which are the journals 8 of the upper member, the latter comprising the plate 9, having the downwardly-turned jaw 10, which is preferably longer than the jaw 3 and adapted to overlap and be limited in its motion by and lying on the cord side of the jaw 3, it being noted that the plate 9 and jaw 10 join at substantially an acute angle.

11 designates a finger-piece forming a rearward extension of the plate 9 and having the eye 12 therein, through which passes the cord 13, having the knot 14 therein, constituting means for connection or attachment of the cord thereto, said cord coöperating with the rear end of member 2, as by passing also through the eye 5, and when the device is in use having its free end wound around or secured to a suitable fastening device 15, which I have shown in Fig. 5 as consisting of a bolt 16, passing through the framework 17 and having the head 18 therein, below which is the washer 19, against which the cord is wound, as indicated in Fig. 5.

20 designates the skin to be stretched, the general manner of stretching the same prior to treating or enameling being indicated in Fig. 4.

The operation is as follows: In practice the tanned or, as the case may be, the dyed skin 20 is placed in the frame 17, which is provided with the requisite number of fastening devices 15. The clamps are secured along the edge of the skin or hide as required, and it will be seen that the edges of the latter are firmly held between the juxtaposed faces of the jaws 3 and 10, and the tighter the cord 13 is drawn around the fastening device 15 the more firm and effective will be the bite upon the leather.

In practice I prefer to make the entire device of two pieces of metal which can be readily struck up or formed by suitable dies or other mechanism, and in order to enable the jaws of the clamp to be readily manipulated I have formed on both the clamping members



the finger-pieces 4 and 11, which are of sufficient length to form a handle to enable the workman to readily manipulate the jaws so as to open the same when desired.

5 It will be seen that by the use of my invention the article or material held between the jaws 10 and 3 cannot be released until the tension on the cord 13 is released, and said material cannot possibly pull out or become detached, and the jaws will hold the same firmly  
10 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 ob-  
15 viated.

While I have shown and described my invention as being useful and applicable in leather-factories for stretching hides, it is apparent that it may also be used for stretching  
20 fabrics of various material or suspending articles, and as it is simple in construction it may be cheaply manufactured and sold at a comparatively low cost. It also is very durable and when used in leather-factories for  
25 stretching leather obviates, as stated, without the necessity of making holes in the same, as required when the old-fashioned toggle or fastener is used. It takes up less room and allows the finisher to work approximately to  
30 the edge of the leather without loss of time, as the fastener is of such form as to afford no obstruction to free manipulation during the finishing treatment.

It will be apparent that changes may be  
35 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. In Fig. 6 I have shown the  
40 plate 2 as provided with an eyelet 21, through which the flexible connection 13 passes, the function of said eyelet being to minimize friction and prevent wear on the cord or other flexible connection. In the construction seen  
45 in Fig. 7 I have shown a finger-piece 4 as provided with an extension 22, which is bent or shaped so as to form the eye 23, through which the cord or other flexible connection 13, above referred to, in practice passes. I also  
50 in some instances for the purpose of giving the plate 2 greater strength and rigidity provide the raised ribs 24, whereby the plate 2 is greatly strengthened and stiffened.

It will be apparent that in Figs. 1, 2, and  
55 4 I have shown the clamps in inverted position for the sake of clearness of illustration, it being of course understood that the parts in use normally appear as indicated in Figs. 6 and 7.

60 It will be understood that the finger-piece 11, which forms the terminus of the plate 9, may, if desired, be provided with the ears 25, whereby the cord or other flexible connection 13 may be formed into a loop instead of the  
65 knot 14 and slipped around said ears 25, the

manner of operation being the same as already described.

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

1. 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  
75 length of one of the members, and a flexible connection engaging the two members to clamp the jaws.

2. A clamp consisting of a lower member, having an upwardly-turned jaw, ears on said  
80 member, an upper member journaled in said ears and having a downwardly-turned jaw of greater length than the first-mentioned jaw and movable toward the first-mentioned jaw transversely of its length, said members be-  
85 ing provided with means for engaging a connection and a flexible connection cooperating with said means to draw the jaws toward each other.

3. A clamp comprising a lower plate having  
90 an upwardly-turned jaw, ears projecting from said plate, an upper plate having a downwardly-deflected jaw, journals located in said upper plate and mounted in eyes in said ears, an eye in the rear portion of each of said plates  
95 and a cord secured in one of said eyes and passing through the other of said eyes.

4. A clamp comprising two members pivotally connected, each of said members having a rearward extension of different lengths,  
100 in the two members, and provided with an eye therein and each having a forward extension terminating in a jaw, said jaws deflected toward each other, and an operating-cord passing through the eye in said longer extension  
105 and secured at its extremity to the eye in said shorter extension.

5. A clamp comprising a lower plate, the latter having a forward extension terminating in a jaw and a rearward extension terminating in a finger-piece, ears projecting from  
110 said plate, an upper member pivoted in said ears and having a rearward extension or finger-piece, and a forwardly-projecting extension terminating in a downwardly-deflected  
115 jaw.

6. A clamp comprising a lower plate, the latter having a forward extension terminating in a jaw and a rearward extension terminating in a finger-piece, ears projecting from  
120 said plate, an upper member pivoted in said ears and having a rearward extension or finger-piece, ears on each side of said finger-piece, and a forwardly-projecting extension terminating in a downwardly-deflected jaw,  
125 said jaws being of different lengths.

7. A clamp having a lower plate, the latter having a forward extension terminating in a jaw, and a rearward extension terminating in a finger-piece, ears projecting from said  
130



plate, an upper member pivoted in said ears and having a rearward extension or finger-piece, and a forwardly-projecting extension terminating in a downwardly-deflected jaw, 5 said first-mentioned plate being provided with longitudinal strengthening-ribs, and one of said finger-pieces having an eye therein.

8. In a clamp, a pair of pivoted plates having inwardly-directed jaws one of which lies 10 between the other and the pivot-point and moves in a line substantially parallel to the other plate and in proximity to it, and means for moving the jaws in proportion to the strain upon the clamp and compressing the material 15 clamped between the edge of the one jaw and the other plate and between the faces of the jaws.

9. A clamp comprising a member having an angularly-disposed jaw portion, a second 20 member having an angularly-disposed portion so pivoted in said first member as to have this jaw portion movable substantially in the direction of the length of the first member, an extension of said second member upon the op-

posite side of the pivot-point from the jaw 25 portion being provided with means for attaching a cord.

10. A clamp comprising two pivoted members having jaw portions disposed transversely to the direction of strain, relatively movable 30 substantially in the direction of strain and having extensions beyond the pivot-point, one of said extensions being provided with means for connecting a cord.

11. A clamp comprising a member one end 35 of which extends transversely of the length of the member and the other end of which is provided with means for engaging a cord, and a second member pivoted thereto one end of which is movable substantially in the direc- 40 tion of the length of the first member and the opposite end of which is provided with means for engaging a cord, in combination with such cord.

DAVID SWOPE.

Witnesses:

JOHN A. WIEDERSHEIM,  
E. HAYWARD FAIRBANKS.