No. 621,709. Patented Mar. 21, 1899.

G. A. RHOADS.

LEATHER STRETCHING MACHINE.

(Application filed Mar. 24, 1898.)

(No Model.)

Fig. 1.

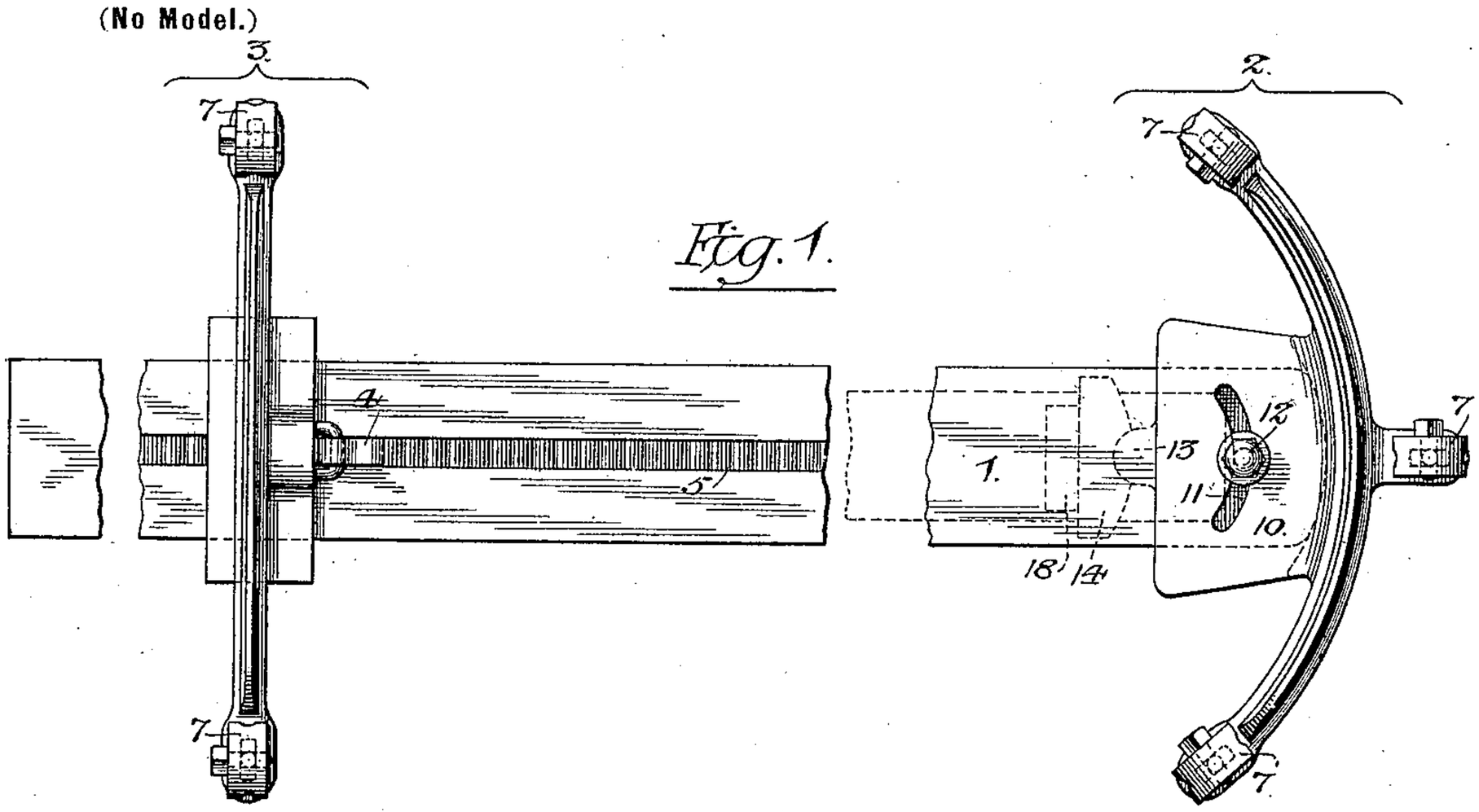


Fig. 2.

Fig. 4.

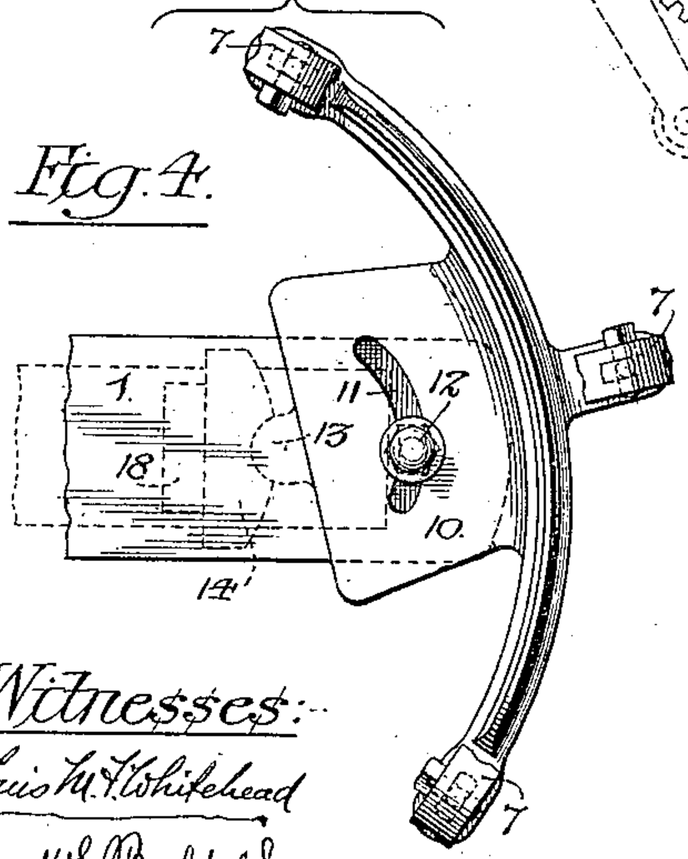
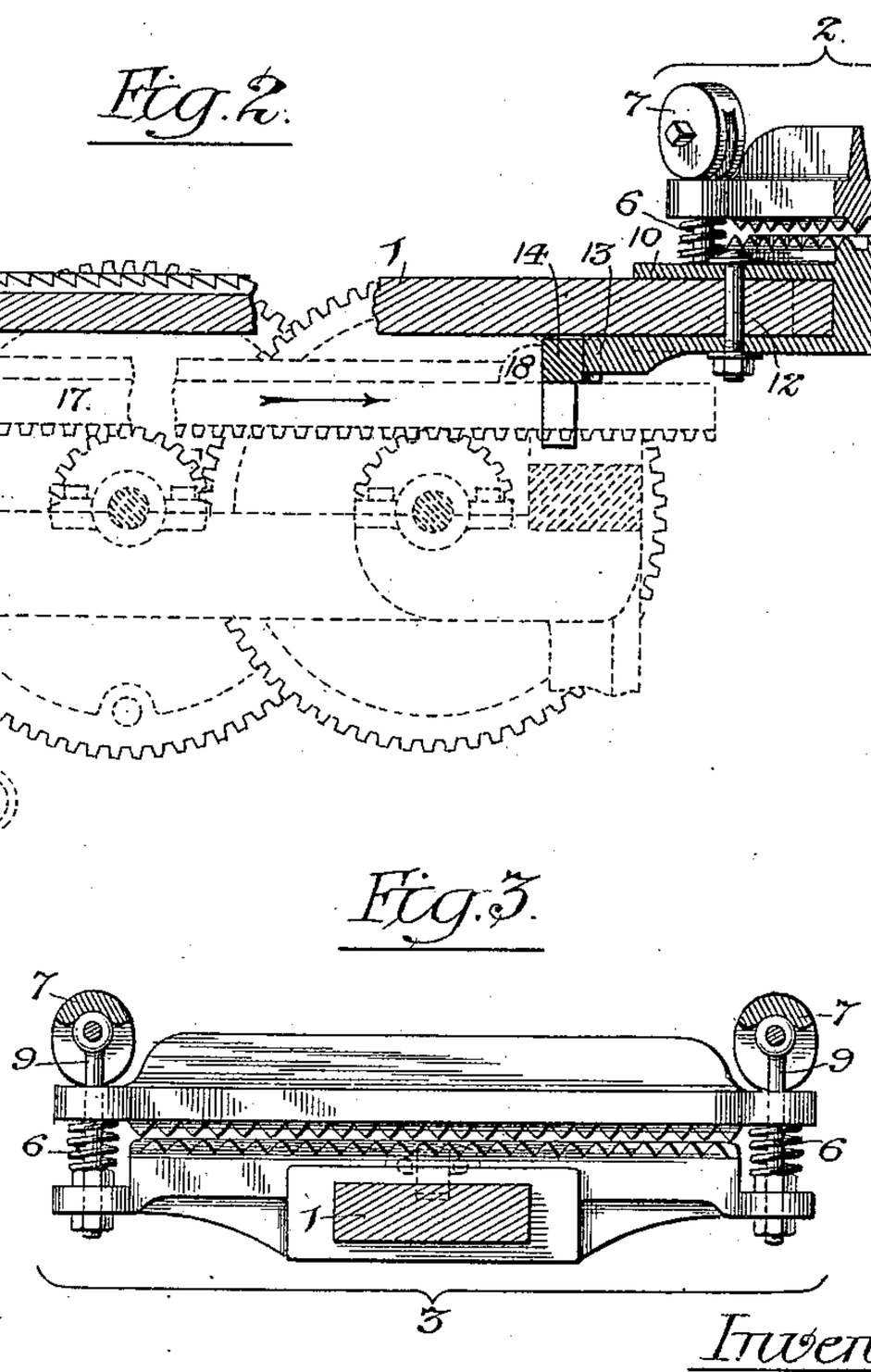


Fig. 3.



Witnesses:-
Louis H. Whitehead
Frank E. Beckhold

Inventor:-
George A. Rhoads
by his Attorneys:
Howson & Howson

UNITED STATES PATENT OFFICE.

GEORGE A. RHOADS, OF WILMINGTON, DELAWARE.

LEATHER-STRETCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 621,709, dated March 21, 1899.

Application filed March 24, 1898. Serial No. 675,014. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. RHOADS, a citizen of the United States, and a resident of Wilmington, Delaware, have invented certain Improvements in Leather-Stretching Machines, of which the following is a specification.

My invention relates to that particular part of a leather-stretching machine which holds the leather while it is being stretched and while it is drying after the stretching has been effected, the object of my invention being to so construct such part of the machine as to prevent the waste of leather which results from the construction now in use. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of that part of a leather-stretching machine to which my invention particularly relates. Fig. 2 is a longitudinal section of the same, showing in dotted lines the mechanism of the machine which operates the stretching-plank. Fig. 3 is an end view of one of the stretching-heads of the machine, showing the stretching-plank and tightening-cams in section; and Fig. 4 is a detached view showing the outer clamping-head adjusted at an angle in respect to the stretching-plank.

1 represents the longitudinal stretching-plank of an ordinary leather-stretching machine, 2 a clamping-head secured at one end of said plank, and 3 a clamping-head having a guide through which the plank can slide longitudinally, said plank being retained in position after adjustment by the engagement of a pivoted pawl 4 on the head with a ratchet bar or rack 5 let into the face of the plank, as shown in Fig. 2.

Each of the heads 2 and 3 comprises a fixed lower jaw and a vertically-movable upper jaw, these jaws being preferably toothed on those faces which engage the leather, and the upper jaw being supported upon springs 6 at the ends and being depressed by means of cams 7, hung to the upper ends of bolts 9, secured to and projecting upwardly from the fixed jaw of the head at the opposite ends of the same.

Usually both of the heads 2 and 3 are straight or at right angles to the plank 1, and in consequence only that portion of a strip of leather extending from one straight head to the other can be stretched in the machine. Hence there is always more or less loss of leather in a strip having a rounded or irregularly-shaped end, the latter not being stretched and having to be trimmed off before or after the stretching operation. In order to overcome this objection, I make the head 2 of transversely curved or segmental form, so that it is adapted to grasp the rounded or irregularly-shaped end of a side of leather, and thus effect the stretching of the latter from one extreme end to the other, the necessity of trimming off the end of the piece of leather before or after the same is stretched being thus rendered unnecessary, and a very considerable saving of leather being thereby effected.

To prevent springing of the central portion of the curved clamping-head, it is preferable to provide this portion of the same with a clamping device similar to those at the ends, as shown in Figs. 1 and 2.

The projecting socket 10, whereby the head 2 is mounted upon the end of the plank 1, has upper and lower plates flared outwardly from the head to the end of the socket, so that it can be adjusted angularly upon the plank, as shown, for example, in Fig. 4, and said socket has formed in its upper and lower plates curved slots 11 for the reception of the bolt 12, whereby said socket is secured to the plank. Hence the curved head 2 can be adjusted to different positions in respect to the plank in order to adapt it to the shape of the rounded end of a side of leather which is being stretched and permit the jaws of the head to clamp the leather as close to the edge of the same as possible, it being understood that the rounded end of the right side of a hide presents a different curve from that of the rounded end of the left side of the hide. Hence the adjustment of the curved head 2 on the plank will enable it to adapt itself to these changes of curvature, and thus provide for the most effective use of the machine under all circumstances.

The under plate of the socket has a central projecting rounded lug 13 for engagement with a recessed shoe 14, upon which the

stretching mechanism of the machine can act to push the head 2 away from the head 3, this rounded lug therefore always insuring a central push upon the head 2, irrespective of the angular adjustment of the same, and preventing the head from slipping out of engagement with the stretching mechanism.

The mechanism of the machine which acts upon the stretching-plank is shown by dotted lines in Fig. 2, on reference to which it will be observed that the framework 15 has a projecting structure 16 for bearing against the clamping-head 3, the frame also having bearings for a longitudinal rack-bar 17, which can be reciprocated by suitable gearing and has a lug 18 bearing upon the shoe 14, so that when the rack-bar is moved in the direction of the arrow the inner clamping-head will be retained in position and the outer clamping-head will be projected, the stretching-plank sliding through its guide on the clamping-head 3 and being retained in position by engagement of the pawl 4 with the rack 5.

By the term "plank," as used in my specification and claims, is meant either the solid plank structure shown or a frame or other equivalent structure, whereby the stretching-heads 2 and 3 may be carried, and arms, either curved or straight, projecting outwardly and backwardly from the front end of the socket 10 will in most cases answer the same purpose as the segmental head. Hence as descriptive of these constructions I have adopted the term "transversely curved or bent."

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

1. The combination of the stretching-plank of a leather-stretching machine, with a head consisting of a socket adapted to be secured to said plank and having transversely curved or bent jaws for engaging with the end portion of the piece of leather to be stretched, substantially as specified.

2. The combination of the stretching-plank of a leather-stretching machine, with a stretching-head consisting of a socket having transversely curved or bent jaws for engaging with the end portion of the piece of leather to be stretched, and provision for mounting said socket upon the plank whereby the angle of the socket in respect to said plank may be changed, substantially as specified.

3. The combination of the stretching-plank of a leather-stretching machine, with a socket secured to said plank and having transversely curved or bent jaws for holding the leather, and transversely-curved slots for the reception of the bolt whereby the socket is secured to the plank, substantially as specified.

4. The combination of the stretching-plank of a leather-stretching machine, with a head consisting of a socket adapted to be secured to said plank, and having transversely curved or bent jaws for engaging with the leather, and clamping devices at the center and at both ends of said jaws, substantially as specified.

5. The combination of the stretching-plank of a leather-stretching machine, with an angularly-adjustable clamping-head having a central rounded lug for engaging with a correspondingly-recessed element of the stretching mechanism, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE A. RHOADS.

Witnesses:

RETA L. BLACKBURN,

HOWELL S. ENGLAND.