

(No Model.)

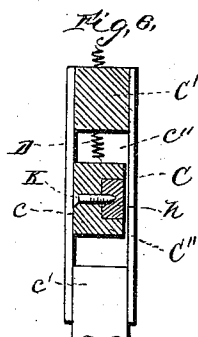
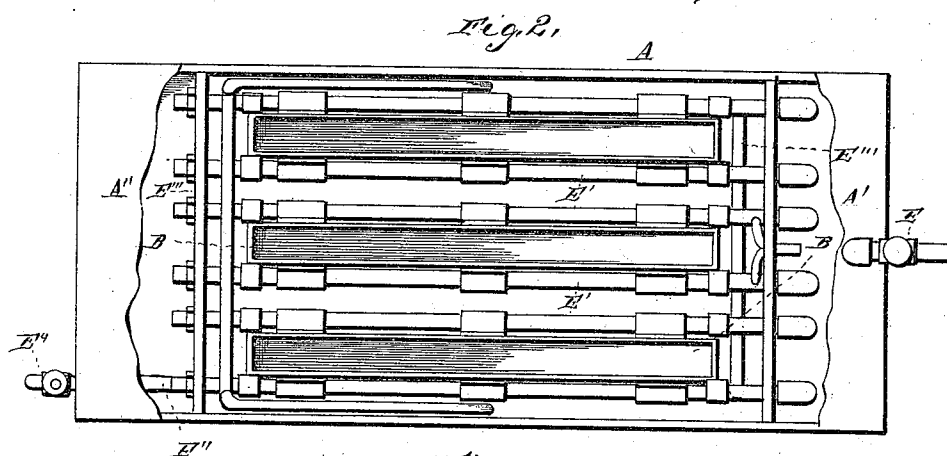
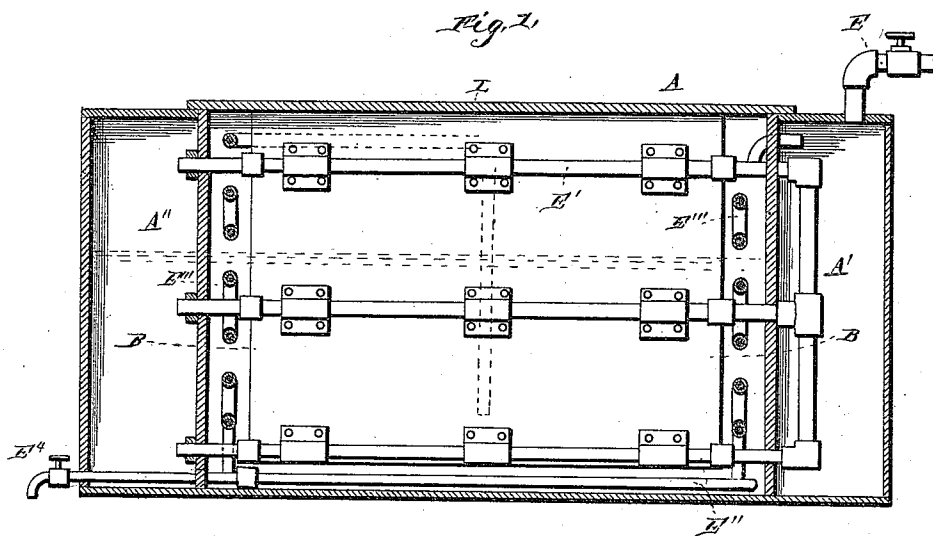
2 Sheets—Sheet 1.

P. KING.

APPARATUS FOR STUFFING AND STRETCHING LEATHER.

No. 440,358.

Patented Nov. 11, 1890.



Witnesses

Philip A. May
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Inventor

Paul King

By his Attorney

E. W. Anderson

(No Model.)

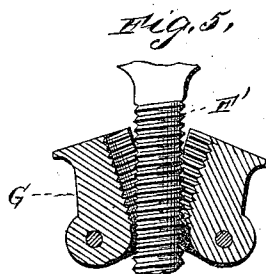
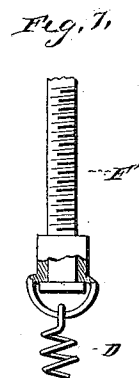
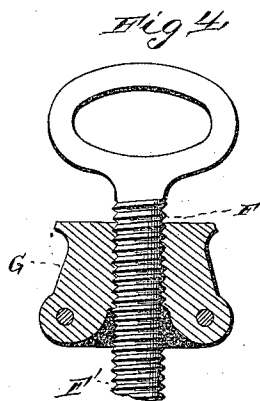
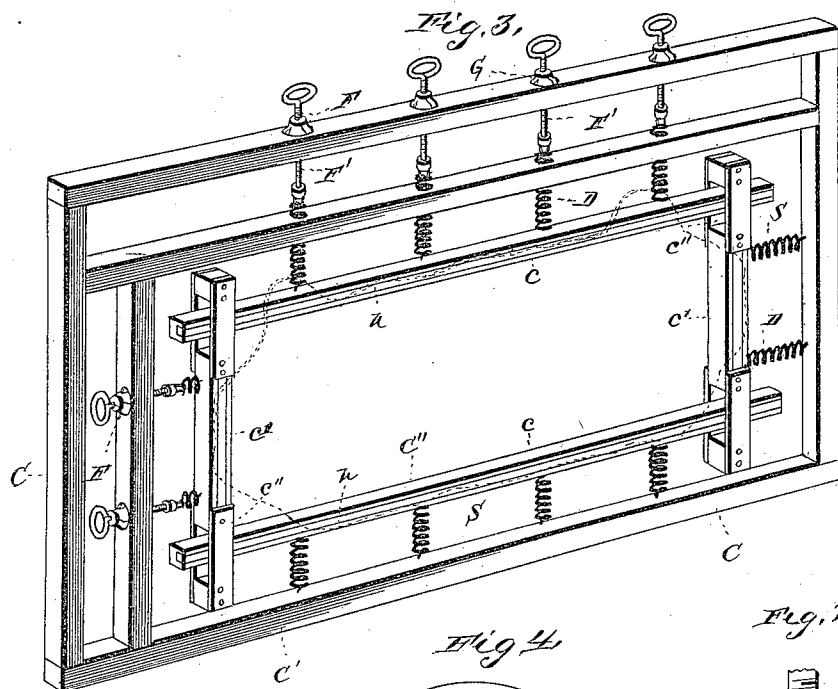
2 Sheets—Sheet 2.

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WITNESSES

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UNITED STATES PATENT OFFICE.

PAUL KING, OF WASHINGTON, DISTRICT OF COLUMBIA.

APPARATUS FOR STUFFING AND STRETCHING LEATHER.

SPECIFICATION forming part of Letters Patent No. 440,358, dated November 11, 1890.

Application filed January 11, 1890. Serial No. 336,879. (No model.)

To all whom it may concern:

Be it known that I, PAUL KING, a citizen of the United States, and a resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Means for Stuffing and Stretching Leather; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a longitudinal section of my device for stuffing leather. Fig. 2 is a top plan view of same. Fig. 3 is a perspective view of one of the leather-stretchers. Figs. 4, 5, 6, and 7 are detail views.

This invention has relation to the art of stuffing and stretching leather; and it consists in the novel construction and combination of devices, all as hereinafter set forth.

In the accompanying drawings, illustrating this invention, the letter A designates the outer case or holder, which is preferably made of wood, and is provided with steam-pipes for the passage of steam for the purpose of heating water contained in said case.

B B represent metallic tanks, which are of little width and are arranged in lateral series in the holder or case A. Some of these tanks contain a composition of tallow and beeswax in proper proportions, well known to those skilled in the art of treating leather. For each tank B is provided a removable stretcher-frame C, to which is attached the side or a piece of leather to be stuffed. These frames are provided with compensating springs D.

The object of the invention is to effect an automatic stretching and stuffing of the leather in such a manner that the work will be performed in an efficient way without rubbing or working the leather and so that subsequent shrinking will be avoided.

The outer case A is usually made with end compartments A' A'', which are closed in a steam-tight manner. Into the compartment A' steam is passed through the inlet-pipe E, and thence it passes through the lateral pipes

E', which are arranged in series, one above the other, on each side of each tallow-tank B. From the compartment A' steam passes also through the bottom coil E'' and through the end coils E'''. Water of condensation is drawn off at E⁴. Each tallow-tank may be braced and supported in its proper position by longitudinal bars L. The water in the case A is heated by the steam passing through the pipes E' E'' E''', and the stuffing-grease in the tanks is melted and raised to a heat of about 130° Fahrenheit, care being taken to avoid a high heat, which would burn the leather.

The stretcher-frame C consists of the main frame C' and the automatically-adjustable inner frame C'', the latter being composed, preferably, of the longitudinal bars c and the vertical end bars c', which are slotted at c'' for the passage of the ends of the longitudinal bars. These bars c c' are independently movable, and are connected by spring S to the main frame, so that they are respectively drawn toward the top and bottom and end bars of the main frame by an elastic force, which can be regulated by means of screw-catches F, to which the springs of the top and end bars are connected. The screw-catches F have long shanks F', which pass through sectional nuts G, sections of which are hinged to the bars of the main frame and are adapted to open outward a little, as indicated in the drawings, to facilitate a rapid adjustment of the screw-catches. The bars c and c' are laterally grooved to receive the attachment-strips h, to which the piece or side of leather is tacked, and these strips are held in position in the grooves of the bars c and c' by means of screws K.

The sides of leather having been attached to the inner frames C'' by the means indicated, these frames are placed in the stuffing-tanks B, containing the heated tallow and beeswax. Prior to being placed in these tanks the springs of the movable frames are pulled outward, and tension is applied by means of the screw-catches, so that there is considerable stretching force due to the springs and ready to act as soon as the leather is in condition to respond. The leather, being in the heated tallow, becomes softened and readily

yields to the action of the springs of the inner frame, and as they draw upon its edges it becomes stretched in an even and uniform manner, the degree of stretching depending on the tension of the springs. At the same time the melted tallow and beeswax enter the leather and fill it to effect the stuffing.

To facilitate the action of the stuffing-composition, it is preferred to leave one of the tanks B empty, or without the filling of tallow and beeswax, in order that it may be used in a preparatory way for warming the sides of leather before it is introduced into the hot composition. In this manner the pores of the leather are opened and prepared for the reception of the stuffing-grease.

The leather is kept in the stuffing composition about three hours, and is then, with its stretching-frame, removed, when the surface cooling, as well as the action of the stretching-frame, prevents shrinkage. After the grease has become cooled in the leather the frame, with the side attached, is introduced into one of the tanks B, which contains water heated to the temperature of that in the outer holder A, and in this tank the leather is cleared of its surface-grease, while the frame prevents it from shrinking.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A device for stretching and stuffing leather, consisting of stuffing-tanks, the stretcher-frames, and the heater, the stuffing-tanks being adapted to receive said stretcher-frames, and said heater having pipes arranged intermediately of said tanks, the ac-

tion of said frames serving to automatically take up the increase in area of the hides or leather as the same stretch or expand under the action of the heat and grease, substantially as set forth.

2. In a device for stuffing leather, the stretcher-frame comprising the outer and inner frames, the inner frame having its side bars laterally movable in their end bars, means for attaching the hides thereto, and springs to render said side and end bars automatically yielding, substantially as set forth.

3. In a device for stuffing leather, the stretcher-frame comprising the outer and inner frames, the inner frame having its side bars or pieces passing through slots in its end bars, said slots being arranged near the ends of the latter, and springs with their holding-screws engaging said frames, said inner frame having means for the attachment of the hides thereto, substantially as set forth.

4. The leather-stuffing device comprising the heating-tank having a grease, containing and heating compartment and a series of longitudinal steam-pipes uniting one of said compartments, and the stretcher-frame having the side and end bars of its inner frame automatically yielding or adjustable, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PAUL KING.

Witnesses:

PHILIP C. MASI,
C. L. TAYLOR.