No. 645,643. Patented Mar. 20, 1900.

# L. A. GALE.

## MACHINE FOR IRONING WEBBING.

(Application filed July 12, 1899.)

(No Model.)

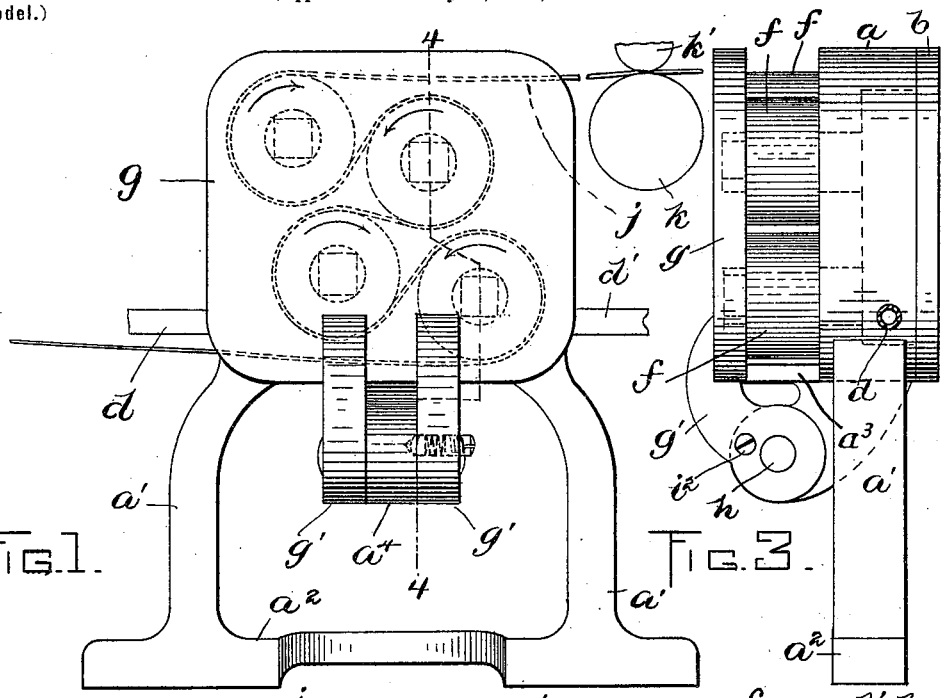

FIG. 1.



FIG. 3.

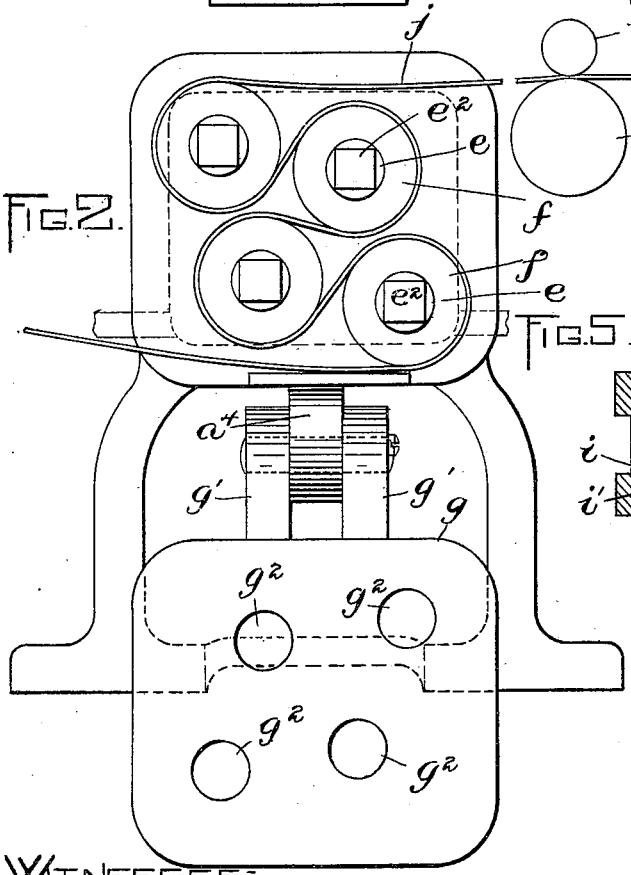

FIG. 2.

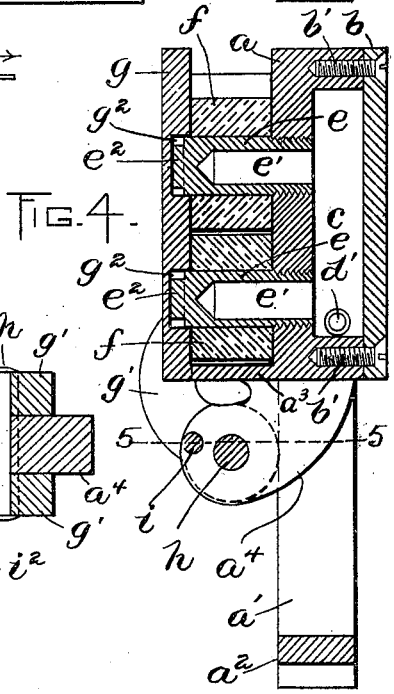

FIG. 4.

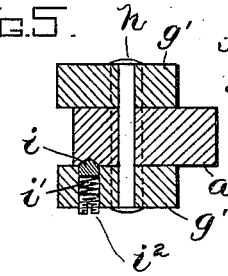

FIG. 5.

WITNESSES:
E. Batchelder
P. W. Pezzetti

INVENTOR:
L. A. Gale
By Wright Brown & Quinby
Atty

# UNITED STATES PATENT OFFICE.

LABURTON A. GALE, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO THE SHAWMUT MACHINERY COMPANY, OF BOSTON, MASSACHUSETTS.

## MACHINE FOR IRONING WEBBING.

SPECIFICATION forming part of Letters Patent No. 645,643, dated March 20, 1900.

Application filed July 12, 1899. Serial No. 723,537. (No model.)

*To all whom it may concern:*

Be it known that I, LABURTON A. GALE, of Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Ironing Webbing, of which the following is a specification.

This invention relates to the treatment of webbing for the manufacture of boot or shoe straps before printing on said webbing the name of a manufacturer, the name of a shoe, or other matter.

The invention has for its object to provide a machine for heating and smoothing the surface of the webbing just before it passes into the printing-press, whereby the surface is so prepared as to take a clear and full impression from the type of the printing-press and whereby also the webbing is heated, so as to quickly dry the ink which is applied to it in the press.

The invention consists in the novel features of construction and arrangement which I shall now proceed to describe and claim.

Of the accompanying drawings, Figure 1 represents a side elevation of an ironing-machine constructed in accordance with my invention, this view also showing the rolls of a printing-press to which the webbing passes from the machine. Fig. 2 represents an elevation of the same side of the apparatus with the hinged retaining-plate swung down to expose the ironing-rolls. Fig. 3 represents an end elevation. Fig. 4 represents a section on line 4 4 of Fig. 1. Fig. 5 represents a detail section on the line 5 5 of Fig. 4.

The same reference characters indicate the same parts in all the figures.

Referring to the drawings, $a$ designates a body provided with supporting-legs $a'$ $a'$, having at their lower ends a base $a^2$. Said body is recessed on its outer face and has a plate $b$ secured to it by means of screws $b'$ $b'$, said plate and the body forming a casing which incloses a steam-space $c$, provided by recessing the body $a$. Steam inlet and outlet pipes $d$ $d'$, extending through the end walls of the body $a$, are adapted to conduct steam from a suitable source of supply into said steam-space $c$ and out therefrom for the purpose of heating the apparatus. To the side wall of the body $a$, opposite the plate $b$, are attached a series of laterally-projecting hollow studs $e$ $e$, screw-threaded at one end to engage tapped holes in the wall of the body $a$ and having their opposite or unsupported ends squared, as at $e^2$, to receive a wrench for screwing the studs into and out of their holes in the wall. Each stud has a central hole or recess $e'$ extending for nearly the whole length of the stud and open to the steam-space $c$, whereby steam in said space can have access to the interiors of the studs to heat their walls.

Loosely surrounding the studs $e$ $e$ are a series of rolls $f$ $f$, independently movable and adapted to be turned around their studs by the traction of the strip of webbing as it passes around the rolls.

$g$ is a retaining-plate mounted at the ends of the rolls opposite the casing $a$ $b$ and abutting a stop or lug $a^3$, projecting from the lower edge of the body $b$, said plate having recesses $g^2$ $g^2$ formed in its face to receive the squared ends $e^2$ of the studs. The plate $g$ has two ears $g'$ $g'$ formed on its lower edge and embracing an ear $a^4$, formed on the lower edge of the body $a$, said ears being connected by a pintle $h$, thus making a hinge-joint, connecting the plate to the body and permitting said plate to be swung down to expose the ironing-rolls. The plate when swung up into position may be held in place by means of a catch, such as that shown in Fig. 5, consisting of a short pin $i$, occupying a hole drilled through one of the ears $g'$ on the plate $g$ and yieldingly pressed against the ear $a^4$ on the body $a$ by means of a spring $i'$, confined at its rear end by a short screw $i^2$, screwing into the threaded outer end of said hole. When the plate $g$ is swung up into position, the pin $i$ slips into a conical recess bored in the side of the ear $a^4$ and retains the plate in position, but permits the same to be swung downwardly when sufficient force is exerted to displace the pin $i$ from the hole in the ear $a^4$. When the plate $g$ is swung up in place, it holds the rolls $f$ from longitudinal displacement on their studs, while permitting them to revolve freely thereon, and when swung downwardly, as shown in Fig. 2, it gives convenient access

to the rolls for the purpose of removing them and cleaning the apparatus or for the purpose of inserting the webbing.

In operation the apparatus is placed close to the printing-press, which prints the name of the manufacturer, the name of the shoe, or other matter upon the webbing at intervals equal to the length of the boot-straps, and the strip of webbing *j* is passed from a reel or other holder around the several rolls *f* of the ironing apparatus and from thence into the printing-press, which is represented in Figs. 1 and 2 by two rolls *k k'*. A feeding movement is given to the webbing in the direction of its length, causing it to pass through the ironing apparatus and the printing-press, and in passing around the rolls *f* of the former, which are heated by the steam contained in the space *c* and in their studs *e*, its surface is smoothed or ironed, laying the fibers thereon, so as to provide a suitable surface to receive the imprint of the printing-press, and the webbing is also heated, so that the ink applied to it in the printing-press will dry quickly. It is important to have the ink on the webbing dried quickly where the strip passes from the printing-press into a strap-covering machine which folds a cover around the strip and cuts it off in lengths for boot-straps.

I am aware that prior to my invention it has been the practice to iron fabrics by passing them around steam-heated ironing-rollers, and I do not therefore claim, broadly, an apparatus for performing such a function.

I claim—

1. A device of the character specified, comprising a casing inclosing a steam-space *c* and having an inlet and an outlet for the admission and exit of steam, a series of studs projecting laterally from and supported by the side wall of said casing and each having a central bore or recess *e'* open at one end to the steam-space *c*, a series of independently-movable rolls loosely surrounding said studs, and a retaining-plate mounted at the ends of the rolls opposite the side of the casing and serving to hold said rolls in place.

2. A device of the character specified, comprising a casing inclosing a steam-space, a series of hollow studs *e e* screwed into the side wall and having squared ends for the reception of a wrench, the interiors of the studs being open to the steam-space, a series of rolls loosely surrounding said studs, and a movable retaining-plate recessed to receive the squared ends of the studs and arranged to retain the rolls in place.

3. A device of the character specified, comprising a vertical casing inclosing a steam-space, a series of studs projecting horizontally from the side of said casing and supported thereby, said studs having internal steam-spaces communicating with the steam-space in the casing, a series of independently-movable rolls loosely surrounding said studs, and a retaining-plate mounted at the ends of the rolls opposite the casing and serving to retain said rolls in place, said plate being hinged to the casing and adapted to be swung outwardly therefrom to expose the rolls.

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

LABURTON A. GALE.

Witnesses:
MARCUS B. MAY,
R. M. PIERSON.