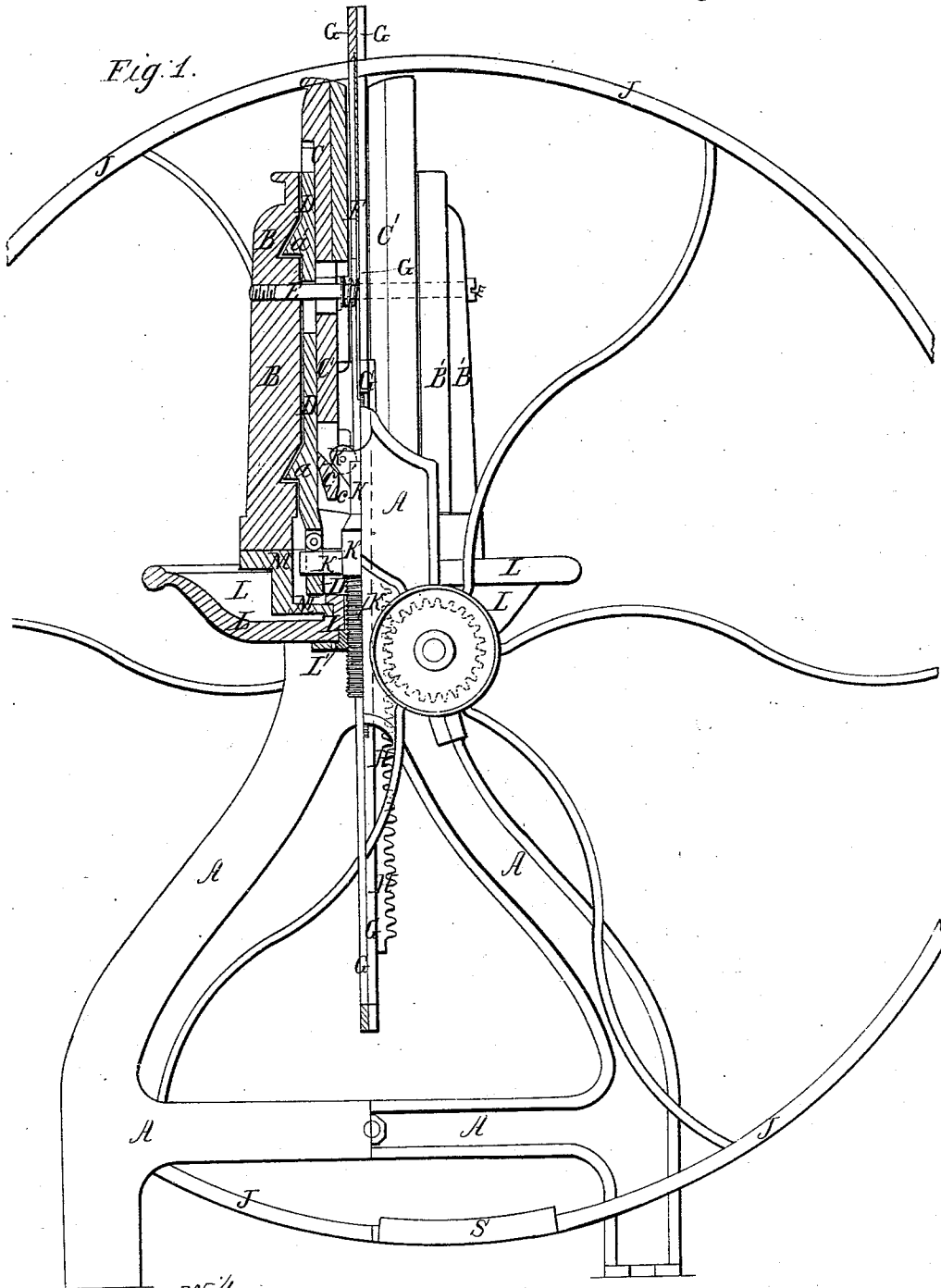


J. Howe.

Crimping Boots and Shoes.

N^o 94,213.

Patented Aug. 31, 1869.



Witnesses;

E. Maguacien
Chas. F. Steper.

Inventor;

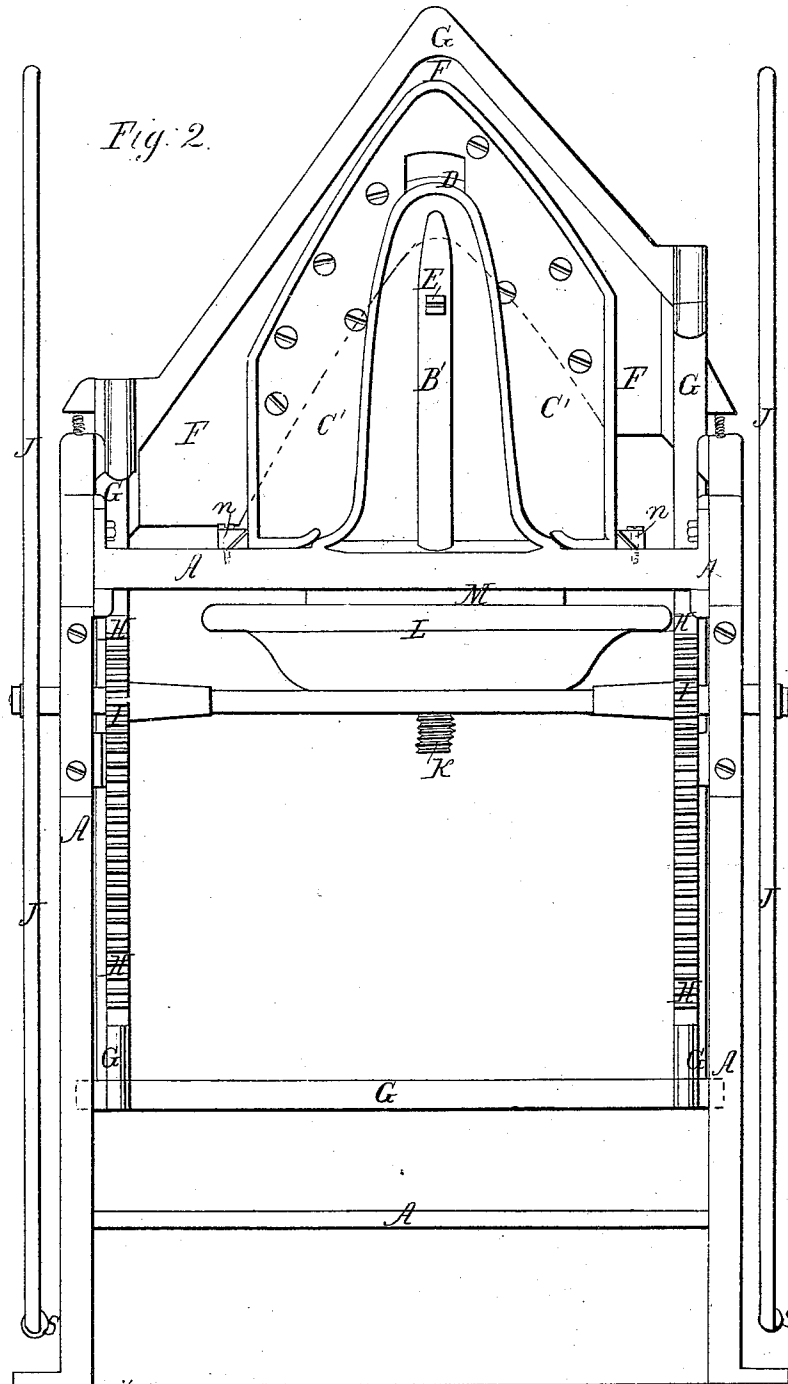
Jarvis Howe

J. Howe.

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Witnesses;
J. V. Maynard
Chas. F. Sleeper.

Inventor;
Jarvis Howe

Sheet 3-3 Sheets.

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Fig. 3.

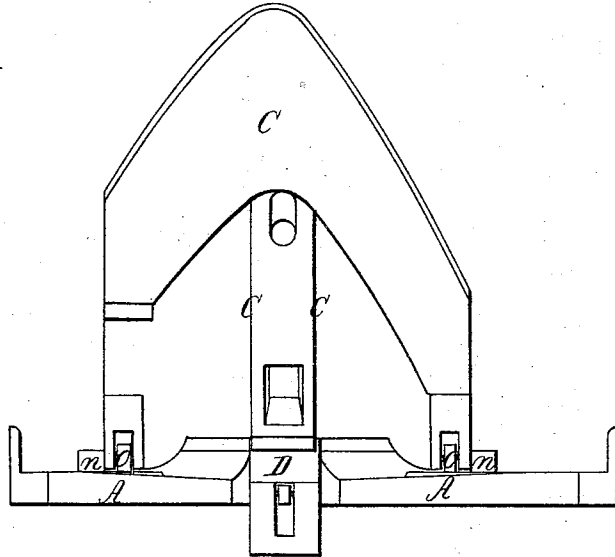


Fig. 4.

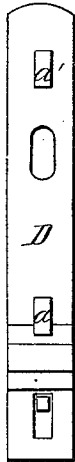


Fig. 5.

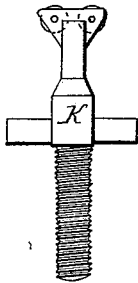


Fig. 6.



Witnesses;

J. E. Maynard
Chas. F. Soper.

Inventor;

Jarvis Howe

United States Patent Office.

JARVIS HOWE, OF MILFORD, MASSACHUSETTS.

Letters Patent No. 94,213, dated August 31, 1869; antedated August 21, 1869.

IMPROVED CRIMPING-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, JARVIS HOWE, of Milford, in the county of Worcester, and State of Massachusetts, have invented a new and improved "Crimping-Brake;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the machine, showing the front half in section, and the rear half in elevation.

Figure 2 is a rear elevation.

Figure 3 shows one of the inner jaws, (inside view,) with a portion of the frame and one of the slides.

Figure 4 shows the outside of one of the slides.

In the said drawings, the various parts are indicated by letters, as follows, viz:

A is the frame-work of the machine.

B B' are the outer jaws.

C C' are the inner jaws.

D D' are slides fitted in the inner jaws.

E is a screw-bolt, passing through the jaws and slides, holding the outer jaws together, and having a spring coiled around it, which presses against the movable jaws.

F is the crimping-blade, or "board."

G is a frame, supporting the crimping-blade.

H is a rack, attached to the said frame.

I is a pinion upon the lever-wheel.

J J are balanced lever-wheels, to raise and lower the crimping-frame.

K is a metal piece, having arms projecting from it through slots in the slides D D', having also an inclined plane at its upper end, fitting in a corresponding inclined plane in the jaws C C', and having at its lower end a screw fitting in the wheel L.

L is a hand-wheel, through which the screw on the armed piece K passes, and which serves to raise or depress the armed piece, by means of the nut L'.

M is a clutch, which is firmly secured to the frame A, and holds the hand-wheel L and nut L'.

a a' are inclined planes, attached to the slides D D', and fitted in corresponding inclines in the stationary jaws B B'.

n n are adjustable ways in which the feet of the inner jaws slide.

o o are trucks on which the jaws c c' move.

s is a balance-weight upon the lever-wheel J.

The process of breaking down a boot-front by this mechanism is as follows:

The operator stands between the wheels J, and in front of the machine. When he turns back the wheels J, the racks and pinions raise the crimping-blade above the jaws, and the balance-weight s, upon the wheel, holds it in that position. He then turns the hand-wheel L, moving the armed piece K, which lifts the

slides D D', and forces their inclined planes a a' to impinge on the corresponding inclines in the outer jaws, thereby causing the jaws to approach each other. He then places the boot-front in position, and forces the crimping-board down upon it, at the same time separating the inner jaws (by turning the hand-wheel L) to the required distance. The crimping-blade is then forced home, as in the common brake. The hand-wheel L is then turned back, and the leather removed, as in the common brake.

The wheels J J, and rack and pinion, operate to raise and lower the crimping-board, as the common lever and rack and pinion operate in the well-known form of brake; but by the use of the wheels, I obtain certain practical advantages, which will be obvious to those skilled in the art. The common form of lever, however, can be used, if preferred, in my brake.

The wheel L is used to operate the inner jaws C C'. When turned in one direction, it raises the armed piece K, the arms of which raise the slides D D', which, by means of their inclined planes a a', throw the inner jaws C C' inward. When turned in the other direction, the armed piece K is lowered, thus lowering the slides and causing the inner jaws to separate, by means of the double inclines on the head of the armed piece K and the spring on the bolt E.

The outer jaws B B' are important parts of my invention.

The inner jaws should be at a slight inclination to each other, which should be always the same, when the leather is being forced between them by the crimping-board; but as the thickness of the boot-fronts varies, the inner jaws must be at varying distances from each other while the leather is being crimped, and they must also be moved to and from each other in the regular operation of the machine.

It will be seen that in my machine the inner jaws have always the same relation to the outer jaws, except that they move to and from them; consequently, if the outer jaws are inclined toward each other, the inner jaws will have the same relation, and will not change that inclination while being moved back and forth.

The outer jaws should be held in their correct relation to each other, and I prefer to use a bolt, connecting them for this purpose. If a screw be cut upon one end of this bolt, it will also afford an effective and ready means of insuring the delicate adjustment of these jaws, as by turning the bolt, the upper ends of the outer jaws can be brought nearer together or thrown further apart, even when the jaws are made of cast-iron, and cast in one piece with the cross-piece of the frame A, as I usually make them.

I do not wish to limit myself to outer or inner jaws, having the slight inclination spoken of, as my machine

will operate well without this inclination, but I do regard this feature of my machine as of great importance.

The principle of this part of my invention consists in the use of an outer jaw to serve as a support to the inner jaw, and a bearing for mechanism by which to give the requisite motion to the inner jaw.

The mode of embodying this principle, shown in the drawings, is the best known to me; but it is obvious that it may be embodied in very many other forms, as; for instance, a toggle-joint, or some other equivalent mechanism, may be substituted for the inclined plane, to move the inner jaw to and from the outer jaw; or the slide D may be made a part of the inner jaw, and the outer jaw be moved up and down to give the desired motion to the inner jaw. I prefer, however, to have the outer jaw cast in one piece with the cross-piece A.

The inner jaws C C do not differ materially from the jaws of the well-known crimping-brake, except that they have inclined planes on their inner faces, and are provided with trucks, which enable them to slide more freely on the cross-pieces. The trucks are

not, however, essential. I prefer to use the ways *n n*, as the means of connecting these jaws with the cross-pieces, but the well-known method will answer.

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

1. The outer jaw, constructed and operating substantially as and for the purpose specified.
2. The outer jaws, when connected together by a screw-bolt, substantially as and for the purpose specified.
3. The piece K, constructed and operating substantially as and for the purpose specified.
4. The combination of the outer and inner jaws, by means of suitable mechanism, substantially such as is herein described.
5. The combination of the slides D D', piece K, nut L', and inclines *a a'* and *c c'*, substantially as described.

JARVIS HOWE.

Witnesses:

J. E. MAYNADIER,
CHAS. F. SLEEPER.