

A. BATES.
LASTING MACHINE.
APPLICATION FILED SEPT. 24, 1908.

1,002,359.

Patented Sept. 5, 1911.

2 SHEETS—SHEET 1.

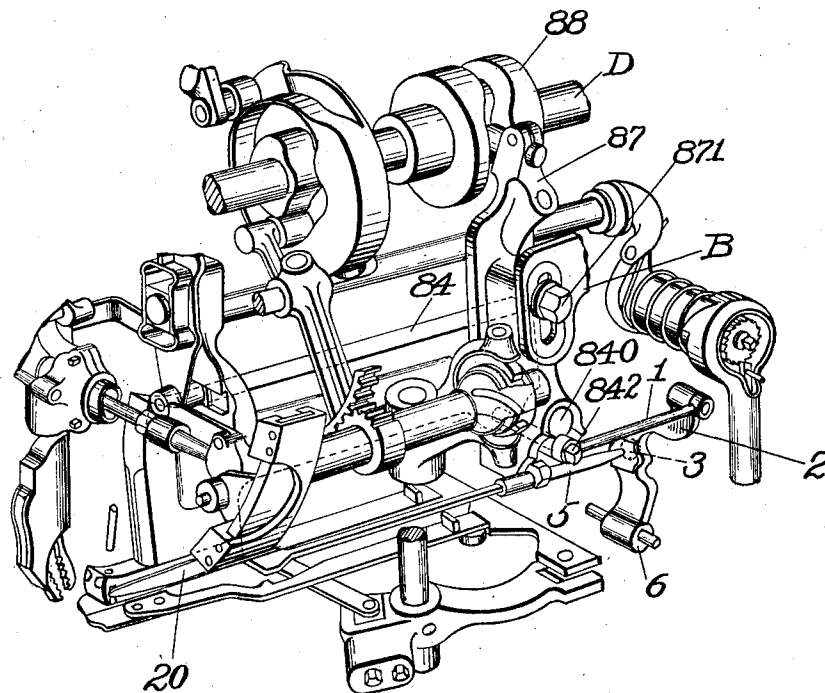


Fig. 1.

WITNESSES:

Elizabeth C. Couper
Edith C. Hollbrook

INVENTOR:

Arthur Bates
By his Attorney
Nelson Howard

A. BATES.
LASTING MACHINE.
APPLICATION FILED SEPT. 24, 1908.

1,002,359.

Patented Sept. 5, 1911.

2 SHEETS—SHEET 2.

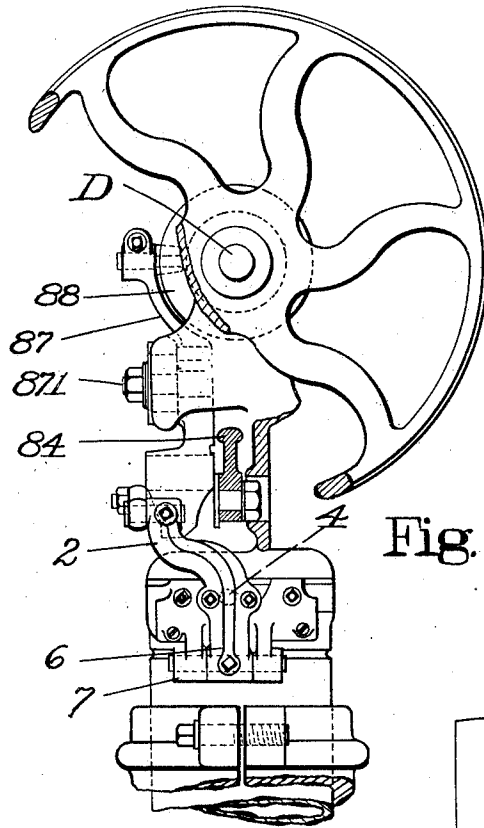


Fig. 3.

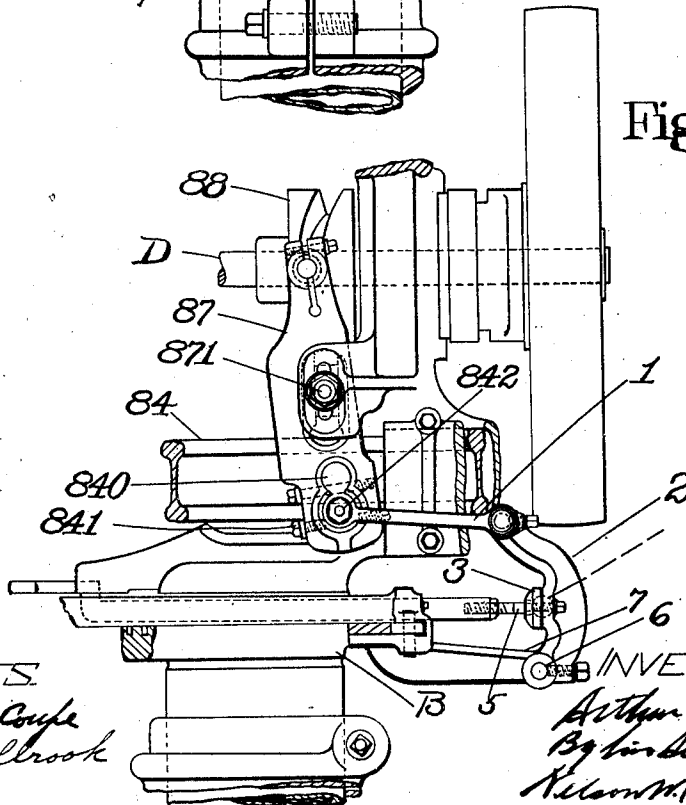


Fig. 2.

WITNESSES:

Elizabeth C. Cougle
Edith C. Holbrook

INVENTOR.

Arthur Bates
By his Attorney
Kilborn M. Howard

UNITED STATES PATENT OFFICE.

ARTHUR BATES, OF LEICESTER, ENGLAND, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

LASTING-MACHINE.

1,002,359.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed September 24, 1908. Serial No. 454,619.

To all whom it may concern:

Be it known that I, ARTHUR BATES, a subject of the King of England, residing at Leicester, in the county of Leicester, Eng-
land, have invented certain Improvements in Lasting-Machines, of which the following description, in connection with the accom-
panying drawings, is a specification, like
reference characters on the drawings indi-
cating like parts in the several figures.

This invention relates to lasting or like machines and particularly to lasting machines of the type described in United States Letters Patent No. 584,744 granted June 15, 1897.

Generally the object of the present invention is to increase the efficiency of the said machines by a simplification of their working parts whereby their cost of manufacture will be lessened and there will be less liability of the machines getting out of order than has been the case with lasting machines as hitherto constructed. Moreover the construction and arrangement of the parts according to the present invention will insure that certain of the working parts of the machine will coöperate together with greater precision and certainty than has hitherto been possible and without having their working relationship deranged by the adjustments of positions that are necessary in the case of one of the parts.

The invention has particular reference, in a machine of the type aforesaid, to the mechanism by which the marginal portion of the upper is wiped into place upon the sole on the last and to the mechanism by which tacks or other fasteners are brought into the position where they are to be inserted to secure the upper in place.

In machines of the type described in the said specification the tack-carrying mechanism includes a cam upon the main shaft of the machine which cam operates a lever which is adjustably connected with a bar that supports the tack-carrier and imparts the necessary movement thereto. And the mechanism which effects the wiping of the marginal portion of the upper over the sole also comprises a second cam upon the main shaft which, by means of a lever, is operatively connected with an endwise movable

rod that imparts the required movements to the wiper. This arrangement resulted in the disadvantage that whenever the tack-carrier was adjusted, the wiper had either to be adjusted independently in a manner and to an extent to compensate for the first adjustment or else allowed to work in a relationship to the tack-carrier which was different from that intended and not the best possible.

According to the present invention the construction of a lasting or like machine is simplified by the arrangement that both the tack-carrier and the wiper are operated by a single cam or other driver or through a single connection with the said driver whereby adjustment of the said driver or connection will insure that the tack-carrier and wiper are adjusted in unison. Other adjusting means to vary the relative positions of the tack-carrier and the wiper may also be provided.

To this end the invention comprises, in a lasting or like machine in which there is a cam and adjustable connections for operating the tack-carrier or the wiper, the provision of other adjustable connections between the said tack carrier and the wiper whereby, while they are both operated by the said cam and can be adjusted in unison, they can also be adjusted in relation to one another.

A preferred embodiment of the invention will now be described by the aid of the accompanying sheet of drawings but it is to be understood that the invention is not necessarily restricted to the construction and arrangement hereafter set forth.

In the drawings which represent sufficient of the lasting machine, which forms the subject of the said prior Letters Patent to enable the present invention, shown as embodied therein, to be understood:—Figure 1 is a perspective view showing the parts with which this invention is immediately concerned and Fig. 2 is a side view. Fig. 3 is an end elevation of the part of the machine shown in Fig. 2 viewed from the right hand side of an observer of that figure.

Like reference characters indicate like parts in the figures and where the char-

acters correspond with those used in the specification of the prior patent they are employed to designate parts in the present arrangement that are substantially similar to parts in the machine of the said prior patent.

The tack-carrier mechanism comprises a cam 88 mounted upon the main shaft D with which cam one end of a lever 87 adjustably pivoted at 871 to the head B is engaged, the other end of the lever 87 being adjustably connected with the bar 84 that supports the tack-carrier 20. By the adjustment of the pivot 871 upon which the lever 87 turns the extent of the movement of the tack-carrier supporting bar 84 is varied. In addition to this variation in the extent of the movement the tack-carrier can also have its path altered in position and this is accomplished by the provision of a block 840 at the lower end of the lever 87. The block 840 is in the form of the figure 8, the upper part being adapted to swing in its bearing as a pivot while the lower part is connected with the bar 84 by a bearing that can be adjusted by set screws 841.

The wiper mechanism comprises a connecting rod 1 that is joined at one end to the stud or pin 842 that forms the pivotal connection of the bar 84 with the block aforesaid, the said stud or pin 842 being extended to afford a pivot or bearing for the end of the connecting rod 1. The other end of the connecting rod 1 is coupled to one end of a lever 2 that is pivoted at its other end 6 to a bracket 7 secured upon the machine head B. Between the ends of the lever 2 a socket 3 is provided that receives the end of a rod 5 by which the wiper is actuated, the end of the rod 5 being formed of an extension piece screwed into the rod and provided with a ball 4 that is received in the socket 3 which thus provides for angular movement of the wiper actuating rod 5. It will thus be seen that an adjustment of the extension piece will alter the relative positions of the tack-carrier and wiper while an adjustment of the pivot of the lever 87 or of the block 840 that connects it with the bar will adjust both the tack-carrier and wiper so that they move in unison notwithstanding the extent of or position to which such adjustment has affected the path of movement of the bar 84.

It will be seen upon reference to the specification of the prior patent aforesaid, that the wiper is formed of two parts, either of which can be brought into operative relationship with the actuating-rod 5, and the provision of the ball and socket joint enables angular movement of the said wiper actuating rod in a horizontal plane to be effected for this purpose and at the same time compensates for the angular movement in a vertical plane caused by the swinging of the lever 2 upon its center 6 on the bracket 7.

It is to be understood that the invention is not to be considered as limited to the precise construction and arrangement set forth as it is obvious that these could be varied without departing from the spirit of the invention.

Having explained the nature of this invention and described a preferred construction embodying it, I claim as new and desire to secure by Letters Patent of the United States:—

1. In a lasting machine having a tack-carrier, a separately mounted wiper and a cam the provision of a single adjustable connection from the cam to the tack carrier and the wiper constructed and arranged to cause both the tack-carrier and the wiper to be operated by the same cam whereby adjustment of the said connection will insure that the tack-carrier and the wiper are adjusted in unison.

2. A lasting machine having in combination, a tack carrier, a wiper mounted separately from the tack carrier, a cam and a single connection from the cam to the tack-carrier and the wiper whereby said parts are actuated in unison, said machine having also provision for relatively adjusting the tack carrier and the wiper.

3. In a lasting machine comprising a cam, a tack-carrier, a wiper and adjustable operating connections from the cam to one of said parts, the provision of other adjustable connections between the tack carrier and the wiper whereby while they are both operated by the same cam and can be adjusted in unison they can also be adjusted in relation to one another.

4. A lasting machine having in combination a tack-carrier, and a wiper arranged for reciprocatory movement, a cam, a lever operatively connected with the cam and with the tack carrier, means permitting adjustment of the lever and the tack carrier, a second lever operatively connecting the carrier and the wiper and means permitting adjustment of the wiper relatively to the second lever.

5. A lasting machine having in combination a wiper, a tack-carrier, means connecting the carrier and the wiper having provision for relative adjustment of said parts, a cam, and a driving connection between the cam and one of said parts arranged to drive both said parts and having provision for adjustment of said two parts together relatively to the driving cam.

6. A lasting machine, having in combination, a tack carrier, a wiper, the cam 88, the lever 87 connected directly with the tack carrier, and means comprising the swinging arm 2 and the link 1 for indirectly connecting the wiper with the cam 87 for the purpose described.

7. A lasting machine, having in combina-

tion, a tack carrier, a wiper, a cam, and connections between the cam and said tack carrier and the wiper for actuating both said members, said connections being constructed
5 and arranged to impart movements of different speed to the wiper and the tack carrier.

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

ARTHUR BATES.

Witnesses:

GRACE HOLMES,
ARTHUR ERNEST JERRAM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."