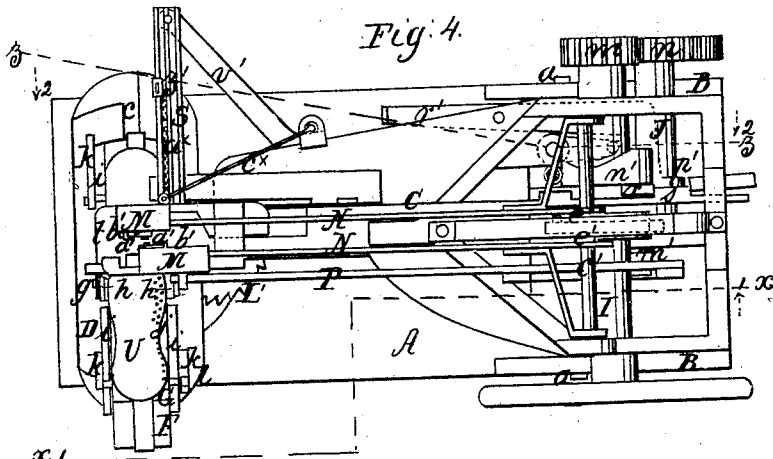
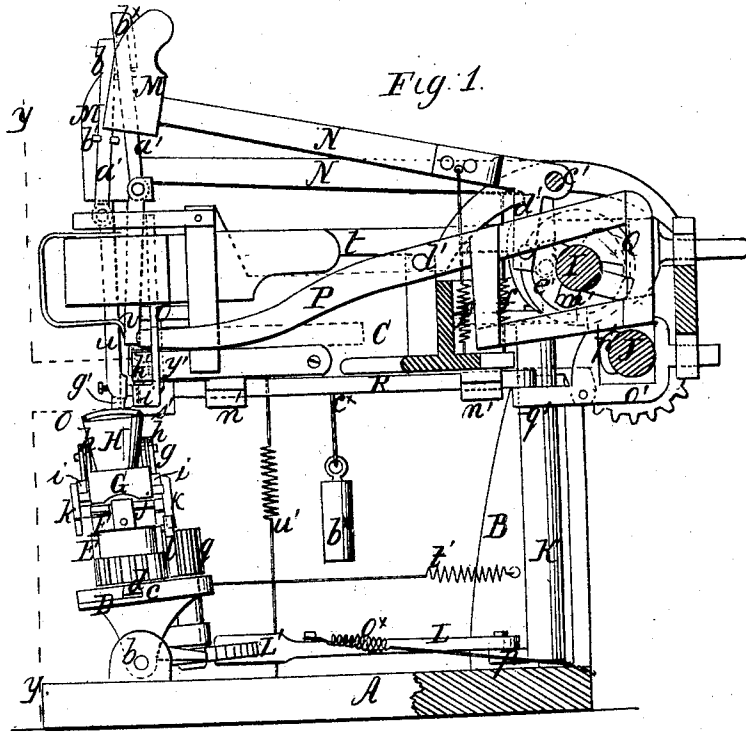


# A.C. Gallatue Pegging Mach.

No. 23,361.

Patented Mar. 29, 1859.



Witnesses;

Mr. Tusch  
W. Hoff

Inventor;

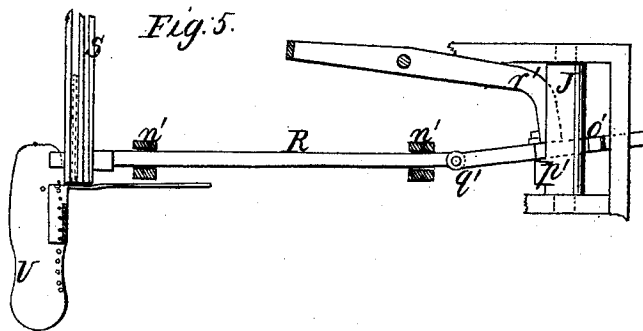
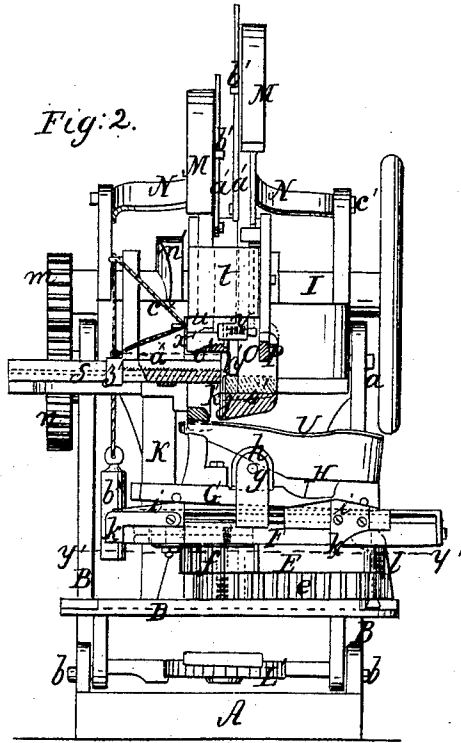
Alpheus C. Gallatue

Sheet 2, 3 Sheets.

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Witnesses;

*Mr. Tuck*  
*Hart*

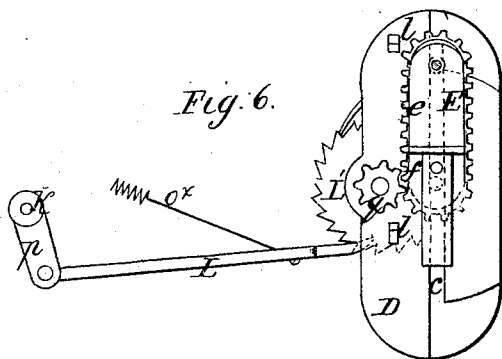
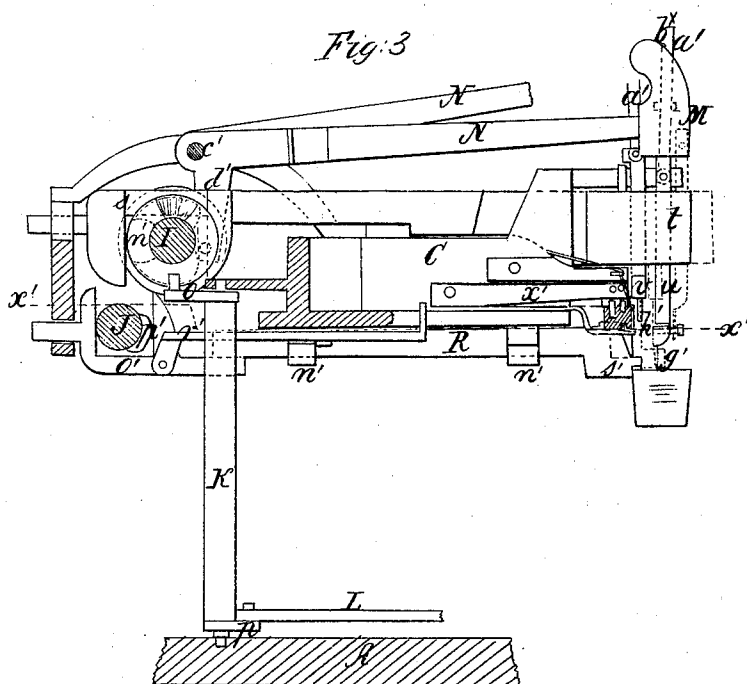
Inventor;

*Alpheus C. Gallahue*

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Witnesses;

*Wm. Tusch*  
*Wm. Hoff*

Inventor;

*Alpheus C. Gallatue*

# UNITED STATES PATENT OFFICE.

ALPHEUS C. GALLAHUE, OF NORTH EAST CENTER, NEW YORK.

## MACHINE FOR PEGGING BOOTS AND SHOES.

Specification forming part of Letters Patent No. 23,361, dated March 29, 1859; Reissued June 22, 1869, No. 3,517.

To all whom it may concern:

Be it known that I, A. C. GALLAHUE, of North East Center, in the county of Dutchess and State of New York, have invented a new and Improved Machine for Pegging Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side sectional view of my invention taken in the line *x, x*, Fig. 4, and looking in the direction indicated by arrows 1. Fig. 2, a front sectional view of ditto, taken in the line *y, y*, Fig. 1. Fig. 3, a side sectional view of ditto, taken in the line *z, z*, Fig. 4, and looking in the direction indicated by arrows 2. Fig. 4, a plan or top view of ditto. Fig. 5, a horizontal section of ditto, taken in the line *x', x'*, Fig. 3. Fig. 6, a horizontal section of ditto, taken in the line *y', y'*, Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a machine that will perform the whole of the work that relates to the pegging of boots and shoes, to wit, the making of the holes in the soles to receive the pegs and the driving of the pegs in the holes, and also the splitting of the pegs from the strip or block as well as the duplicating of the rows of pegs entirely around the sole or at certain points of the sole, each at right angles to the surface of the sole where driven.

The invention consists in the means employed for effecting the above results, whereby an automatic machine is obtained and one that will be far more perfect in its operation than any that has hitherto passed under my observation.

To enable those skilled in the art to fully understand, construct and use my invention I will proceed to describe its construction and operation.

A, represents a base or platform, on the back part of which two uprights B, B, are secured. C, is a frame, the back part of which is fitted between pivots *a, a*, in the upper parts of the uprights B, B, said frame being allowed to work or move vertically as occasion may require between said points as centers.

D, is a bed plate which is fitted transversely on the base A, and between centers

*b, b*. This bed plate is grooved longitudinally, as shown clearly at *c*, in Fig. 6, and an adjustable sliding rack block E, is placed on said bed plate, the rack block having projections *d*, at its under side, which projections fit in the groove *c*, as shown clearly in Fig. 1. The rack block E, is allowed to slide freely on the bed plate D, and said block is formed of two parts *e, f*. One part *f*, being placed directly over the other and so arranged as to admit of being adjusted further in or out on the part *e*, and thereby regulate the length of the rack block, the part *f*, having teeth formed on its outer side as shown clearly in Fig. 2.

To the upper surface of the part *e*, of the rack block a plate F, is permanently attached, and G, is a swinging plate or block, which is suspended on a rod or shaft *g*, the ends of which are fitted in uprights *h, h*, at the sides of the plate F, see Figs. 1, 2 and 4. Between the swinging plate or block G, and the plate F, inclined planes *i, i*, are placed, said inclined planes being attached to blocks *j*, which are allowed to slide freely on the plate F. These inclined planes *i, i*, have pendants *k*, attached to them, which pendants at certain points in the movement of the rack block E, come in contact with uprights *l* on the plate F, and actuate the inclined planes *i, i*, as will be hereafter referred to. On the swinging plate G, a last H, is secured on which the boot or shoe to be pegged is placed.

In the back part of the frame C, a shaft I, is placed transversely. This is the driving or power shaft and it communicates motion to the whole machine. This shaft I, has a pinion *m*, at one end of it, and said pinion gears into a wheel *n*, which is placed at the outer end of a shaft J, which is also placed in the back part of the frame C, and parallel with the shaft I.

On the shaft I, a cam *n'*, is placed, said cam acting against an arm *o*, which is attached to the upper end of a vertical shaft K, the lower end of shaft K, being provided with a similar arm *p*, to which a pawl L, is attached, said pawl engaging with a ratchet L', which is on the axis of a pinion *q*, that gears into the rack block E, see more particularly Figs. 1 and 6.

To the inner side of the cam *n'*, a projection *r*, is attached, and this projection works in a yoke *s*, which is secured to the inner end

of a sliding bar *t*, in the frame C. In the outer end of the bar *t*, two vertical plunger rods *u*, *v*, are placed and allowed to slide or work freely up and down therein. To the upper end of each rod *u*, *v*, a plate *a'*, is pivoted, and on each plate *a'*, a hammer M, is placed or attached by a guide *b'*, the upper end of each plate *a'*, being notched as shown at *b<sup>x</sup>*, Figs. 1 and 3, so that the guides *b'*, may catch against the shoulder formed by the notches and raise the rods *u*, *v*, after said hammers have reached a certain height. The hammers M, M, are attached to the ends of bars N, N, which are both placed loosely on a shaft *c'*, in the back part of the frame C, each shaft *c'*, having a pendent *d'*, attached against which pendent cams *e'*, on the shaft I, act. To each bar N, a spring *f'*, is attached, said springs having a tendency to keep the hammers M, down.

In the lower end of the plunger rod *u*, an awl *g'*, is secured and a rod or punch *h'*, is attached to the lower end of the plunger rod *v*. In the outer end of the sliding bar *t*, a vertical sliding bar O, is placed. At the lower end of this bar O, a socket *i'*, is attached. This socket is simply a projection attached to the bar O, and having a vertical hole *j'*, made in it near one end to receive the peg to be driven, see Fig. 2. A knife or cutter *k'*, is attached to the socket *i'*, adjoining the hole *j'*. In the bar O, the front end of a lever P, is fitted, said lever having its fulcrum pin at *U'*, see Fig. 1, and a yoke Q, at its back end in which yoke a cam or projection *m'*, on the shaft I, works.

To the under side of the frame C, a slide bar R, is placed and fitted in guides *n'*. To the back end of this bar a yoke *o'* is attached, in which yoke a cam *p'* on the shaft J, works. The yoke *o* is attached to the slide bar R, by a pivot *q'*, as shown clearly in Fig. 5, and the yoke has a lever or slipper *r'*, attached to it for the purpose of throwing the yoke in and out of gear with the cam *p'*, as may be desired. The front end of the slide bar R, has a shoulder *s'*, formed on it and the edge of the sole of the shoe is made to bear against this shoulder in consequence of a spring *t'*, which is connected with the plate F, and the front end of the bar R, is made to bear on the shoe by a spring *u'*, which is attached to the frame C, as shown in Fig. 1.

To the front part of the frame C, a feed box S, is attached, the outer end of said box being attached to a stationary arm *v'*, by a pivot. This feed box is formed of two parallel troughs in which the serrated wooden strips *x<sup>x</sup>*, are placed as shown in red Fig. 2. A cap or box *w'*, is placed directly over the inner end of the feed box S, said cap or box being attached to a spring *x'*, which is secured to the side of the frame C, the spring keeping said cap against a gage *y'*, attached

to the opposite side of frame C, see Fig. 2. The inner surface of the gage *y'* is beveled as shown clearly in Fig. 2, so that its lower edge will be somewhat closer to the inner end of the feed box than the upper end, the outer part of the gage being in line with or directly opposite the inner end of the feed box. In the feed box S, a slide or follower *z'*, is placed, said slide or follower having a weight *b<sup>x</sup>* attached by a cord *c<sup>x</sup>* which feeds the peg strip to the gage *y'*.

The operation is as follows:—The boot or shoe U, to be operated on is placed on the last H, and motion is given the shaft I, in any proper way. The two hammers M, M, are operated by means of the cams *e'*, *e'*, and springs *f*, *f*, which actuate the bars N, N, and the sliding bar *t*, moves horizontally back and forth in consequence of the projection *r*, working within the yoke *s*. The edge of the shoe U, bears against the shoulder *s'*, of the slide bar R, the spring *t'*, insuring such result, and the shaft K, has a vibratory motion given it by the cam *u'*, arm *o'*, in connection with a spring *o<sup>x</sup>*, which is attached to the pawl L, said shaft K, actuating the pinion *q*, through the medium of the ratchet L', and pawl L, and the pinion *q*, moving the rack block E, and consequently the shoe U, which is moved along by the side of the shoulders *s'*, the rack block E, being kept in proper position on the plate D, by the projections *d*, fitting in groove *c*, and turned or rotated as the pinion *q*, acts on each end of the rack block. As the plunger rod *u*, descends, it being struck by its hammer M, a peg hole is made in the sole of the shoe by the awl *g'*, and as said rod *u*, rises, the other plunger rod *v*, moves forward directly over the hole made by the awl *g'*, and the socket *i'*, being in the bar *t*, moves with said rod *v*, and the hole *j'*, in said socket which contains a peg is brought directly over the hole in the sole of the shoe and the rod *v*, then descends and its punch *h'*, is forced down into the hole *j'*, of the socket and drives the peg into the hole. The slide bar *t*, then moves back, the shoe U, simultaneously moving along a certain distance until the rod *u*, is made again to descend to form a succeeding hole for the next peg, the object therefore of the reciprocating movement of the bar *t*, will be seen, and it will also be seen that the hammers in consequence of being connected to the plunger rods *u*, *v*, admit of a very compact arrangement of the peg driving mechanism as well as insuring a perfect unity of action, so far as the operation of the plunger rods *u*, *v*, and hammers are concerned, the latter raising the plunger rods as well as forcing them down.

As the slide bar *t*, reaches the end of its backward movement the socket *i'*, is raised by the lever P and the knife *k'*, splits a peg

from the serrated strip of wood  $a^x$ , the peg passing into the hole  $j'$ , of the socket. The strip of wood  $a^x$ , is fed to the gage  $y'$ , by the weight  $b^x$ , and follower  $z'$ , and as the face side of the gage  $y'$ , is made inclined, its lower edge being nearer the feed box S, than its upper end, it follows as a matter of course, that the lower part of the peg strip  $a^x$ , will be kept against said gage even when the upper part projects over the lower edge of the peg strip, a contingency which frequently occurs in consequence of the crooked grain of the wood. This inclined face surface of the gage  $y'$ , insures the gaging of the pegs from their points and consequently the pegs will be fed regularly into the holes  $j'$ , of the socket  $i'$ . As the operation of pegging progresses the sole of the shoe U, is always presented at right angles with the pegs to be driven in consequence of the swinging plate G, which is actuated or inclined by the inclined planes  $i, i$ , said planes being moved at the proper time by their pendants  $k$ , coming in contact with the uprights  $l$ , on plate D. The machine is adapted to varying sized shoes by elongating or shortening the rack block E, which is done by adjusting the part  $f$ , of said block. The width of the shoes being compensated for by the swinging bed plate D. In case two rows of pegs are to be driven around the shoe, the yoke  $o'$ , of the bar R, is thrown in gear with the cam  $p'$ , and the bar R, will consequently be moved back and forth a requisite distance to allow two rows of pegs to be driven side by side, all around the sole or at such parts as may be desired. The feed box S, as before stated, has two compartments and one compartment may be provided with longer pegs than the other, so that long pegs may be driven in the sole at certain points, and short pegs

at other points, the box S, being capable of adjustment in consequence of working on a pivot at its outer end.

The swinging bedplate D, it will be understood admits of the shoe being moved in and out by the bar R, so that the two rows of pegs may be driven into the sole.

I do not claim a rack block E, arranged so as to feed the shoe with a continuous motion underneath the awl and peg driver for such device has been previously used; but,

Having thus described my invention what I do claim as new and desire to secure by Letters Patent, is:

1. Forming the rack bar E, of two parts  $e, f$ , arranged as shown so as to admit of being lengthened and shortened to compensate for different length of shoes.

2. The adjustable or swinging plate G, in connection with the inclined planes  $i, i$ , or an equivalent device for actuating the plate G, for the purpose set forth.

3. The inclined peg gage  $y'$ , in connection with the peg or feed box S, so as to gage the pegs from their lower ends as described.

4. The vibrating socket  $e'$ , in connection with the plunger rods  $u, v$ , arranged in the same slide bar  $t$ , to operate as set forth.

5. The bar R provided with the shoulder or bearing  $s'$ , and rendered capable of being operated when necessary by the adjustable yoke  $o'$ , and cam  $p'$ , for the purpose of duplicating the row of pegs when required.

6. The combination of the swinging bed plate D, with a rack E, arranged to operate substantially as and for the purpose set forth.

ALPHEUS C. GALLAHUE.

Witnesses:

WM. TUSCHS,  
E. V. HANFT.