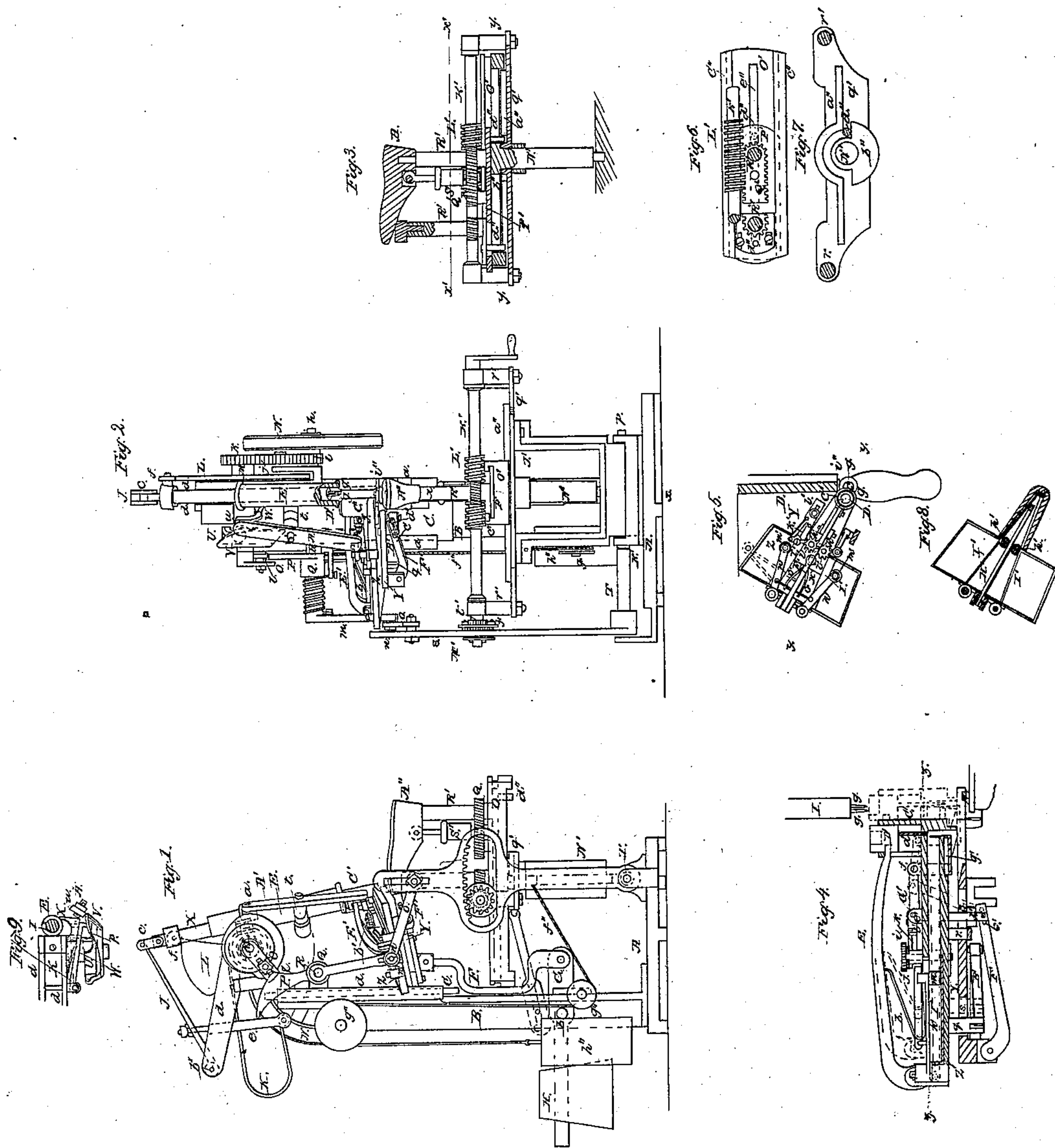


Schuh & Slayton,

Pegging Machine,

N^o 14,370.

Patented Mar. 4, 1856.



UNITED STATES PATENT OFFICE.

GEO. SCHUH AND PHINEAS L. SLAYTON, OF MADISON, INDIANA.

MACHINE FOR PEGGING BOOTS AND SHOES.

Specification of Letters Patent No. 14,370, dated March 4, 1856.

To all whom it may concern:

Be it known that we, GEORGE SCHUH and PHINEAS L. SLAYTON, of Madison, in the county of Jefferson and State of Indiana, have invented a new and Improved Machine for Pegging Boots and Shoes; and we 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 view of our improvement. Fig. 2, is a front view of the same. Fig. 3, is a longitudinal vertical section of the shoe rest showing the mechanism by which the rest is operated (*x*) (*x*) Fig. 2 shows the plane of section. Fig. 4, is a vertical section of the feed box (*y*), (*y*), Fig. 5, showing the plane of section. Fig. 5, is a detached plan or top view of the feed box. Fig. 6, is a horizontal section of the shoe rest, (*x'*), (*x'*), Fig. 3, shows the plane of section. Fig. 7, is also a horizontal section of the shoe rest (*y'*), (*y'*), showing the plane of section. Fig. 8, is a horizontal section of the feed box (*z*), (*z*), Fig. 4, shows the plane of section. Fig. 9, is a detached plan or top view of the cam and friction block for regulating the blow of the plunger.

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

To enable those skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A, represents a bed plate to which an upright B, is permanently secured. The upright B, has two ways or guides (*a*), (*a*), attached to its front side between which guides a plate C, is fitted and works, said plate C, having a plate D, attached to it, the plate D, projecting outward at right angles with the plate C. The outer edge of the plate D, is not vertical but is inclined and has a cylinder E, attached to it. The inclination of the cylinder is plainly shown in Fig. 1. The lower end of the plate D, has an arm F, attached to it, the lower end of said arm being connected to a lever G, which works on a rod (*b*), in the upright B, said lever having a weight H, on its outer end to counterpoise the plates C, D.

I, represents a plunger or cylindrical rod which works in the cylinder E. The upper end of the plunger is connected by a link (*c*), to an arm J, which works on a pin

(*b**), said pin passing through the outer ends of two arms (*d*), (*d*), which are attached to the upper part of the plate D, see Fig. 1. The arm J, has a rod (*e*), attached to it, the lower end of said rod being connected to a spring K, also shown in Fig. 1. The spring K has a tendency to keep the plunger down within the cylinder E.

The upper end of the plunger has a friction roller (*f*), attached to it, and L, is a cam which acts against this roller, said cam being upon a shaft M, which passes transversely through the upper part of the plate D, the cam raising the plunger as the shaft M, rotates and the spring K, forcing the plunger downward within the cylinder as the prominent portions of the cam pass the friction roller (*f*), see Figs. 1 and 2. The lower end of the plunger I, has two points or awls (*g*), (*g*), secured in it as shown in Figs. 2 and 4.

N, is a driving wheel which works on a shaft (*h*), at one side of the plate D. This wheel N, is connected by gear wheels (*i*), (*j*), (*k*), to the shaft M, see Fig. 2. To one end of the shaft M, there is attached a crank O, having a friction roller (*l*), at its end the axis of said roller being secured in a slot in the crank so that the roller may be adjusted nearer to or farther from the end of the crank. This roller (*l*), as the crank O, rotates acts against an arm P, which is attached to a socket Q, fitted on a shaft or rod R, which projects horizontally from the upright B. The socket Q, is allowed to turn freely on the shaft or rod R, and an arm (*m*), is attached to the outer end of the socket Q, the lower end of said arm being connected by a pivot (*n*), to a rod (*o*), which is attached to the upper end of a radius bar S, the lower end of which is attached to a shaft T. The rotation of the crank O, gives an oscillating movement to the bar S, by means of the arms, socket and lever just described. On the shaft M, and adjoining the crank O, there are placed two cams U, V, one of which U, acts against a friction roller (*p*), which is attached to the end of a lever W, which has a friction block X, attached to its outer end, see more particularly Fig. 9. The use of this block will be shown hereafter.

To the lower end of the plate D, there is attached a horizontal plate *y*, on which a shallow box L, is placed, said box having

projections (q), (r), on its under side which projections pass through slots (s), in the plate y , as shown clearly in Fig. 4.

A' , is a lever which works on the end of a rod (t), which projects from the plate D. The upper end of this lever has a friction roller (u) attached to it, against which roller the cam V, acts. A spring B' , is attached to the projection (g), underneath the plate y . The cam V, and lever A' , throw the box L, from the cylinder E, and plate D, and the spring B' , throws the box toward the cylinder and plate when the lever A' , is freed from the action of the cam. On the end of the box L, near the plate D, and cylinder E, there is placed a small cylinder C' , in which a plunger D' , is fitted, said plunger having two rods (a'), attached to its lower end.

E' , is a lever one end of which is attached by a pivot to one end of the box L. The opposite end of this lever passes through a slot in the small cylinder C' , and is fitted in the plunger D' , as clearly shown in Figs. 4 and 5. The lever E' , has a spring (b'), underneath it which serves to keep the lever and plunger D' , raised when not otherwise acted upon.

Underneath the plate y , there is attached by a pivot a lever F' . One end of this lever has an oblong slot (c'), made through it, in which slot a pin (d') is fitted said pin being at the lower end of a bent or right angled lever G' , which passes through the box L, and has its fulcrum at (e'). The outer end of the upper horizontal part of the lever G' , has an arm (f'), attached to it by a pivot said arm passing through the box L, and having a knife or cutter (g'), attached to its lower end, the knife or cutter passing upward into the box L, as shown clearly in Fig. 4. In the box L, there are placed feed rollers (h'), (h'), the upper ends of which are connected by pinions (i''), as shown clearly in Fig. 5, and one of the feed rollers has a small ratchet (j') on its upper end, into which ratchet a pawl (k'), catches, said pawl being attached to an arm (l') which is attached to a small upright on the plate y . The end of the box L, on which the small cylinder C' , is placed is of taper form as shown clearly in Figs. 5 and 8, and a block H' , is fitted within the box L, directly back of the taper portion of it, and pressure rollers (m'), (m'), attached to levers (n'), (n'), bear against the peg timber I' , which is in the form of wooden strips of a suitable thickness, width, and length. These strips are placed in the box L, each side of the block H' , and are kept in proper position by the pressure rollers (m'), springs (o'), being connected with the levers (n'), and causing the pressure of the rollers (m'), against the peg timber. This will be understood by referring to Fig. 5.

J' , represents a frame the lower end of which is secured between center points (p'), (p'), on the bed plate A, so that said frame may vibrate on the bed plate. The top horizontal plate (q'), of the frame has an upright (r'), at each end which form bearings for a shaft K' , which has a screw L' , upon it at about its center. One end of this shaft has a pinion M, placed loosely upon it and connected with the shaft K' , by a pawl (s'), and ratchet (t'), see Fig. 2 so that the pinion may be turned in one direction without turning the shaft K' , but when turned in the opposite direction will cause the shaft to turn with it. The pinion M' , fits within a curved slot (u'), in the bar S, the upper edge of this slot being toothed and the pinion M' , gears into the teeth as shown in Fig. 1. The upper surface of the plate (q'), of the frame J' , has a ledge or projection (a''), upon it as shown in Fig. 7, and a vertical shaft N' , passes through the plate (q'). The upper end of the shaft (n'), has a semicircular plate (b''), attached to it and above the plate (q').

O' , is a plate attached to the upper end of the shaft N, the plate O' , is nearly equal in length to the plate (q'), and has a way or guide (c''), at each side between which a plate P' , is fitted. The plate P' , has a rack Q' , attached to it the ends of which are rounded and toothed as shown in Fig. 6. The rack Q' , is attached to uprights R' , R' , and on the upper ends of the uprights the last and boot or shoe A'' , is secured by a clamp rod S' , see Fig. 3. The under surface of the plate P' , has two pins (d''), attached to it near its ends which pins work through a slot (e''), in the plate O' , and against the ledge or projection (a'') on the plate (q').

The frame J, has a cord (f'') attached to it, and this cord passes around pulleys (g''), attached to the upright B, and a weight (h''), is secured to the end of the cord, see Fig. 1.

To the end of the plate y , a circular rest or bearing (i'') is attached which rests or bears upon the edge of the sole of the boot or shoe.

Operation: The last A'' , with the shoe or boot upon is secured upon the uprights R' , R' , and the peg timber I' , is placed in the feed box y . Motion is then given the driving pulley N, in any proper manner, and the cam L, raises the plunger I, while the lever A' , throws back the box y , so that the spring K, may force the plunger I, downward within the cylinder E, and cause the points or awls (g), (g), to be driven into the sole of the boot or shoe. When the plunger I, is raised the spring B' , will throw the box y , toward the cylinder and the small cylinder C' , will be placed underneath and in line with the cylinder E, and when the plunger

I, again descends the plunger D', will be forced downward the projection (a') driving the pegs into the holes in the sole previously made by the points or awls (g), (g).
 5 During the outward movement of the box y, the peg timber I, is fed toward the cylinder C', by the rollers (h'), (h'), which are operated by the pawl (k'), and the pegs are cut off from the timber by the knife or cutter (g'), at the proper time in consequence
 10 of the pin (d'), striking against the end of the slot (c'), in the end of the lever F'. The lever E', throws the plunger D', upward in the small cylinder C', when it is
 15 drawn back from the cylinder E.

The shoe or boot is fed along underneath the rest or bearing (i''), by the screw L, on the shaft K', the shaft K', being turned by the pinion M', and bar S, and the shoe or
 20 boot is turned around when the toe and heel are pegged in consequence of the pins (d''), striking against the end of the shaft N', and the screw working into the rounded ends of the rack Q, thereby turning the plates P',
 25 O', and shaft N'. When the plunger I, is raised the friction block X, will be pressed against it by the cam U, and will regulate the force of the blow of the plunger and also its stroke that is, when the plunger I,
 30 strikes against the plunger D'.

It will be seen that the points or awls (g), (g), make two holes in the sole, and two
 35 pegs are driven into the sole at each stroke of the plunger D', and consequently two rows of pegs are driven into the sole at one operation, and as the points or awls (g), are fitted rather diagonally in the end of the
 40 plunger I, the pegs of one row will be opposite the spaces between the pegs of the adjoining row. This will be understood by referring to Fig. 5.

The above described machine has been practically tested and operates rapidly and well.

Having thus described our invention, we 45 do not claim the plates or tables, P', O', and rack Q', attached to the shaft, N', for the purpose of feeding the boot or shoe to be pegged, as these devices are applied in the pegging machine of J. J. Greenough, pat- 50 ented January 17th, 1854, nor do we claim the vibrating frame, J', and screw, L', as they are employed in the pegging machine of Ivel Robinson, patented October 31st, 1852, but 55

What we do claim as new and desire to secure by Letters Patent, is—

1. Feeding the boot or shoe to the plungers, D', I', so that it may be punched and pegged by means of the combination of the 60 screw, S', plates, P', O', shaft N', frame, J', and pins, (d''), arranged and operated substantially in the manner as described.

2. We claim punching the necessary holes in the sole and driving the pegs therein by 65 means of the plungers I, D', fitted within separate cylinders, the points and awls (g), on one plunger I, making the necessary holes in the sole at one stroke, and the other plunger D', being driven down and forcing 70 the pegs in the sole by the plunger I, at its succeeding stroke, substantially as shown and described.

3. We claim the friction block X, operated by the cam V, for the purpose of regu- 75 lating the stroke of the plunger I, and also the force of its blow as described.

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 P. L. SLAYTON.

Witnesses:

R. M. SMITH,
 JAMES M. SAFFORD.