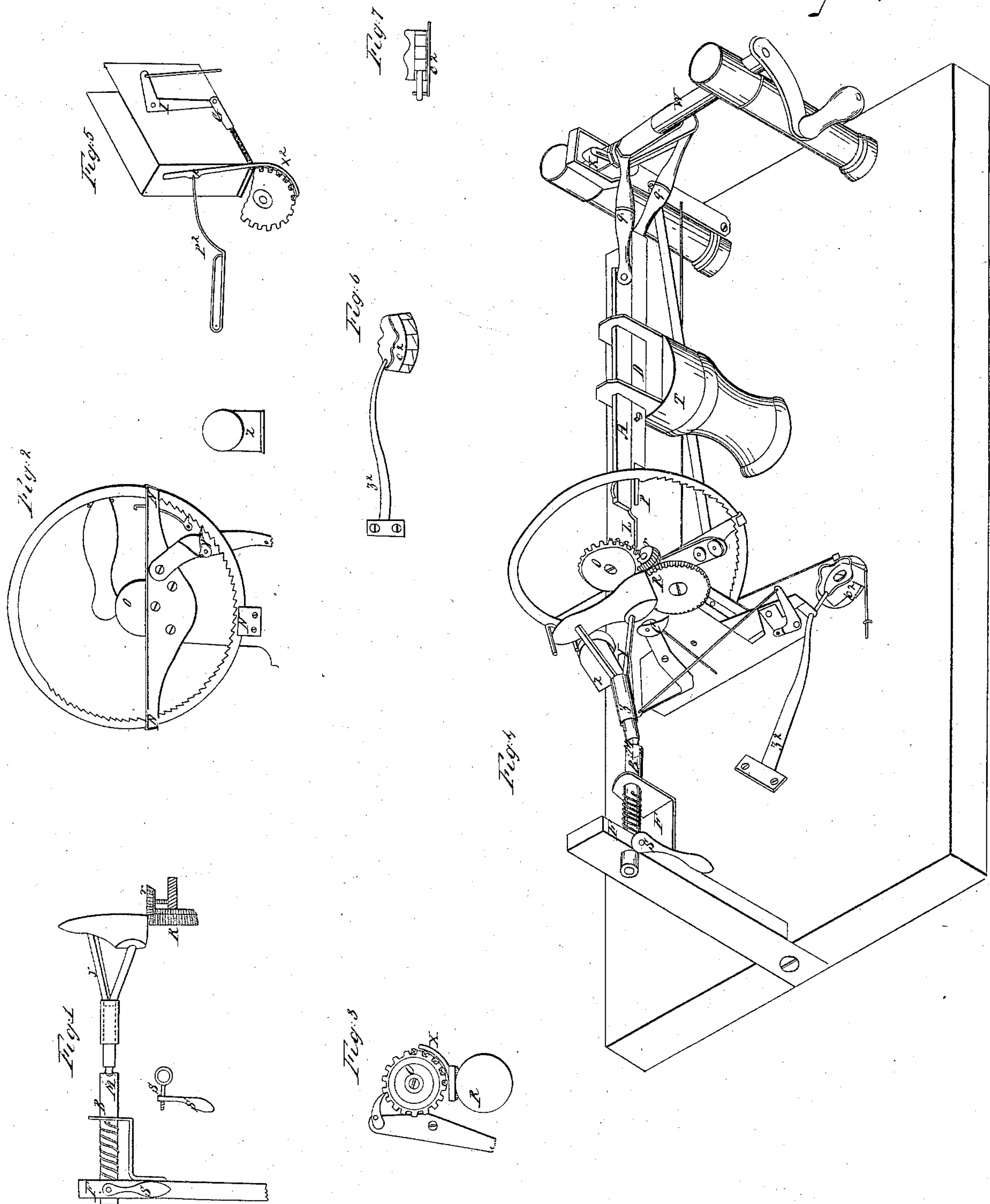


*L. Lackey,*  
*Pegging Machine,*

*No 10,917,*

*Patented May 16, 1854.*





# UNITED STATES PATENT OFFICE.

LEANDER LACKEY, OF SUTTON, MASSACHUSETTS.

## MACHINE FOR PEGGING BOOTS AND SHOES.

Specification of Letters Patent No. 10,917, dated May 16, 1854.

*To all whom it may concern:*

Be it known that I, LEANDER LACKEY, of Sutton, in the county of Worcester and State of Massachusetts, have invented a new and useful Machine for the Purpose of Pegging Boots and Shoes; and I hereby declare the following to be a full and clear description of the same, reference being had to the drawings herewith presented, which drawings constitute a part of said description.

This machine consists of the following essential parts, whereby the shoe or boot having been cut and lasted in the usual way is held and pierced the pegs are cut and driven and the shoe is completely pegged with two rows around the sole.

In the drawing Figure 1 is a jack or boot holder (Y) firmly fitted to the last having a ball and socket joint (M) with sliding joint ( $y$ ) the socket is attached to one end of a bar (B) supported in the stand (F) in such manner as to be movable endwise for the purpose of being brought forward to the work or to be shoved back for the jack to be taken out. The bar is pressed forward by the spiral spring around its middle and is then secured by the clamp or eyebolt and screw (S). The shoe is supported on a spur roller (R), this roller is notched at proper distances for the pegs and is turned one notch at certain times by a catch (C,) which is moved by rods (Z and Z) leading from a lever and cam X on the crank shaft (W) seen at Fig. 4 the back part of roller (R) is indented and forms a beveled wheel gearing into a pinion ( $V^2$ ) of about half its size the upper part of this pinion forms the small spur roller against which the shoe is firmly pressed by the bar (B), so that by the joint action of both rollers the shoe is carried accurately at proper times when the awl (L) and the punch (P) alternately approach to pierce the hole and drive the peg. The awl (L) and punch (P) are fitted into two sliding bars (A and D,) which are supported in the stand (T) parallel to each other, seen at Fig. 4 they are connected by the pitmen ( $q, q,$ ) to the double crank on the shaft (W,) Fig. 4. It may be observed that by turning the crank the awl is made to approach and pierce a hole in the sole and as it recedes another apparatus (to be described) cuts the peg and drops it into the receiver (O,) which brings it exactly to the hole pierced by the awl. This receiver in form resembles a bevel pinion, see Fig. 5 it

is indented at proper distances to receive the pegs, the awl and the punch both strike through its indentations thereby insuring the peg to be brought exactly to enter the hole and insuring the punch to strike the peg on the head. This receiver is moved at proper time by a catch ( $e$ ) seen at Fig. 3 worked by a lever and a rod from the lever and cam on shaft (W).

At Fig. 6 is seen the apparatus that furnishes and cuts the pegs this is a rectangular box or hopper (H) wide enough to receive the rudiments of pegs, these are prepared pieces of wood cut to the exact length, seasoned and pointed by the proper grooving tool as in the usual way of making shoe pegs, but they are left in cards of any length according to the block from which they were made; this card of pegs being pointed forms a complete rack for the purpose of being fed along by the alternate vibration of a catch (G) on the small lever (I,) attached to the side of the hopper and moved by a rod also connected to the lever and cam on crank shaft (W). These cards are laid into the bottom of the hopper which has a movable back adjustable by screws to adapt it to any required length of pegs; there is a spring to press down the card and keep it steady at the bottom while the catch (G) shoves it along and protrudes it out through a slot at the end of the box next to the receiver, and a small knife (K) is attached on the end of the box and vibrates on a pivot near the top of the box, see Fig. 5. The lower end or point of the knife strikes between the points of the first and second pegs and cuts the peg exactly through. The peg then drops into the receiver within the concave  $X^2$  and is carried down to the hole and driven by the punch, the knife flies back to its place and the card is again pushed forward by the catch. These movements arranged in order perform their work with regularity but other movements are required to adjust the shoe so as to present all parts of the sole to the action of the awl.

The annular guide Fig. 2 is a broad ring of metal supported loosely in three clasps or bearings (N N N) so as to be slipped round by the catch (V) which vibrates on the inside of the ring and catches the dents moving the guide at proper times as will be hereafter described; this ring has a forked guide or wires projecting on the front side into which the toe of the shoe is protruded



when the shoe is being pegged near the heel and as the shoe advances and enters the fork the catch is to be brought into gear by the operator which by moving the ring elevates the end of the last and carries it over while the pegs are being driven round the heel. When this has been effected the ring stops and the shoe travels out of the fork while the shoe is being pegged along the side. The disk that holds the ring in place is withdrawn and the ring turns back to its position by means of a small barrel spring (Z) which has a chain or wire attached to the side of the ring. The forked guide is then in position to receive the heel of the shoe and to perform again the same operation while the shoe is being pegged round the toe. In order to place the pegs in a double row the shoe is to be alternately raised and lowered at each driving of a peg. This is effected by means of the waved cam (C<sup>2</sup>) (Figs. 6 and 7) on which rests a spring lever (Y<sup>2</sup>). This is attached to the standard of the spur rollers (R, r). The cam has 10 dents and is moved by a catch operated by the cam on shaft (W). This lever by sliding up on the swell of the cam raises the rolls and shoe. And again when a peg has been driven the cam turns another notch and the lever sliding down the cam depresses the shoe enough to receive a peg in the inner row.

The various appendages as wires bell-cranks, &c. being very common, it is not deemed necessary to swell this description by a detailed account of them. It may be sufficient to state that all the catches receive their motions from the cam on the shaft (W), the knife which cuts the peg receives its motion from a pin in the sliding bar that carries the punch, the wire rod (P<sup>2</sup>) seen at Fig. 5 attached by one end to the knife and terminating at the other in a slot or loop embraces the pin in the sliding bar and so communicates motion from the bar to the knife.

The operations of this machine may be announced in the following order: The shoe having been cut and lasted in the usual way is fixed in its place, the card of pegs is placed in the hopper and pressed downward so as to protrude out through the slot at the end of the hopper. Now by turning the crank the punch is drawn back and the knife is drawn forward by the rod (P<sup>2</sup>) and cuts the peg which then falls into the receiver (O) and is carried forward, the awl approaches and pierces a hole in the sole, then as the awl retreats the receiver advances one dent forward and brings the peg into the right position to enter, and the punch then approaches and drives the peg, then as the punch recedes the shoe is carried along by the rollers (R and r) and at the same time

the card of pegs is moved forward and another peg is cut and the shoe is lifted by the waved cam so as to receive the next peg in the outer row.

In using my machine I loosen the screw S when a peg has been driven, and it remains loose while the shoe moves, and I tighten it again just before the awl strikes. This I do with the left hand while turning the crank with my right. It only requires to be done while the machine works over the hollow of the sole.

What I claim as my invention and desire to have secured by Letters Patent is the several parts of the above described machine combined for the purpose of making boots and shoes—

1. I claim the hanging the jack or last holder (Y) by universal joint so arranged as to press against points of inclined spur wheel (r) and held firmly at proper time by clamp (S) or analogous device.

2. I claim the receiver (O) when this is so combined with a concave guide in which it revolves as to receive the peg directly as it is cut from the block and convey it directly to the hole pierced by the awl.

3. In combination with the revolving receiver I claim the awl and punch when made to operate alternately through the compartments thereof for the purpose of piercing the hole and driving the peg, it being understood that I do not claim in general the device of making the awl and punch act alternately with each other as that is not new.

4. I claim the rolling spur wheels (R and r) on which the shoe rests and is carried at certain times the precise distances for the series of pegs either for single or double rows.

5. I claim the manner of making the pegs by cutting them on the box or hopper as set forth, and feeding along the card by the alternate motion of a catch operating on the points of the card.

6. I claim the annular guide that supports the toe while the shoe is being pegged round the heel and also supports the heel while being pegged round the toe.

7. I claim the waved cam (C<sup>2</sup>) for the purpose of raising and depressing the shoe to place the pegs in alternate rows.

I am aware that one or more of the above mentioned devices may be dispensed with in some kinds of work. I therefore do not claim the whole as a necessary combination, but I use the whole for common large work reserving the right to use less or more as required.

In testimony whereof I subscribe in presence of two witnesses.

LEANDER LACKEY.

Witnesses:

L. C. MUMFORD,  
JAS. G. ARNOLD.