

(No Model.)

3 Sheets—Sheet 1.

F. L. CONANT.
BOOT OR SHOE UPPER PACKING MACHINE.

No. 513,763.

Patented Jan. 30, 1894.

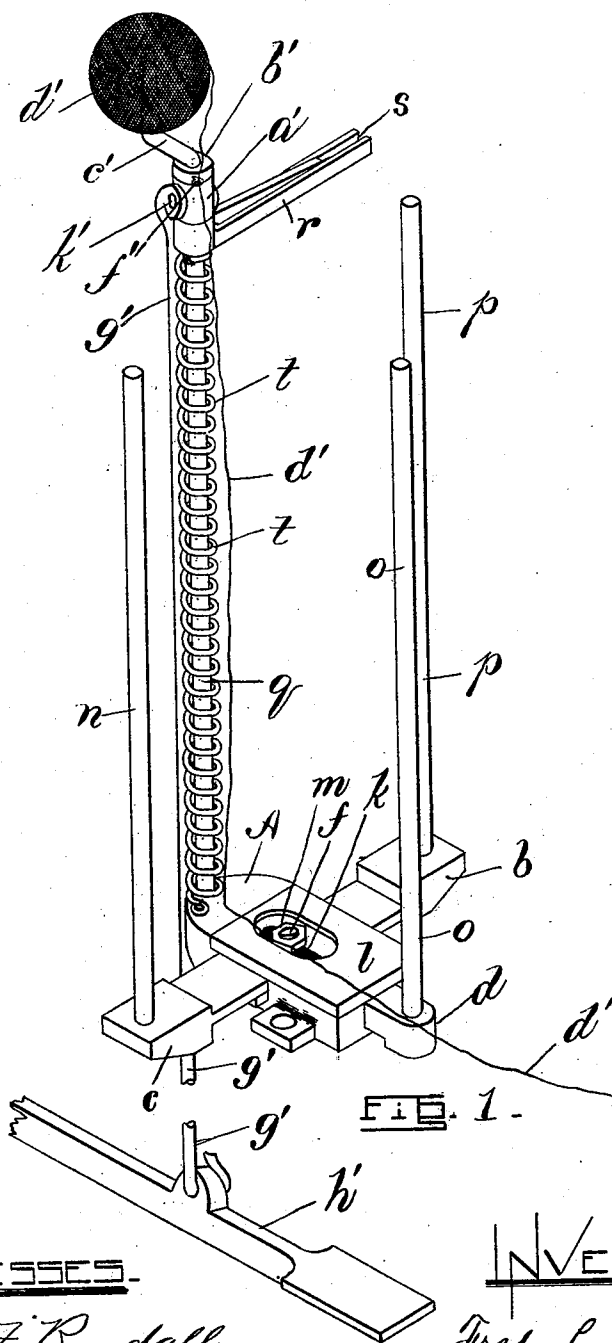


FIG. 1.

WITNESSES.

Arthur F. Randall.
Robert Wallace.

INVENTOR.

Fred L. Conant
by Macleod Calver & Raudall
his Attorneys

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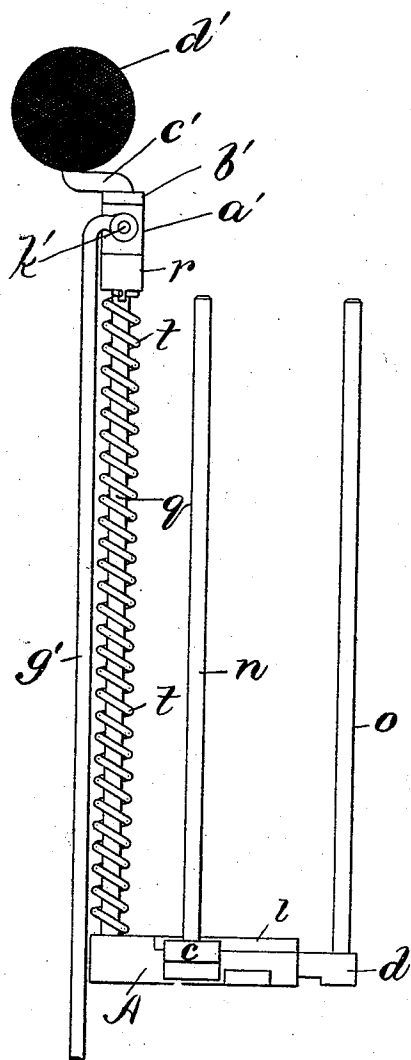


FIG. 2 -

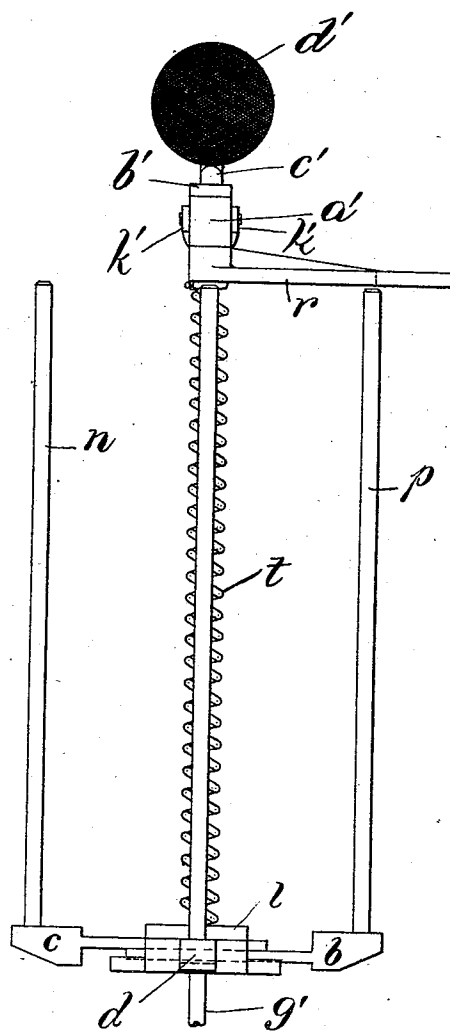


FIG. 3 -

WITNESSES.

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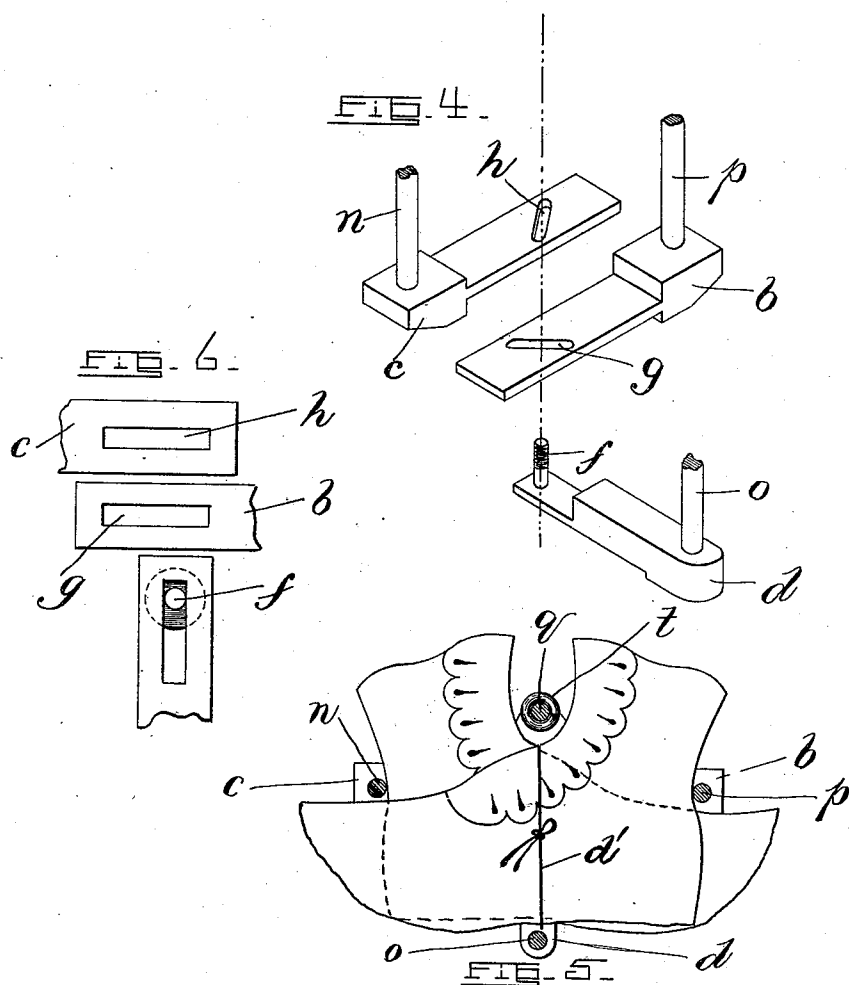
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UNITED STATES PATENT OFFICE.

FRED L. CONANT, OF MILTON, NEW HAMPSHIRE, ASSIGNOR TO FRANK W. WHITCHER, OF BOSTON, MASSACHUSETTS.

BOOT OR SHOE UPPER PACKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 513,763, dated January 30, 1894.

Application filed March 18, 1893. Serial No. 466,650. (No model.)

To all whom it may concern:

Be it known that I, FRED L. CONANT, a citizen of the United States, residing at Milton, in the county of Strafford and State of New Hampshire, have invented certain new and useful Improvements in Boot or Shoe Upper Packing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

In the manufacture of boots or shoes after the uppers are sewed in the sewing room, it is desirable that they should be packed in bundles, each bundle containing enough uppers for a case of shoes. It is further important in packing or making up these bundles of uppers that the uppers of right shoes should be distinguished from the uppers of left shoes. This enables the laster to whom this bundle or package is sent to work more quickly. In making up the bundles to distinguish the rights from the lefts, the uppers for the rights are all laid with the toes pointed in one direction, while the uppers for the lefts are laid with the toes pointing in the opposite direction, and the right and left uppers alternate through the pile or bundle. For the purpose of assisting in the packing of these uppers, it is customary, so far as known to me, to employ a rack comprising a board or base having four vertical rods set in it in such a position that the uppers may be placed one above the other between the rods. Before the uppers are placed between the rods on the board a piece of twine is laid across the board, and after the required number of uppers have been placed between the rods the twine is carried over the uppers and they are tied into a package or bundle. As the uppers vary in size a considerable number of these boards or racks are necessary.

My invention has for its object to provide a device by means of which uppers of any size may be readily packed in these bundles thus obviating the necessity of a number of racks, and by means of which also a more compact bundle or package may be formed than is formed by the method now employed.

The invention will be readily understood from the following description of a machine or device in which the invention is embodied, and its novel features are pointed out in the

claims which are appended hereto and which form a part hereof.

In the drawings to which reference is hereinafter made, Figure 1 is a perspective view of a packing machine embodying my invention and showing also a portion of the treadle which operates the compressing arm. Figs. 2 and 3 are respectively side and front views. Fig. 4 is a perspective of the arms of the machine detached. Fig. 5 is a plan view of the lower portion of the device showing the uppers in position. Fig. 6 is a modification.

A represents a body or base piece which is provided with lugs having holes by means of which the base may be secured to a bench, and which is cut away to receive two laterally projecting arms *b c*, and a forwardly projecting arm *d*. The base piece is provided with a lengthwise slot through which a bolt *f* passes. The bolt *f* passes upwardly through a hole in the inner end of the arm *d* and through reversely oblique slots *g h* in the inner over-lapping ends of the lateral arms *b c*, and through a lengthwise slot *k* in the top plate *l*. The portion of the top plate *l* around the slot *k* is recessed to receive a nut *m* which is screwed onto the top of the bolt *f* and which serves to clamp the arms in a given position. It will be seen that the shape of the slots is such that by loosening the nut *m* and sliding the bolt *f* the arms may be drawn in or extended and thus the size of the space between the uprights *n, o, p* which are set in the arms may be increased or diminished to accommodate uppers of different sizes. The upright rods *n, o, p* are set rigidly, as shown, in the outer ends of the arms *c, d, b* and simply serve as guides to keep the uppers, which are piled one on the other, in position.

At the rear of the base *A* is secured another upright rod *q*. On the rod *q* is placed a compressing arm *r*, the rod *q* passing through a hole in one end of said arm, said arm being free to swing laterally on said rod as also to move vertically thereon. The free end of the arm *r* is slotted as shown at *s*, said slot being to receive the upright *o* when the arm *r* is swung over the bundle of uppers in the rack. A spiral spring *t* encircles the upright *q* and is secured at its lower end to the base *A* and at its upper end to the arm *r*. A collar *a'* is

placed on the rod *q* above the arm *r*, said collar being free to slide vertically on said rod *q*. A collar *b'* which is fast on said rod *q* is placed just above the uppermost position of the collar *a'*. The upper end of the upright *q* is offset as shown at *c'*, and is provided with an upright spindle to receive a ball of twine *d'*. The twine from the ball passes down through an eye or guide ring shown at *f'* on the collar *b* and is carried down and across the base and allowed to project in front of the machine. This twine is used for tying the bundle of uppers after they have been placed in the rack. A connecting-rod *g'* which is connected at the lower end with a treadle *h'* placed in convenient proximity to the foot of the operator is connected preferably by pivots, at its upper end as shown at *k'* to the collar *a'*.

The operation of the device is as follows:—The arms being properly set for the size of uppers which are to be packed, the uppers are then placed in the rack, rights and lefts alternating, the toes of the rights lying in one direction, and the toes of the lefts lying in the opposite direction. When this has been done the uprights *n* and *p* will be found to occupy positions substantially at the intersection of the lines formed by the contour of the uppers as shown in Fig. 5, while the upright *o* will be opposite the shank portion of the uppers. The required number of uppers being in place, the operator swings the arm *r* over the uppers, places his foot on the treadle *h'*, forcing down the compressing arm *r* onto the bundle of uppers and compressing them firmly and holding them thus compressed. When the arm *r* is thus carried down the front upright *o* will lie in the slot *s* in the free end of the said arm. The operator may, by retaining his foot on the treadle, hold the bundle of uppers in this compressed condition, and has both hands free to cut the twine *d'*, and tie it securely around the bundle, thus obtaining a compact and neatly formed bundle. The operator then removes his foot from the treadle, the spring *t* operates to force the arm *r* upwardly and as soon as the arm *r* has cleared the top of the upright *o* the torsional action of the spring *t* will carry the arm *r* laterally to one side to the position shown in Fig. 1, thus permitting the bundle of uppers to be taken from the rack. The twine *d'* is then drawn down and laid across the base *A* in position to tie another bundle and the operation is repeated.

In the modification shown in Fig. 6 the inner ends of the arms *c*, *d*, *b* are provided with lengthwise slots and in this construction after the nut *m* of the clamping bolt *f* is loosened each arm requires to be separately adjusted to the position required, after which the nut is again tightened, while in the preferred construction shown in Fig. 1 by sliding the bolt *f* toward or from the operator all the arms are adjusted simultaneously to the desired position.

As will be obvious many of the substantial advantages of my device may be obtained by omitting the adjustable arms and employing in place thereof a rigid base of proper size and I do not therefore desire to limit myself to a device employing adjustable arms.

What I claim is—

1. An upper packing machine consisting of uprights between which the uppers may be placed, a base provided with radially movable upright-supporting arms, means for securing said uprights in adjusted position, and a compressing device movable lengthwise on one of the uprights whereby the uppers which are piled up between the uprights may be compressed and held while they are being tied into a bundle, substantially as described.

2. An upper packing machine comprising uprights between which the uppers are placed, a base provided with radially adjustable upright-carrying arms, means for securing said arms in adjusted position, a compressing arm vertically movable on one of said uprights, and mechanism for operating said arm to compress the pile of uppers, substantially as described.

3. An upper packing machine having uprights between which the uppers are placed, a base provided with radially adjustable upright-carrying arms, means for securing said arms in adjusted position, a compressing arm sliding on one of said uprights, and a spring for raising said arm after the uppers have been compressed by the depression of the arm, substantially as described.

4. An upper packing machine comprising a base provided with uprights, a compressing arm sliding on one of said uprights, means for operating said arm to compress the uppers, a spring secured to said arm for raising the same after the uppers are compressed and for swinging said arm laterally to permit the removal or insertion of the uppers substantially as set forth.

5. An upper packing machine having a base provided with suitable uprights and having a holder for a ball of twine on one of said uprights substantially as set forth.

6. An upper packing machine comprising a base provided with suitable uprights, a vertically and laterally movable compressing arm on one of said uprights, a vertically movable collar on the same upright and means for forcing said collar downwardly on said upright whereby said compressing arm may be moved vertically to compress the uppers and may also be moved laterally to allow of the withdrawal or insertion of the uppers, substantially as set forth.

7. An upper packing machine having a base provided with radially adjustable arms each of said arms having an upright and means for holding said arms in an adjusted position whereby the base may be adjusted to accommodate uppers of different sizes, substantially as set forth.

8. An upper packing machine comprising

a base having adjustable arms, an upright on each of said arms, an upright on the base, a compressing arm on said upright on the base, means for operating said arm to compress the
5 uppers and for raising said arm after the uppers are compressed, and a twine guide secured to the upper portion of said upright on the base, substantially as set forth.

10 9. An upper packing machine comprising a base, adjustable arms on said base provided with suitable uprights, a securing bolt for said arms passing through said base and through slots in said arms, substantially as set forth.

10. An upper packing machine comprising

a base, adjustable arms on said base provided 15 with suitable uprights, a securing bolt for said arms passing through said base and through divergent slots in said arms whereby by moving said bolt lengthwise of said base the arms will be simultaneously adjusted, substantially 20 as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRED L. CONANT.

Witnesses:

WM. A. MACLEOD,
R. WALLACE.