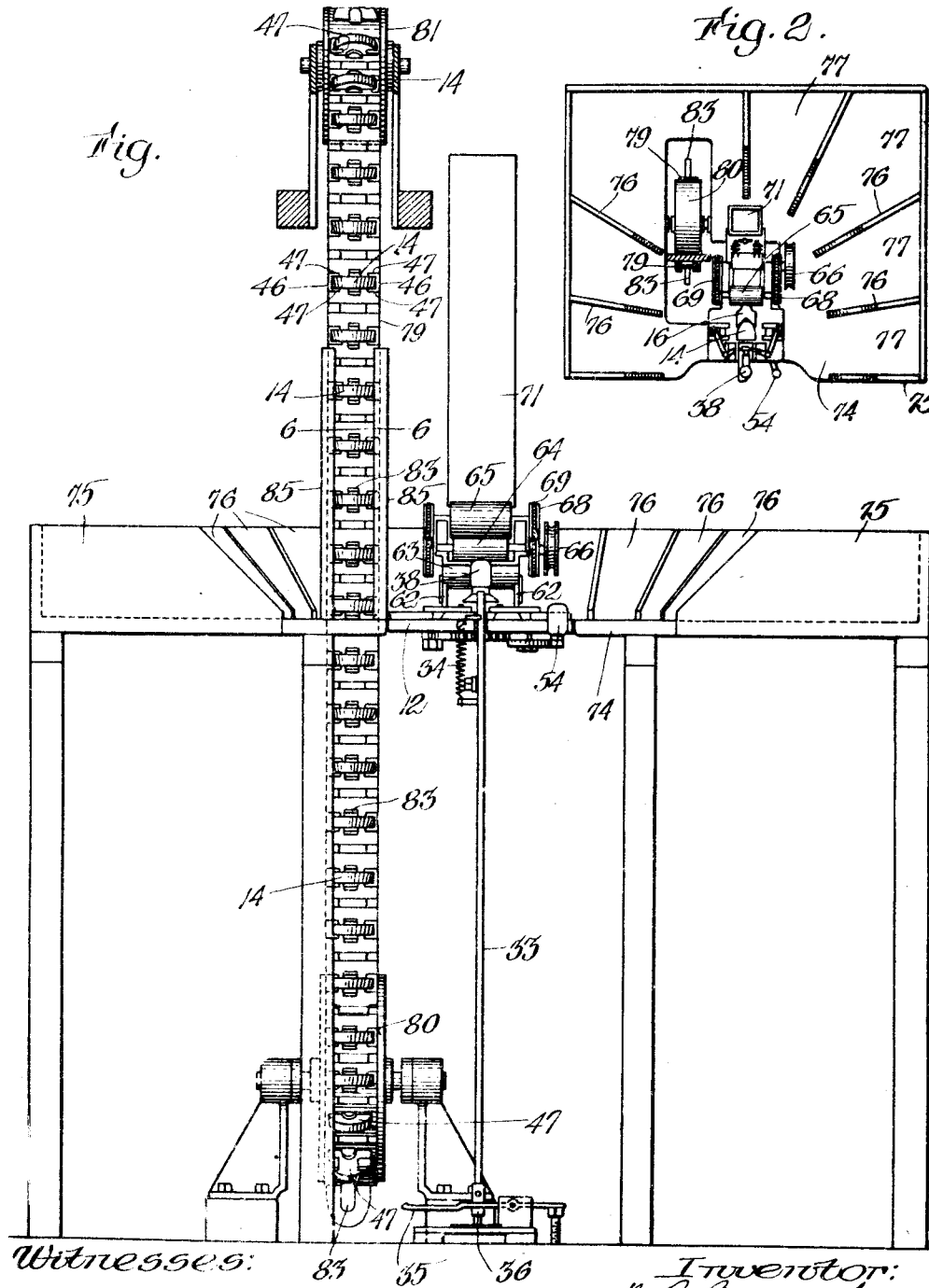


W. P. BOSWORTH.
MACHINE FOR BUILDING CEMENTED HEELS FOR BOOTS AND SHOES.
APPLICATION FILED AUG. 6, 1912.

1,065,338.

Patented June 24, 1913.

4 SHEETS—SHEET 1.



Witnesses:

D. S. Clark
G. L. Johnson

Inventor:

W. P. Bosworth
by Night & Brown Smith & May
Attorneys

W. P. BOSWORTH.
MACHINE FOR BUILDING CEMENTED HEELS FOR BOOTS AND SHOES.
APPLICATION FILED AUG. 8, 1912.

1,065,338.

Patented June 24, 1913.

4 SHEETS—SHEET 2.

Fig. 5.

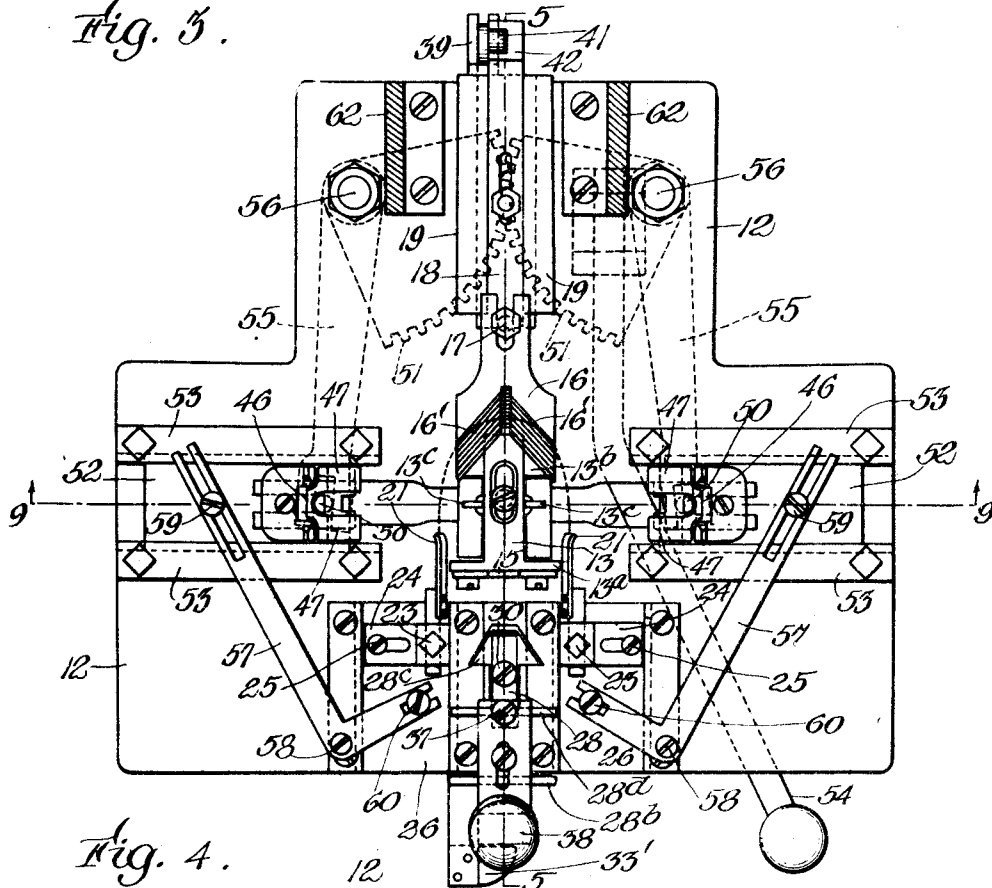
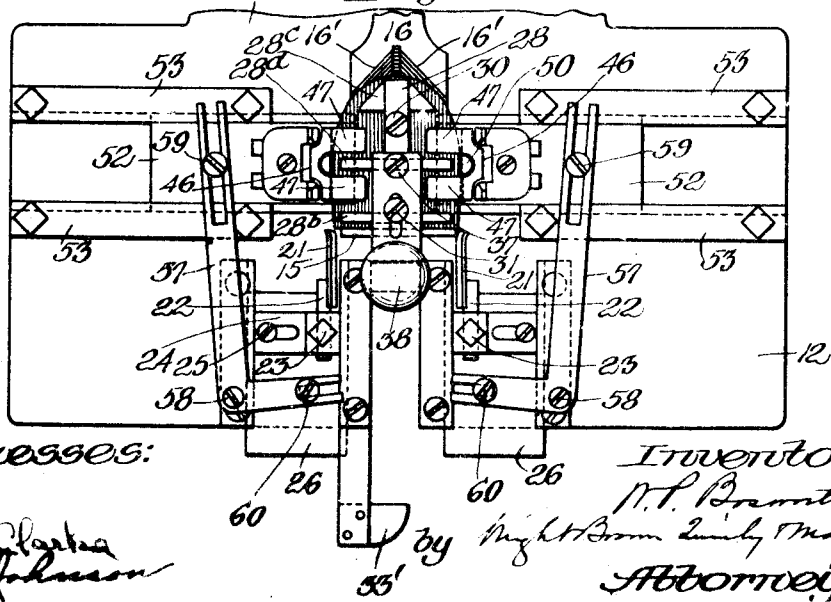


Fig. 4.



Witnesses:

D. L. Clarke
H. L. Johnson

Inventor:

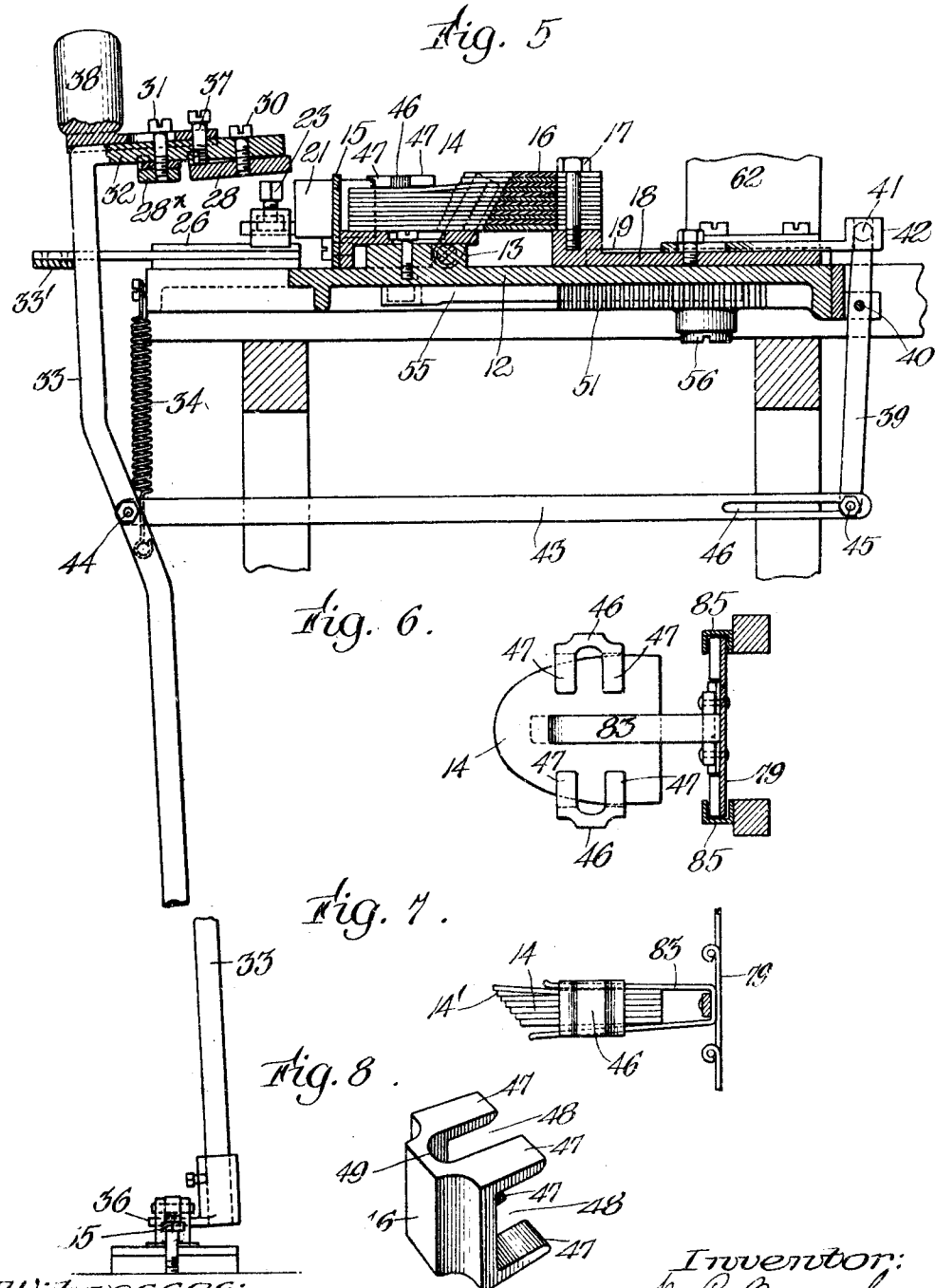
W. P. Bosworth
by Wright & Brown
Attorneys.

W. P. BOSWORTH.
MACHINE FOR BUILDING CEMENTED HEELS FOR BOOTS AND SHOES.
APPLICATION FILED AUG. 6, 1912.

1,065,338.

Patented June 24, 1913.

4 SHEETS—SHEET 3.



Witnesses:
D. S. Clark
S. L. Johnson

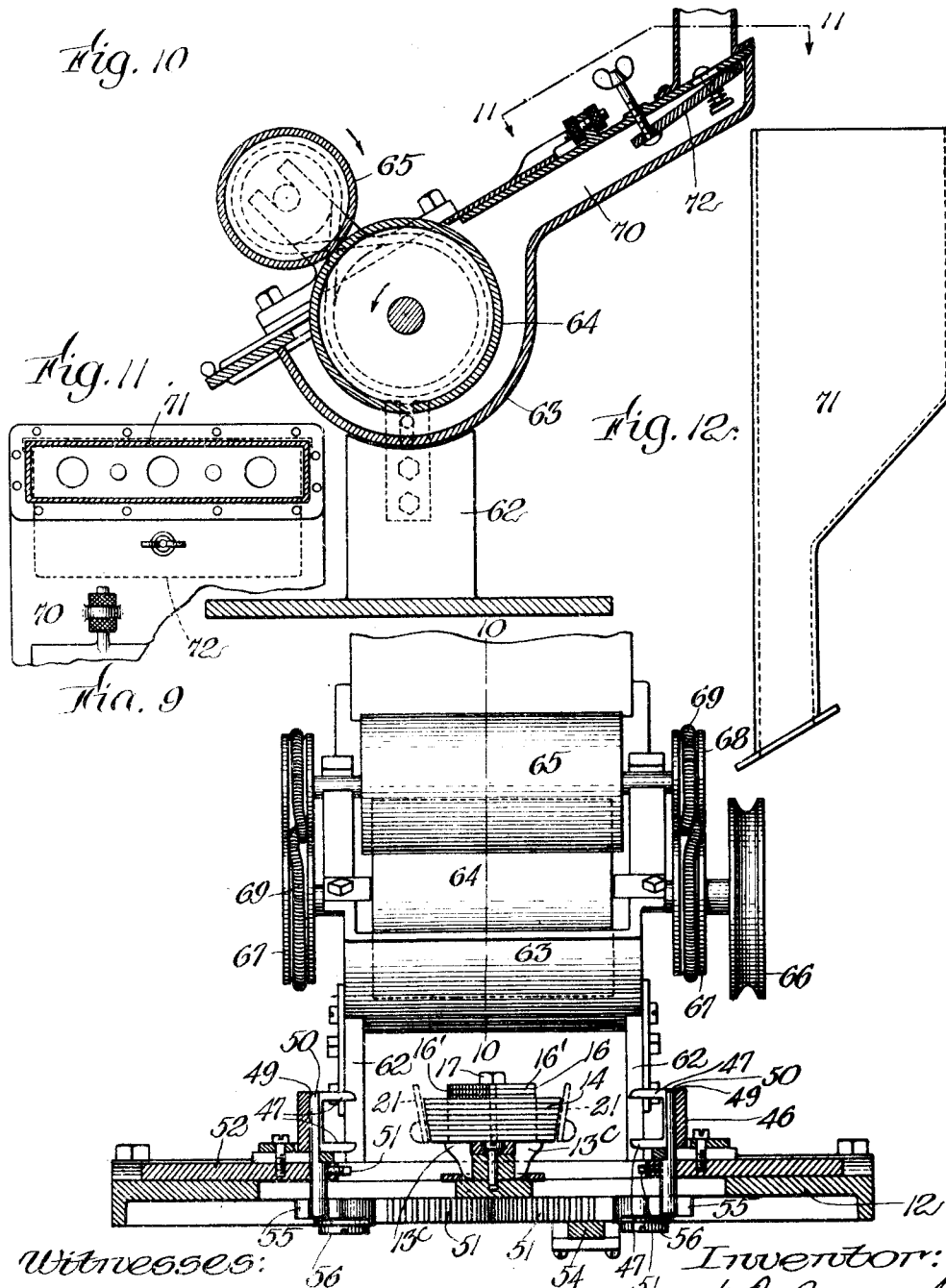
Inventor:
W. P. Bosworth
by *Highman Lundy May*
Attorneys

W. P. BOSWORTH.
MACHINE FOR BUILDING CEMENTED HEELS FOR BOOTS AND SHOES.
APPLICATION FILED AUG. 6, 1912.

1,065,338.

Patented June 24, 1913.

4 SHEETS—SHEET 4.



Witnesses:
D. L. Clark
G. L. Johnson

Inventor:
W. P. Bosworth
by Knight Brown Lundy May
Attorneys.

UNITED STATES PATENT OFFICE.

WENDELL P. BOSWORTH, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO BROCKTON
HEEL COMPANY, OF BROCKTON, MASSACHUSETTS, A CORPORATION OF MASSA-
CHUSETTS.

MACHINE FOR BUILDING CEMENTED HEELS FOR BOOTS AND SHOES.

1,065,338.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed August 6, 1912. Serial No. 713,572.

To all whom it may concern:

Be it known that I, WENDELL P. BOSWORTH, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Machines for Building Cemented Heels for Boots and Shoes, of which the following is a specification.

This invention relates to the operation of assembling and securing together a pile of heel lifts of sufficient size to form a heel body, the lifts being cemented together, and the heel body, when completed so far as my invention is concerned, being ready for the final operations required in compressing, attaching and finishing the heel. It will be understood that the term "heel body", as used herein, refers to a blank or unfinished heel, the lifts of which have been cemented together so that the body is ready for subsequent compression and other finishing operations.

Heretofore, heel bodies have been made by assembling the lifts which are coated with paste or other cement, subjecting the pile or assemblage of lifts to an initial pressure to bring the cement-coated surfaces into close contact with each other, and at the same time forcing a nail into the assemblage of lifts, the nail being relied upon to maintain the initial compression of the lifts and hold their cemented surfaces together until a considerable number of heel bodies have been formed, each body being laid aside unconfined, excepting by the connecting nail, until enough bodies have been formed to be assembled on a pressing board or platen, which is placed in a press and allowed to remain therein under secondary pressure until the cement sets or dries sufficiently, about one hour being usually required for this operation. It is customary for each operator to form a considerable number of heel bodies, usually about fifty, before collecting them and placing them in the press. While the heel bodies are awaiting the secondary pressing operation, the cement in the bodies first formed becomes partially dry so that the secondary pressing operation, of the series of bodies does not cause a desirably firm adhesion of the lifts to each other, the lifts being liable to separate, particularly at their edges, after

the secondary pressing operation, and thus form what is known as a checked or cracked heel. Moreover, the press in which the heel bodies are subjected to the secondary pressure while the cement is setting, takes up much valuable space and requires to be operated by an operator having considerable muscular power.

My invention has for its object to enable the lifts composing a heel body to be securely maintained and clamped when they are first assembled, in such manner as to insure close contact between the cement coated surfaces, and to be laid aside independently while under pressure until the cement sets and the heel body is ready for the final operations. the secondary pressing operation which has heretofore followed the assembling and initial pressing operations, being eliminated, the initial pressure of the assembled lifts being maintained until the cement sets, so that there is no liability of checking or cracking in the completed heel.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a front elevation of a heel-building machine embodying my invention. Fig. 2 represents a plan view of the same. Fig. 3 represents an enlargement of a portion of Fig. 2. Fig. 4 represents a view similar to a portion of Fig. 3, showing a heel under pressure. Fig. 5 represents a section on line 5—5 of Fig. 3. Fig. 6 represents a section on line 6—6 of Fig. 1, and a plan view of parts below said line. Fig. 7 represents an edge view of the parts shown by Fig. 6. Fig. 8 represents a perspective view of one of the clamps hereinafter referred to. Fig. 9 represents a section on line 9—9 of Fig. 3. Fig. 10 represents a section on line 10—10 of Fig. 9. Fig. 11 represents a section on line 11—11 of Fig. 10. Fig. 12 represents a side view of the cement reservoir.

The same reference characters indicate the same parts in all of the figures.

In the drawings, 12 represents a fixed supporting base or table on which is mounted a fixed pressing bed adapted to support a pile of heel lifts comprising a heel body 14, which I will hereinafter call the heel, and to expose portions of the bottom of the

heel so that clamps may be applied to said lower side, as hereinafter described. As shown by Figs. 3 and 9, the bed is preferably composed of an elongated block 13 which is narrower than the bottom of the heel, so that portions of the heel bottom project from opposite sides of the block, as indicated by dotted lines in Fig. 3, and wings 13^a, 13^b projecting from opposite sides of the end portions of the block, these wings affording wider supports for the front and rear end portions of the heel bottom, and being separated from each other by recesses which expose portions of the bottom and permit the application of the said clamps thereto. Narrow wings 13^c attached to the central portions of the sides of the block 13 form additional supports for the heel bottom, the clamps being provided with slots or recesses, as hereinafter described, to receive said wings.

To the front end of the bed is secured a gage plate 15 adapted to bear on the breast ends of the heel lifts assembled on the bed. As here shown the heel is provided with a wedge lift 14' to increase the thickness of its rear portion. 16 represents a positioning rear jaw which is attached by a bolt 17 to a slide 18 movable between fixed guides 19 on the table 12, said jaw being provided with oblique faces 16' forming the sides of a V-shaped recess adapted to receive the rear portion of the heel edge. When the edge of the heel is inclined, as shown, the faces 16' are correspondingly inclined, the jaw being preferably composed of a plurality of thin plates, the forward ends of which form the faces 16', as shown by Fig. 5.

Means hereinafter described are provided for moving the slide 18 and jaw 16 toward and from the gage plate 15, the jaw, when moved forward, pressing the breast ends of the lifts against the gage plate.

To position the side portions of the lifts, I provide side jaws 21 adapted to bear on opposite sides of the heel, said jaws being provided with shanks 22 secured by set screws 23 to socketed ears 24 attached by screws 25 to slides 26 which are moved by means hereinafter described on the table 12, alternately to the positions shown by Figs. 3 and 4, the jaws being in the position shown by Fig. 3 when the lifts are being assembled, and serving to position the front end portions of the lifts. The jaws 21 may be inclined at different angles to conform to the inclination of the edge of the heel, the shanks 22 being adapted to turn in the ears 24, and secured at the desired inclination by the set screws 23. The screw 17 that attaches the rear jaw 16, and the screws 25 that attach the side jaws, pass through slots, as shown by Fig. 3, so that the several jaws are adjustable to heels of different sizes.

The machine is provided with a presser,

preferably formed to bear on a sufficient extent of the top of the heel to exert the desired initial pressure required to bring the cement-coated surfaces of the lifts into sufficiently close contact with each other, and to expose parts of the heel top so that the said clamps may be applied thereto. The presser is movable, not only in the direction required to exert pressure on the heel body, but also in the direction required to remove it from its operative position over the bed while the lifts are being assembled, and to restore it to said operative position after the assemblage of the lifts. As here shown, the presser is composed of a narrow elongated bar or member 28, having lateral wings 28^a and 28^b, and a presser member 28^c, attached to the arm 32 hereinafter described, and having lateral wings 28^d, the whole forming a skeleton presser conforming to the skeleton bed above described, and adapted to expose parts of the top of the heel.

The presser members 28 and 28^c are attached, respectively, by screws 30 and 31, to an arm 32 on a swinging rod 33, normally raised by a spring 34 and adapted to be depressed by a treadle 35, the rod being normally held by the spring 34 in the position shown by Fig. 5 against a fixed stop 33', and adapted to be moved by the operator to the right from said position to bring the presser over the bed and the heel thereon, the lower end of the rod being provided with a toe 36 bearing loosely on the under side of the treadle and engaging the rod with the treadle in such manner that the rod is free to swing, as described, and is also depressible by the treadle to force the presser against the top of the heel.

The presser member 28 is preferably adapted to be adjustably inclined to enable it to conform to the inclination of a heel having a wedge lift 14', the arm 32 being provided with an adjustable bearing screw 37 for this purpose. When the lifts have been assembled on the bed, the operator grasping a handle 38 on the upper end of the rod 33, swings the rod in the direction required to move the presser over the bed. This movement of the rod 33 causes a forward movement of the rear jaw 16, said jaw being forced against the rear ends of the lifts and forcing their breast ends against the gage plate 15, and between the side jaws 21, which are at this time held, by the means hereinafter described, in the position shown by Fig. 3. The lifts are thus correctly positioned to form the rear end, sides and breast of the heel. The forward movement of the rear jaw is caused by a lever 39 (Fig. 5) fulcrumed at 40 to a fixed support, one arm of the lever having a stud 41 engaged with a slotted ear 42 attached to the slide 18, and a link 43 pivoted at 44 to the rod 33, and connected with the other arm of the

lever 39 by a stud 45 passing through a slot 46, in said link. The slot 46 is of such length that the link 43 moves without moving the lever 39 until the presser is nearly over the bed; the advancing end of the slot 46 then bearing on the stud 45 and moving the lever 39 in the direction required to force the rear jaw 16 against the heel lifts.

When the heel lifts are positioned as above described, the operator, while holding the presser over the heel, depresses the treadle 35 and thus causes the presser to exert sufficient pressure on the heel to insure close contact between the surfaces of the lifts, each lift having been previously coated on one side with cement.

After the initial compression has been applied to the heel, and while said pressure is maintained by the operator, two clamps are applied to the exposed top and bottom surfaces of the heel, these clamps being formed to confine the heel in its condition of compression and being removable with the heel from the pressing bed, the heel remaining confined by the clamps while the cement is setting.

In the embodiment of my invention here shown, each clamp is composed of two pairs of jaws 47, connected by a neck or coupling member 46, which not only connects the said jaws, but also is formed to engage a complementary coupling member forming a part of the mechanism hereinafter described, for applying the clamp to a heel under the described initial pressure, and removing the clamp from a heel in which the cement has set or hardened to maintain said pressure. The jaws 47 of each pair are separated by a slot 48 (Fig. 8), said slots being formed to receive the bed wings 13^c and the presser wings 28^a, so that when the clamps are forced onto the heel, as shown by Fig. 4, the jaws 47 bear on sufficient portions of the top and bottom surfaces of the heel to maintain the described initial pressure after the heel and clamps are removed from the bed. The neck or coupling member 46 of each clamp has an internal groove 49 (Fig. 8), adapted to receive a complementary coupling member composed of a vertical pin 50. There are two of these pins and they form parts of a mechanism for applying the clamps to the heel and for removing them from the heel after the setting of the cement.

The pins 50 are attached by set screws 51 (Fig. 9) to slides 52 which are movable in guides 53 attached to the table 12. Mechanism is provided for moving the slides 52 simultaneously in opposite directions, the slides being alternately retracted from the bed, as shown by Figs. 3 and 9, and projected toward the bed, as shown by Fig. 4. Said mechanism includes bell-crank levers 55 pivoted at 56 to the table 12. The longer arms of said levers are slotted and engaged

with the lower ends of the pins 50, and their shorter arms are provided with intermeshing gear segments 51.

54 represents an operating lever attached to one of the bell-crank levers 55. When the lever 54 is swung horizontally, the bell-crank lever 55 to which it is attached is swung horizontally, and its gear segment 51 imparts a simultaneous movement in the opposite direction to the other bell-crank lever 55, the two levers being thus moved horizontally in opposite directions and caused to either project the slides 52 and the pins 50 carried thereby toward the bed and presser, or to retract said slides and pins.

The clamps are adapted to be placed by hand on the pins 50, when the pins are retracted. The pins are projected toward the heel by the described mechanism while the heel is compressed between the bed and presser, the clamps engaged with the pins being thus forced onto the compressed heel, as shown by Fig. 4, to maintain the initial compression. The operator now releases the treadle 35, and handle 38, and the spring 34 raises the presser and at the same time swings the rod 33 and the presser outwardly to the position shown by Fig. 5. This movement of the rod 33 causes the link 43 and lever 39 to retract the rear jaw 16 from its bearing on the rear end of the heel.

The slides 26 carrying the side jaws 21, are connected with the clamp-carrying slides 52, by bell-crank levers 57 pivoted at 58 to the table 12, the arms of said levers being slotted to receive studs 59, 60 attached respectively to the slides 52 and 26. The side jaws 21 are projected to engage the sides of the heel by the retraction of the slides 52, as shown by Fig. 3. When the slides 52 are projected to apply the clamps to the heel, the levers 57 retract the slides 26 and side jaws 21, so that when the clamps are applied to the heel, the side jaws are removed therefrom, as shown by Fig. 4. The heel and the clamps thereon are now free to be removed from the bed and stored while the cement is setting, the clamps and the heel engaged thereby being lifted by hand from the pins or coupling members 50.

After the removal of a clamped heel, a previously clamped heel, the cement in which has been allowed to dry, may be again placed on the bed, the clamps on the dried heel being again engaged with the pins 50. The operator then swings the operating lever 54 to the position shown by Fig. 3, thus retracting the slides 52 and causing the pins 50 to remove the clamps from the dried heel, and at the same time projecting the slides 26, and leaving the side jaws 21 in position to position the front ends of the next series of lifts assembled on the bed.

It will be seen that the top and bottom lifts of each heel are externally connected after

the initial compression and while the cement is soft, to maintain said compression and hold the cement-coated surfaces of the lifts in close contact with each other while the cement is setting, each heel body being treated independently of the others which are under construction at the same time, so that the secondary pressing operation, which has heretofore been considered necessary, is entirely eliminated, each heel body, after the initial compression and after the setting of the cement, being ready for the heel pressing and attaching machine.

62 represent standards mounted on the table 12. Said standards support a paste trough 63 and paste-applying rolls 64, 65, associated with the trough. The said rolls are rotated in the directions indicated by the arrows in Fig. 10, by means of a driving pulley 66, pulleys 67, 68, and crossed belts 69 connecting the same. The operator inserts the heel lift between the rolls, and the lifts in passing between the rolls are coated with cement and delivered in convenient relation to the bed, the upper roll 65 being movable toward and from the lower roll to permit a lift of any desired thickness to pass between the rolls. Cement may be supplied to the trough 63 by a conduit 70 communicating with a suitable reservoir 71 and preferably provided with an adjustable regulating gate 72.

The table is preferably located in a recess in a supplemental table 74 (Figs. 1 and 2), having a curb 75, a series of semi-partitions 76 forming a series of pockets 77 adapted to contain heel lifts, there being preferably as many pockets as there are sizes of lifts, each pocket containing lifts of a given size. The pockets are open at their inner ends and the partitions 76 are radially arranged so that the operator can conveniently select lifts from the different pockets, coat them with cement and assemble them on the bed.

For storing the clamped heels while they are drying, I provide an endless belt or carrier 79 mounted on pulleys 80, 81, one below and the other above the table 12, the belt extending in elongated vertical stretches between the pulleys. The belt is provided with a plurality of spring clips 83 each adapted to hold a heel 14, confined by a pair of clamps, as shown by Figs. 1, 6, and 7. A portion of the edges of the front stretch of the carrier are guided by fixed trough-shaped guides 85 which laterally support the portion of the carrier having the clips that are located in position to receive the clamped heels removed from the bed by the operator, these supported clips being in position to enable the operator to conveniently insert in them the clamped heels removed by him from the bed. The operator after removing each clamped heel inserts it in one of the clips supported by the guides 85, and

moves the belt a short distance to carry the inserted heel away from the point where it was inserted. In due course, all the clips are charged with clamped heels, and when this is the case, each movement of the carrier by the operator carries forward a freshly inserted heel from the guides and brings into the guides a dried heel, which the operator removes from the carrier preparatory to removing the clamp in the manner described, the length of the carrier being such that a heel has time to dry in passing step by step from the point where it was engaged with the carrier back to said point.

The operation may be briefly described as follows: the operator selects a lift from the pockets 77, passes it between the cementing rolls, deposits it on the bed, and repeats this operation until the lifts for a heel are assembled. He then moves the presser over the assemblage of lifts, this operation pressing the rear jaw against the rear ends of the lifts and forcing their breast ends against the gage plate and between the side jaws. The presser is then depressed and the clamps are applied. The presser is then removed and the clamped heel is disengaged from the pins 50, and inserted in one of the supported clips. The carrier is then moved to bring a clip containing a dried heel into supported position and the dried heel is removed and placed on the bed, in engagement with the pins 50. The pins are then retracted and remove the clamps from the dried heel which is now completed, so far as this machine is concerned, the side jaws being at the same time projected and ready to laterally position the front ends of the next assemblage of lifts.

I claim:—

1. A heel building machine comprising a bed adapted to support a heel composed of a pile of cement-coated lifts, a presser adapted to compress the heel supported by the bed, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, and clamps adapted to engage said exposed parts while the heel is under pressure, to maintain the compression of the heel, the compressed heel and the clamps engaged, therewith being removable from the bed and adapted to be stored while the cement is setting.

2. A heel building machine comprising a bed adapted to support a heel composed of a pile of cement-coated lifts, a presser adapted to compress the heel supported by the bed, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, clamps adapted to engage said exposed parts while the heel is under pressure, to maintain the compression of the heel, and mechanism for applying the clamps to the compressed heel.

3. A heel building machine comprising a

- bed adapted to support a heel composed of a pile of cement-coated lifts, a presser adapted to compress the heel supported by the bed, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, clamps adapted to engage said exposed parts while the heel is under pressure, to maintain the compression of the heel, and mechanism for applying the clamps to the compressed heel, said mechanism and the clamps being provided with coupling members whereby the clamps may be withdrawn from a heel replaced on the bed.
4. A heel building machine comprising a bed, a presser movable to and from a position over the bed, means for forcing the presser toward the bed to compress an interposed heel, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, and clamps adapted to engage said exposed parts while the heel is under pressure.
5. A heel building machine comprising a supporting bed, a presser adapted to compress a heel supported by the bed, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, clamps adapted to engage said exposed parts and provided with coupling members, clamp-applying and removing slides having complemental coupling members, and means for moving the slides longitudinally to apply and remove the clamps.
6. A heel building machine comprising a supporting bed, a presser adapted to compress a heel supported by the bed, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, clamps adapted to engage said exposed parts and provided with coupling members, clamp-applying and removing slides having complemental coupling members, an operating lever and intermediate connections between the operating lever and the slides, whereby movements of the lever cause the slides to move simultaneously in opposite directions to apply and remove the clamps.
7. A heel building machine comprising a supporting bed, a presser adapted to compress a heel supported by the bed, the bed and presser being formed to expose parts of the bottom and top surfaces of the heel, clamps adapted to engage said exposed parts and provided with coupling members, clamp-applying and removing slides having complemental coupling members, an operating lever and a pair of bell-crank levers geared together and engaged with the slides, the operating lever being connected with one of said bell-crank levers, and adapted to oscillate the same horizontally.
8. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a swinging rod adapted to support the presser, either in a bed-exposing position or a heel-pressing position, a treadle engaged with said rod to depress the presser and compress the heel, and clamps adapted to engage the said exposed parts of the heel.
9. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a swinging rod adapted to support the presser, either in a bed-exposing position or a heel-pressing position, a treadle engaged with said rod to depress the presser and compress the heel, means for yieldingly supporting the rod and presser in a raised position, and clamps adapted to engage said exposed parts of the heel.
10. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a fixed gage adapted to position the breast ends of lifts assembled on the bed, a movable rear jaw adapted to engage the rear ends of the lifts and press their breast ends against the gage, means for moving said jaw toward and from the gage, means for operating the presser to compress the positioned lifts, and clamps adapted to engage said exposed parts of the heel.
11. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a fixed gage adapted to position the breast ends of lifts assembled on the bed, a movable rear jaw adapted to engage the rear ends of the lifts and press their breast ends against the gage, side jaws adapted to laterally position the front ends of the lifts, means for moving said rear jaw to and from its operative position, means for operating the presser to compress the positioned lifts, and clamps adapted to engage said exposed parts of the heel.
12. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a fixed gage adapted to position the breast ends of lifts assembled on the bed, a movable rear jaw adapted to engage the rear ends of the lifts and press their breast ends against the gage, movable side jaws adapted to laterally position the front ends of the lifts, means for moving the rear and side jaws to and from their operative positions, means for operating the presser to compress the positioned

lifts, and clamps adapted to engage said exposed parts of the heel.

13. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a fixed gage adapted to position the breast ends of lifts assembled on the bed, a movable rear jaw adapted to engage the rear ends of the lifts and press their breast ends against the gage, a swinging rod adapted to support the presser either in a bed-exposing position or a heel-pressing position, means for depressing said rod and presser to compress the heel, connections between the rod and the rear jaw whereby said jaw is moved to and from its operative position by movements of the rod, and clamps adapted to engage the said exposed parts of the heel.

14. A heel building machine comprising a heel-supporting bed, a presser adapted to compress a heel on the bed, the presser and bed being formed to expose parts of the top and bottom surfaces of a heel, a fixed gage adapted to position the breast ends of lifts assembled on the bed, a movable rear jaw adapted to engage the rear ends of the lifts and press their breast ends against the gage, movable side jaws adapted to position the front ends of the lifts, mechanism for operating the presser and to compress the heel, connections between said presser-operating mechanism and the rear jaw for moving said jaw to and from its operative position, clamps adapted to engage the said exposed parts of the compressed heel, clamp-operating mechanism for simultaneously applying and removing the clamps and connections between the clamp-operating mechanism and the side jaws for moving said jaws to and from their operative positions.

15. In a heel building machine in combination, a heel-supporting bed, a presser adapted to compress a pile of cement-coated lifts thereon, the bed and presser being formed to expose parts of the top and bottom surfaces of the heel, clamps adapted to engage said exposed parts while the heel is under pressure, the heel and clamp being removable from the bed, and a heel-storing carrier having means for engaging a plurality of clamped heels, said carrier being movable to remove freshly clamped heels from the operator's station and return dried heels thereto.

16. In a heel building machine in combination, a heel-supporting bed, a presser adapted to compress a pile of cement-coated lifts thereon, the bed and presser being formed to expose parts of the top and bottom surfaces of the heel, clamps adapted to engage said exposed parts while the heel is

under pressure, the heel and clamps being removable from the bed, and a heel-storing carrier composed of an endless belt, a portion of which is located near the operator's station, said belt being provided with heel-engaging clips.

17. In a heel building machine in combination, a heel-supporting bed, a presser adapted to compress a pile of cement-coated lifts thereon, the bed and presser being formed to expose parts of the top and bottom surfaces of the heel, clamps adapted to engage said exposed parts while the heel is under pressure, the heel and clamps being removable from the bed, and a heel-storing carrier composed of an endless belt, a portion of which is located near the operator's station, said belt being provided with heel-engaging clips, and means for laterally supporting the said portion of the belt.

18. In a heel building machine in combination, a heel-supporting bed, a presser adapted to compress a pile of cement-coated lifts thereon, the bed and presser being formed to expose parts of the top and bottom surfaces of the heel, clamps adapted to engage said exposed parts while the heel is under pressure, the heel and clamps being removable from the bed, a heel-storing carrier composed of an endless belt, a portion of which is located near the operator's station, said belt being provided with heel-engaging clips, and fixed trough-shaped guides engaged with the edges of the said portion of the belt.

19. In a heel building machine, a detachable clamp comprising a body portion formed as a coupling member adapted to detachably engage a complementary coupling member forming a part of the machine, and pressure-maintaining jaws projecting from said body portion and adapted to bear simultaneously on the top and bottom surfaces of a heel supported by the machine, said jaws being separated by an invariable space corresponding to the thickness of a compressed heel.

20. In a heel building machine, a detachable clamp comprising a body portion internally recessed to receive a pin forming a part of the machine, and pressure-maintaining jaws projecting from said body portion and adapted to bear simultaneously on the top and bottom surfaces of a heel supported by the machine, the clamp being removable from said pin.

In testimony whereof, I have affixed my signature, in presence of two witnesses.

WENDELL P. BOSWORTH.

Witnesses:

FRANK W. CRANE,
E. M. SHEEHAN.