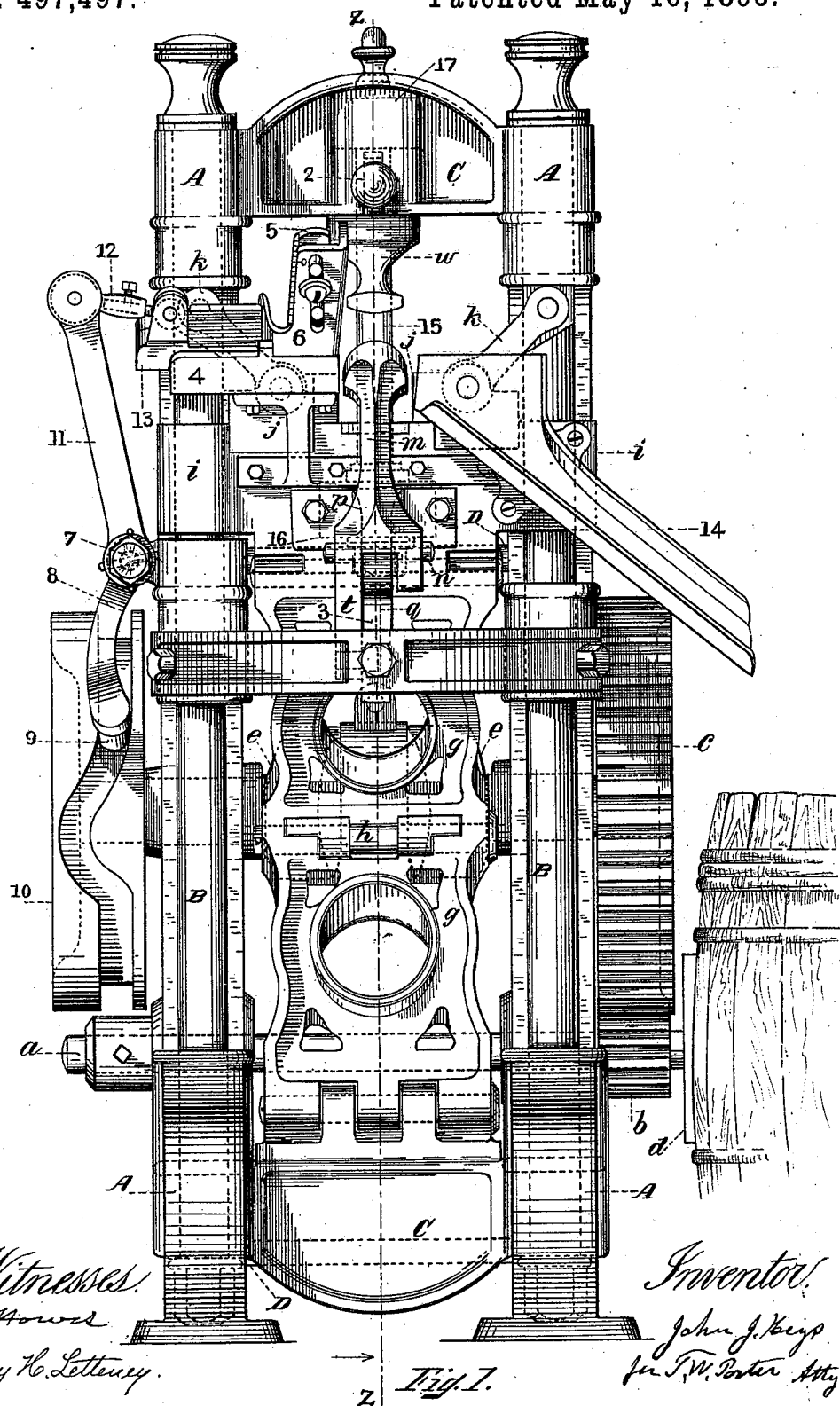


J. J. HEYS.
HEEL PRESSING MACHINE.

No. 497,497.

Patented May 16, 1893.



Witnesses:
E. W. Howard
Henry C. Lettucey.

Inventor:
John J. Heys
per T. W. Porter Atty

(No Model.)

4 Sheets—Sheet 2.

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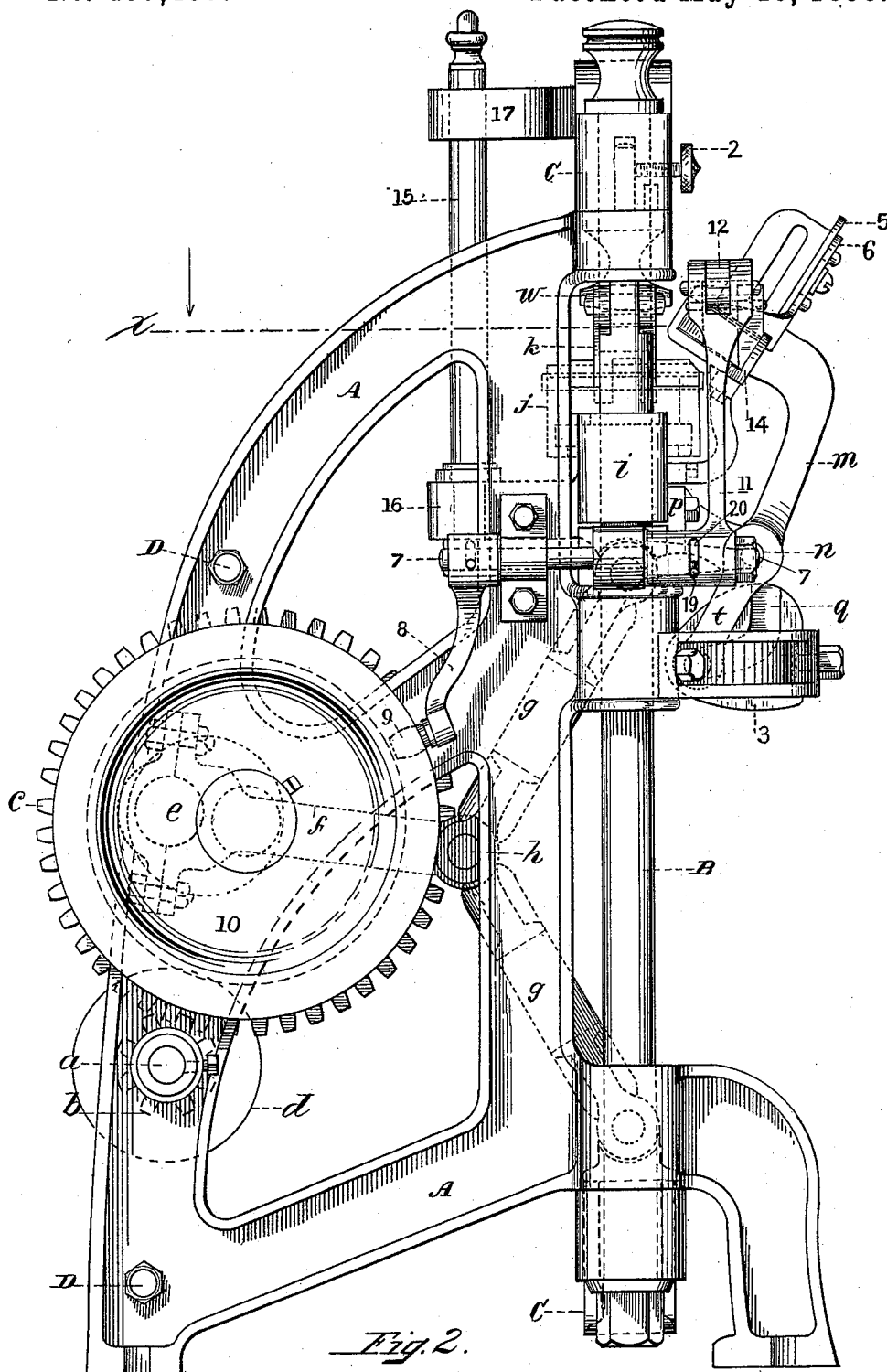


Fig. 2.

Witnesses: L. W. Howell
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Inventor: John J. Heys
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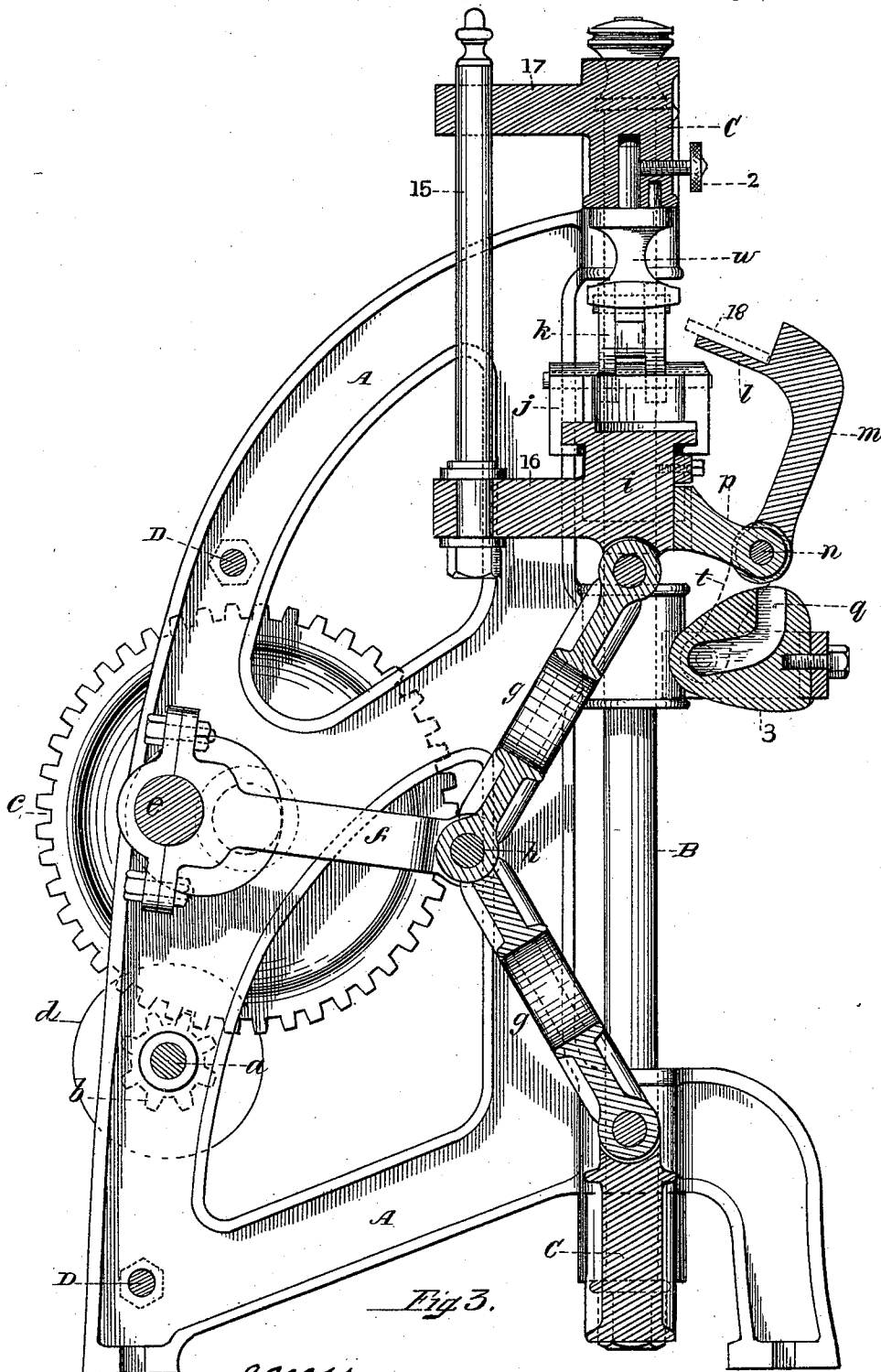
(No Model.)

4 Sheets—Sheet 3.

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Witnesses, L. W. Howes
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Inventor) John J. Keys
per J. W. Porter Atty

(No Model.)

4 Sheets—Sheet 4.

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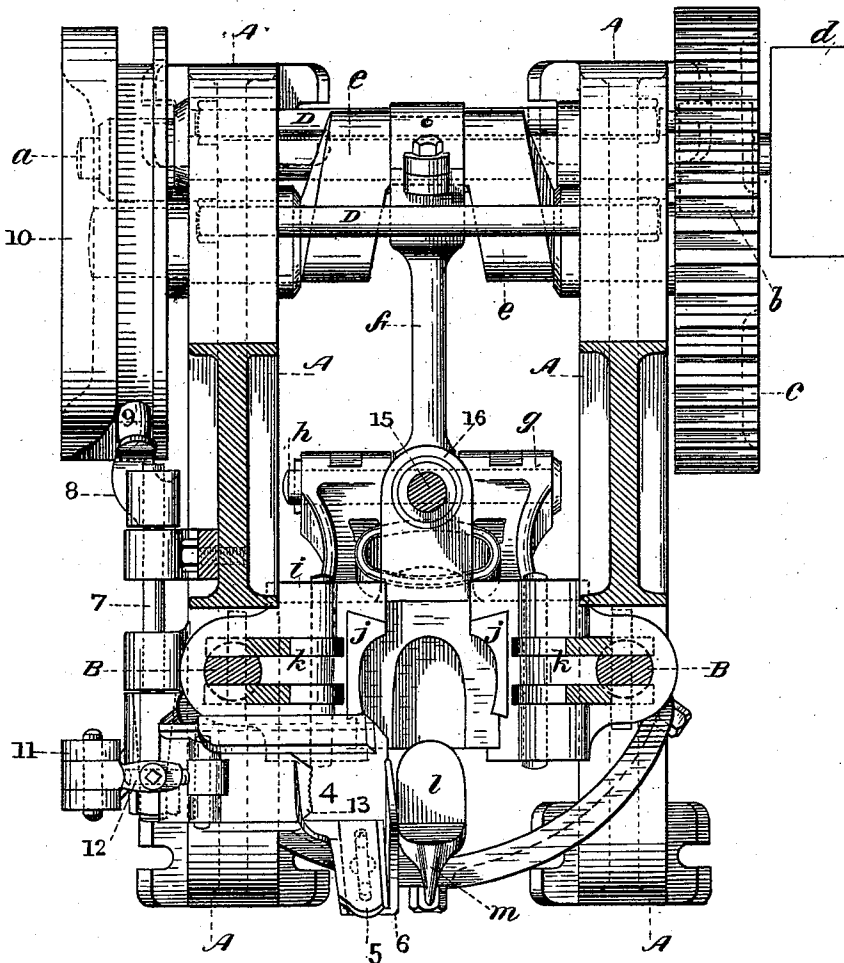


Fig. 4

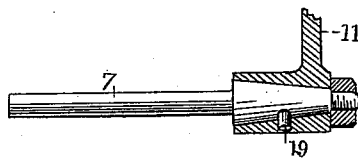


Fig. 5.

Witnesses.
L. W. Howe
Henry H. Letteney.

Inventor.
John J. Keys
per J. M. Foster Atty

UNITED STATES PATENT OFFICE.

JOHN J. HEYS, OF LYNN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
MAURICE V. BRESNEHAN, OF SAME PLACE.

HEEL-PRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 497,497, dated May 16, 1893.

Application filed January 16, 1893. Serial No. 458,453. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HEYS, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Heel-Pressing Machines, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings Figure 1 is a front elevation of my machine. Fig. 2 is a side elevation taken at the left of Fig. 1. Fig. 3 is a vertical sectional elevation on line Z, Fig. 1. Fig. 4 is a horizontal sectional plan view taken on line X, Fig. 2. Fig. 5 is a detail sectional view.

The object of my invention is to automatically feed the cut and nailed together heels of boots and shoes to an automatic pressing device constructed and arranged to press the heel blanks on every side; which next delivers the blank out of the machine by the act of admitting another blank to the pressing devices.

The invention consists in a machine embodying divers devices and combinations thereof which will be next herein described in connection with the accompanying drawings, and then defined in the appended claims.

Referring again to said drawings, A A represent the side frames of my machine, which are formed of cast-iron of adequate size and strength, and which at the front are reinforced by the wrought metal rods B B which are inserted in hollow bosses of the frame and at their ends are secured by nuts, as shown. Said side frames are united by the cross girts C C, which also engage said rods B B, and the girt rods D D, as shown. A pinion shaft *a* journaled in the lower portion of the machine carries a pinion *b* that meshes with and drives gear *c*, it being itself driven by a belt on pulley *d* shown in part in Fig. 1 and fully in Fig. 4. Said gear *c* is mounted on crank shaft *e*, which shaft impels pitman *f* which at its opposite end is connected with pivot rod *h* that is arranged at the meeting ends of knuckle joint *g g*, which at its lower end is pivoted to lower girt C, while at its upper end it is pivoted to cross head *i* which it causes to move up and down as it is crooked and

straightened through pitman *f* and crank shaft *e* as rotation of the gears takes place.

Upon cross head *i* are arranged the curved molds *j j* that press the side and rear edges of the heel blanks. Said molds *j* are pivoted by links *k* to rods B, so that when the cross head is in its depressed position said link draws the molds farthest apart and when it is in its most elevated position the molds will be nearest together, they sliding on the cross head and thus alternately compressing the heel blank and then releasing it. The top side or plane of the heel blanks is pressed by the broadened end of die *w* the stem of which is inserted in top girt C where it is secured by set screw 2, and the breast of the heel bears against the shoulder at the intersection of arm *m* and carrier *l*. The heel blanks are carried between the half dies *j* by carrier *l* extended from arm *m* pivoted at *n* to a projection *p* extending from cross head *i*; while an extension *t* of arm *m* passes below pivot *n* and carries a trundle that enters the curved slot *q* cut in the side of block 3, secured at the front of the machine. The office of said groove and the engagement of the trundle of projection *t* therein is that as the cross head rises the arm *m* will be swung on pivot *n* to the rear, and the part *t* will move to the front; and the reverse movement occurs when the cross head is lowered. The heel blanks are held and delivered to the molding dies by a trough-like piece, 4, supported by cross head *i*, which piece has an upwardly extending arm 5, to which is adjustably secured the angle plate 6, which is at such an angle that the heel blanks can be stacked with their breasts to the front against its two sides and will slide downward as the bottom one is removed from the stack onto carrier *l*.

To move the bottom heel blank from the stack in angle plate 6 to carrier *l*, a rock shaft 7 is journaled to the side of the machine and on the rear end of said shaft is secured arm 8, carrying trundle 9, that travels in the cam groove in the periphery of wheel 8 secured on crank shaft *e*; an arm 11 is secured to the front end of shaft 7, and rising above trough 4, it carries a pitman 12 that is connected with and reciprocates expeller 13 sliding in trough 4, which travels just far enough to

force the bottom heel blank onto carrier *l* and thereby forcing off the preceding blank that had been pressed. A chute 14 is so arranged that it receives and conducts away the heels

5 as they leave carrier *l* as already explained.

As the strain on cross head *i* is considerable, I extend an arm 16 therefrom to the rear, and in this arm I secure the rod 15, which passes through arm 17, also extending to rear

10 from upper girt C, so that said rod will slide therein and will aid in holding cross head *i* true and level at all times.

The molds *j* can be formed separate from the main part that is pivoted by links *k*, so that when it is requisite to change to a larger or smaller size of heels it will only be necessary to change the mold proper, leaving in the part so pivoted. The recess in cross head *i* is somewhat larger than carrier *l* and

20 on said carrier is removably secured a plate 18, which will be changed as different sized heels are to be pressed; said plate, when lowered, resting on cross head *i* and being inclosed by the molds when molding the heel.

25 Among the advantages of my machine are the facts that the fingers of the operator are never nearer the molds than when stacking the heels in the crib; so that there is no possible danger of mutilation; and by such system of feeding a number of heels to the machine at the same time one boy can tend two

30 or more machines, and if desired, the machine may be made duplex; that is two machines run by the same belt, so as to bring both machines into as small a compass as possible, and in such case one machine would be arranged to be under pressure when the heel in the other was liberated.

35 In Figs. 2 and 5 the arbor 7, where it passes through the hub of arm 11, is shown by dotted lines as formed conical; and a pin 19, is rigidly inserted in said arbor; while the hub

of arm 11 is formed with a slot 20 cut through its shell to receive said pin; in order that if arm 11 should meet with undue resistance 45 said arbor could move in its hub to the distance required by cam 10, and so remain till arm 11 is liberated.

I claim as my invention—

1. In a heel pressing machine the combination of pinion *b* duly rotated, gear *c* on crank shaft *e* impelled by said pinion, pitman *f* driven by shaft *e* and arranged to actuate knuckle joints *g g*; cross head *i*, molds *j j*, top mold *w*, and carrier arm *m* with carrier 55 *l*, all substantially as specified.

2. The combination of sliding molds *j j*, top mold *w*, the rising and falling cross head and carrier *l* extended from pivoted arm *m*, substantially as specified. 60

3. In combination with cam 10, and arm 8, thereby driven, the arbor 7 impelled by said cam and its arm and the arm 11, carrying expeller 13, and secured to said arbor by a conical bearing and a pin inserted in a slot in its 65 hub; whereby said arbor can move when arm 11, is held fast, substantially as specified.

4. The die blocks *j* pivotally attached and resting on the moving cross head *i* overhead mold *w*, carrier *l*, arranged to fit in a cavity 70 in cross head *i*, arm *m* and block 3, formed with groove *q* to receive the trundle of said arm, all substantially as specified.

5. The combination with the molding devices of expeller 13 connected by a pitman 75 with arm 11, said arm, the rock shaft 7, arm 8, cam wheel 10, and a trundle by which said arm 8 is in contact with said cam wheel, all substantially as specified.

JOHN J. HEYS.

Witnesses:

T. W. PORTER,
L. W. HOWES.