

Jan. 20, 1931.

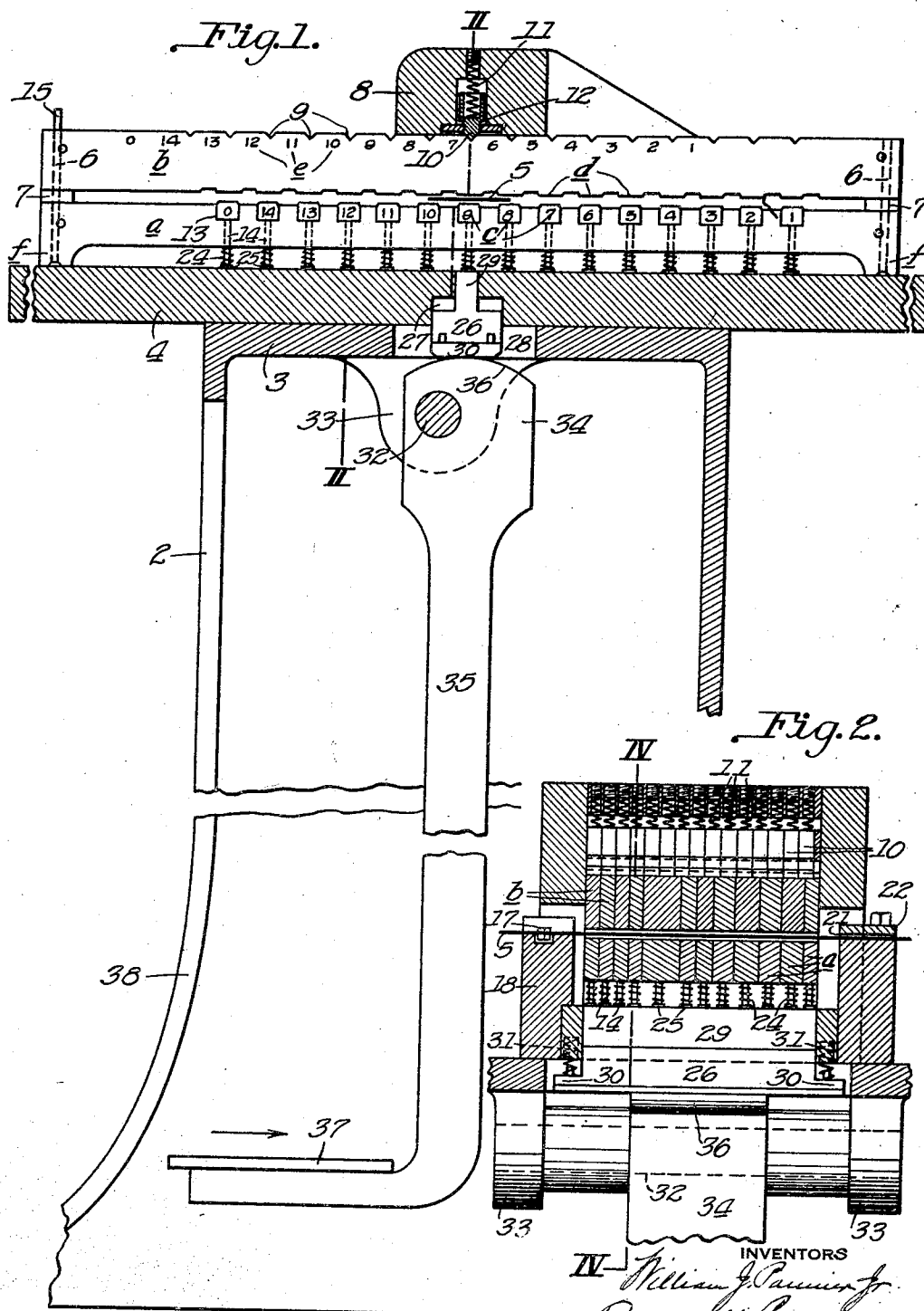
W. J. PANNIER, JR., ET AL

1,789,831

EMBOSSING MACHINE

Filed March 26, 1929

2 Sheets-Sheet 1



Jan. 20, 1931.

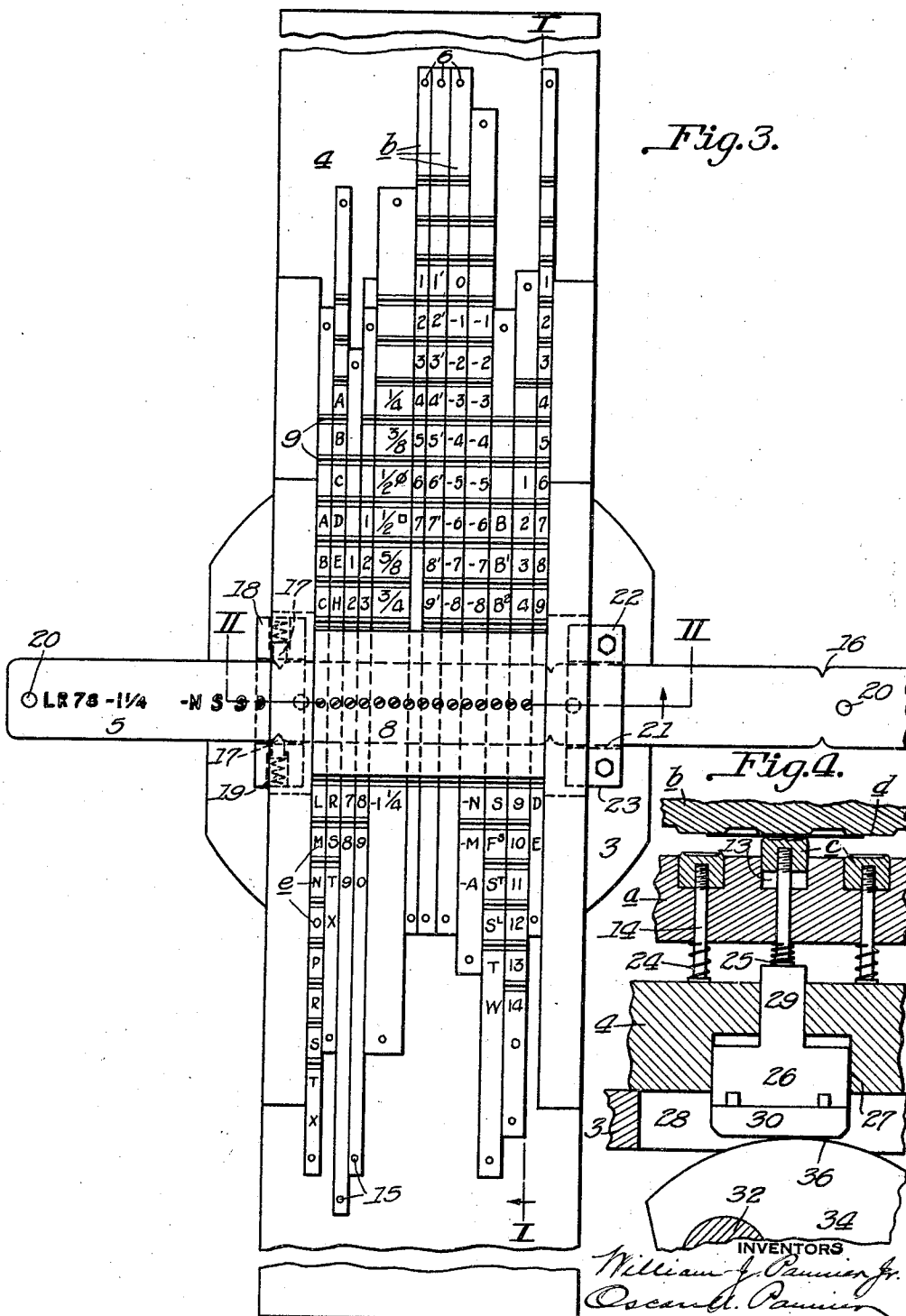
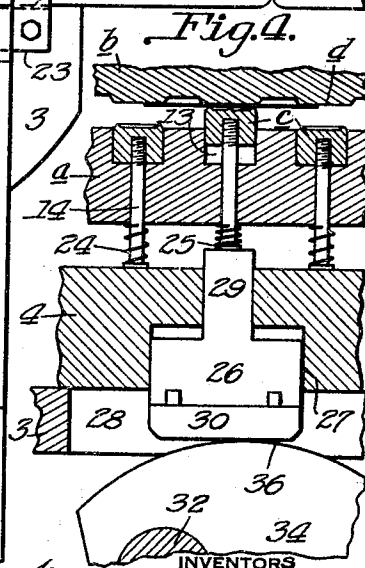
W. J. PANNIER, JR., ET AL

1,789,831

EMBOSSING MACHINE

Filed March 26, 1929

2 Sheets-Sheet 2



INVENTORS
 William J. Pannier Jr.
 Oscar L. Pannier
 by C. M. Clarke
 Attorney

UNITED STATES PATENT OFFICE

WILLIAM J. PANNIER, JR., OF BELLEVUE, AND OSCAR M. PANNIER, OF KILBUCK TOWNSHIP, ALLEGHENY COUNTY, PENNSYLVANIA, ASSIGNORS TO PANNIER BROTHERS STAMP COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

EMBOSSING MACHINE

Application filed March 26, 1929. Serial No. 350,057.

Our invention consists of an improvement in embossing machines for metallic tags or the like. It has in view to provide means for stamping or embossing a strip of thin metal or other suitable material by means of a plurality of movable stamping elements capable of being adjusted to various combinations in a simple, expeditious and efficient manner.

In general, the machine comprises a series of pairs of spaced apart stamping bars, each pair being longitudinally adjustable across the path of a transversely movable blank, with means for locating and temporarily holding the bars in position, means for temporarily holding the blank in place, means effecting operative closure of the type member of one of the bars towards the other, and various other features of construction and operation, as shall be more fully hereinafter described.

The invention is generally similar to that of our companion application filed herewith, Ser. No. 350,056.

Referring to the drawings showing one preferred embodiment of the invention:

Fig. 1 is a vertical sectional view on the line I—I of Fig. 3, partly broken away;

Fig. 2 is a cross section on the line II—II of Fig. 1;

Fig. 3 is a plan view of the machine showing a strip passing therethrough;

Fig. 4 is a sectional detail view on the line IV—IV of Fig. 2.

Referring to the drawings, the machine is provided with a base 2 of any suitable construction adapted to be mounted on the floor, extending upwardly in the manner of a pier, and providing at its upper end a supporting top or plate 3.

A supporting base 4 of suitable length is mounted on plate 3 and secured thereto by any suitable means, such base extending laterally at each side, in the general direction of the stamping bars, and providing ample longitudinal support therefor.

The upper surface of base 4 is planed smooth, providing a flat surface closely adjacent to or a sliding support for the lower ends of the thrusting pins for the stamping

type of the lower member *a* of the series of two-part stamping bars *a* and *b*.

Such bars are provided with male and female stamping elements as movable type *c* and abutments *d* respectively, between and across which the longitudinal strip or blank 5 is passed, for operation thereon by the stamping elements.

As shown in Fig. 3, the sets of bars are assembled side-by-side, of varying widths dependent on their stamping characters, and are so arranged that each individual set may be adjusted longitudinally, to bring the particular pair of stamping elements *c* and *d* into registering position longitudinally of the path of movement of blank 5.

For such purpose both members *a* and *b* are connected together by any suitable means as interfitting connecting pins 6 at each end, operating to hold the two parts in registering spaced apart position by intervening lugs or spacers 7 and permitting the type *c* of lower bar *a* to be thrust upwardly toward the upper bar *b*.

An upper bridge piece 8 extends across the top of the machine and provides a limiting bearing for the upper edge of each bar *b* to resist the stamping pressure when the type *c* of the lower bar are individually raised towards it. Upper bar *b* is provided with a series of notches 9 corresponding with the transverse center line and spacing of each operating set or pair of type *c* and abutments *d*.

Automatic holding pins 10 are mounted upwardly within the bridge 8 having blunt V-shaped terminals at their lower ends and bearing against an inserted spring 11 in the hollow upper end of pins 10, with limiting shoulders 12 engaging a plate or shoulder. By such means the pair of bars *a—b* may be moved longitudinally in either direction, and will be held for operation at the particular position desired.

For the purpose of indicating to the operator the position of any particular pair of stamping elements *c—d*, when in proper registering position with the blank, the upper edge portions of bar *b* are identified by marking, as by numerals or letters *e*, corresponding

to the numeral or letter in such stamping position, the indicating marking being, however, located just beyond the bridge 8 when in such position. In other words, the marking positions are longitudinally off-set for visibility and are exposed just beyond the edge of the bridge at the time when the corresponding stamping elements are in middle registering position, as in Fig. 1.

Each pair of stamping bars *a-b* is adjusted longitudinally in one direction or the other to bring the proper marking or stamping abutments into register with the blank by grasping the extended end 15 of one of the pins 6, the lower bar *a* preferably having supporting pedestals *f* for such purpose. The bars *a* may also rest upon the extended stems of their type members *c*.

By such adjustment any particular pair of stamping bars may be moved longitudinally in either direction over the smooth upper surface of base 4 and adjusted to proper position for operation when they will be held by the automatically operating blunt wedge or point 10.

Blank 5, which may be fed from a reel in convenient location for such purpose, is provided at suitable intervals with edge notches 16, by which in the same manner the blank may be engaged and temporarily held by similar blunt pointed spring-pressed pins 17, one at each side of the blank. Such pins are mounted in suitable receiving bearings 18 on the frame or its bridge, the pins being normally extended by re-acting springs 19, as clearly shown in Fig. 3.

The blank 5 being previously provided with notches 16 and securing holes 20, may after stamping be reversely folded at the location of each pair of notches 16, facilitating its separation by bending into individual tags after being embossed, as is well understood in the art. At the opposite side of the machine it is provided with a comparatively narrow guiding slot 21 below a cover plate 22 of supporting abutment 23, by which the blank 5 may be introduced and guided through the machine, and between the members of the several series of stamping bars *a-b*.

The stamping type *c* of bar *a* are set in spaced sockets 13 in the edge of the bar having stems 14 which extend through and below the bar and bear by their heads upon the plane upper face of base 4.

Springs 24 between the lower face of the bar *a* and terminal heads 25 of the pins 14 normally hold the type retracted and also hold all the pins extended. Springs 24 may be sufficiently strong to support the pair of bars upwardly above the base in operative position.

It is designed that but one type *c* of each bar *a* shall be elevated at a time and that a transverse row of such type in register shall

be elevated together, the other type remaining inoperative.

For the purpose of thus raising all of such individual type of a registering cross row thereof against the registering cross row of abutments *d* of the upper bars *b* at the same time, we provide means for elevating such row of type together by their pins 14.

At the middle position of the machine, corresponding to the zone of pressure on the blank, a lifting gudgeon or block 26 is mounted for vertical movement in a socket 27 of base 4 for sliding movement therein. Plate 3 of the frame is provided with a registering clearance opening 28 and gudgeon or head 26 is provided with a lower bearing terminal face. An extension 29 of the gudgeon projects upwardly through an opening in base 4 in the form of a narrow lifting bar, adapted to engage and lift all of the pins of the several type of a registering cross row, as in Fig. 4.

The lower bearing face of the gudgeon is also extended crosswise, and its ends have bearing flanges or lugs 30 against which bear springs 31 for lowering the gudgeon to normal position after each operation. When so lowered the top of bar 29 is flush with or below the upper surface of base 4 as in Fig. 1, so that the bars may be easily shifted by their pin heads across the surface.

Pivotaly mounted on cross shaft or pin 32 carried by lugs 33 of plate 3 is the upper end 34 of the main operating lever 35. The upper face of head 34 of the lever is provided with a curved bearing surface 36, eccentrically developed with relation to the center of pivoting bearing pin 32, by off-setting such pin mounting, in the manner shown in Fig. 1. The lower end of lever 35 is provided with a treadle extension 37 extending forwardly toward the front opening 38 of base 2, whereby the operator may thrust lever 35 backwardly by such treadle engagement.

In the case of extra width of the strip 5, it may be embossed with two or more longitudinal rows of stamped characters by subjecting it to repeated operation. In such case the guiding and holding devices should be arranged accordingly.

The construction of the machine and its manner of operation will be readily understood and appreciated from the foregoing description. It provides simple, efficient and continuously operative means for effecting the stamping of a strip of metal or the like sectionally, and of providing for an extremely wide range of combinations of stamping or marking units.

It will be obvious that the number of the side-by-side bars of the series of pairs of stamping bars may be varied by increasing or decreasing them, or substituting them by others, or that some of the bars may be used as blanks, without stamping abutments, should spacing be desired.

Also, that various other changes or modifications as to size, dimensions, or detail construction of the different elements of the invention may be readily made by the skilled mechanic, but that all such changes are to be understood as within the scope of the following claims.

What we claim is:

1. An embossing machine having a lower supporting base and an upper resisting face, a pair of fixedly spaced apart longitudinally movable stamping bars between the base and said face, stamping units in one of said bars, and means for moving one of said units towards the other bar.

2. An embossing machine having a lower supporting base and an upper resisting face, a pair of fixedly spaced apart longitudinally movable stamping bars between the base and said face, stamping units in one of said bars, means for moving one of said units towards the other bar, and means for retracting it.

3. An embossing machine having a lower supporting base and an upper resisting face, a pair of fixedly spaced apart longitudinally movable stamping bars between the base and said face, stamping units in one of said bars, means for moving one of said units towards the other bar, and means for holding the bars together longitudinally.

4. An embossing machine having a lower supporting base and an upper resisting face, a pair of fixedly spaced apart longitudinally movable stamping bars between the base and said face, stamping units in one of said bars, means for moving one of said units towards the other bar, and means for holding said bars in longitudinally adjusted position.

5. An embossing machine having a flat supporting base providing a trackway, an upper pressure opposing bridge, a pair of connected upper and lower fixedly spaced apart stamping bars slidably mounted on the base, means for temporarily holding the bars at varying longitudinal positions, a plurality of stamping type movably mounted in one of said bars, and means for moving one of said type towards the other bar.

6. An embossing machine having a flat supporting base providing a trackway, an upper pressure opposing bridge, a pair of upper and lower fixedly spaced apart stamping bars slidably mounted on the base, means for temporarily holding the bars at varying longitudinal positions, a series of spaced abutments on the lower side of the upper bar, a corresponding series of spaced stamping type movably mounted in the lower bar, and means for moving one of said type towards an opposite abutment of the upper bar.

7. An embossing machine having a flat supporting base providing a trackway, an upper pressure opposing bridge, a pair of upper and lower fixedly spaced apart stamping bars slidably mounted on the base, means

for temporarily holding the bars at varying longitudinal positions, a series of spaced abutments on the lower side of the upper bar, a corresponding series of spaced stamping type movably mounted in the lower bar, means for moving one of said type towards an opposite abutment of the upper bar, and means for retracting the type.

8. In combination with a lower supporting base and an upper pressure opposing bridge, a lower type bar having a series of type mounted therein each having a spring retracted stem extending towards the base, an upper co-acting stamping bar engaging the bridge, means holding the bars in fixedly spaced relationship, and means for thrusting one of the type upwardly by pressure against its stem.

9. In combination with a lower supporting base and an upper pressure opposing bridge, a lower type bar having a series of type mounted therein each having a spring-retracted stem extending towards the base, an upper co-acting stamping bar engaging the bridge, means holding the bars in fixedly spaced relationship, a plunger slidably mounted in the base, and means for thrusting it upwardly against the type stem.

10. In combination with a lower supporting base and an upper pressure opposing bridge, a lower type bar having a series of type mounted therein each having a spring-retracted stem extending towards the base, an upper co-acting stamping bar engaging the bridge, means holding the bars in fixedly spaced relationship, a plunger slidably mounted in the base, means for thrusting it upwardly against the type stem of one of said series, and means for lowering the plunger.

11. In an embossing machine, the combination of a plane surface supporting base, an upper bridge wall, intervening guiding and holding means for a blank, a series of pairs of fixedly spaced apart bars between the base and bridge wall providing clearance for a transversely located blank, one of the bars of each pair having a row of individually movable type, and means for thrusting a single type of each of such bars towards the other companion bar.

12. In an embossing machine, the combination of a plane surface supporting base, an upper bridge wall, individually adjustable pairs of fixedly spaced apart upper and lower bars between the base and bridge wall, a plurality of spring-retracted type in the lower bars, a transverse plunger in the base adopted to engage and thrust upwardly a transverse registering series of type, means for actuating the plunger, and means for introducing a blank between such series of type and the upper bar.

13. A composite stamping unit for an embossing machine consisting of a pair of fixedly connected and spaced apart upper and

lower bars, the upper bar having spaced bearing faces and the lower bar having correspondingly spaced movable type provided with spring-retracted stems.

14. A composite stamping unit for an embossing machine consisting of a pair of fixedly connected and spaced apart upper and lower bars, the upper bar having spaced bearing faces and the lower bar having correspondingly spaced movable type provided with spring-retracted stems extending downwardly through the bar and terminating on a common level.

15. A composite stamping unit for an embossing machine consisting of a pair of fixedly connected and spaced apart upper and lower bars, the upper bar having on its under edge spaced bearing faces and on its upper edge correspondingly spaced holding notches, and the lower bar having correspondingly spaced movable type provided with spring-retracted heads extending downwardly through the bar.

16. A composite stamping unit for an embossing machine consisting of a pair of fixedly connected and spaced apart upper and lower bars, the upper bar having on its under edge spaced bearing faces and on its upper edge correspondingly spaced holding notches and indicating marks, and the lower bar having correspondingly spaced movable type provided with spring-retracted heads extending downwardly through the bar.

17. In an embossing machine as described, a supporting base having a plane upper face and a transverse groove, an upwardly movable lifting bar movable through said groove, a series of lower type bars supported on the base transversely of its lifting bar each having a plurality of stamping type provided with spring-retracted stems adapted for selective location in register with the lifting bar, and upper spaced apart resisting bars fixedly connected with the lower bars.

In testimony whereof we hereunto affix our signatures.

WILLIAM J. PANNIER, JR.
OSCAR M. PANNIER.

50

55

60

65