

May 28, 1929.

M. A. G. LUEDTKE ET AL

1,714,795

EMBOSSING MACHINE

Filed July 25, 1927

5 Sheets-Sheet 1

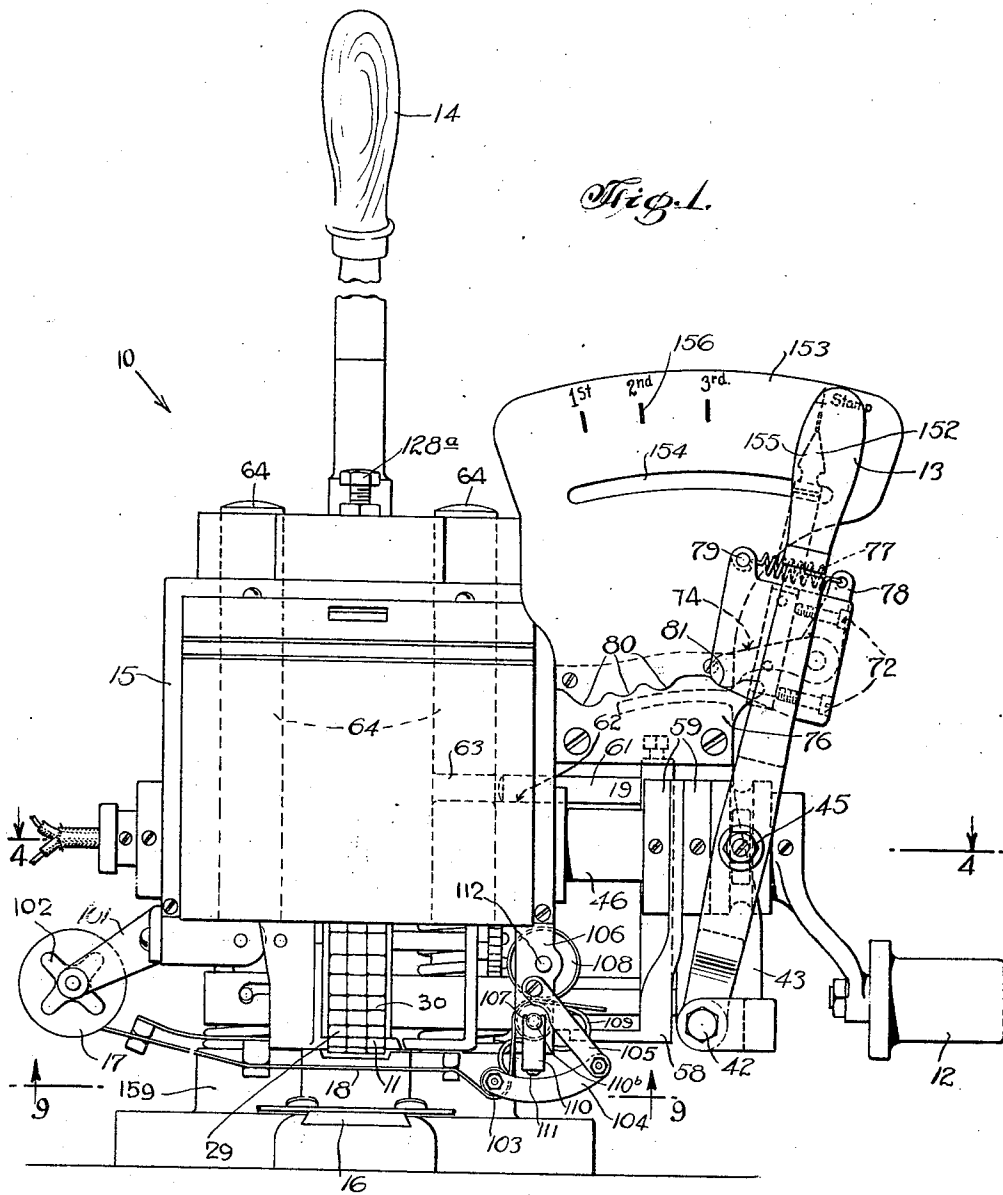
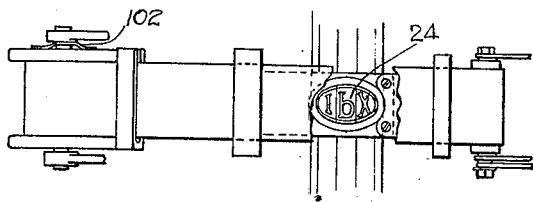


Fig. 9.

Max A. G. Liedtke
and Hugo Hoffmann
INVENTORS

BY
Samuel J. Friedman
ATTORNEY

May 28, 1929.

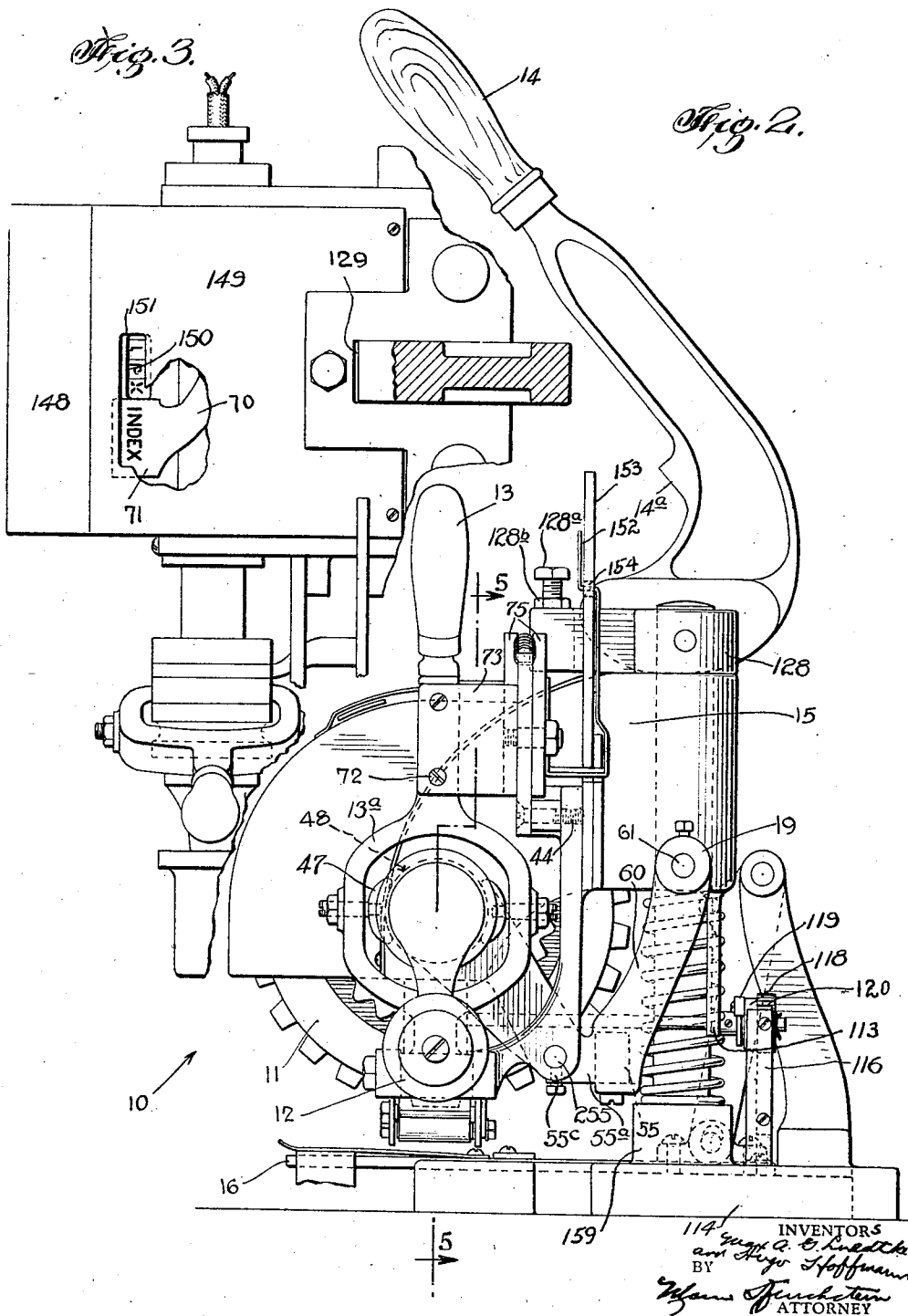
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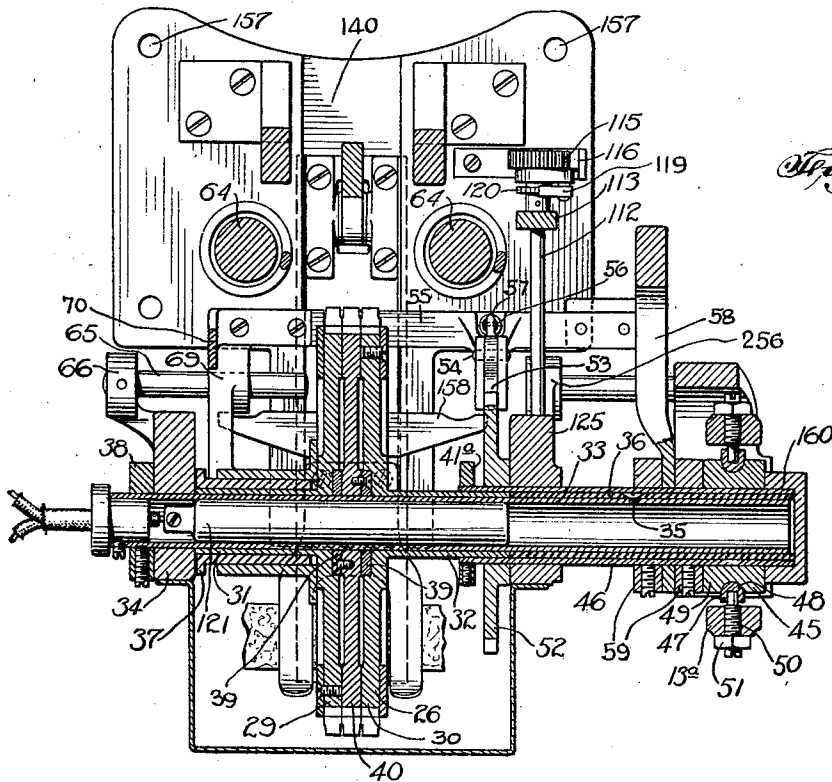


Fig. 4.

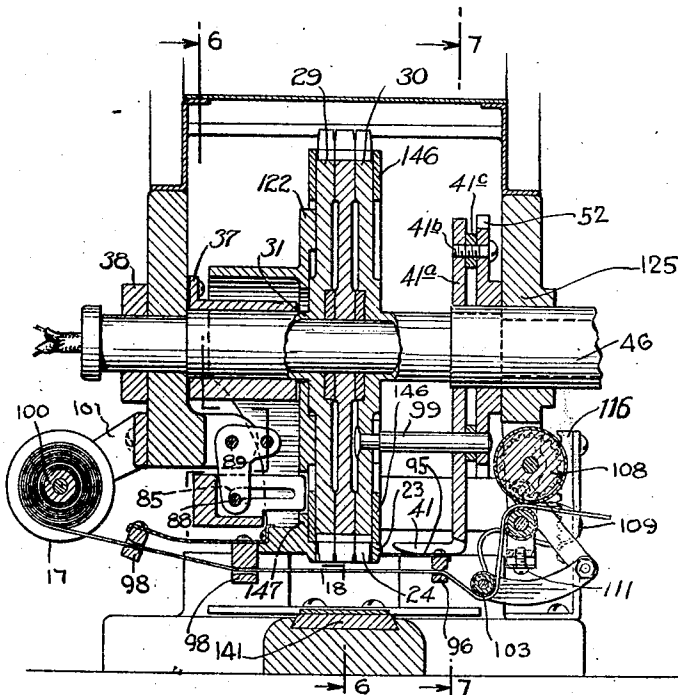


Fig. 5.

Max A. G. Luedtke
and Hugo Hoffmann
INVENTORS

BY
Horn & Spink
ATTORNEYS

May 28, 1929.

M. A. G. LUEDTKE ET AL

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EMBOSSING MACHINE

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5 Sheets-Sheet 4

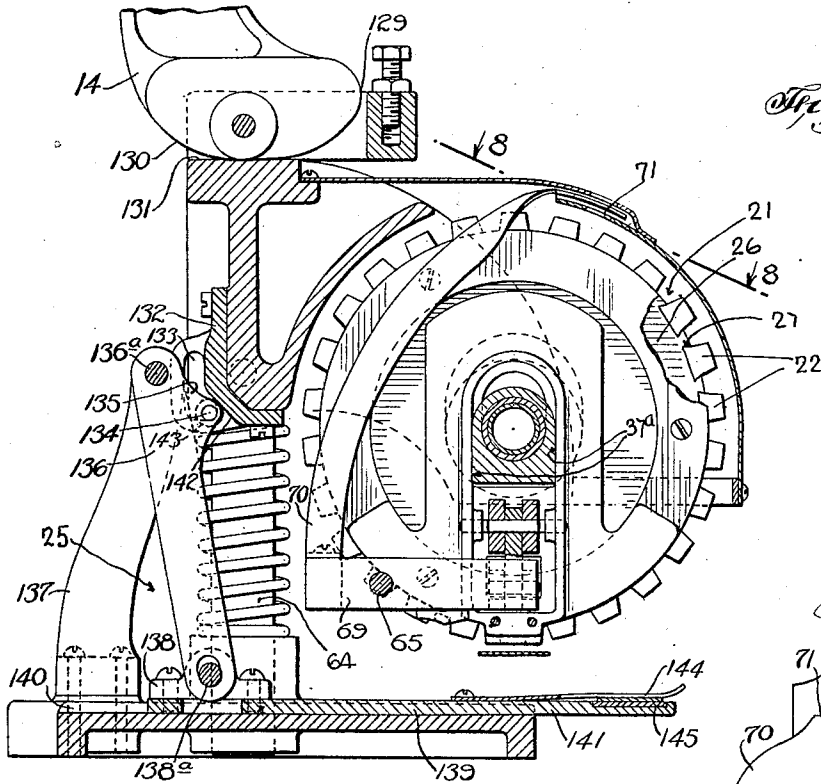


Fig. 6.

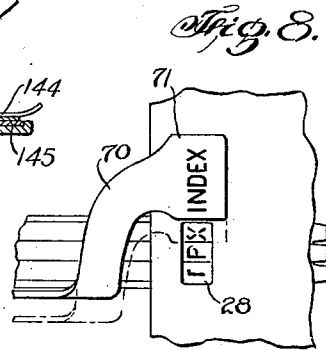


Fig. 8.

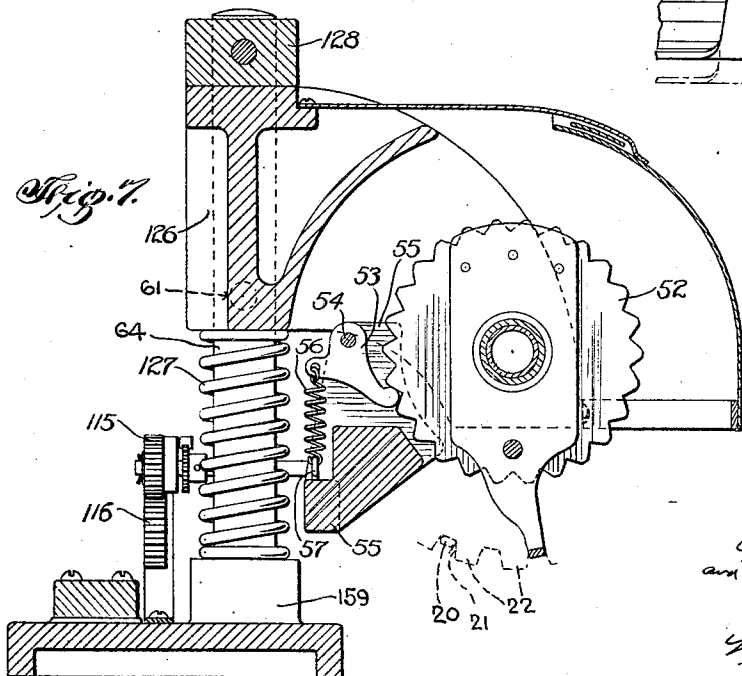


Fig. 7.

Max A. G. Luedtke
and Hugo Hoffmann
INVENTORS

BY
Maurice J. Stein
ATTORNEY

May 28, 1929.

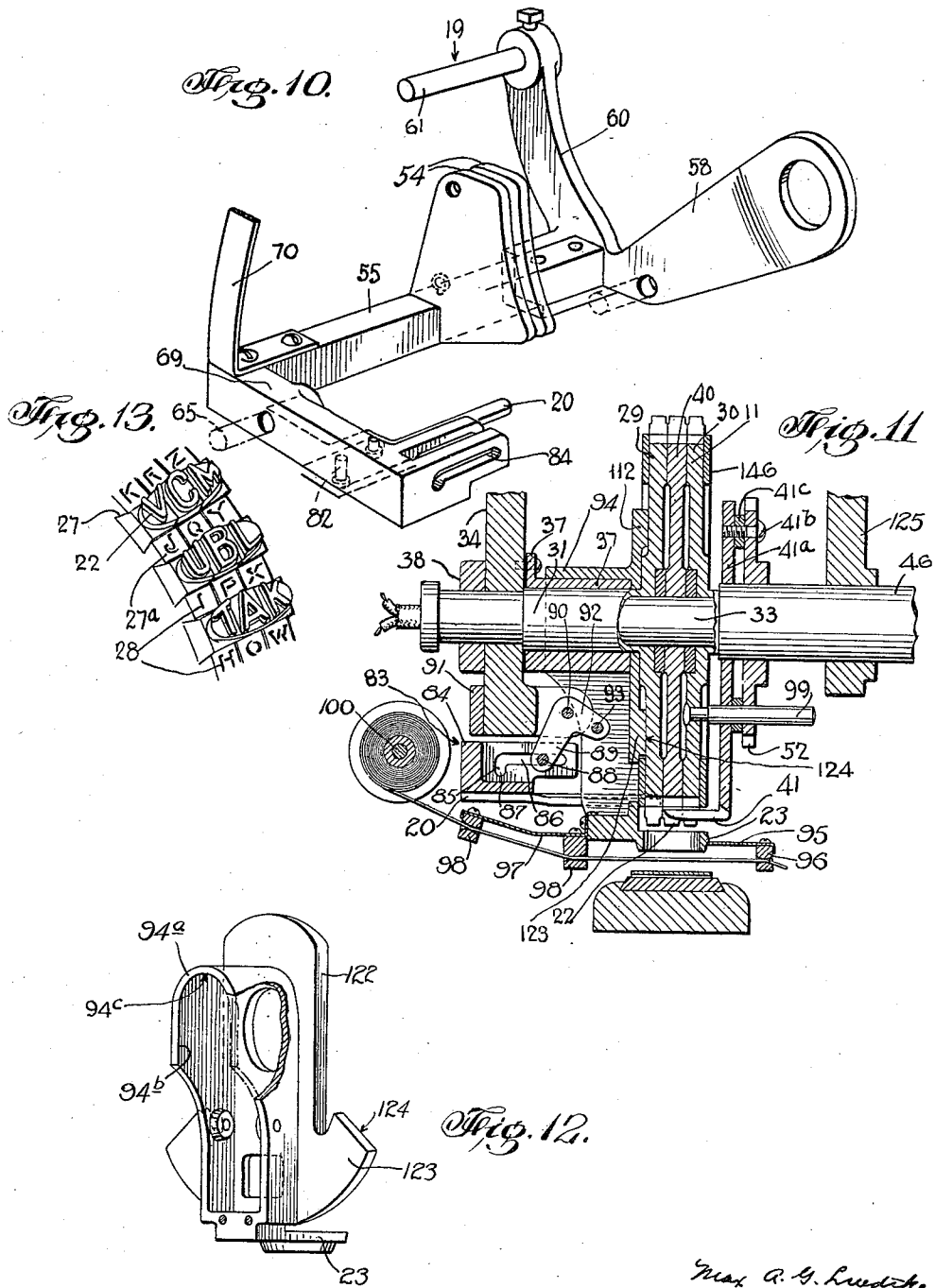
M. A. G. LUEDTKE ET AL

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EMBOSSING MACHINE

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5 Sheets-Sheet 5



Patented May 28, 1929.

1,714,795

UNITED STATES PATENT OFFICE.

MAX A. G. LUEDTKE, OF WEEHAWKEN, NEW JERSEY, AND HUGO HOFFMANN, OF
NEW YORK, N. Y.

EMBOSSING MACHINE.

Application filed July 25, 1927. Serial No. 208,389.

This invention relates to improvements in embossing machines.

In our co-pending applications Serial Nos. 76,595 and 116,076 filed December 21, 1925 and June 15, 1926, respectively, we have shown an embossing machine in which a plurality of discs carrying type elements are employed, mounted in operative relation to a strip of gold leaf, or the like, adapted to be impressed upon the material to be embossed and having heating means for properly heating the type.

It is the object of the present invention to generally improve our said previous constructions by the addition of many advantageous features hereinafter more fully described, the rendering of some of the operations automatic and making the machine as a whole more efficient in operation.

More particularly, one object of the invention is to provide an embossing machine of simplified construction which is capable of operation by anyone without reference to his skill, such machine being entirely fool-proof and protected against damage from operation by an inexperienced person.

A further object of the invention is to provide a single setting means for the character wheels or discs and means for preventing printing operation of the machine while the single setting means is in operative position.

A further object is to provide, in a machine of the character described, a movable embossing part upon which is mounted all the actuating mechanism for determining the mark to be made, such mechanism consisting in a single head which is locked against movement when the setting means is in operation, and further means to prevent movement of the character wheels after being set for a monogram during the embossing operation of the machine.

A still further object is to provide, upon a single mounting, a device for setting to a certain position the character wheels used in such machine, a stop for restraining the machine from printing during the setting operation, an indicator to positively disclose the characters set and means for moving an ornamental border for the monogram into and out of coacting relation with the characters to be embossed, and further to provide a means thereon to lock these characters in position when the setting mechanism is moved out of setting position.

Another object is to provide in an embossing machine having a plurality of printing wheels capable of being set to print various characters, a means preventing movement of the machine to printing position except when a set of characters has been properly positioned with respect to the material to be embossed.

A further object is to provide an apparatus of simple construction, capable of producing varied monograms of an ornamental character, part of the apparatus comprising a device for printing an ornamental border, this device serving as a lock for the other printing devices when the machine is set for the printing operation, and further carrying a printing medium for the apparatus.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

Certain features herein shown and described are shown, described and claimed in our co-pending applications aforementioned, and accordingly are not claimed herein.

With the above exception, the invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a front elevational view of an improved embossing machine embodying the invention.

Fig. 2 is a side elevational view of the machine showing the parts in position ready for the embossing operation.

Fig. 3 is a partial plan view of the device showing the housing for the index feature of said machine.

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a vertical sectional view taken on the line 5—5 of Fig. 2.

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 5 showing the manner of assembly of the device for moving the border for enclosing the monogram characters.

Fig. 7 is a detailed sectional view taken on the line 7—7 of Fig. 5 showing the device for positively indicating when the setting finger for moving the letters has been

properly positioned with respect to a particular letter.

Fig. 8 is a detail view showing the index hand positioned with respect to the index spaces on the character wheels.

Fig. 9 is a view taken on the line 9—9 looking upwardly at the monogram border feature and showing how the parts are assembled before imprinting the monogram.

Fig. 10 is an isometric view of a detail involved in the automatic locking and setting mechanism.

Fig. 11 is a sectional view similar to Fig. 5, showing the parts in position for the setting operation.

Fig. 12 is a detail perspective view of the ornamental border device.

Fig. 13 is a perspective view showing the construction and method of mounting the character elements in the character wheels.

Referring in detail to the drawings, 10 indicates an embodiment of the embossing machine in which the invention herein claimed is contained. Briefly described, the machine consists of a number of embossing wheels 11 mounted to be rotated by a handle 12 and thereby set for any particular combination of letters or characters, the wheels 11 being selectively movable by handle 12 in accordance with the position of the selector handle 13. After the proper combination of letters has been formed by the actuation of handle 12 and selector handle 13, lever 14 is depressed to lower the head 15 which carries the wheels 11 with consequent impression of the monogram upon a piece of material mounted upon the material positioning means 16 which is actuated in the manner hereinafter described to move the material toward and away from the wheels 11 according to the operation desired. If a printed monogram is desired, as in gold letters, or the like, the spool 17 carrying a roll of tissue paper or the like coated with gold leaf may be suitably mounted to feed a strip 18 therefrom with relation to the wheels 11 so that, when the impression is made the gold leaf upon the paper will be pressed into the material carried by the material positioning means 16.

During the movement of the selector handle 13 to the position for moving the wheels 11 to any particular position, a lock bar 19 mounted with relation to this selector is moved into locking relation with elements on the head 15 to prevent any vertical movement thereof. Likewise, when selector handle 13 is in extreme inoperative position, a finger 20 will have been moved into interlocking engagement with the grooves 21 between the raised embossing characters 22 on wheels 11 to restrain any rotary movement of these wheels. Likewise a border 23 for the monogram will have been moved into contact with the wheels 11 so as to enclose any particular set 24 of characters 22, thus lock-

ing the wheels against any movement and further presenting an ornamental feature for the monogram to be embossed. The material positioning means 16 is moved toward and away from such particular set of characters 24 by means of a mechanism 25 which is operatively connected with head 15 for positive actuation.

These various parts, and a more detailed operation thereof will now be more fully described. The embossing wheels 11 are made up of a number of plates 26 having grooves 27 formed therein for the reception of the embossing characters 22 which are preferably made separate from the plate for selective mounting with respect to index characters 28 which are impressed on the raised portions 27^a between the grooves 27. The plates 26 consists of two end plates 29 and 30 on which plates are mounted means for fixing the position longitudinally of characters 22 with respect to the material positioning means 16.

End plate 29 carries integral with it or attached thereto in any other manner a sleeve 31, while end plate 30 has secured to it in like manner sleeve 32. These sleeves together with the hubs of the respective plates 26 are received upon a tube 33 carried at one end in a bearing 34 made integral with the head 15 and at the other end having attached thereto as by a screw 35 or made integral therewith an additional tube 36, the end of which tube 36 normally abuts the end of sleeve 32 for the purpose hereinafter set forth. Secured to head 15 and receiving the end of the sleeve 31 on plate 29 is a bearing member 37. The opening of bearing 34 is insufficient to receive sleeve 31 so that the wall of head 15 at this point acts as a stop for sleeve 31. Tube 33 extending through sleeve 31 projects beyond the bearing 34 and has fixed thereto limiting washer 38 by means of which the position of plates 26 is fixed, since the internal shoulder formed by tube 36 positively engages sleeve 32 thus forcing the plates into contact with each other and sleeve 31 into contact with bearing 34 as shown in Fig. 4. Wear plates 39 are attached to the center plate 40 to provide for any frictional wear that may take place during the operation of setting the wheels for any particular monogram.

In order to set the plates 26 to any particular character 22 the selecting finger 41 is movable in and out of grooves 21 by movement of the selector handle 13 which handle is pivotally mounted on a fixed pivot at 42 positioned on a bracket 43 attached as at 44 to head 15. Selector handle 13 is further mounted on the moving pivot 45 associated with tube 46, by means of which finger 41 which is attached to tube 46 may be positively actuated to any selected position. The mounting of selector 13 is embodied in a plurality of bearing arcs 47 received in a circumferential

groove 48 in a ring member 49 fixedly attached to the tube 46. The bearing arcs 47 are adjustably supported in groove 48 by means of the set screws 50 with their associated lock nuts 51 carried in the loop 13^a formed in handle 13.

Selector finger 41 is mounted fixedly at the end of tube 46 on plate 41^a. In fixed relation to this finger and preferably secured to plate 41^a in any suitable manner as by screw 41^b and washer 41^c there is mounted on tube 46 a ratchet wheel 52 in conjunction with which is associated a pawl 53 as shown in Fig. 7, this pawl being mounted on a fixed pivot 54 on a slide bar 55 which is fixedly related to tube 46 in a manner to be described. Spring 56 carried on the slide bar 55 at point 57 positively actuates the pawl 53 into contact with the teeth of wheel 52.

The wheel 52 is formed with as many teeth as there are characters 22 on the plates 26 and the spaces in the wheel are so positioned that the pawl 53 will be at the bottom of its travel only when a character 22 is in the embossing position and the index character 28 in the indicating position.

By the coaction of pawl 53 with a tooth on wheel 52 during the setting of plates 26, a positive indication is given when plate 26 has been properly positioned to bring characters 22 into embossing position. Furthermore, due to the pressure exerted by the spring 56 upon pawl 53, a camming action takes place and plate 26 will be positively rotated so that some one embossing character 22 will be brought into the embossing position.

Fixedly secured to end plate 30 in a suitable manner is guide pin 99 received slidably in plate 41^a and ratchet wheel 52 to permit relative longitudinal movement of the plate and wheel with respect to plate 30 but restraining any relative rotary movement of these two plates and wheel 52. By this means a positive drive of plate 30 is provided without any danger of finger 41 being put under too great a torsional stress, while allowing it to easily act as a connector between two adjacent plates in providing a driven connection for supplying the necessary force in moving plates 29 and 40. In this manner, likewise, the action of the ratchet wheel 52 and its associated pawl 53 is made more positive.

Furthermore, the relation of pin 99, finger 41 and a groove 21 on plate 30 is such that finger 41 will at all times be aligned with a groove 21 on plate 30, assuring immediate engagement of the finger whenever the wheels 11 are to be set, without any "hunting".

On tube 46 is mounted lug 58 extending from the slide bar 55 upon which the pawl 53 is mounted, this lug 58 being restrained against longitudinal movement between two fixed washers 59 but mounted to permit relative rotary movement of said lug and tube.

Mounted on the slide bar 55 is an upward extension 60 carrying lock bar 19, which bar consists of pin 61 slidably received in an opening 62 in head 15. Said opening, when the head 15 is in its extreme upward position, is in registry with a corresponding opening 63 in one of the columns 64 upon which the head 15 slides under the control of lever 14 so that, on any movement of the selector 13 to move finger 41 into cooperative relation with the grooves 21, pin 61 will be moved into coacting relation with opening 63, thus restraining any vertical movement of head 15. Thus the embossing operation cannot take place unless finger 41 has been moved out of engagement with the plates 26 and as will hereinafter appear, the border 23 has been moved up into metallic engagement with the wheels 11. Slide bar 55 is formed with an extension 69 which is carried at one end upon pin 65 fixedly attached to a bearing 66 which may be integral with bearing 34 or comprise a separate member carried upon tube 33 and held in fixed relation thereto by washer 38. At the other end of bar 55 on lug 55^a is formed a bearing 55^b for reception of a fixed pin 255 which is mounted in fixed supports 256.

Attached to the extension 69 on slide bar 55 is a strap 70 extending up through an opening in the head 15 and operatively engaged with the index plate 71 for moving the same into the several indicating positions corresponding to the positioning of selecting finger 41. The strap 70 may be made integral with index plate 71 as shown in Fig. 8.

Mounted upon selector handle 13 by any suitable attaching means as at 72 is a plate 73 upon which is carried the pawl 74 between the two plates 75, said pawl 74 being maintained in contact with a plate 76, secured to head 15, by means of a spring 77 attached at one end to the projecting end 78 of said pawl and at its other end to a cross-bar 79 supported between and spacing the two plates 75. Plate 76 is formed with a number of grooves 80 into which pawl 74 is depressed when selector handle 13 has moved the selecting finger 41 into operative relation with any one or a number of plates 26. Likewise, the groove 81 is provided into which the pawl 74 is depressed when handle 13 has moved finger 41 out of operative engagement with plates 26, released locking pin 61 from engagement with column 64 and moved border 23 into contact with wheels 11, in which position vertical movement of head 15 is permitted to print any monogram which may have been set.

Extending inwardly from the extension 69 is a carrier arm 82 upon which is formed the finger 20 which is movable into engagement with grooves 21 in any of the plates 26 with which selecting finger 41, at that time, is not

in engagement. Attached to this carrier arm 82 is an actuating mechanism 83 for raising and lowering the border 23 in accordance with the position of selector handle 13. This actuating mechanism 83 consists of a box 84 having a slot 85 formed in each of its sides, said slots being formed with a horizontal portion 86 approximating the length of movement necessary to release finger 41 from plates 29 and 40 in moving toward the inoperative position. Slot 85 further has a downturned portion 87 communicating with horizontal portion 86. Slidably received in slots 85 is a pin 88 carried by a rocker arm 89 pivotally connected at fixed bearing 90 to a bracket 91 extending from head 15. Rocker arm 89 has the form of a bell-crank having one of its arms carrying pin 88 and the other arm 92 pivotally supported as at 93 in the border raising mechanism 94. It will be seen that after the selector handle 13 has been moved to disengage finger 41 from plates 29 and 40 and is then further moved to bring finger 41 out of engagement with plate 30, the wall of the downturned portion 87 will be brought into engagement with pin 88 forcing rocker arm 89 to lift mechanism 94 and its attached parts.

Attached to the bottom of mechanism 94 is the border 23 from which extends a connector 95 carrying one guide 96 for the strip 18 of the ribbon on the spool 17 while extending in the opposite direction and mounted on the border raising mechanism is the strap 97 carrying two other guides 98 for said strip. The spool 17 from which the strip 18 of gold leaf or the like is fed is carried on a shaft 100 mounted in the bracket 101 attached to head 15, the said spool being frictionally restrained from accidental rotation by flat spring 102. Strip 18 is fed through guides 98 and 96 to roller 103, supported by means of the set of links 104 and 105 which are loosely pivoted to each other and to an extension 106 attached to head 15; the strip 18 then passes between the follower rolls 107 and driven roll 108 which provide the power to move the strip past the set 24 of embossing characters and the border 23 upon movement of the head toward the material to be embossed. By means of spring 109 fixed at one end to extension 106 and at the other end bearing against roller 103, the strip 18 is maintained in a condition of tension, sufficient slack being provided however to avoid tearing as the border raising mechanism 94 is brought into action to move the guides 96 and 98 toward and away from the wheels 11.

Follower roll 107 is pressed against driven roll 108 by means of a U-shaped spring member 110, the sides 110^a of the U member forming the bearings 110^b for the roll 107, and the center portion of the U carrying screw 111 by means of which member 110 is held associated with extension 106 and the spring com-

pressed. The driven roll 108 is carried on the end of a shaft 112 which is supported in extension 106 and in a bracket 113 carried upon the head 15 of the embossing machine. Mounted loosely on shaft 112 and capable of rotary movement on the shaft is the gear 115 which is received in mesh with the rack 116 mounted in fixed relation to the base 114 of the embossing machine. On an integral extension 118 of gear 115 is mounted the pawl 119 which meshes with a ratchet wheel 120 mounted fixedly on shaft 112 between gear 115 and bracket 113 to revolve therewith and to act as an end bearing for shaft 112. When pawl 119 is in coacting relation with ratchet wheel 120 and head 15 is moved in a downward direction, pawl 119 will move ratchet wheel 120 and thereby actuate driven roll 108 to feed strip 18 past the material positioning means. On release of head 15, it will move upwardly as hereinafter described but gear 115 will rotate on shaft 112 without affecting the position of ratchet wheel 120.

The border raising mechanism 94 in addition to the parts before related carries means for conducting heat supplied by means of an electrical heater 121 inserted into the hollow portion of tube 31. As shown in Fig. 5, the heat conducting member preferably comprises bosses 122 formed integral with said mechanism and contacting end plate 29. An additional plate 123, which may be separate from or integral with the mechanism 94 provides a bearing surface 124 for additional heat contact with plate 29. In this manner, heat may be transmitted through plate 29, bosses 122, surface 124 and plate 123 to the mechanism 94 and then to border 23 to provide for the ready imprinting of the border for a monogram when the machine is used for impressing a medium like gold leaf into such material as leather.

The border raising mechanism is further made up of U-shaped member 94^a slidably received over bearing member 37 which bearing is formed with flat sides 37^a to slidably receive the sides 94^b of member 94^a. Thus, while positioning wheels 11, the surface 94^c is brought into contact with bearing 37 in which is supported sleeve 31 to conduct additional heat to the border; likewise, the large contacting surfaces of bearing member 37 and mechanism 94 serves as additional conduits for heat energy.

The head 15 which is in the form of a U-shaped casting, carrying in one of the prongs thereof the bearing 34 and in the other prong the bearing 125 for supporting tube 46, has formed in the rear portion thereof a pair of openings 126 through which slide the columns 64 about which, between head 15 and base 114, are coiled the spring 127 to normally maintain the head 15 in its raised position. Fastened between the two columns 64 at their upper ends is the connector 128 in an opening

129 of which is pivoted lever 14. Lever 14 is formed with a cam end 130 which is adapted to bear against the top 131 of head 15 so that, upon depression of the lever, the upward pressure of the springs 127 will be counteracted and head 15 forced downwardly, provided locking bar 19 is disengaged from opening 63. Lever 14 is formed also with an integral projecting surface 14^a adapted to contact with set screw 128^a having the customary lock nut 128^b thereon, adjustably mounted in connector 128.

Attached to the head 15 at the rear thereof, and between the columns 64 is the cam element 132 having a cam groove 133 in which is slidably mounted pin 134 connected to a boss 135 on link 136. The latter is carried at one end on a pin 136^a pivoted in risers 137 supported on base 114 of the machine, its other end being loosely pivoted on a pin 138^a mounted in bosses 138 which may be integral with or attached to sliding plate 139 forming the moving element of the material positioning means 16. A groove 140 formed in base 114 receives a complementary part 141 on a sliding plate 139 as a guiding means for the material positioning means.

The boss 135 on link 136 is normally positioned to be in contact with the cam surface 142 on head 15 so that on downward movement of head 15 link 136 will be forced to move plate 139 in a rearward direction and bring the material strip upon means 16 into position under the set 24 for printing the monogram. On release of lever 14, the head 15 will be moved upwardly by means of springs 127 and the lower surface 143 of the cam element 132 will be brought into contact with pin 134 to move means 16 and the material thereon away from the embossing wheels.

Material positioning means 16 is provided with the spring prongs 144 in which the material is fixedly retained during the embossing operation. A padding material 145 may be positioned with respect to prongs 144 in order to provide a cushioning means during the embossing.

End plates 29 and 30 may have secured thereto or made integral therewith rings 146 preferably made of heat conducting material, against which rings border 23 is adapted to contact when brought into the raised or locking position. Likewise, these rings provide a ready means for conducting heat to the border 23 as through an extension 147 on the border raising mechanism which contacts therewith. Furthermore, these rings provide the border 23 with a firm backing during the embossing operation without requiring that it come directly into contact with the plates 26.

The heating element 121, which may be of the ordinary type of tubular electrical heater, is mounted in tube 83. From this element heat is conducted to the plates 26 and in the man-

ner previously described to the border 23 to supply the heat necessary to impress the gold leaf or the like into the leather or similar material upon which the monogram is to be embossed.

The index plate 71 is housed between the two plates 148 and 149 which are detachably mounted over head 15, plate 148 substantially covering the front of head 15 and normally guarding access to the wheels 11, while plate 149 is received over plate 148 and over the index plate 71. Corresponding openings 150 and 151 in the respective plates 148 and 149 are in registry to provide means for observing the setting operation, and to permit observation of those plates only that have been set and of the plate at that time in the process of being set.

Attached to the plate 75 in any suitable manner is an indicator arm 152 formed to pass behind an index plate 153 mounted in any convenient manner on the head 15, the indicator plate 153 having an opening 154 provided therein through which the pointer end 155 of arm 152 projects to positively indicate the position of finger 41 with respect to plates 26 in accordance with markings 156 on plate 153.

The base 114 has openings 157 drilled or otherwise made therein for the reception of a fastening means used in securing the machine to any permanent support. If desired, stops 158 may be provided upon material positioning means 16 for properly limiting the rearward movement of said means, said stops being adapted for contact with the base supports 159 of the column 64.

In operation, after the strip 18 has been properly positioned on spool 17 and carried around rollers 103, and between 107 and 108 and the guides 96, 98 and power applied to the heater 121 from any source of electric power, selector 13 is placed so that pointer 155 is associated with marking 156 indicating the first wheel, and indicator plate 71 closes the openings 150, 151 to the extent that only the first wheel 29 is in view. Handle 12 which is fixed to tube 46 in any manner as by the reception of tube 46 in the recess 160 of handle 12, is then turned to actuate selecting finger 41 together with pin 99 to set the plate 29 so that the indicating character 28 will properly appear at openings 150, 151 to show which character 22 has been associated with set 24. Selector handle 13 is then moved to the marking 156 corresponding to the second plate 40 and a like procedure of setting carried out. Unless character 22 on plate 29 is properly aligned at set 24, the finger 20 will not pass into a groove 21 on plate 29, and the machine will be locked against further operation since lock bar 19 has previously engaged column 64 to lock head 15 against any vertical movement. In the same manner, plates 40 and 30 must be

respectively properly positioned before any further operation of the device is possible.

Now as the finger 41 is carried out of engagement with groove 21 on plate 30 and finger 20 into engagement with its groove 21, the mechanism 83 raises border 23 into contact with wheels 11, against rings 146, at the same time positioning strip 18 with respect to set 24. The last movement has locked the wheels 11 by means of finger 20 and border 23, and has also retracted bar 19 to release head 15 for operation.

With a piece of material to be embossed positioned upon means 16, lever 14 is now depressed. Simultaneous rearward movement of means 16, rotation of drive roller 108 and depression of head 15 to printing position then take place, resulting in a movement of the material to be printed to embossing position, positioning of strip 18 to supply the necessary printing medium while the head 15 is descending to apply the printing pressure.

It has been found necessary to limit the feed of strip 18 to the downward movement of head 15 since provision must be made to separate strip 18 from the heated characters 22 and border 23 and, at the same time, prevent tearing of the strip, before any longitudinal movement is possible. The movement of strip 18 as characters 22 come into contact therewith on the printing movement is negligible, whatever little movement may take place being taken up by roller 103 and the associated linkage 104, 105 and spring 109. This slight tension will be sufficient on raising head 15, to separate strip 18 from characters 22 without tearing.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:—

1. In an embossing machine, a movable head carrying a plurality of printing wheels, means for selectively positioning said wheels to form a design, means operatively connected to said positioning means for restraining movement of said head during said positioning operation, and means for moving said head.

2. In an embossing machine having a movable head carrying a plurality of embossing members, unitary means for selectively ar-

ranging said embossing members, locking the head against movement during said arranging operation, and for locking any of such members not being selectively arranged.

3. A printing device comprising a head capable of sliding movement in one plane only, a plurality of printing wheels rotatably mounted upon said head, means rotatable with and capable of sliding movement relative to said wheel for selectively setting said wheels, and means for locking said head during said setting operation.

4. In a printing machine in combination with printing means, unitary means for locking said machine against printing, positioning a selector with respect to said printing means, positioning a locking means for said printing means, and for indicating the set-up of said printing means.

5. In a printing machine having printing means, means for locking said printing means, a secondary printing device adapted for coaction with said printing means, and means preventing cooperation of said device with said printing means until said locking means is in position.

6. In a printing machine, a base, supporting means mounted on said base, a printing head slidably mounted on said supporting means and normally maintained in non-printing position, and means mounted on said head for setting up matter to be printed and means for locking said head to said support during the setting up operation.

7. In an embossing machine in combination with embossing means, means for selectively positioning said embossing means in embossing position, and means for preventing operation of said embossing means until said embossing means has been set to embossing position.

8. In combination an embossing machine, an ornamental element associated therewith, means for moving said element into operative position for co-operating with said machine and means for locking said machine against embossing operation until said element has been placed in operative position.

9. In an embossing machine in combination with means for embossing an article, a printing medium for said machine interposed between said means and article, means for feeding said medium in relation to said machine, said means being operative only when the machine is being moved to embossing position.

10. In an embossing machine, a plurality of embossing wheels, a tube carrying said wheels, a border for cooperation with said wheel, a heating device contained in said tube, and means contacting one of said wheels for conducting heat to said border.

11. In an embossing machine, means for setting up a monogram, means for imprinting said monogram, means for positioning

material to be imprinted with respect to said printing means, said printing means comprising means to actuate said positioning means, and means to lock said printing means except when said setting mechanism is inoperative.

12. In an embossing machine in combination with a plurality of embossing means, single means for selectively engaging said embossing means, and for indicating the embossing means engaged.

13. In an embossing machine, in combination with a plurality of embossing means, unitary means for selectively engaging said embossing means, for indicating the embossing means engaged, and for locking said embossing means against operation to printing position.

14. In an embossing machine, in combination with a plurality of embossing means, unitary means for selectively engaging said embossing means, for indicating the embossing means engaged, for locking said embossing means against movement to printing position and for locking any of said embossing means not engaged by said selecting means.

15. In an embossing machine in combination with a plurality of embossing means, unitary means for selectively engaging said embossing means, for indicating the embossing means engaged, for locking said embossing means against movement to printing position and for locking any of said embossing means not engaged by said selecting means, and an ornamental border, said single means including means for moving said border to printing position.

16. In an embossing machine, in combination

with a plurality of embossing means, unitary means for selectively engaging said embossing means, for indicating the embossing means engaged, for locking said embossing means against movement to printing position and for locking any of said embossing means not engaged by said selecting means, and an ornamental border, said single means comprising means for moving said border to printing position, said single means carrying index means for said machine.

17. In an embossing machine, a plurality of embossing means, means for selectively moving said embossing means, means for preventing movement of said selective means unless said means are properly positioned, and means for indicating when said means are properly positioned.

18. In an embossing machine, printing means, means for setting up said printing means, means for moving said printing means to embossing position, means for preventing movement of said printing means unless the setting up operation has been completed, and means for preventing actuation of said setting up means unless the movement of said printing means is prevented.

19. In combination, printing means, setting up mechanism for said printing means, means for moving said printing means to printing position, and means for preventing movement of said printing means to printing position until the setting-up operation is completed.

In testimony whereof we affix our signatures.

MAX A. G. LUEDTKE.
HUGO HOFFMANN.