

Dec. 24, 1935.

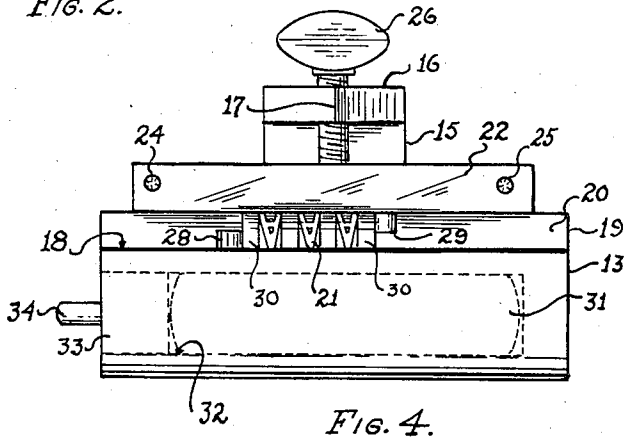
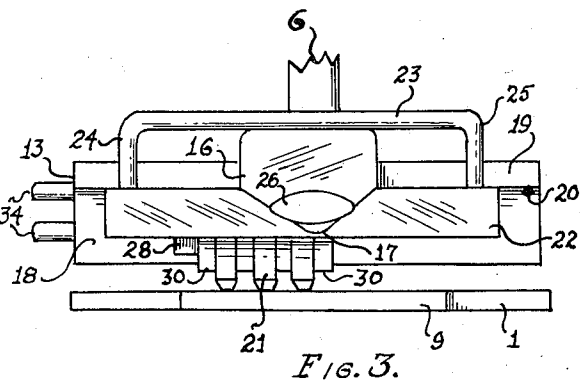
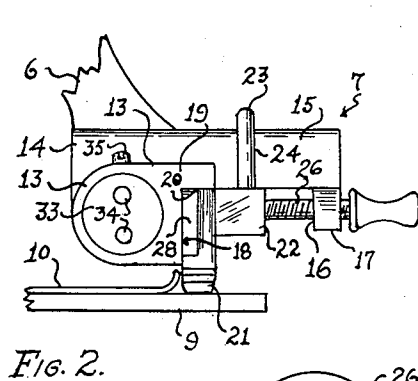
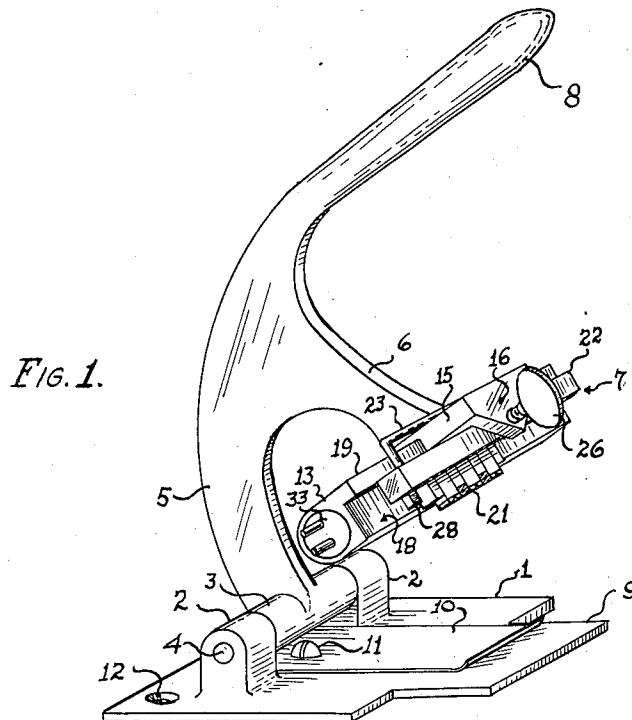
H. A. MINTZ

2,025,691

STAMPING MACHINE

Filed Jan. 29, 1935

2 Sheets-Sheet 1



INVENTOR

By HENRY A. MINTZ
Elmer J. Gorn
ATTORNEY

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2 Sheets-Sheet 2.

FIG. 5.

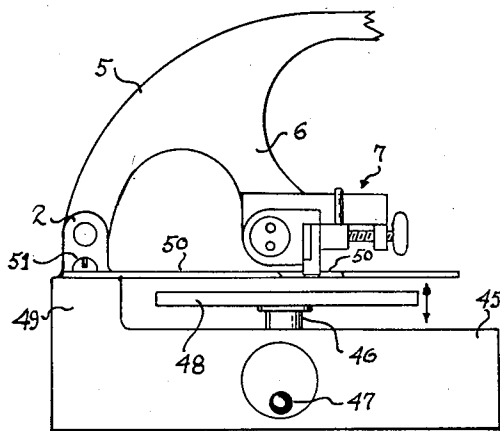
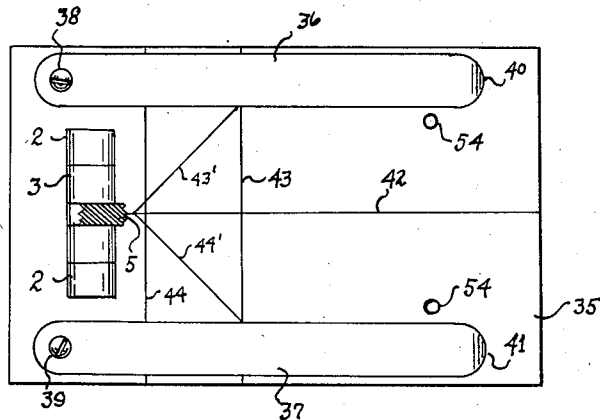


FIG. 6.

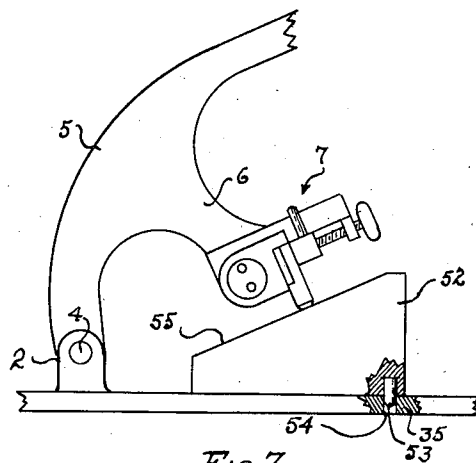


FIG. 7.

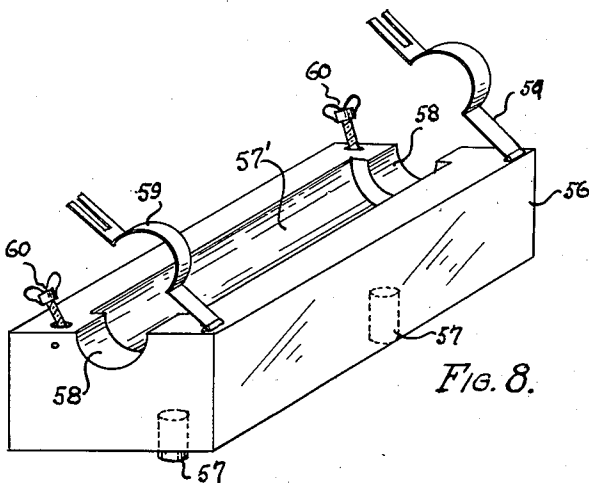


FIG. 8.

INVENTOR
HENRY A. MINTZ
BY Elmer J. Gorn
ATTORNEY

UNITED STATES PATENT OFFICE

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STAMPING MACHINE

Henry A. Mintz, Norwood, Mass.

Application January 29, 1935, Serial No. 3,913

10 Claims. (Cl. 101—10)

This invention relates to stamping machines, and more particularly to such machines for branding gold letters into the surface of articles made of leather or other material.

One of the objects of my invention is to provide a novel, simple and inexpensive mounting of a pallet on such a machine.

Another object is to devise a novel pallet in which the insertion and renewal of type is simplified.

A further object is to provide novel supporting means in such a machine for supporting various shaped and sized articles.

The foregoing and other objects of my invention will be best understood from the following description of exemplifications of my invention and the accompanying drawings illustrating the same.

In the drawings—

Fig. 1 is a perspective view of one form of my novel stamping machine;

Fig. 2 is a side view on a larger scale of the pallet shown in the machine of Fig. 1;

Fig. 3 is a front view of the pallet shown in Fig. 2;

Fig. 4 is a bottom view of said pallet;

Fig. 5 is a top view of another form of base plate which can be utilized in my machine;

Fig. 6 is a side view of another form of my machine having an adjustable article-supporting member;

Fig. 7 is a side view showing an auxiliary article-supporting member in place on one form of my machine; and

Fig. 8 is a perspective view of an auxiliary article-supporting member for supporting articles generally of cylindrical shape.

The machine illustrated in Fig. 1 is of the type intended to brand identifying marks on hat bands, and includes a base 1 upon which are formed bosses 2 between which is rotatably mounted a shaft 3. The shaft 3 is carried by pins 4 received in corresponding bores in the bosses 2. The shaft 3 carries an arm 5. A branch arm 6 formed integrally with arm 5 carries the pallet 7 rigidly secured to said arm 6. The arm 5 is extended to form a handle 8, whereby the entire arm assembly carrying with it the pallet 7 may be rotated about the pins 4. In order to receive the article to be stamped, base 1 is provided with an extension 9. Some suitable retaining means, such as the spring plate 10, is provided under which one edge of the article to be stamped can be slipped and thus be held firmly to receive the impression

from the type carried by the pallet 7. The plate 10 can be retained in place by some suitable means, such as a screw 11. The base plate 1 may be provided with screw-holes 12, whereby the machine may be secured in place by suitable fastening means such as screws.

The pallet 7 consists of a type-holding block 13 rigidly secured to the outer end of arm 6. At the center of the block 13 where it is joined to the arm 6 is a boss 14 which is extended to form an overhanging arm 15 having a depending member 16 at its outer end. The member 16 is formed with a point 17 which acts as an aligning indicator for the type which may be carried by the block 13. The block 13 is formed with a front face 18 and an upper extension 19 having a lower surface 20. Type 21 in any desired arrangement may be assembled in the block 13 on surfaces 18 and 20. In order to retain the type 21 in place, a bar 22 is slidably mounted on the arm 15 of block 13. A set screw 26 is threaded through the member 16 so as to bear against the bar 22 and clamp it against the type 21, thus retaining said type in place. In order to be supported in the desired manner, bar 22 carries an elongated rod 23 bent at its outer end to form legs 24 and 25, which are received in bores at the ends of bar 22 and turned over at their lower ends, as shown in Fig. 4, to secure rod 23 rigidly to the bar 22. The rod 23 passes over the upper side of the arm 15, and thus permits the bar 22 to be moved transversely with respect to arm 15 through substantially the entire length of bar 22. The depending member 16 prevents bar 22 from being removed from arm 15. In order to provide clamping members for preventing sideward movement of the type 21, the surface 18 of the block 13 has secured thereto the bar 28, and the inner surface of the bar 22 is provided with a pin 29.

The above device affords a particularly simple arrangement for the insertion and removal of type. In order to arrange the type, the operator grasps the handle 8 and rotates the arm 5 carrying with it the pallet 7 so that the bottom of the block 13 faces the operator, presenting the appearance shown substantially in Fig. 4. The set screw 26 is loosened and the type assembled below the bar 22, using the bar 28 as a stop and a guide for the left-hand edge of the line of type. The operator by referring to the point 17 can arrange the type so that it bears the proper relationship to the base plate 1 and the work which is mounted thereon. By the use of filling blocks, such as indicated at 30, the type can

readily be held in the desired position relative to point 17. When the desired arrangement of type has been set up, the bar 22 is slid to the left until the pin 29 bears against the right-hand side of the line of type, thus firmly clamping it between the bar 28 and the pin 29. Finally the set screw 26 is tightened, clamping the type against the surface 20 and retaining the pin 29 in its clamping position. When so assembled the type may then be impressed on the work.

Before operating on the work in devices of the kind herein involved, it is usually desirable to heat the type to a relatively high temperature in order to secure the proper transfer of the gold leaf, or other printing material, to the article to be stamped. For this purpose the block 13 carries an electrical heating element 31, shown diagrammatically by dotted lines in Fig. 4. In order to support the heating element to produce a maximum of heating efficiency, the block 13 is provided directly to the rear of surface 18 with a bore 32 extending substantially along the entire length thereof. The heating element 31 is received within the bore 32, and carries at one end thereof a plug 33 filling the open end of the bore 32. The plug 33 carries contacts 34, whereby an electrical connection may be made to the heating element 31. The heating element 31 may be held in place by any suitable means, such as by a set screw 35 received in the plug 13 and engaging the plug 33. Due to the above arrangement of heating element, it will be noted that the distance between the heating element and the surface 18, along which the greatest length of each piece of type is in contact, is very short, and therefore the type is heated by the heating element 31 quickly and effectively.

The machine described above is operated substantially as follows: The type is heated to the proper temperature by connecting the contacts 34 to the source of electrical current. The work to be stamped is slipped into place under the spring 10, and retained in proper position thereby. The operator then grasps the handle 8 and rotates the entire arm 5, carrying with it the pallet 13 and the type assembled therein around the pins 4, thus bringing the heated type into contact with the surface of the work. The desired pressure is then exerted between the work and the type through the handle 8. The base plate 1 and the mounting of the pallet is so related that the surface of said base plate at the point where the work is supported is perpendicular to the tangent to the curve described by the printing end of the type at the point where that curve intersects with the surface of said base plate. Thus the printing surface of the type is moving substantially perpendicularly to the surface of the work upon coming in contact therewith. It is also preferable that the radius of curvature of the curve described by the type at this point shall be sufficiently large so that the type continues to move substantially perpendicularly to the surface of the work while in contact with the work during the stamping stroke. In a machine having substantially the relationships as shown in the drawings, this condition is true. Of course it is to be understood that the relationships might differ considerably from those illustrated and still accomplish the purpose of my invention. By the principle as described above, I have been able to eliminate from my machine the complex mounting heretofore used in machines which guide the type through a path substantially perpendicular to the surface of the work throughout the entire

movement of the type. I have found that with a machine such as described above, an impression of extraordinary clearness can be secured upon the surface of the work.

Instead of utilizing such a base plate as I have illustrated in Fig. 1, any other suitable type of base plate may likewise be used. For example, in Fig. 5 I have illustrated a base plate adapted to receive flat articles having relatively extended surfaces. In Fig. 5, 35 represents a supporting base plate of relatively extended area at one end of which are mounted the bosses 2, such as are shown in Fig. 1. Between the bosses 2 is rotatably mounted the shaft 3 and arm 5 likewise substantially in the same manner as illustrated in Fig. 1. In order to support the work upon the base plate 35, I prefer to utilize a pair of spring arms 36 and 37 retained at one end on the base plate 35 by means of screws 38 and 39. The outer end of the spring arms 36 and 37 are turned upwardly at 40 and 41 to facilitate the easy insertion of the work under the arms 36 and 37. Due to the fact that the arms 36 and 37 can be rotated around the screws 38 and 39, these arms can easily be swung out of the way if so desired. If accurate aligning of the impression upon the work is desired, I have provided the base plate in Fig. 5 with aligning marks 42, 43, 44, 43', and 44'. The mark 42 is located so as to be substantially in line with the point 17. The lines 43 and 44 may bear any desired definite relationship with respect to the type supported in the block 13. I prefer to have line 43 coincide substantially with one edge of said type. Due to this arrangement, the work may be accurately set up on the base plate 35 in a predetermined manner so that the impression upon the work will occur at a definitely predetermined place thereon.

I have pointed out above that with the mounting of the pallet illustrated it is desirable that the type be moving substantially perpendicular to the surface of the work upon coming in contact therewith. If work of relatively great thickness is to be stamped, it might be somewhat difficult to secure the proper relationship between the movement of the type and the surface of the work in a device having a fixed base plate such as illustrated in Figs. 1 and 5. Such difficulty, however, is eliminated by the arrangement which I have illustrated in Fig. 6 in which a movable base plate is provided. In Fig. 6 the arm 5 carrying the pallet 7 is mounted upon bosses 2 in substantially the same manner as illustrated in Fig. 1. Likewise the pallet 7 is of substantially the same construction as that shown in Fig. 1. However, instead of mounting the bosses 2 directly upon the base plate in Fig. 6, I have shown said bosses as being carried by a base frame 45. This frame carries a shaft 46 which is adjustable vertically by means of some suitable arrangement operated by a manually-operated adjusting member 47. The shaft 46 carries at its upper end a base plate 48. Thus by means of the adjusting member 47 the base plate can likewise be moved up and down to any desired level. The frame 45 is provided with an upstanding portion 49 which carries the bosses 2. At the upper end thereof the portion 49 also carries two guide arms 50 mounted substantially the same as spring arms 36 and 37, as illustrated in Fig. 5 by means of screws 51. These arms 50 have sufficient rigidity so that they are supported in a horizontal plane solely by the support afforded by the extension 49 and the screws 51. The under surface of the arms 50 are located in a plane which bears the

desired relationship to the printing surface of the type mounted in the pallet 7. Thus if work is supported with its upper surface in contact with the lower surface of arms 50, the type will be moving substantially perpendicular to the surface of the work upon coming in contact therewith. When work of relatively great thickness is used therefor, such work is mounted upon the base plate 48. The adjusting member 47 is then moved by the operator to raise the base plate 48 until the upper surface of the work comes into contact with the lower surface of the arms 50. In this manner the work is not only accurately placed relative to the type, but due to the clamping of pressure which is exerted between the base plate 48 and the arms 50, it is firmly clamped in place.

In certain types of articles, such as for example suitcases, it is relatively difficult to place the member to be stamped flat upon such a base plate as is shown in either Figs. 1 or 5. If, however, a surface at an angle to said base plate is provided, I have found that such members can readily be placed thereon. My novel machine affords a particularly convenient arrangement for operating upon work placed at such an angle. Referring to Fig. 7, it will be seen that as the pallet 7 is rotated by the arm 5 in an upward direction, the plane of the printing surface of the type is no longer parallel to the plane of the base plate but is at an angle therewith. Therefore, if the work is supported at an angle relative to the base plate, it can be readily stamped by the type in the pallet 7 if it is supported at the proper level above the base plate. In Fig. 7 I have illustrated an auxiliary supporting member which accomplishes the desired purpose. This auxiliary supporting member consists of a block 52 having a plurality of pins 53 mounted in the lower surface thereof, which pins are received into corresponding openings 54 in the base plate 35. These openings are likewise illustrated on base plate 35 in Fig. 5, and are located outside of the printing area so as not to interfere with the operation of the device when block 52 is not in use. This arrangement enables the block 52 to be readily slipped into place on the base plate 35 and accurately retained in the proper position thereon. Of course any other suitable arrangement of removably supporting the block 52 in the desired position on the base plate may be used. The block 52 has formed thereon a supporting surface 55, which surface is placed at an angle with respect to the base of block 52. The angle between the surface 55 and the base of block 52 is of such a value that when the block 52 is supported in place upon the base 35, the surface 55 will bear the desired relationship to the printing surface of the type carried by the pallet 7. Under these conditions the type will be moving substantially at right angles to the surface of the work supported on the surface 55 upon coming in contact with said work.

Auxiliary supporting blocks of the type illustrated by block 52 afford a convenient way of supporting articles not only of the flat surface type but also of various other shapes. For example, in Fig. 8 I have illustrated an auxiliary supporting block which is useful for supporting articles generally of cylindrical shape, such as for example fountain pens and the like. In Fig. 8 an auxiliary supporting block 56 has mounted in its lower surface aligning pins 57 similar to the pins 53 illustrated in Fig. 7. These aligning

pins likewise are adapted to be received into openings 54 on the base plate 35. The upper surface of the block 56 is hollowed out at 57' and is formed with semi-cylindrical supporting shoulders 58 at the opposite ends of said block. An article of cylindrical shape may be supported on said shoulders 58, and clamped in place thereon by some suitable clamping means, such as arms 59 pivoted at one end to the upper side of block 56 and cooperating with clamping screws 60. The shoulders 58 and the pins 57 are so related that when the supporting block 56 is placed in position upon base 35, the printing surface of the type will come into contact with the articles supported in said supporting block at a point where the tangent to the surface of the work is substantially perpendicular to the direction in which the type is moving at the time of contact. Thus the stamping pressure of the type will be exerted substantially perpendicular to the surface of the work.

Of course it is to be understood that this invention is not limited to the particular details of the arrangements as described as many equivalents will suggest themselves to those skilled in the art. For example, various other forms of supporting blocks might be designed to support articles of other shapes aside from flat or cylindrical articles. Also the base plate of Fig. 1 might be provided with such auxiliary supporting blocks as illustrated for base 35 of Fig. 5. Various other changes will suggest themselves to those skilled in the art. It is accordingly desired that the appended claims be given a broad interpretation commensurate with the scope of the invention within the art.

What is claimed is:

1. A stamping machine comprising a pallet adapted to carry a line of type having its printing faces in the same plane, a base having a supporting surface adapted to support a member to be stamped, an arm rotatably mounted at one end thereof on said base, said arm being mounted to rotate through substantially 180 degrees, said pallet being rigidly supported on said arm, the plane of the surface to be stamped supported on said base being substantially at right angles to the tangent to the curve described by a point on the printing faces of said type at the point of contact therebetween, the plane of said printing faces coinciding with the plane of the said surface to be stamped supported on said base at said point of contact, said arm being extended to form an integral actuating handle projecting beyond said pallet, said pallet being supported between said handle and the end of said arm mounted on said base.

2. A stamping machine comprising a pallet adapted to carry a line of type having its printing faces in the same plane, a base having a supporting surface adapted to support a member to be stamped, an arm rotatably mounted at one end thereof on said base, said arm being mounted to rotate through substantially 180 degrees, said pallet being rigidly supported on said arm, said arm carrying said pallet being mounted to rotate through substantially 180 degrees in a plane substantially at right angles to said supporting surface, the plane of the surface to be stamped while supported on said base being substantially at right angles to the tangent to the curve described by a point on the printing faces of said type at the point of contact therebetween, the plane of said printing faces coinciding with the plane of

the said surface to be stamped supported on said base at said point of contact.

3. A pallet for a stamping machine comprising a block adapted to support a line of type, said block having an elongated surface upon which the type is adapted to be assembled, a fixed projection carried by said pallet adjacent said surface forming a stop for one end of said line of type, an elongated bar parallel to said surface carried by said pallet, said bar being movable relative to said pallet but non-removable therefrom, said bar carrying a projection fixed thereon and facing said surface and forming a movable stop for the other end of said line of type, said bar being adjustable along its length parallel to said surface to adjust its projection for varying lengths of lines of type, and means for forcing and retaining said bar against said line of type in its adjusted position to clamp said type between said bar and said surface.

4. A pallet for a stamping machine comprising a block adapted to support a line of type, said block having two elongated surfaces at right angles to each other upon which the type is adapted to be assembled, a fixed projection carried by said pallet adjacent one of said surfaces forming a stop for one end of said line of type, an elongated bar parallel to said last-named surface carried by said pallet, said bar being movable relative to said pallet but non-removable therefrom, said bar carrying a projection fixed thereon and facing said last-named surface and forming a movable stop for the other end of said line of type, said bar being adjustable along its length parallel to said last-named surface to adjust its projection for varying lengths of lines of type, and means for forcing and retaining said bar against said line of type in its adjusted position to clamp said type between said bar and said last-named surface.

5. A pallet for a stamping machine comprising a block adapted to support a line of type, said block having an elongated surface upon which the type is adapted to be assembled, a projection carried by said pallet adjacent said surface forming a stop for one end of said line of type, an elongated bar parallel to said surface carried by said pallet by a strip mounted on said block by at least one end of said strip and held spaced from said block and parallel thereto along substantially its entire length, a relatively narrow projection on said pallet extending between said block and said strip, and additional means for preventing the removal of said projection from between said block and strip, said bar carrying a projection facing said surface and forming a movable stop for the other end of said line of type, said bar and strip being movable with respect to said projection to adjust its projection for varying lengths of lines of type, and means for forcing and retaining said bar against said line of type in its adjusted position to clamp said type between said bar and said surface.

6. A stamping machine comprising a pallet adapted to carry a line of type having its printing faces in the same plane, a base having a supporting surface adapted to support a member to be stamped, means for moving the printing faces of said type into stamping engagement with the surface of said member to be stamped, said pallet comprising a block adapted to support said line of type, said block having an elongated surface upon which the type is adapted to be assembled, an indicating point on said pallet adjacent said pallet surface with respect to which

said type may be aligned, and a reference line on said base with respect to which the member to be stamped may be aligned, said reference line coinciding with one edge of the line of type to be printed.

7. A stamping machine comprising a pallet adapted to carry a line of type having its printing faces in the same plane, a base having a supporting surface adapted to support a member to be stamped, an arm rotatably mounted on said base, said pallet being rigidly supported on said arm, aligning means carried by said machine having one side thereof lying in a predetermined printing plane, the plane of said printing faces coinciding with said printing plane at the point of contact therebetween, said printing plane being substantially at right angles to the tangent to the curve described by a point on the printing faces of said type at said point of contact, said supporting surface being adjustable vertically to bring the surfaces of articles of various thickness into coincidence with said side of said aligning means and thus into said printing plane.

8. A stamping machine comprising a pallet adapted to carry a line of type having its printing faces in the same plane, a base having a supporting surface, said pallet being supported to move downwardly toward said base in a curved path to execute a stamping stroke, an auxiliary supporting member having a base adapted to be removably secured on said first-named base in a predetermined position thereon, said auxiliary supporting member having a supporting surface at a fixed angle with respect to its base such that the plane of said printing faces coincides with said last-named supporting surface at the point of contact therebetween, said last-named supporting surface adapted to support a member to be stamped, the plane of the surface to be stamped supported on said last-named surface being substantially at right angles to the tangent to the curve described by a point on the printing faces of said type at said point of contact.

9. A stamping machine comprising a pallet adapted to carry a line of type, a base having a supporting surface, said pallet being supported to move downwardly toward said base in a curved path to execute a stamping stroke, an auxiliary supporting member removably secured on said base in a predetermined position thereon, said auxiliary supporting member adapted to support a member to be stamped having a curved surface, the tangent to the surface to be stamped at the point of stamping being substantially at right angles to the tangent to the curve described by a point on the printing surfaces of said type at the point of contact therebetween.

10. A stamping machine comprising a pallet adapted to carry a line of type having its printing faces in the same plane, a base, a supporting member adapted to support an article to be stamped, an arm rotatably mounted on said base, said pallet being rigidly supported on said arm, aligning means adapted to be secured to said base in a fixed position relative thereto, said aligning means having one side thereof presented to said supporting member and lying in a fixed position relative to said base, said side defining a printing plane, the plane of said printing faces coinciding with said printing plane at the point of contact therebetween, said supporting member being adjustable to bring the surface of said article into contact with said side of said aligning means and thus into said printing plane.

HENRY A. MINTZ. 75