H. W. WINTER.

STAMPING OR EMBOSSING MACHINE.

APPLICATION FILED NOV. 6, 1914.

1,301,890.

Patented Apr. 29, 1919.

5 SHEETS—SHEET 1.

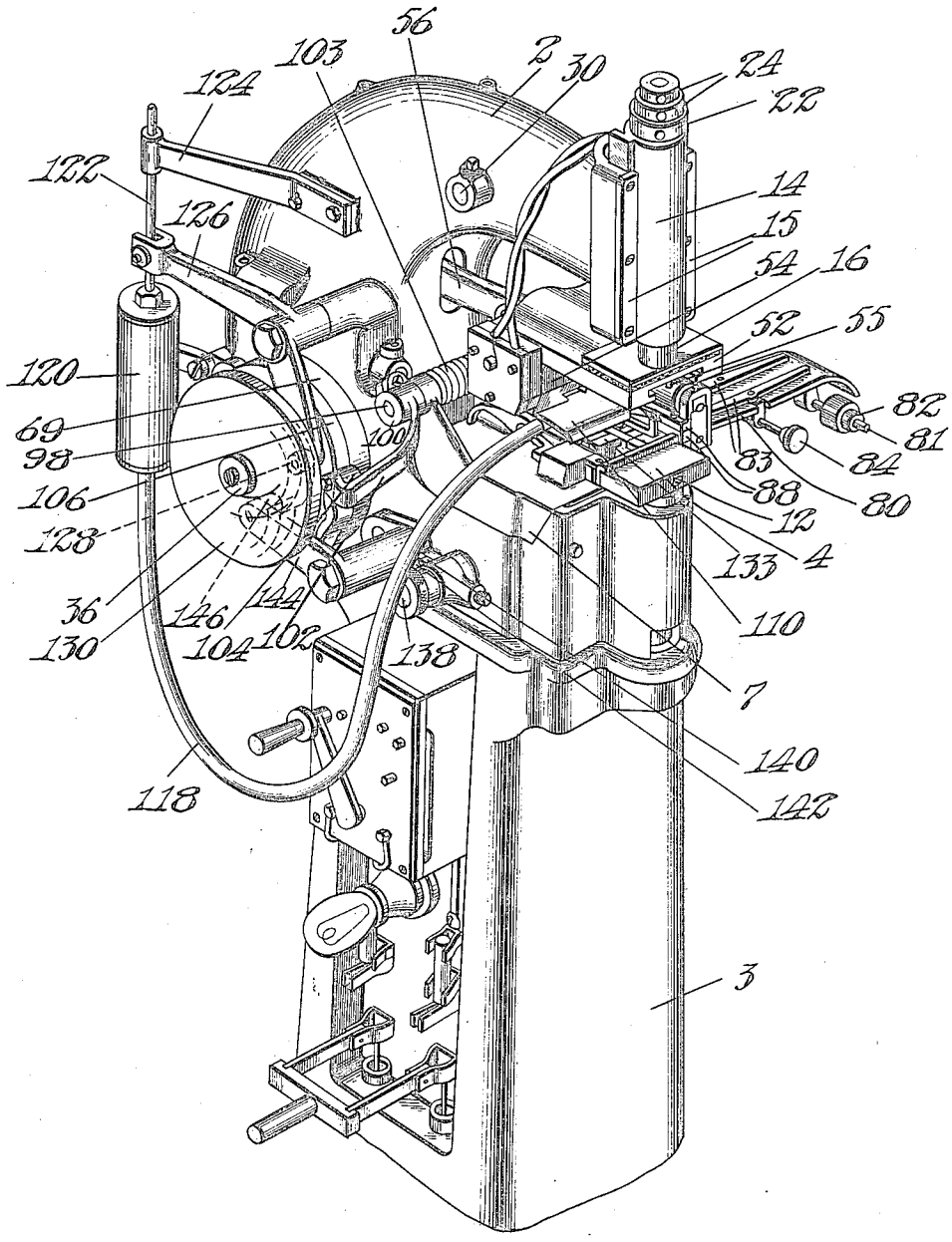

Fig. 1.

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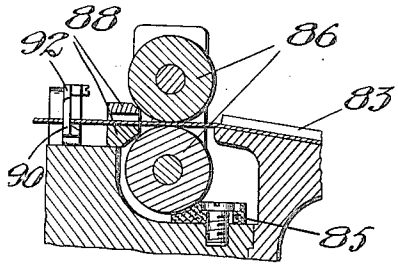

Fig. 7.

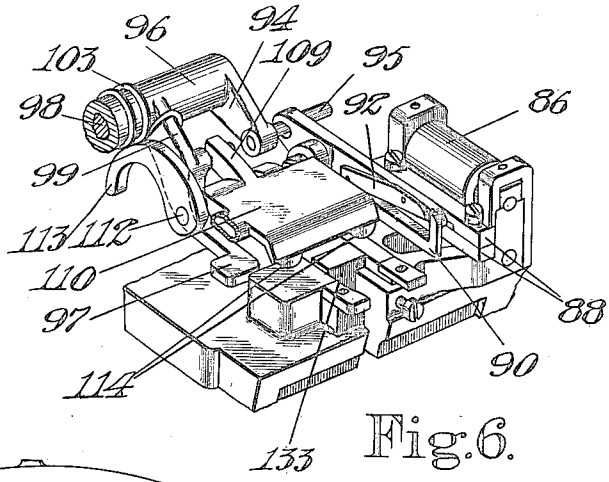

Fig. 6.

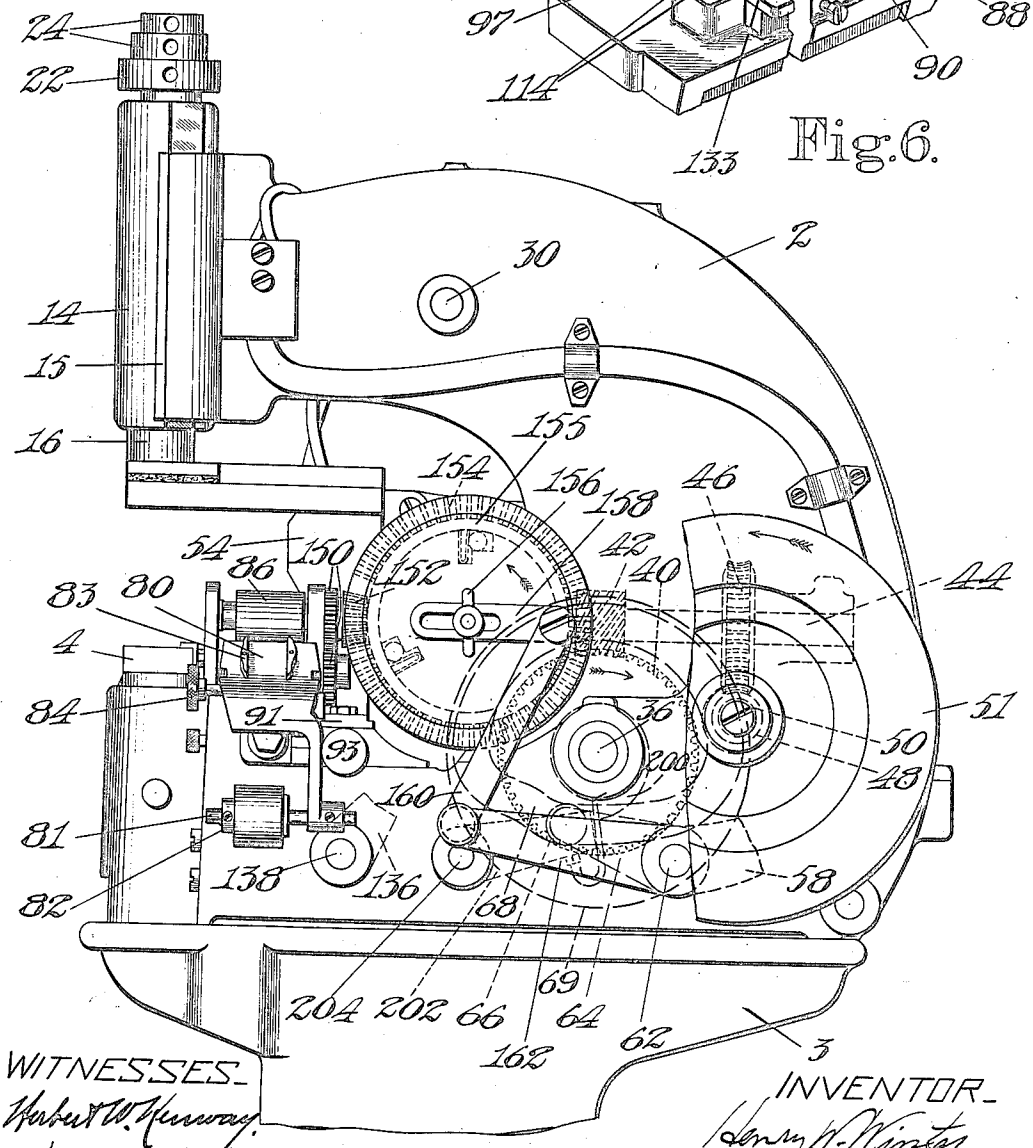

Fig. 2.

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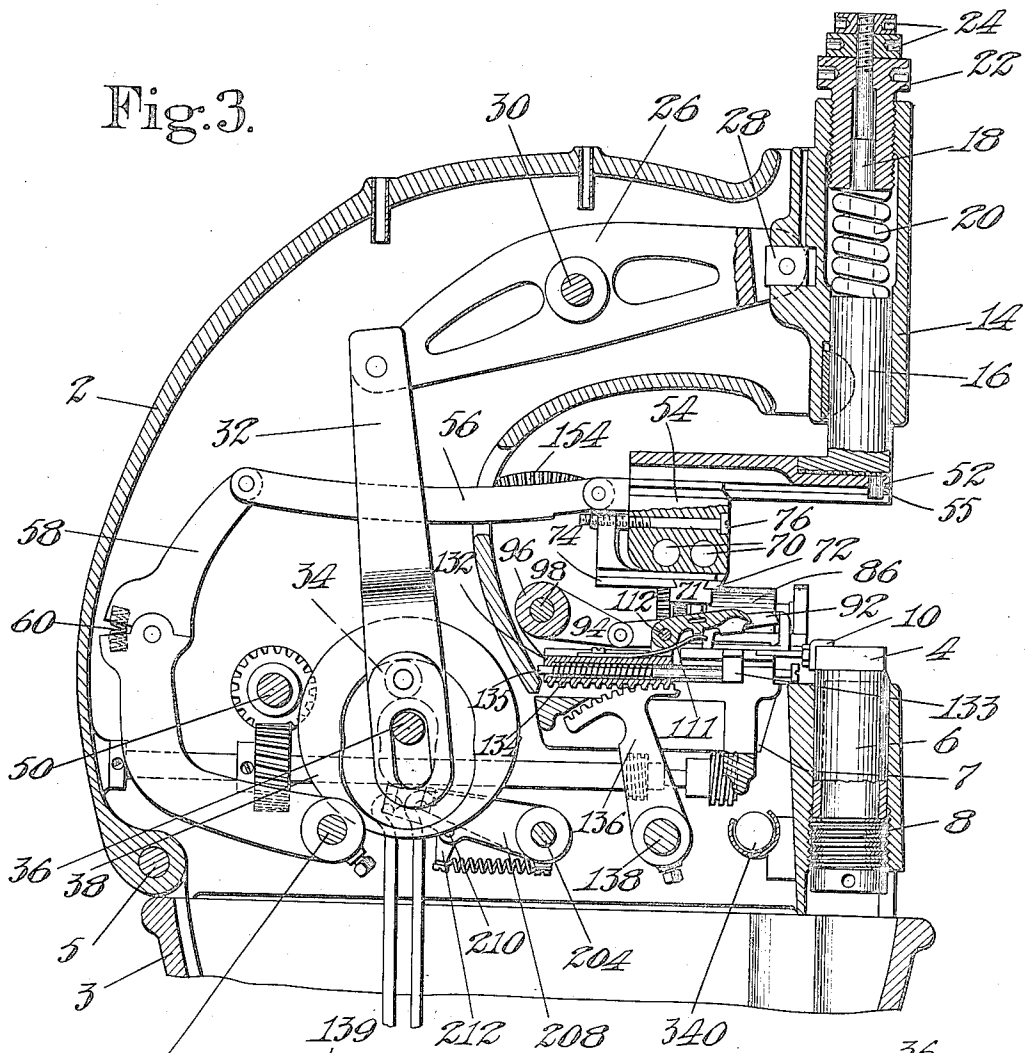
5 SHEETS—SHEET 3.

Fig. 3.



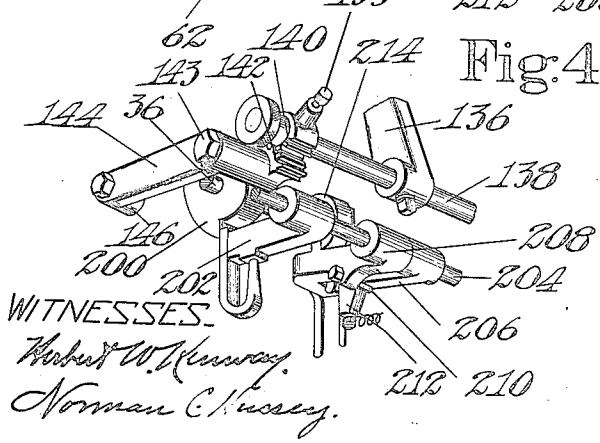


Fig. 4.

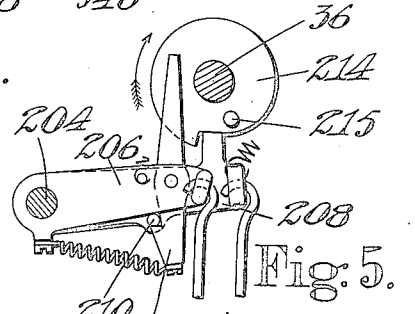


Fig. 5.

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5 SHEETS—SHEET 4.

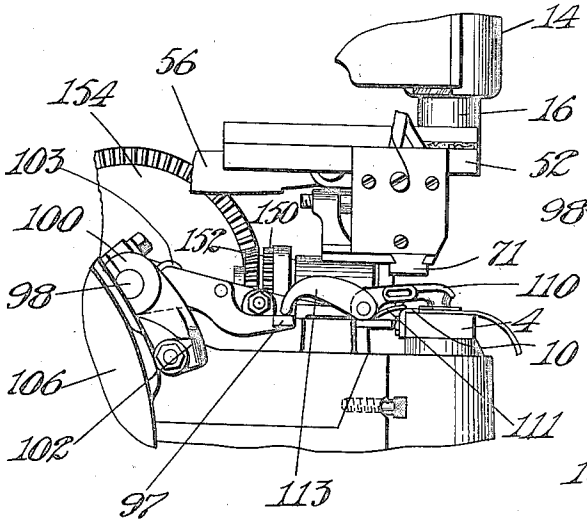

Fig. 8.

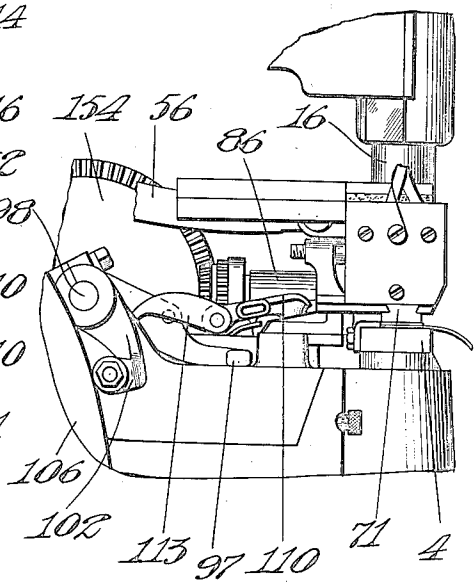

Fig. 9.

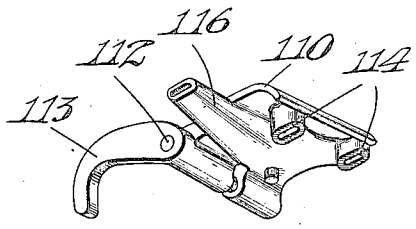

Fig. 10.

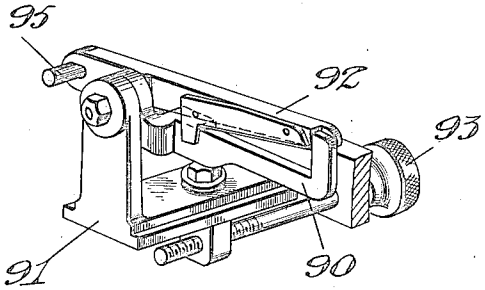

Fig. 11.

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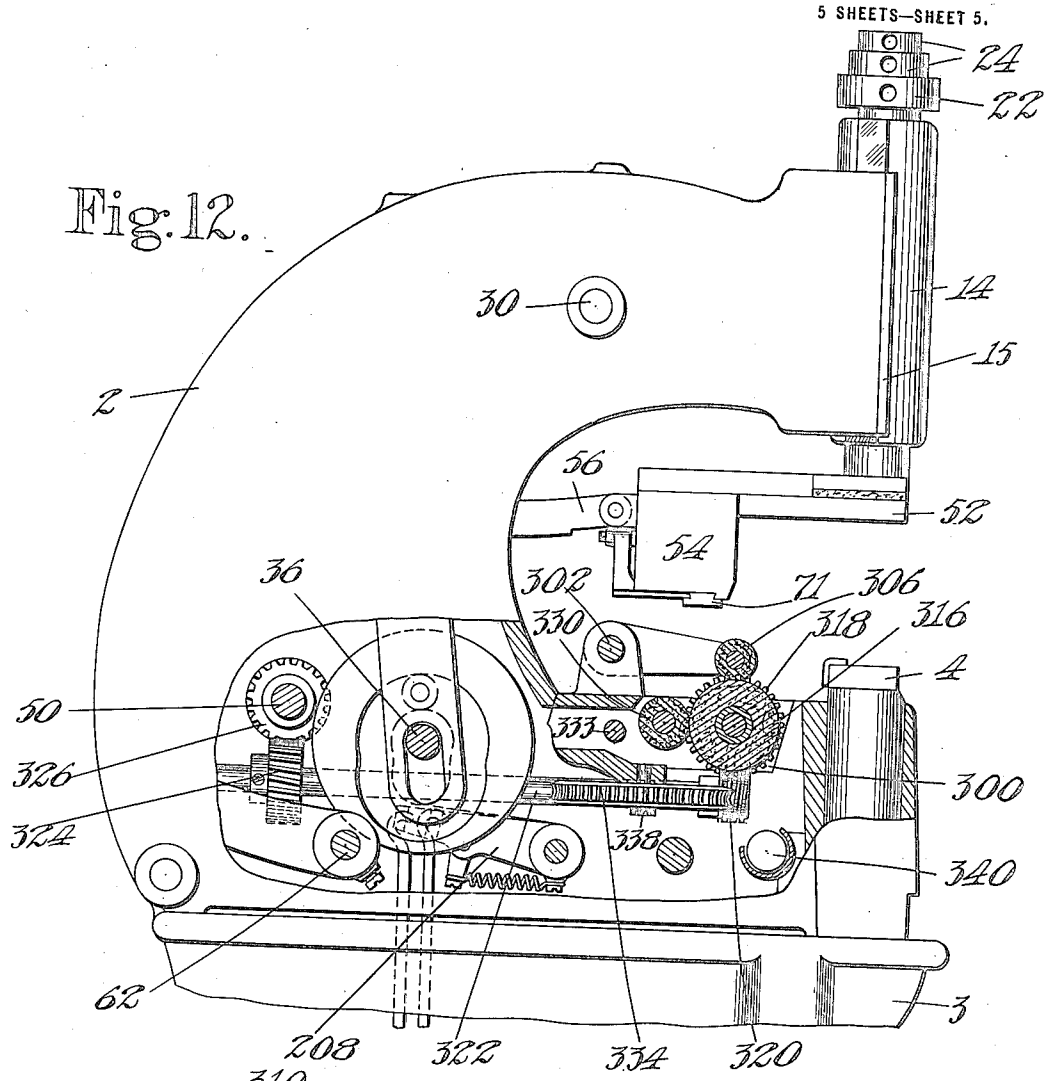
5 SHEETS—SHEET 5.

Fig. 12.



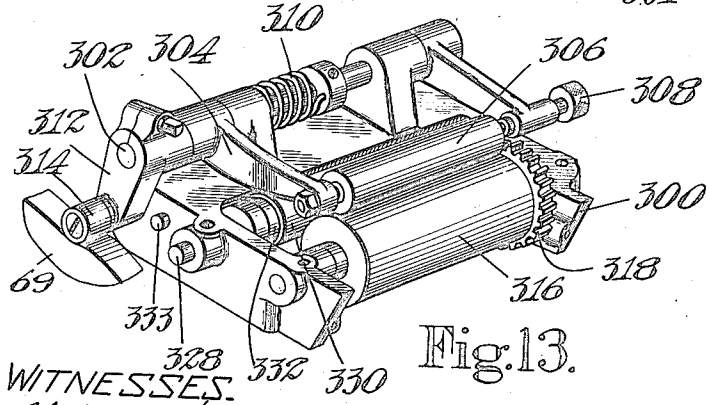
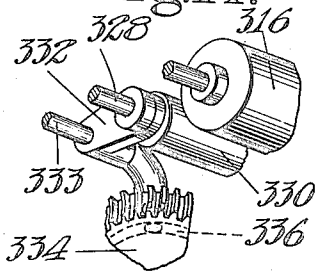


Fig. 13.

Fig. 14.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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STAMPING OR EMBOSSING MACHINE.

1,301,890. Specification of Letters Patent. Patented Apr. 29, 1919.

Application filed November 6, 1914. Serial No. 870,700.

To all whom it may concern:

Be it known that I, HENRY W. WINTER, a citizen of the United States, residing at Methuen, in the county of Essex and State of Massachusetts, have invented certain Improvements in Stamping or Embossing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to machines for marking, stamping or embossing sheet material such for example as parts of boots and shoes with words, trade marks or other designs. The invention is herein illustrated as embodied in a machine for stamping or embossing in gold leaf or other similar color medium. One object of the invention is to provide a machine wherein either of two dissimilar stamping mediums, such as those mentioned, may be employed in accordance with the requirements of the work in hand.

Metallic stamping medium, such as gold leaf, is supplied for stamping purposes in the form of a long strip with a paper backing wound into a coil, this gold being in a thin, delicate film of leaf or powder. One feature of the present invention consists in novel means for feeding portions of such a strip without injury to the stamping medium into alinement with the stamping die. As herein shown this is effected by feeding the end of the strip into position at one side of the work support, then severing the end of the strip and finally conveying the severed end into position upon the work which has been placed upon the support.

Another feature of the invention consists in a strip-conveying mechanism of improved form. As herein shown this comprises a carrier member arranged to engage the severed end of the strip by suction, then convey it to stamping position and finally release it by pneumatic action. Such mechanism has proved very satisfactory in handling gold leaf strips, its action being uniformly dependable and taking place without wrinkling or tearing the strip.

Other features of the invention relate to mechanism for feeding and severing the end of the strip preliminarily to placing the severed end in stamping position. The feeding mechanism herein disclosed comprises a pair of positively driven rollers and adjustable means for regulating the action thereof in accordance with the length of the strip of stamping medium required. The end of the strip is severed, after its end has been advanced through the rollers, by shear blades and these are mounted for bodily adjustment toward or from the feed rollers. The construction above discussed is advantageous in that it permits the severing of a portion of the strip which corresponds exactly with the size of the stamping die in use in a position corresponding to the location of the die. This is important as a stamping medium such as gold leaf is expensive and waste is very objectionable.

Another feature of the present invention consists broadly in providing a stamping machine with interchangeable mechanism for supplying either a stamping medium in the form of a strip or as a powder or paste so that the same die may be used to emboss with either medium. As herein shown this is effected by mounting the strip feeding mechanism and the paste supplying mechanism on interchangeable parts of the machine frame and by providing suitable actuating mechanism within the machine frame for driving either of said mechanisms.

Still another feature of the invention consists in the provision of novel mechanism for supplying a stamping medium of paste to the die. It has been found that desirable results are secured by rolling and spreading the paste preparatory to applying it to the die, and to this end a pair of rotating and relatively longitudinally movable rollers are provided for receiving and working over the paste, and means are also provided for transferring the paste from these rollers to the die. The consistency of the paste is further improved if the paste is warmed during the working over process and the invention contemplates also the provision of heating means for this purpose.

In the machine herein illustrated the die carrier is arranged to occupy initially a position at one side of the work support so that the operator may have an uninterrupted view of the support and may locate the work thereon quickly and accurately and without being hampered by an overhanging die. In this connection an important feature of the invention consists in the provision of a stop for determining the stamping position of the head and means for moving the die car-

rier transversely to the stop and for holding it yieldingly against the stop during the stamping movement of the die carrier. This construction eliminates the possibility of all objectionable transverse displacements of the die during its stamping movement or when it encounters the work. In one of its aspects the construction above discussed constitutes improvements on that disclosed in my Patent No. 1,128,209, dated Feb. 9, 1915, in which the said construction is broadly claimed.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawings, in which,—

Figure 1 is a view in perspective of the machine;

Fig. 2 is a view in side elevation of the right hand side of the machine;

Fig. 3 is a view in section of the left hand side of the machine;

Figs. 4 and 5 illustrate the stopping and starting mechanism, part of the strip conveying mechanism being shown in Fig. 4;

Figs. 6 to 10 are views illustrating in detail the strip conveying mechanism and associated parts;

Fig. 11 is a view in perspective of the strip severing device;

Fig. 12 is a view, in side elevation, partly in section, showing the machine equipped with mechanism for supplying metallic paste, and

Figs. 13 and 14 illustrate details of the paste supplying mechanism.

The machine frame 2 is hinged on the pintle 5 to the top of a standard 3 so that it can be swung back to permit access to the incased mechanism. It is provided with upper and lower branches, in the lower of which is formed a socket for the reception of the shank 6 of a work supporting plate 4. The lower end of the socket is threaded to receive an adjustable nut 8 by which the vertical position of the work supporting plate 4 is determined. At the rear edge of the plate 4 is provided an edge gage 10 which may be adjusted forwardly and rearwardly by an adjusting screw 12.

In the upper branch of the frame 2 are formed vertical ways for the reciprocatory head 14. The ways are formed partly in the machine frame and partly by gibs 15 secured thereto. The head 14 is bored to receive a plunger 16 having a reduced stem 18 which extends upwardly through a stop nut 22 threaded into the upper portion of the head 14. Interposed between the stop nut 22 and the body of the plunger 16 is a heavy compression spring 20 which affords relief for the stamping die in case work of unexpected thickness is encountered or an improper adjustment as to height should be made in the supporting plate 4. The normal position of the plunger 16 in the head 14 is determined by the setting of a pair of lock nuts 24 on the upper end of the stem 18. It will be apparent that by adjusting the stop nut 22 and the lock nuts 24 the pressure of the spring 20 and the position of the plunger may be adjusted separately or together as desired.

The stamping head 14 is actuated by a cam 38 on the shaft 36 acting through connections which comprise a slotted link 32 carrying a cam roller 34 and pivotally connected at its upper end to a rocking lever 26. The lever 26 at its forward end carries a pivoted block 28 which is fitted loosely into a square slot in the back of the head 14. At its lower end the link 32 is slotted for the passage of the cam shaft 36 which consequently guides the lower end of the link in its movements.

The main shaft 50 is journaled in the frame 2 at the rear of the cam shaft 36 and carries on its right hand end a driving pulley 51. The shaft 50 carries a worm 48 arranged to mesh with a worm wheel 46 secured to a worm shaft 44 extending from front to rear of the machine as shown in Fig. 2. At its forward end the worm shaft 44 carries a small spiral gear 42 which meshes with a large spiral gear 40 secured to the cam shaft 36 above mentioned. The large gear 40 is positively driven at all times from the pulley 51 and constitutes the loose member of a clutch. When it is desired to set the machine in motion the gear 40 is clutched to the shaft 36 by mechanism which will be described hereinafter.

Secured to the lower end of the plunger 16 is a guideway plate 52 having ways extending from front to rear in which slides the die carriage 54. The body of the carriage 54 is recessed to receive a pair of electric heating units 70 and is provided upon its lower surface with retaining ribs 72 and 74 which are adapted to engage and hold the stamping or blocking die 71 in place. The rib 72 is stationary while the rib 74 is slidable and provided at its rear side with an upwardly extending ear into which is threaded an adjusting screw 76. The screw 76 passes through the body of the carriage so that its head is located within convenient reach of the operator for releasing or clamping a die in place.

In its initial position the carriage 54 is located at the rear end of the guideway plate 52 as shown in Figs. 1, 2 and 3 in which position it is out of line with the work supporting plate 4 so that an unobstructed view is afforded the operator of work positioned on the plate. The carriage 54 is moved forwardly preliminarily to the depression of the stamping head and then

rearwardly after the stamping operation through the link 56 pivoted at its rear end to the lever 58 fast to the transverse shaft 62. The shaft 62 has secured to it a cam arm 64 as shown in dotted lines in Fig. 2, which carries a cam roller 66 arranged to run in a cam track 68 cut in the inner side of the cam disk 69 which is secured to the cam shaft 36 at the left side of the machine. In order to prevent any transverse movement of the die carriage 54 during the downward movement of the stamping head a stop pin 55 is set in the forward end of the guide plate 52 where it will arrest the die carriage in the proper transverse position for stamping. The actuating lever 58 is made in two parts hinged together as shown in Fig. 3 and the upper part is normally thrown forwardly by a compression spring 60 which is interposed between rearwardly extending projections on the respective parts. The cam track 68 is so shaped that in moving the die carriage 54 forwardly the lower part of the lever 58 is swung more than is sufficient to bring the die carrier 54 up against the pin 55, the excess movement being taken up as lost motion which compresses the spring 60. Thereafter as the stamping head 14 is depressed the spring 60 acts to hold the die carriage yieldingly in engagement with the pin 55.

At the right hand side of the machine adjacent the work table 4 and carried by a removable part 7 of the frame is a bracket 80 shaped at its upper face to constitute a table over which the gold leaf strip may be drawn from the roll held in place on a spindle 81 disposed below the bracket. The spindle 81 is provided with a removable collar 82 which retains the roll in place and creates a sufficient tension to keep the strip smooth. Two guide ribs 83 are disposed on the face of the bracket 80 to form a channel for the gold leaf strip. These ribs are made relatively adjustable to accommodate strips of various widths by means of a right and left screw 84.

The strip feeding means comprise a pair of rollers 86 which are journaled at the inner end of the bracket 80 in position to draw the strip forwardly between the guide ribs 83. At the inner side of the feed rollers is arranged a pair of stripping plates 88, see Fig. 7, separated by a space through which the advancing end of the strip may pass. A stationary cleaning pad 85 is arranged to bear on the side of the lower feed roller to remove any adhering particles.

In order to sever the end of the gold leaf strip advanced by the rollers a pair of cooperating shear blades 90 and 92 are arranged adjacent to the slot between the strippers 88. These blades are carried by a transversely adjustable slide 91 as shown in Fig. 11. The slide is guided in ways formed in the machine frame and may be adjusted toward or from the feed rollers to regulate the length of the severed portion of the strip by means of an adjusting screw 93. The lower blade 90 is normally stationary and has an upwardly extending guard piece at its outer end which prevents transverse displacement of the strip during the severing operation. The movable blade is carried by a pivoted arm 92 which has its rear end slotted to receive an actuating pin 95. The pin 95 projects from an arm 94, see Fig. 6, formed as a part of a sleeve 96 secured to a shaft 98 which is journaled in bearings formed in the removable part 7 of the machine frame. Secured to the left hand end of the shaft 98, as shown in Fig. 1, by means of a split hub 100 is an arm 102 which carries a cam roller 104 arranged to run on the periphery of a cam disk 106 secured to the cam shaft 36. The cam 106 is shaped to swing the arm 102 at the proper time in the cycle of the machine and cause the movable shear blade to sever the end of the strip.

The feed rollers 86 act to advance the end of the strip through the shear blades and into a position over the supporting block 133 upon which it rests by gravity and without necessitating the use of clamping means which might injure the delicate film of stamping medium. When the end of the strip has been severed it rests upon the block 133 in a position from which it may be picked up and carried forwardly by mechanism which will now be described. In the part 7 of the machine frame are formed guideways for a carriage 132, shown best in Fig. 3, upon which is pivotally mounted on a pintle 112 a plate 110 having a pair of suction nozzles 114 on its lower surface connected to the tubular stem 116. Fitted over the stem 116 is the end of an air pipe 118 which leads from an air pump 120 mounted upon the rear side of the frame. The pump plunger, not shown, is provided with a rod 122 which extends upwardly through bearings formed in an arm 124 secured to the machine frame. The pump plunger is reciprocated by a bell crank lever 126 pivoted on a stud set in one side of the machine frame and carrying a cam roller 128 which is arranged to run in a cam track cut in the inner face of the cam disk 130. The cam track is so shaped as to lift the pump plunger and cause a suction at the nozzle 114 when the plate 110 is moved into contact with the surface of the severed portion of the strip and this suction causes the strip to adhere to the plate which furnishes, to the rear of the nozzles, a retaining means or rest for the strip to prevent its displacement during the applying movement of the nozzles or defacement of the stamping medium. The strip is then carried into stamping position

whereupon the pump plunger is moved downwardly and the strip blown away from the suction nozzles and upon the work to be stamped.

The carriage 132 has a body portion on which is pivotally mounted the plate 110 and rack teeth 134 are formed on the lower surface of the carriage. The carriage is shaped to slide forwardly and rearwardly in horizontal guideways and is operated by a toothed segment 136 meshing with the rack 134 and fast on the transverse shaft 138. The body of the carriage is bored to receive a stem 135 projecting rearwardly from the block 133 and a compression spring surrounding the stem 135 and bearing against a shoulder therein serves normally to project the same to hold the block 133 outwardly as shown in Fig. 3. When the carriage is moved forwardly the block 133 encounters a stationary stop screw and its movement is arrested, the spring surrounding the stem 135 being compressed during the latter part of the forward movement of the carriage. The purpose of this construction is to permit the conveying plate 110 to be moved with the carriage to a position above the work support 4. The block 133 is designed to be located beneath the conveying plate 110 when the latter is in its initial position for the purpose of supporting the severed end of the strip but would interfere with the movement of the carriage if not moved from its inital position. At its left hand end the shaft 138 carries a small segment 140, shown in Fig. 1 and Fig. 4. The segment 140 meshes with a corresponding segment 142 which comprises part of a cam lever 144 pivotally mounted on a stud 143 set in the machine frame. The segment 140 is detachably locked to the shaft 138 by a spring pin 139, see Fig. 4, which fits into a socket, not shown, in the shaft. By retracting the pin 139 the shaft 138 is left free and the segment 136 may be swung rearwardly into an inoperative position supported by the shaft 204 when desired. At its rear end the lever 144 carries a roller 146 which is arranged to run in a cam track cut in the outer face of the cam disk 106 on the cam shaft 36. The cam track is so shaped as to advance and the carriage 132 to carry the gold leaf strip into position on the work and then immediately to retract the carriage before the stamping head is depressed.

The plate 110 as already stated, is hinged upon a pintle 112 which extends between ears on the carriage 132. A leaf spring 111 normally holds the plate with its front end elevated as shown in Figs. 3 and 9. The plate is depressed into engagement with the strip and against the tension of the spring 111 through a rearwardly extending arm 109, see Fig. 6, which overlies a pin set in the arm 99 extending forwardly from the sleeve 96 before mentioned. This sleeve 96, as before explained, is oscillated by the cam 106 to effect the severing of the end of the strip and consequently the plate 110 will be depressed at the same time as the upper shear member 92. When the plate 110 rises after its first depression it carries with it the severed end of the strip and thereupon the carriage 132 is moved forwardly so that the strip is brought into position above the work. When the carriage reaches its forward position the plate 110 is again depressed and this operation is effected through a rearwardly extending arm 113, the end of which is located above the end of an arm 97, see Figs. 8 and 9, which constitutes a projection from the arm 99. When the plate 110 is depressed in its forward position the severed end of the strip is blown from the suction nozzles as before described.

The feed rollers 86 are provided at their rear ends with meshing pinions at 150 and the upper roller carries also a bevel pinion 152 which meshes with a large bevel gear 154 loosely journaled on the right hand end of the shaft 98. The gear 154 is intermittently rotated through a one-way clutch between it and the disk 155 also journaled on the shaft 98. The disk 155 is connected to a crank piece 158 and link 160 which, in turn, is connected to an arm fast on the shaft 62. The shaft 62 it will be remembered constitutes part of the mechanism for advancing and retracting the die carrier 54 and consequently when this shaft is oscillated the crank arm 158 will be oscillated and the feed rollers rotated. In order to vary the extent of the strip advanced at each feeding operation the crank arm 158 is adjustably secured to the disk 155 by means of a thumb nut 156. It will be apparent that by lengthening the effective portion of the crank arm 158 a reduced oscillation will be imparted to the gear 154 and a correspondingly shorter feed will result.

By adjusting the action of the feed rollers the advancing end of the strip may be brought to rest in a position directly in line with the left edge of the die (seen from the front). If a wide die is in use the feed will be lengthened, while in the case of a narrow die, the feed will be correspondingly reduced. On the other hand, by properly adjusting the position of the shear blades by the screw 93, the right hand end of the severed strip will be located in alinement with the right hand edge of the die.

The fast member of the clutch comprises a disk 200, as shown in Fig. 4, keyed to the shaft 36 and having a single tooth arranged to be engaged at times by the stop 202. The loose member, as already stated, comprises the large gear 40. The member 200 constitutes part of the well known Horton clutch of which specific description is un-

necessary. When the stop 202 is withdrawn the clutch is permitted to engage and the shaft 36 will then be rotated. When the stop 202 is permitted to occupy such position that it will be engaged by the tooth on the disk 200 the clutch is disengaged and the shaft 36 brought to rest. The stop 202 is fast upon a transverse shaft 204 journaled in the machine frame and also secured to the shaft 204 is a treadle arm 206. This arm is connected with a treadle rod as shown in Fig. 5 and by depressing the treadle rod the stop 202 may be depressed and held in an inoperative position while the machine makes as many revolutions as desired.

In some classes of work, notably in stamping or embossing with gold leaf, it is important to insure a non-repeating action of the clutch and for this purpose a second treadle arm 208 is mounted upon the shaft 204. The latter arm, however, is loose upon the shaft and carries the transversely extending latch pin 210. This pin engages a latch piece 212 pivotally mounted upon a fast arm 206. A treadle rod is also connected to the treadle arm 208 and when this rod is depressed the arm 206 is also depressed through the connection afforded by the pin and latch. The stop 202 is consequently moved to inoperative position and the machine set in operation. The cam shaft 36 carries a cam 214 which is disposed above the end of the treadle arms above discussed and this cam carries a pin 215 so arranged as to encounter the tail of the latch piece 212 and disengage it from the pin 210 as soon as the machine is started. This operation releases the shaft 204 so that the stop 202 is immediately returned to its operative position. It is, however, prevented from engaging the clutch member 200 by the cam 214 until the proper time arrives for it to engage the tooth of the clutch member and stop the machine.

In operating the machine to stamp or emboss with gold leaf the end of the gold leaf strip is passed between feed rollers 86 after the necessary preliminary adjustments in the edge gage, guide ribs 83 and length of feed have been made. When the treadle lever 208 is depressed and the cam shaft 36 set in operation the feed rollers 86 are rotated to advance the end of the gold leaf strip between the shear blades and over the block 133. The shear blade 92 and the carrier plate 110 are then simultaneously depressed and at the same time the air pump 120 creates a suction at the nozzles 114. The end of the strip is therefore severed and immediately picked up by the carrier plate 110. The plate 110 is then advanced to carry the severed portion of the strip into position above the work on the table 4 and as soon as it has reached the limit of its forward movement it is against depressed and the portion of the strip carried by it blown from the nozzles upon the work. This depression of the carrier plate is accompanied by a second depression of the shear blade 92 but as no further feeding of the strip has taken place this movement of the shear blade is idle. The carrier plate 110 is then moved rearwardly and returned to its initial position whereupon the cam shaft 36 is automatically brought to rest.

It will be noted that the means for holding and guiding the gold leaf strip together with the feed rollers, the shear blades and the conveying plate 110 are all mounted upon the detachable part 7. This part and all the mechanism carried by it may be removed from the machine by merely disengaging a pair of retaining screws, one of which is shown in Figs. 8 and 9. This construction permits the substitution of other mechanism for supplying a different kind of stamping medium to the die. Mechanism for supplying a metallic paste is illustrated in Figs. 12 to 14.

All of the paste supplying mechanism is carried by a part 300 which corresponds in shape to the removable part 7 and is adapted to fit in its place in the machine frame. The part 300 is provided with a pair of upwardly extending ears in which is journaled a transverse shaft 302 carrying a pair of forwardly extending arms 304. Between these arms is journaled an applying roller 306. One of its journals is yieldingly held in place and is provided with a head 308 by which it may be retracted in case it is desired to remove the roller 306. Beneath the roller 306 is journaled a large roll 316 having a pinion 318 at one end. A torsion spring 310 surrounding the shaft 302 normally holds the applying roller 306 in its lowest position in which it bears upon the upper side of the roller 316. The applying roller is moved upwardly into the path of the die 71 by the action of the cam 69 upon the cam roller 314 carried by an arm 312 fast to the shaft 302. The cam 69 it will be remembered has on its inner face the cam track which transversely reciprocates the die carrier and for the purpose of operating the applying roller 306 its periphery is shaped so as to elevate the roller while the die carrier is being moved forwardly.

The roller 316 is driven through a pinion 318 by a worm 320 on the forward end of a shaft 322 extending from front to rear of the machine and having on its rear end a spiral gear 324. The gear 324 meshes with the corresponding spiral gear on the driving shaft 50, all as shown in Fig. 12, so that the roller 316 is continuously driven as long as the driving pulley 51 is in operation. At the rear of the roller 316 is provided a shaft 328 for a spreading roller 330. This roller is rotated frictionally by the large roller 316

and is also shifted transversely for the purpose of spreading paste evenly over the roller. For this purpose a shipping member 332 is arranged to slide on a rod 333 and is provided with an arm for engaging a groove in the spreading roller 330. The shipper member has a downwardly extending arm which runs in a cam track formed in the upper face of a large worm wheel 334 arranged to turn upon a vertical stud set in the part 300. The worm wheel 334 is continuously driven from the shaft 322 by a worm 338.

It has been found that improved results are secured by maintaining the metallic paste in a slightly warm condition and to this end heating means in the form of an electric bulb 340 is provided within the machine frame and beneath the roller 316.

In operating the machine for stamping with metallic paste the machine is started and a supply of paste delivered upon the roller 316. The paste so delivered is quickly and evenly distributed over the surface of the roller by the action of the spreading roller 330 and is at the same time transferred to the applying roller 306. The work is then placed upon the plate 4 and the treadle lever 206 depressed to throw into operation the cam shaft 36. Thereupon the die carrier is moved forwardly and the applying roller 306 is simultaneously elevated. A coating of stamping medium is applied to the die in its forward movement and in the continued operation of the machine the die carrier reaches its forward position and the head 14 is depressed to effect the stamping operation. This is repeated as long as the treadle lever 206 is held depressed and in practice it has been found desirable to impart two or three successive impressions to the work before releasing the treadle lever.

In placing the paste supplying mechanism in operative position in the machine it is necessary only to bring the two gears 318 and 334 into mesh with the two worms 320 and 338 which, with the shaft 322, form a permanent part of the machine. When the strip supplying mechanism is in operation these parts are rotated idly as is apparent from Fig. 3. On the other hand the segment 136, which reciprocates the carriage 132 of the strip supplying mechanism has no function when the paste supplying mechanism is in use. It may be moved downwardly and rearwardly to give room for the gear 334 after disengaging the small segment from the shaft 138 by withdrawing the pin 139, see Fig. 4.

Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States:

1. A stamping machine comprising a reciprocatory stamping head to receive a die for impressing in the work a design in color, a work support, a holder for a strip of color-medium, and mechanism for automatically cutting off successive portions from the end of the strip and then placing on the work between the surface which is to receive the design and the impression portion of the die a portion of the strip preliminarily to each reciprocation of the head.

2. A stamping machine in which is employed a stamping strip including a film of stamping medium, said machine comprising a reciprocatory stamping head, a coöperating work support, mechanism for feeding the strip of stamping medium into position at one side of the support, means for severing the end of the strip, a carrier, and means for moving said carrier into coöperation with the strip and thereafter moving the carrier and the severed portion of the strip to place said portion upon the work without injury to the stamping medium.

3. A stamping machine in which is employed a stamping strip including a film of stamping medium, said machine comprising a stamping head and work support arranged for relative movement, and a shear blade and a carrier member simultaneously movable respectively to sever the strip and engage the severed end, the carrier member being subsequently moved to position the severed end above the support without injury to the stamping medium.

4. A stamping machine in which is employed a stamping strip including a film of stamping medium, said machine comprising a stamping head, a horizontal work support and a horizontal support for the stamping medium situated beside the work support, means for guiding a strip of stamping medium onto its support, means for severing the end of the strip while it lies held by gravity upon its support, and means for lifting the end so severed from its support and applying it to the work.

5. A stamping machine in which is employed a stamping strip including a film of stamping medium, said machine comprising a stamping head and work support, actuating means for producing movement in opposite directions, a support for the strip of stamping medium, a carrier movable by the actuating means to pick up a piece of the strip stamping medium at one side of the work support and movable in the opposite direction by the actuating means to deposit it above the work support on which it rests by gravity.

6. A stamping machine comprising a frame provided with a guideway, a work support mounted on the frame, a carrier for stamping medium arranged to move in the guideway toward and from the support, and a support for the stamping medium movable in the guideway in advance of the carrier.

7. A stamping machine in which is employed a stamping strip including a film of stamping medium, said machine comprising a stamping head and work support, a support for the stamping medium in strip form, and a carrier for conveying stamping medium from its support into stamping position and comprising a plate with spaced suction nozzles, said plate furnishing a support for the film of stamping medium during the conveying movement.

8. A stamping machine in which is employed a stamping strip including a film of stamping medium, said machine comprising a stamping head and work support, shearing blades, a plate having suction nozzles for engaging the strip severed by the shearing blades, said plate presenting a surface which may contact with the severed portion of the strip at the rear of the nozzles, and an air pump arranged to be automatically operated when the severing operation takes place.

9. A stamping machine comprising a stamping head and work support, a carrier for stamping medium in strip form movable toward and from the support and comprising a pivoted suction device, and means for automatically swinging the suction device in opposite directions at the limits of the path of the carrier.

10. A stamping machine comprising a stamping head and work support relatively movable to stamp the work and also relatively movable in a transverse direction, and means for feeding to the work on the support, during such relative transverse movement, a strip of stamping medium.

11. A stamping machine comprising a stamping head and work support, feed rollers for advancing a strip of stamping medium toward the support, and shear blades bodily adjustable toward or from the rollers for regulating the length of the portion of the strip to be severed.

12. A stamping machine comprising a stamping head and work support, shearing blades, feed rollers for advancing a strip of stamping medium between the shear blades on its way to the work support, and adjustable means for actuating the feed rollers.

13. A stamping machine comprising a reciprocatory head, a die carrier transversely movable on the head, a stop for determining the stamping position of the die carrier with respect to the head, and means for yieldingly holding the die carrier in engagement with the stop during the stamping movement of the head.

14. A stamping machine comprising a reciprocatory head having a stop, a die carrier movable on the head with respect to the stop, and mechanism for moving the die carrier against the stop and for holding the die yieldingly in such position during a part of the reciprocation of the head.

15. A stamping machine comprising a head, a movable die carrier thereon, a stop for the carrier, a lever having two relatively movable parts arranged to move the die carrier toward the stop, and means for imparting to one part of the lever a movement greater than that necessary to bring the die carrier into engagement with the stop.

16. A stamping machine comprising a frame provided with means constructed and arranged to receive and support in operative relation to the other elements of the machine mechanisms for feeding the stamping medium in strip form or mechanism for applying stamping medium in paste form, a stamping device to which either medium may be supplied, and actuating means adapted to coöperate with either one of the mechanisms which may be in place in the frame.

17. A stamping machine comprising a work support, a relatively movable stamping head carrying a die, and common operating means constructed and arranged for operating either feed rollers for stamping medium in strip form or driving mechanism for a device for supplying stamping medium in paste form.

18. A stamping machine comprising a work support and stamping head arranged for relative movement, a clutch and actuating mechanism therefor, a non-repeating clutch controlling device for use with one stamping medium supplying means, and a clutch controlling device permitting consecutive movements of the head for use with another stamping medium supplying means.

19. A stamping machine comprising a work support and stamping die, means for feeding a strip of stamping medium toward the die having provision for adjustment whereby the position of the advancing end may be determined, and shear blades adjustable to determine the point of severance.

20. A stamping machine comprising a work support and stamping die, means for feeding a strip toward the die, means for severing the advanced end, and adjustable means for determining the location of both ends of the severed piece.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY W. WINTER.

Witnesses:
CHESTER E. ROGERS,
LAURA M. GOODRIDGE.