

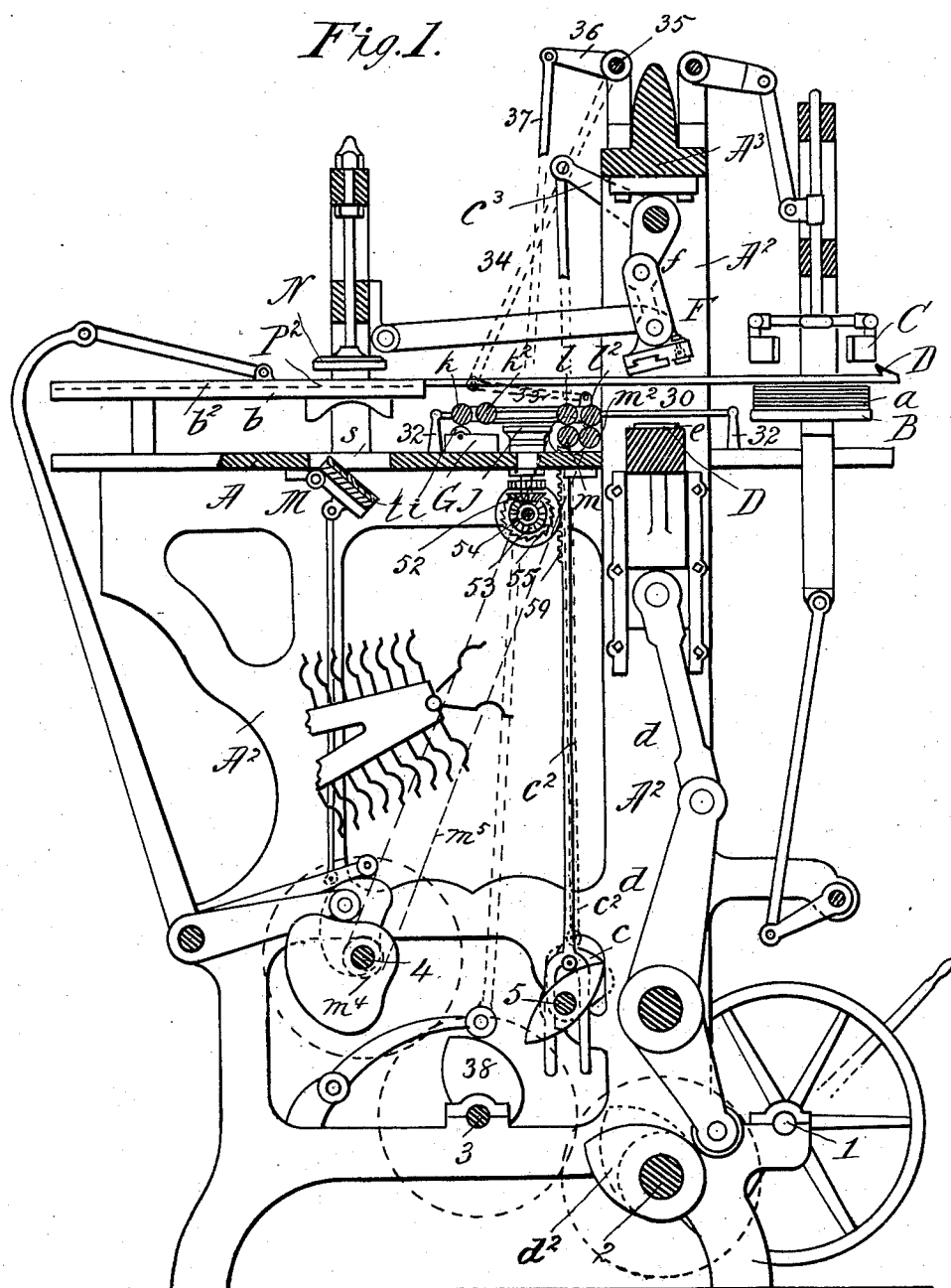
(No Model.)

4 Sheets—Sheet 1.

J. VINES.
ENVELOP MAKING AND PRINTING MACHINE.

No. 578,684.

Patented Mar. 9, 1897.



Witnesses:

M. A. Campbell

A. W. Smith

Inventor,
John Vines,
by N. C. Bellows
Attorney.

(No Model.)

J. VINES.

4 Sheets—Sheet 2.

ENVELOP MAKING AND PRINTING MACHINE.

No. 578,684.

Patented Mar. 9, 1897.

Fig. 2.

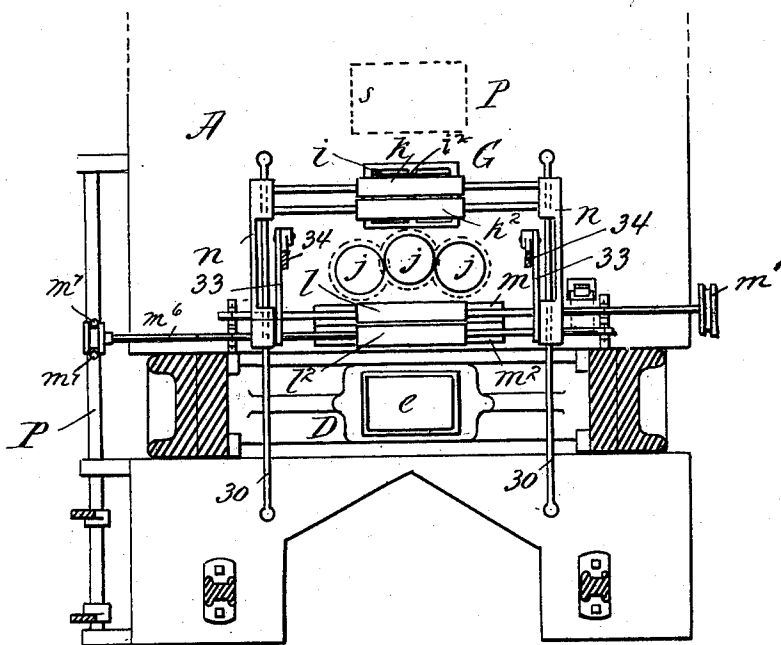
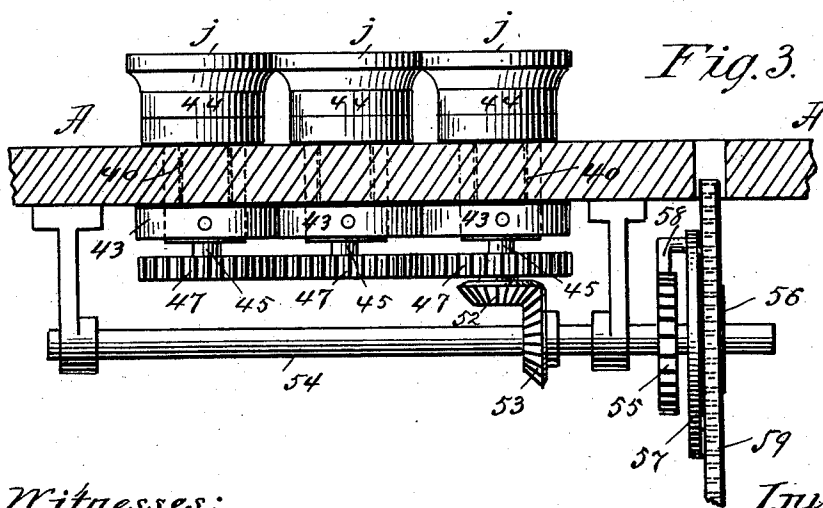


Fig. 3.



Witnesses:
M. A. Campbell
A. W. Smith

Inventor,
John Vines,
by M. S. Allom, Attorney.

(No Model.)

4 Sheets—Sheet 3.

J. VINES.

ENVELOP MAKING AND PRINTING MACHINE.

No. 578,684.

Patented Mar. 9, 1897.

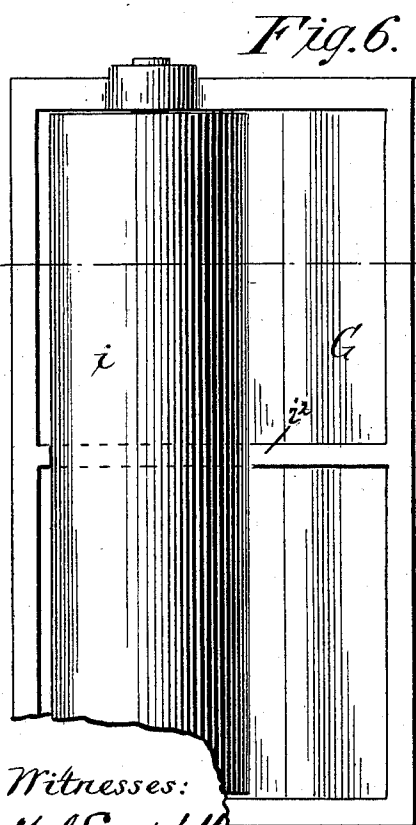
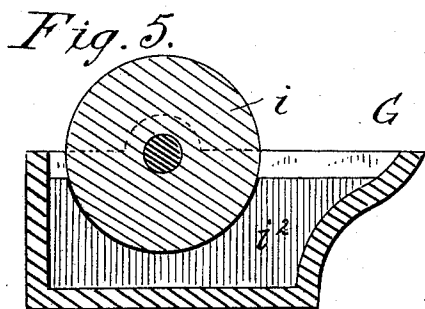
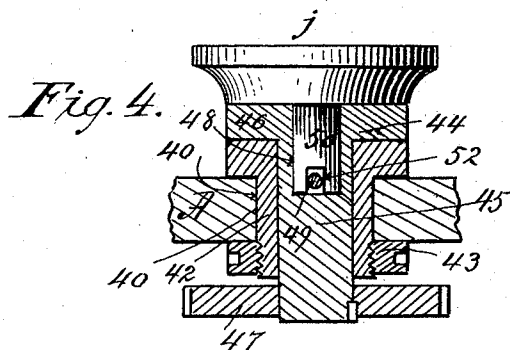


Fig. 7.

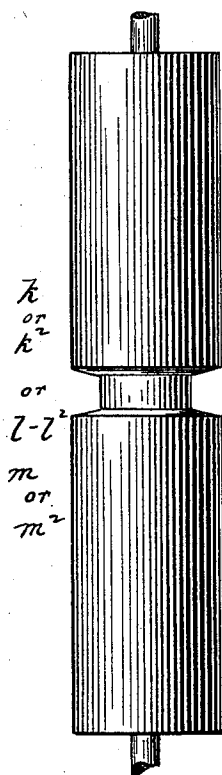
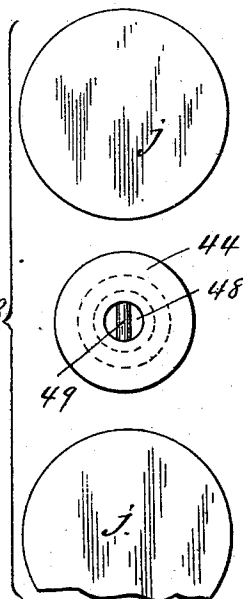


Fig. 8.



Witnesses:
M. A. Campbell
A. W. Smith

Inventor,
John Vines,
by M. F. Bellamy
Attorney.

ENVELOP MAKING AND PRINTING MACHINE.

No. 578,684.

Patented Mar. 9, 1897.

Fig. 9.

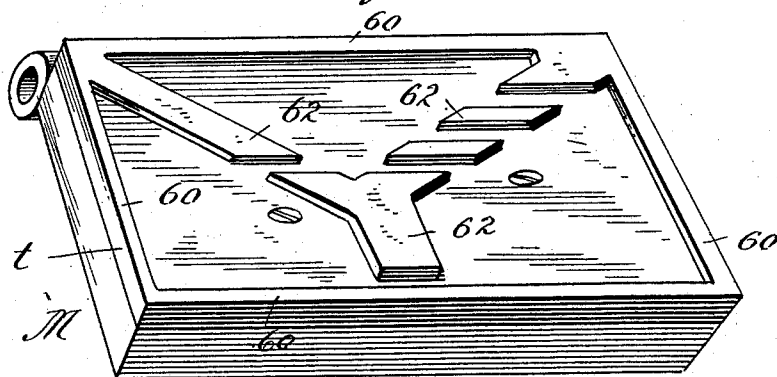


Fig. 10.

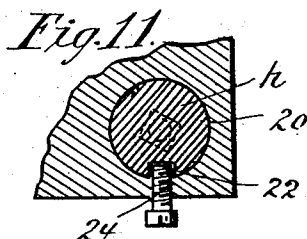
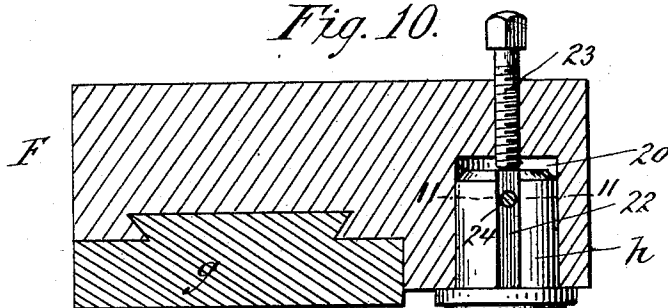
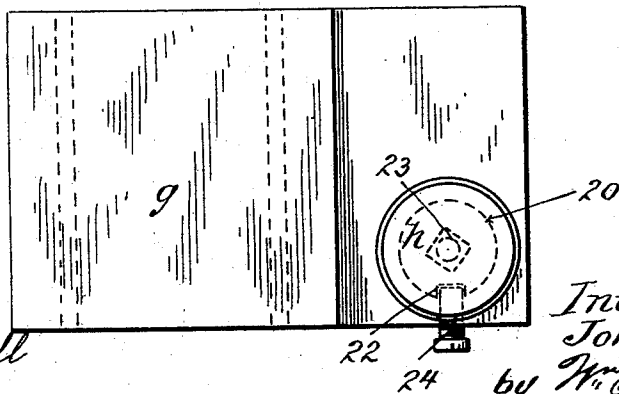


Fig. 13.



Witnesses.

M. A. Campbell

A. W. Smith

Inventor,
John Vines,

by W. L. Bellows
Attorney.

UNITED STATES PATENT OFFICE.

JOHN VINES, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR TO THE HOLYOKE ENVELOPE COMPANY, OF SAME PLACE.

ENVELOP MAKING AND PRINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 578,684, dated March 9, 1897.

Application filed December 31, 1896. Serial No. 617,634. (No model.)

To all whom it may concern:

Be it known that I, JOHN VINES, a subject of the Queen of Great Britain, and a resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Envelop Making and Printing Machines, of which the following is a specification.

This invention relates to improvements in machines for making and printing envelopes, and more particularly to the mechanisms and means which contribute in the performance of the printing operations.

The invention is especially applicable in an envelop making and printing machine in which blanks are supplied as usual, picked up one at a time by gummers or pneumatic pickers, as preferred, being properly gummed, then conveyed rearwardly a suitable distance and momentarily held stationary, whereupon the printing mechanism operates thereon to print the blank. The blank is then conveyed still farther rearwardly to its position where it is subjected to the operation of the creasing and folding mechanism, and is next delivered into the drier-chain and finally disposed of by the attendant who places bands around the bunches of envelopes.

The present improvements more especially relate, first, to improved means for supplying and distributing the ink or inks from the ink-fount onto the face of the type which performs the printing, the objects being to simplify the mechanism or apparatus and to render the same available for printing with one color or with two or more colors at one time; secondly, to an improved sectional and adjustable tympan-bed or platen against which the imprinting, or the imprinting and embossing, of the blank is done, all to the end that all parts of the type or type and embossing faces will come up solid and with equal and uniform pressure; thirdly, to a construction of the folding bed or bottom whereby the portion thereof on which the envelop-blank is folded is susceptible of receiving the impact of the usual folder-wings in approximately continuous lines for effecting the final folding of the envelop at its edges and for setting the gummed surfaces of the overturned flaps and

yet without becoming smeared or smutched by the ink from the freshly-printed blanks, and, furthermore, to permit the change of the detachable layer or plate which constitutes the top of the folding-bed for another layer similar in dimension but dissimilar in respect of the arrangement of its prominent and depressed portions to correspond with another arrangement of the printing on a different lot of envelopes to be made and printed on the machine.

The present improvements are applicable on envelop and printing machines of the general character as exemplified in Letters Patent of the United States granted to James Ball, April 7, 1891, No. 449,894, and February 14, 1893, No. 491,935.

This invention consists in combinations and arrangements of parts and in construction or mechanisms, all substantially as will hereinafter fully appear, and be set forth in the claims; and the said improvements are fully and clearly illustrated in the accompanying drawings in connection with so much of a known type of envelop and printing machine as is necessary to render manifest their operativeness and availability.

In the drawings, Figure 1 is a sectional elevation of the machine as taken centrally from front to rear thereof. Fig. 2 is a plan view of the machine as seen below the level of the conveyers and folding plunger, as these and many other parts understood as absent are omitted for purposes of increased clearness, they constituting no part of the present invention. Fig. 3 is in substance an elevation, on a somewhat larger scale, of the intermittently-rotating removable ink-distributing disks and the means for imparting to them their movements. Fig. 4 is a vertical sectional view through the intermittently-rotating support for one of the removable ink-distributing disks. Fig. 5 is a cross-sectional view of the ink-fount and the ink-fount roll, and Fig. 6 is a plan view of the same. Fig. 7 is a plan view of a divided ink-distributing or inking roll, which form of roll is at times employed in this machine. Fig. 8 is a plan view of two of the ink-receiving disks, the intermediate one thereof being understood as temporarily removed. Fig. 9 is

a perspective view of the folding bed or bottom. Fig. 10 is a vertical sectional view taken from end to end through the sectional and adjustable platen or tympan-bed, while Fig. 11 is a horizontal sectional view in part thereof as taken on line 11 11, Fig. 10. Fig. 12 is a side view of the adjustable section of this platen or bed removed. Fig. 13 is a bottom plan view of Fig. 10.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A^2 represents the frame of the machine, of which A is the main table. All of the movable parts of the machine are primarily driven through shaft 1, which is the driving-shaft, and there are other cam-carrying shafts 2 3 4 5, and several of the cams which affect movable parts referred to in connection with the present improvements will be hereinafter referred to.

B represents the elevating-table, on which the blanks a are supported and by which they are automatically fed up in a well-known way so as to maintain the top of the pile within the reach of the gummets C , which pick them up and carry them above the blank-conveyor D , which moves horizontally in ways b^2 in the horizontal supplemental table b . The blank-conveyor imparts the movement thereto in the usual way.

D represents the vertically-moving type-bed, operating in an already-known manner by the toggle-levers $d d$, operated by the cam d^2 , this bed carrying the type-form e at its top.

F represents the platen, supported by the toggle f under the arch A^3 above the type-bed, this platen moving toward and from the type-bed through means of the cam c , connecting-rod c^2 , and the lever c^3 .

The platen has its bottom formed step-like, as seen in Fig. 10, receiving in the cut-out portion thereof by a dovetail engagement the platen-section g , the bottom of which is plane and level. The body of the platen, at one corner thereof, for instance, as indicated in Fig. 10, has a vertical socket 20 extending from its bottom part way through the platen-body, and h represents an interchangeable platen-section removably confined in the said socket 20, which has its shank formed with the longitudinal side groove 22. The screw or bolt 23 passes, with the thread engagement, vertically down through the top of the platen-body, centrally entering the said socket 20, and bearing by its lower end against the top of the platen-section h . The screw 24 passes through the side wall of the socket 20 into the groove 22, its end bottoming against the base of the groove, and serves to confine the part h when adjusted as to height. The adjustment is performed, while screw 24 is loosened, by turning the screw 23.

In printing Government envelopes, for example, where it is desired to have on the upper right-hand corner an embossed postage-stamp (this stamp constituting all the printing to

be done on the envelop, or being in addition to an address or corner notice, or both, or otherwise) it has been found difficult to acquire the uniform impression on the platen or tympan throughout the whole area of the type-form, and now by using the bottom of the platen-section g as the base from which to work or adjust and by manipulating the section h and the screws 23 24, coacting therewith, it becomes very convenient and practicable to have the work "come up" entirely satisfactory. The face of the platen or tympan may be constituted by a semirigid material, as paper, molded pulp, papier-mâché, or any known suitable material.

G represents the ink-fount, in which, as common, an ink-roll i rotates, the lower portion of its body being immersed in the ink. This fount is located directly and at some distance to the rear of the type-form and rests on the table A .

Intermediate between the ink-roll i and the type-form are three disks $j j j$, having smooth top surfaces which are at about the height of the upper surface of the ink-roll, these disks being removably mounted in peculiar supports therefor and are in edgewise contact and have imparted to them intermittent rotational movements by means which will be hereinafter described.

$k k^2$ and $l l^2$ are pairs of distributing-rolls all movable in unison, the pair $k k^2$ proceeding from the position shown in Fig. 1 at the ink-roll i forward to the distributing-rolls $m m^2$, rotating about fixed axes forward of the disks j and between the latter and the type-bed, while the rolls $l l^2$ are movable from their positions on rolls $m m^2$ forward across the face of the type, said pairs of rolls periodically resuming their positions shown in said Fig. 1. These pairs of rolls are journaled in parallelism in suitable boxes therefor in the frame n , which is supported and guided on the stationary horizontal runner-rods 30 30, supported by the standards 32 above the table.

The reciprocal movements of the rolls $k k^2 l l^2$ and the frame which unites them are imparted by means of the link 33, which is connected to the said frame n , and by its other end to the extremity of the lever-arm 34 on the rock-shaft 35, this shaft receiving its rocking motion by the connection with its arm 36 of the thrust-rod 37, the lower end of which is in engagement with the cam 38 on shaft 3.

The rolls $m m^2$ are constantly rotated by common and simple means, as usual in this class of envelop making and printing machines, and hence not necessary to here illustrate or describe.

Each of the aforesaid disks j is removably mounted in a rotatable support therefor, which will be now described.

The table has a circular hole 40 there-through under the position of each disk, through and below which the cylindrical portion 42 of a tubular bushing of brass or other

suitable metal is placed, the upper flange portion of the bushing resting on the table. The lower screw-threaded extremity of the bushing receives the annular clamping-nut 43.

44 represents the disk-support, the same consisting of a vertical shaft 45, with a flanged top 46, the latter bearing on the top of the bushing, while the shaft portion 45 has its bearing within and protrudes below the depending tubular or cylindrical portion of said bushing and receives on its lower end the spur gear-wheel 47. The upper portion of the disk-support 44 is tubular or formed with an upwardly-opening socket 48 and has the cross-pin 49. The disk j has the depending stem 50, which fits in said socket, its lower end being notched or forked, as seen at 52, to engage said pin 49.

The spur-gears 47, secured to the three disk-supports, mesh one with another and one of these gears has formed thereon or attached thereto a bevel-gear 52, with which meshes a bevel-gear 53 on a shaft 54, which ranges horizontally below the table, being journaled in suitable supports, substantially as shown in Fig. 3. The said shaft 54 has thereon a fixed ratchet-wheel, alongside of which, loosely rotating on shaft 54, is a pinion or spur gear-wheel 56, having the enlarged flange 57, which constitutes a carrier for the pawl 58, which engages in the teeth of the said ratchet-wheel 55.

59 represents a vertically-movable rack-bar to which a vertical reciprocatory movement is imparted, and at every thrust of the rack-bar in one direction the pawl 58 drives the ratchet-wheel and shaft on which it is fixed around a certain distance, the return thrusts of the rack-bar effecting merely a retracting movement of the pawl, which clicks back over the teeth of the ratchet-wheel and causes no rotation of the shaft 54.

Of the rolls k k^2 , which, as shown, do not run in contact with each other, but are slightly separated, the rear one k takes ink from ink-fount roll i onto disks j , and the forward one k^2 takes ink from the disks j to the rolls m m^2 , one of which moves endwise relative to the other. The rolls l l^2 are also arranged on their common support slightly apart and do not run in contact, and said rolls l l^2 , (which are the type-inking rolls,) when the aforesaid roll k is on the ink-fount roll i , rest in contact on the said pair of rolls m m^2 , having the fixed axial positions forward of the disks, these said rolls l l^2 proceeding forward and carrying ink received from the pair of rolls m m^2 onto the face of the type at the same time that the rear rolls k k^2 are moved forward across the disks.

The ink-fount G has therein a partition i^2 , dividing it into two compartments or wells, said partition closely adhering to the periphery of the ink-fount roll i , so that none of the printer's ink in the one compartment can flow into and mix with the ink in the other.

The disks j , having the intermittent rotational movements, as described, serve the same purpose as the usual ink-receiving disk in printing-machines, that is, they present surfaces on which the ink carried by the roll k is spread, rolled, and evened, it being understood that if the roll k were to convey the ink from ink-fount roll i directly onto rolls m m^2 too much ink would be unevenly laid on said rolls m m^2 and the type-form would be excessively and unevenly inked, and when the printing in one color is being performed these disks serve substantially as a single disk of proper area, with the advantage, however, of having the required length and but comparatively slight breadth, whereby small space for their occupancy is required, and this is especially desirable and important in an envelop making and printing machine of the kind to which this invention relates and which is here partially illustrated, especially by reason of the complexity and closeness of the mechanisms and the lack of space.

Now when it is desired to print an envelop in two colors, for instance, a Government envelop having the corner stamp in color on the right-hand upper corner and an address upon its face, or a corner notice, or both address and corner notice, which latter may be in black, different-colored printer's inks are provided in the separated compartments in the ink box or fount, and the middle one of the disks j is removed by simply lifting it out of its rotatable support 44, and now it becomes desirable to have the roll or rolls m peripherally divided intermediate between their ends, as by cutting away or grooving the printer's-roll composition, as seen in the detail view, Fig. 7. The colored ink will be taken from the one end portion of the ink-roll i which is in the compartment of the ink-fount containing such ink and will be carried by the roll k onto the one disk, and the black ink will be taken from the other end portion of the ink-roll i and will be carried also by roll k onto the end disk farthest from the one which received the colored ink, and the different inks on the now non-continuous disks, while being spread and evened, will not become mixed or blended; and the same said rolls k also convey these inks, evened as they are rolled upon the disks having the step-like rotational movements, to the roll or rolls m and m^2 , preferably peripherally divided, as before described, and represented in Fig. 7, and the conveyance of these inks across the type by the rolls l l^2 is apparent, so that the different portions of the face of the type-form will be appropriately and evenly inked.

In lieu of a single ink-fount divided by the partition and having a single roll extending through both of its compartments interchangeable ink-founts and rollers may be removably provided at the position of the ink-fount shown—that is to say, a single long unpartitioned ink fount or box may be employed

with a long roll therein. This is to be replaced by two separate shorter ink-boxes with rolls therein in axial alinement one with another.

The rolls m and m^2 run in peripheral contact, and the roll m has the pulley m' on its arbor, around which a belt m^5 may be passed, this belt running around another pulley m^4 , which may be on any of the driving-shafts having a constant rotation, as, for instance, the shaft 4. The extended arbor m^6 of the roll m^2 has on its one end a double-flanged disk or pulley, with which engages a fork-like arm m^7 , radially extended from the rock-shaft P. This rock-shaft is located at the side of the machine and receives its rocking motion by mechanism common in the Ball envelop-machine, before referred to in this specification, and which rock-shaft is utilized for imparting the reciprocatory movements to the gum-rollers which supply gum to the pickers. The forked arm having the swinging movement in conjunction with the rocking movement of the said rock-shaft P imparts an endwise or axial movement to the roll m^2 , which roll receives its rotatory movement by being in peripheral contact with said roll m , so that the ink brought from the disks by roll k^2 is still further evened and distributed by the rotatory motions of rolls m m^2 , together with the endwise movement of the latter. The rolls l l^2 , slightly separated, as shown, when on rolls m m^2 , rotate in opposite directions, but when these rolls advance and run on the type-form they both rotate in the same direction.

In this envelop making and printing machine having a capacity for rapid production it is necessary to provide against the offsetting of the inked impression on the envelop-blanks upon the folding-bottom, to which the blanks are carried and upon which they are folded by the usual wings or folders, not necessary to here illustrate or describe. To this end I have provided a folding-bottom M, hinged at its one edge to the under side of the table and swinging up into and down from a recess s therefor through the table under the reciprocatory folding-plunger N and creasing-box, the position of which is indicated at P² in Fig. 1, which said folding-bottom is formed with a removable and interchangeable top plate or layer, its upper surface provided with plane prominent marginal surfaces 60 to receive the impact of the folder-wings at the edges of the envelop, and having also internal prominent surfaces 62 in the form of a widened Y, having recesses in lines substantially parallel with the length of the folding-bottom and in such an arrangement as corresponds to the arrangement of the lines of printing on the envelop, more especially those which are at the middle of the envelop, and notwithstanding these recesses the surfaces in the more prominent plane are so approximately continuous that it is sufficient to withstand the hard pressure for the final fold-

ing of the envelop and the setting of the parts which are to be stuck. The simplicity of this expedient measurably enhances the production of the machine beyond the production in a machine of a somewhat similar character, but in which a folding-bed is employed having long extent and adapted to intermittently present different plane surfaces under the folders, those surfaces which had previously received the folding impact being wiped of the offset ink before it has a repeated presentation at the folding position.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an envelop making and printing machine, the combination with a type-form and support therefor and an ink-fount provided with an inking-roller, to the rear thereof, of three disks arranged in a line substantially parallel with the length of the ink-roll intermediate between the type and said roll, a support in which the middle one of said disks is removably mounted, a roll having fixed bearings between the type and said disks and a movable roll for carrying ink from the ink-fount roll onto the disks and means for imparting the bodily reciprocatory movement thereto, means for carrying ink from the disks to said roll forward of the disks, and a roll for carrying ink from the last said roll across and upon the type and means for imparting thereto its reciprocatory movement, substantially as described.

2. In an envelop making and printing machine, the combination with a type-form and support thereof and separate ink-compartments to the rear of the type-form having a roll receiving ink from both of said compartments, of three disks arranged intermediate between the type-form and said ink-fount roll, the middle one of which is removably mounted and means for imparting rotational movements to said disks, a roll m , located between the type-form and said disks and a movable roll for carrying ink from the ink-fount roll onto and across the disks and a roll for carrying ink from the latter to said roll m , and means for imparting a bodily reciprocatory movement thereto, and a roll for carrying ink from the roll m across the type and means for imparting its backward and forward movements, substantially as and for the purposes described.

3. In an envelop making and printing machine, the combination with a type-form and support therefor and separate ink-compartments to the rear of the type-form having a roll which receives ink from both of said compartments, of three disks arranged intermediate between the type-form and said ink-fount roll the middle one of which is removably mounted and means for imparting rotational movements to said disks, a roll m , having its surface peripherally divided between its ends, located between the type-form and

said disks, and a movable roll for carrying ink from the ink-fount roll onto and across the disks, and a roll for carrying ink from the latter to said roll *m*, and means for imparting a bodily reciprocatory movement thereto, and a roll for carrying ink from the roll *m*, across the type and means for imparting thereto its backward and forward movements, substantially as and for the purposes described.

4. In an envelop making and printing machine, the combination with a type-form and support therefor and an ink box or fount to the rear of the type-form having a roll therein and having a partition which divides the ink-fount into two compartments and which bears peripherally on the ink-fount roll, of three disks arranged intermediate between the type-form and said ink-fount roll, rotatable supports in which the disks are removably mounted, and means for imparting rotational movements to one of said rotatable supports and gears connecting one of said supports with another, a roll *m*, located between the type-form and said disks and a movable roll for carrying ink from the ink-fount roll onto, and across the disks and a roll for carrying ink from the latter to said roll *m*, and means for imparting a bodily reciprocatory movement thereto, and a roll for carrying ink from the roll *m* across the type and means for imparting thereto its reciprocatory movements, substantially as and for the purposes described.

5. In an envelop making and printing machine, the combination with a type-form and support therefor and an ink-fount having an ink-roll, of two or more disks having their tops in a common plane and each provided with a depending stem, a support for each disk consisting of a shaft 45 bearing a flanged top and provided with a socket opening to its top in which said stem is removably fitted and engaged, the said shaft being journaled vertically through the table and having a gear on its bottom in mesh with the corresponding gear on the adjacent disk-support, means for imparting a rotational movement to one of said disks, means for conveying ink from the ink-fount roll onto the disks and from the latter onto the type, substantially as and for the purposes set forth.

6. In an envelop making and printing machine, the combination with a type-form and support therefor, and an ink-fount having an ink-roll, of two or more disks having their tops in a common plane and each provided with a depending stem, recessed in its end, a disk-support consisting of a shaft 45 and a flanged top and provided with a socket opening to its top and having the cross-pin 52 with which the recessed end of the disk-stem is engaged, the said shaft being journaled vertically through the table and having a gear on its bottom in mesh with the corresponding gear on the adjacent disk-support, means for imparting a rotational movement to one of

said disks, means for conveying ink from the ink-fount roll onto the disks and from the latter onto the type, substantially as and for the purposes set forth.

7. In an envelop making and printing machine, the combination with the table, a type-form and support therefor, and an ink-fount having an ink-roll, of the three disks having their tops in a common plane and each provided with a depending stem, a tubular top-flanged bushing supported upon and extending down through the table, and receiving on its lower screw-threaded end a clamp-nut, a disk-support consisting of shaft 45, having flanged top and provided with a socket, opening to its top, in which the disk-stem is removably fitted and engaged, the lower portion of each disk-support being extended below said bushing and receiving thereon a gear 46, to mesh with the corresponding gear of the adjacent disk-support, means for rotating one of said disk-supports, a means for conveying ink from the fount-roll onto the disks, and means for receiving ink from the disks and supplying it on the type, substantially as described.

8. In an envelop making and printing machine, the combination with the table, a type-form and support therefor, and an ink-fount having an ink-roll, of the three disks having their tops in a common plane, and each provided with a depending stem, a tubular top-flanged bushing supported upon and extending down through the table and receiving, on its lower screw-threaded end a clamp-nut, a disk-support consisting of shaft 45, having flanged top and provided with a socket, opening to its top, in which the disk-stem is removably fitted and engaged, the lower portion of each disk-support being extended below said bushing and receiving thereon the gears 47, to mesh with the corresponding gear on the adjacent disk-support, and a second gear also on one of the disk-supports, a shaft having a gear in mesh with said second gear, and means for imparting a rotational movement to said shaft, means for conveying ink from the fount-roll onto the disks and from the latter onto the type, substantially as described.

9. In an envelop making and printing machine, the combination with a table, the type-form and support therefor, and an ink-fount and roll, of the three disks having their tops in a common plane and each provided with a rotatable support journaled through and depending below the table and with which support the disk is removably engaged, the said supports being geared together and one thereof having thereon an additional gear, a shaft geared to the last said gear and having fixed thereon a ratchet-wheel and loose thereon, a pinion which carries a pawl that engages said ratchet-wheel, a rack-bar meshing the said pinion and means for imparting thereto its reciprocatory movement, and dis-

tributing-rolls for conveying ink from the fount-roll to the disks, and from the latter to the type, substantially as described.

10. In an envelop making and printing machine, the combination with a type-form and support therefor and an ink-fount provided with an inking-roller, to the rear thereof, of two or more disks arranged with their tops level and in a line substantially parallel with the length of the ink-roll intermediate between the type and said roll, a roll m having fixed bearings between the type and said disks and means for rotating it, and the roll m^2 in peripheral contact on said roll m and journaled to slide endwise in the bearings provided therefor, and means for imparting thereto its endwise movement, a movable roll for carrying ink from the ink-fount roll onto the disks and means for imparting the bodily reciprocatory movement thereto, means for carrying ink from the disks to said roll m and a roll for carrying ink from the last said roll across and upon the type, and means for imparting thereto its reciprocatory movement substantially as described.

11. In an envelop making and printing machine, the combination with a type-form and support therefor and an ink-fount provided with an inking-roller, to the rear thereof, of two or more disks arranged with their tops level and in a line substantially parallel with the length of the ink-roll intermediate between the type and said roll, a roll m having fixed bearings between the type and said disks and means for rotating it, and the roll m^2 in peripheral contact on said roll m and journaled to slide endwise in the bearings provided therefor, and having the flanged collar on its end; the rock-shaft P having a forked arm engaging said flanged collar, a movable roll for carrying ink from the ink-fount roll onto the disks and means for imparting the bodily reciprocatory movement thereto, means for carrying ink from the disks to said rolls m and m^2 and a roll for carrying ink from the last said rolls across and upon the type, and means for imparting thereto its bodily reciprocatory movement, substantially as described.

12. In an envelop making and printing machine, the combination with a table, the type-form and support therefor, and an ink-fount and roll to rear of the type-form, of the three disks having their tops in a common plane located between the type and ink-fount, and each provided with a rotatable support journaled through and depending below the table and with which support the disk is removably engaged, the said several supports being geared together and one thereof having thereon an additional gear, a shaft geared to the last said gear and having fixed thereon a ratchet-wheel and loose thereon a pinion which carries a pawl that engages said ratchet-wheel, a rack-bar meshing the said pinion and means for imparting thereto its reciprocatory movement, the roll m , the rolls k k^2 and l l^2 united

to move in unison, and means for moving them, substantially as and for the purposes set forth.

13. In an envelop making and printing machine, the combination with a table having at a rear portion thereof an ink-fount and at a front portion thereof a type-form support, and a platen having an adjustable and interchangeable tympan bed or section at one portion at its base, two or more disks j intermediate between the type-form and ink-fount, one of which is removably mounted, the roll m between the disks and the type-form, the rolls k k^2 and l l^2 movable in unison, means for imparting thereto their reciprocatory movements, means for imparting rotational movements to the said disks, and means for operating the type-form against the platen all substantially as and for the purposes described.

14. In an envelop making and printing machine, the combination with a table having at a rear portion thereof separate ink-fount compartments and a roll in each and at a front portion thereof a type-form support and a platen having an adjustable and interchangeable tympan bed or section at one portion of its base, two or more disks j detachably mounted intermediate between the type-form and ink-fount, the roll m between the disks and the type-form, the rolls k k^2 and l l^2 movable in unison, together with means for imparting thereto their reciprocatory movements, means for imparting rotational movements to the said disks and means for operating the type-form against the platen all substantially as and for the purposes described.

15. In an envelop making and printing machine, the combination with a type-form and ink distributing and supplying devices therefor of a platen body or bed having a socket 20 opening to its impact-face, a movable platen-section 22 having its side grooved fitted in said socket, the screw 23 threading through the platen-body, entering the said socket and having a forcing bearing, the end of the screw 24 entering the platen-body and engaging in said groove of the section 22 substantially as described.

16. A platen consisting of a body formed steplike and with a dovetailed way in the depressed portion thereof and having in the prominent portion thereof a socket-opening to its face, the dovetailed platen-section g , and the section h which is fitted in said socket adapted for movement toward and from the face of the platen, means for so adjusting it, and a set-screw for confining it in its adjustment substantially as described.

17. In an envelop making and printing machine, the combination with a type-form and means for inking same and means for conveying blanks subject to the action thereof, and for conveying them away therefrom, of a folding-bed adjacent to which the blank is conveyed having an interchangeable, removably-attached face-section with prominent

portions, in the same plane, corresponding to the lines of folding and gum-sticking, said prominent portions being, within the margin of said section, recessed to correspond to the
5 lines of printing, and yet affording approximately-continuous prominent surfaces to properly support the envelop under the hard pressure for setting the gum, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 23d day of December, 1896.

JOHN VINES.

Witnesses:

WM. S. BELLOWS,
M. A. CAMPBELL.