July 1, 1947. N. J. PANTAZAKOS 2,423,112

PRINTING MACHINE

Filed May 26, 1944 5 Sheets-Sheet 1

Fig. 1

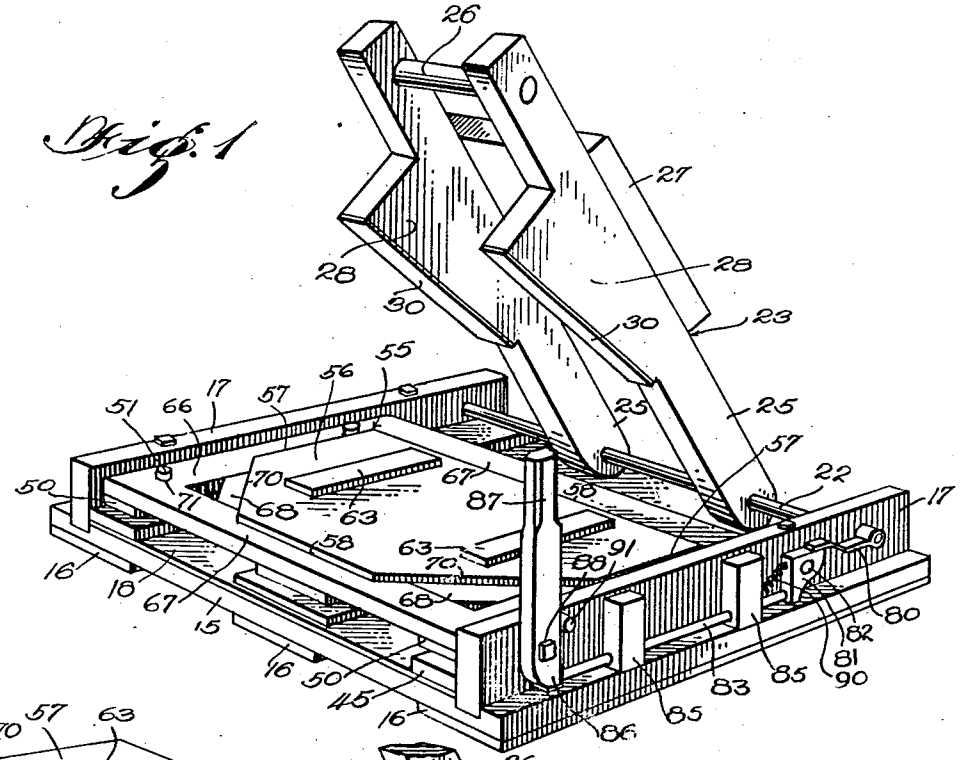
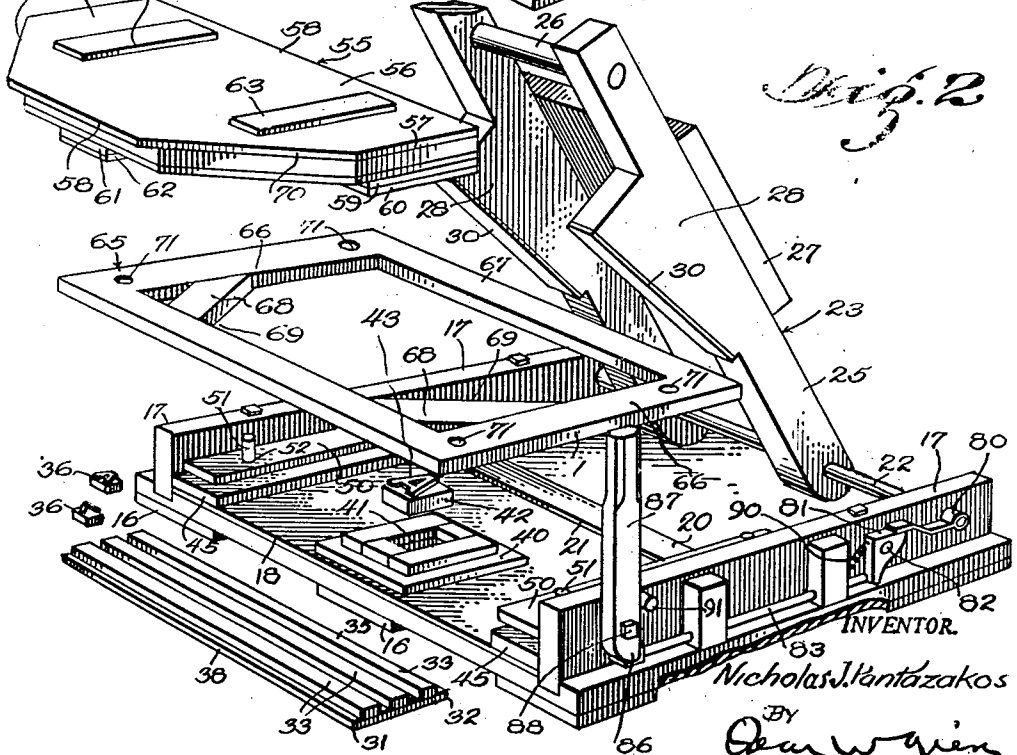


Fig. 2



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July 1, 1947. N. J. PANTAZAKOS 2,423,112

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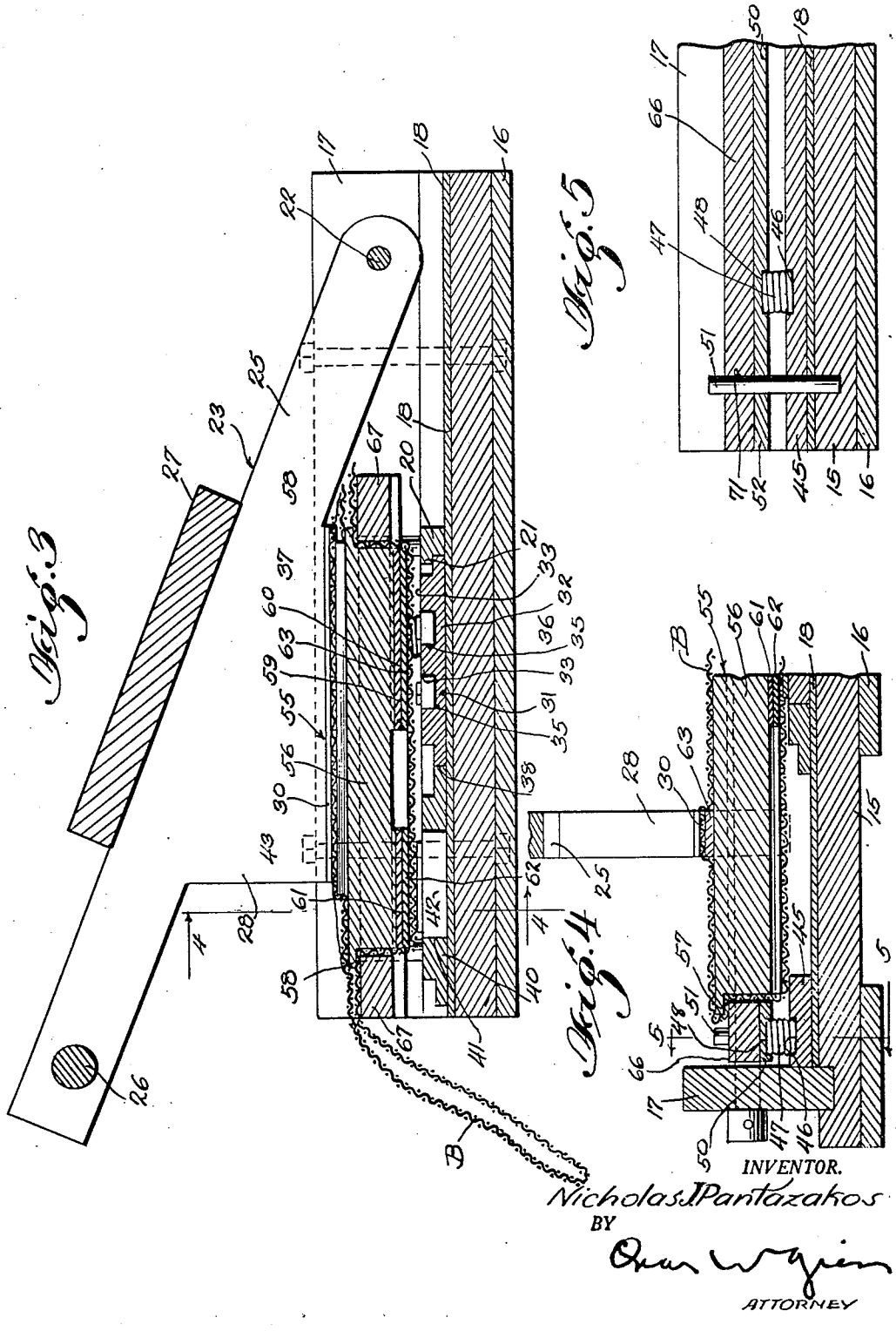


Fig. 3

Fig. 5

Fig. 4

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July 1, 1947. N. J. PANTAZAKOS 2,423,112

PRINTING MACHINE

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Fig. 6

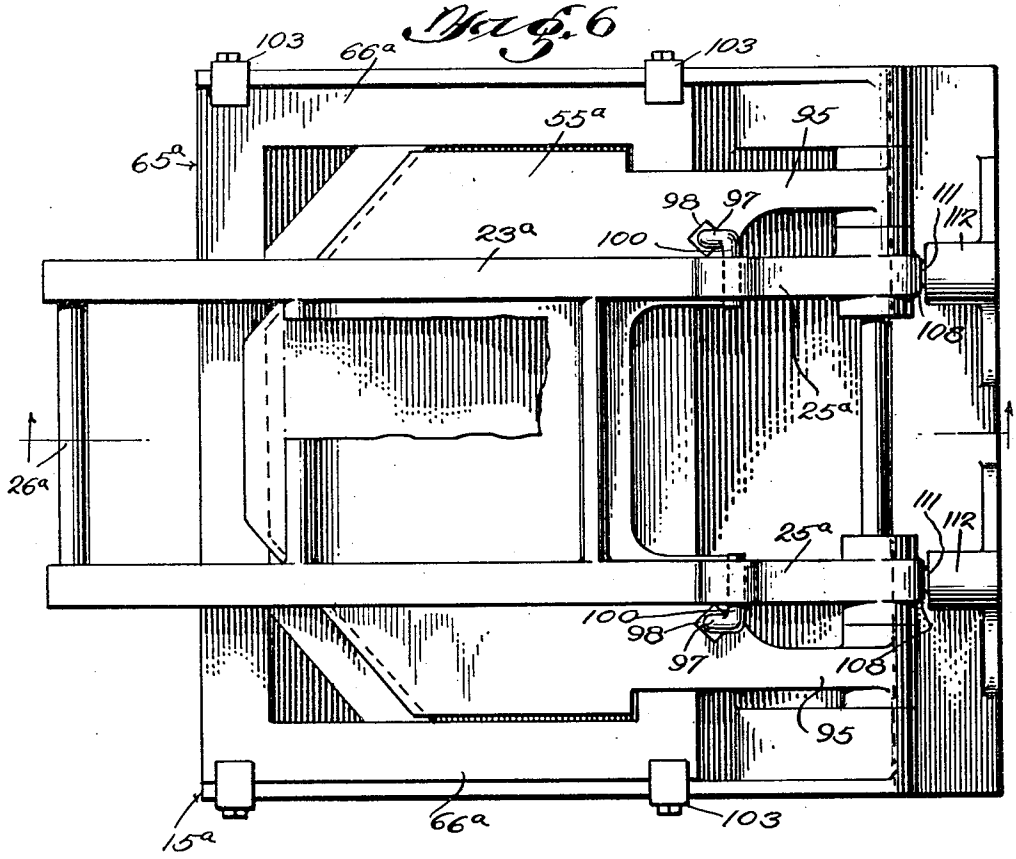
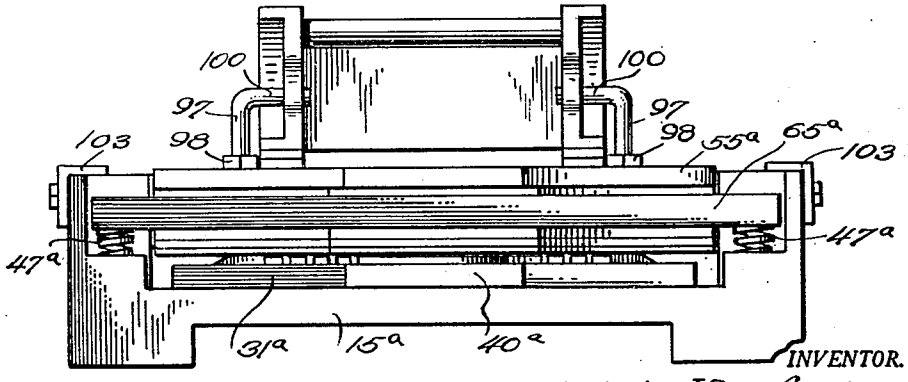


Fig. 7



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PRINTING MACHINE

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Fig. 8

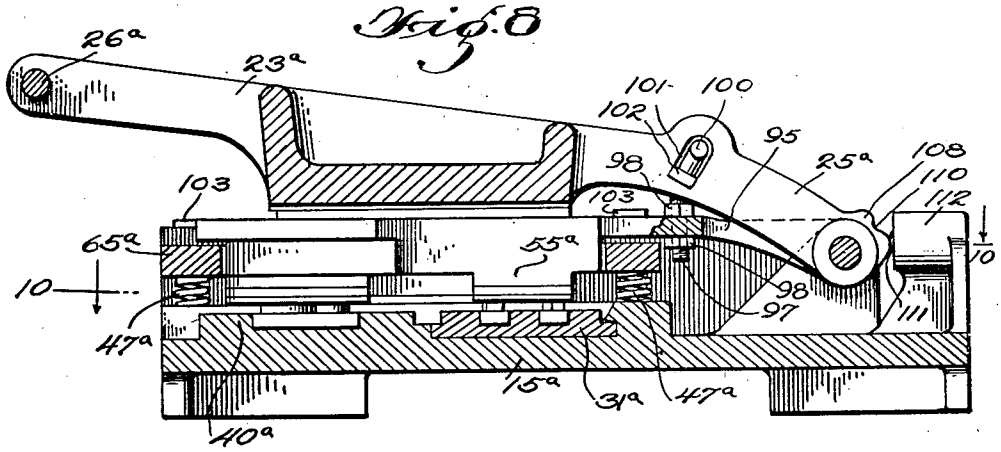
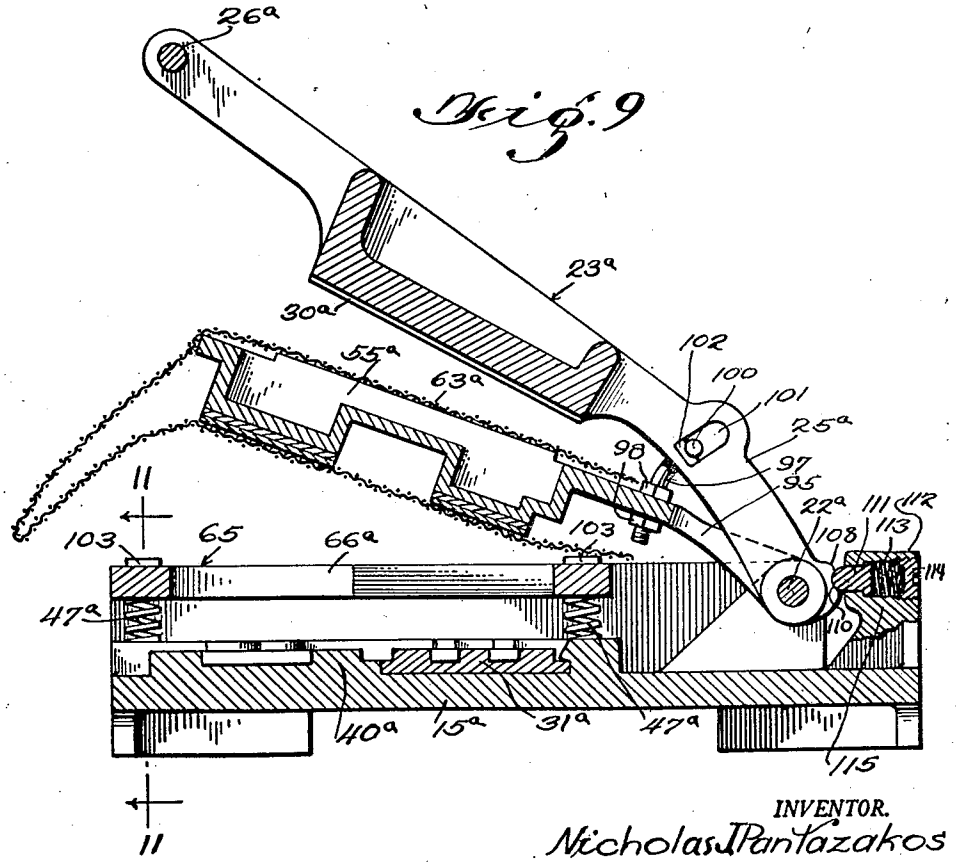


Fig. 9



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July 1, 1947. N. J. PANTAZAKOS 2,423,112

PRINTING MACHINE

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Fig. 10

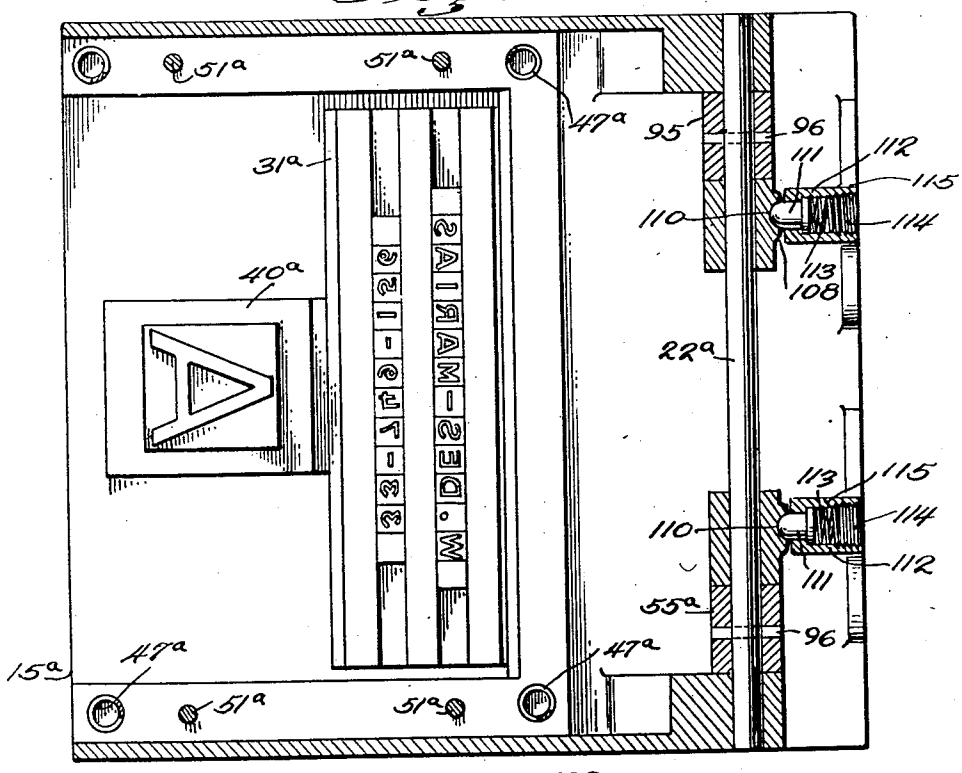


Fig. 11

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Patented July 1, 1947 2,423,112

UNITED STATES PATENT OFFICE

2,423,112

PRINTING MACHINE

Nicholas J. Pantazakos, United States Army,
Westwood, N. J.

Application May 26, 1944, Serial No. 537,447

19 Claims. (Cl. 101—41)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment of any royalty to me thereon.

This invention relates to printing, and more particularly to a machine for printing impressions on bags, sacks, fabric containers and the like.

The device is especially useful in printing the names, serial numbers and other identifying data on barrack bags, duffel bags and the like which are used by members of the Armed Forces. This identifying data has been applied to these bags, heretofore, by the conventional hand-stenciling method, in which marking ink is applied to the material by a brush which is inserted through the character-forming apertures in the usual stenciling strips. These stenciling operations require relatively long periods of time for their completion, and inasmuch as each character is ordinarily formed by manipulating a brush so that its bristles extend through a stenciling aperture, the formed characters lack uniformity in appearance and frequently they are incomplete.

It is an object of this invention to provide a printing machine which includes a form, a movable platen having an impression face, means for stretching material which is to be printed over the impression face of the platen, and means for moving the platen into operable engagement with the form to thereby print impressions on the material.

Another object of this invention is to provide a bag-printing machine which includes a movable platen having an impression face, the platen being constructed and arranged to be received within a bag with the bag-forming material covering the impression face, a form positioned for operable engagement with the impression face of the platen, and means for moving the platen into operable engagement with the form to thereby print impressions on the said material.

A further object of this invention is to provide a bag-printing machine which includes a movable platen having an impression face, the platen being constructed and arranged to be received within a bag with the bag-forming material covering the impression face, a frame adapted to securely engage the platen to tautly draw the said material over the impression face of the platen, a form positioned for operable engagement with the impression face of the platen, and means for moving the platen into operable engagement with the form to thereby print impressions on the said material.

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A specific object of this invention is to provide a bag-printing machine which includes a bed, a movable platen having an impression face, the platen being constructed and arranged to be received within a bag with the material of the bag covering the impression face, a frame adapted to accurately engage the platen to tautly draw the said material over the impression face of the platen, a removable form adapted to be supported in the bed in position to operably cooperate with the impression face of the platen, and an impression lever adapted to operably engage the platen and move it into operable engagement with the form to thereby print impressions on the bag material.

A more specific object of this invention is to provide a bag-printing machine which includes a bed, a movable platen having an impression face, the platen being constructed and arranged to be received within a bag with the material of the bag covering the impression face, a frame adapted to accurately engage the platen to tautly draw the said material over the impression face of the platen, a removable form holder carrying a printing form and adapted to be supported in the bed in position to operably cooperate with the impression face of the platen, an impression lever adapted to operably engage the platen and move it into operable engagement with the form to thereby print impressions on the bag material, and releasable means for holding the impression lever in a position of disengagement from the platen.

It is also an object of this invention to provide a printing machine of generally improved arrangement, whereby the device will be simple, durable and inexpensive in construction, as well as convenient, practical, serviceable and efficient in its use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that various changes in form, proportion and minor details of construction may be made within the scope of the claims without departing from the spirit or sacrificing any advantages of the invention.

For a complete disclosure of the invention, a detailed description thereof will now be given in connection with the drawings forming a part of the specification, wherein:

Figure 1 is a perspective view of a form of my invention;

Figure 2 is a similar view but depicting the components of the device in disassembled relationship;

Figure 3 is a vertical longitudinal sectional view taken through the printing device with the components positioned in their printing relationship;

Figure 4 is a fragmentary vertical transverse sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a fragmentary vertical longitudinal sectional view taken on the line 5—5 of Figure 4;

Figure 6 is a plan view of a modified form of the invention;

Figure 7 is a front view thereof;

Figure 8 is a vertical longitudinal sectional view taken approximately on the line 8—8 of Figure 6, depicting the components of the printing device in printing relationship and certain components in elevation;

Figure 9 is a similar view depicting the components of the device in their non-printing or open relationship;

Figure 10 is a horizontal sectional view taken on the line 10—10 of Figure 8; and

Figure 11 is a fragmentary vertical longitudinal sectional view taken on the line 11—11 of Figure 9 and depicting the guiding and supporting components for the bags stretching member.

Referring to the drawings, in which corresponding parts are indicated by similar reference characters, there is depicted in Figures 1 to 5, a form of my improved printing machine which includes a base or bed 15 having spaced sills or supports 16 and opposed side members or rails 17. The sills 16 and side members 17 extend longitudinally along the bed 15 from front to back thereof. The upper surface of the bed 15 is preferably covered by a facing strip or plate 18, and the facing strip 18 supports a transversely extending guide or stop rail 20 which has its forward edge rabbeted to define an overhanging flange or lip 21, as best seen in Figure 3.

A shaft 22 is rotatably supported in bearings formed in or supported by the side members 17, and the intermediate portion of the shaft 22 has a composite impression lever 23 rigidly secured thereto. The impression lever 23 includes spaced lever members 25 which are united at their outer terminals by a manipulating handle 26, and they are also united intermediate their terminals by a cross member or impression weight 27. Each lever member 25 has an offset portion or impression foot 28 extending downwardly from the intermediate portion of its lower edge, and the lower face of each impression foot 28 has a facing plate or strap 30 secured thereto which is preferably disposed in substantially tangential relation to the shaft 22.

A form holder 31 (Figures 2 and 3) is provided, and it includes a base 32 having spaced parallel ribs or runners 33 extending upwardly from its upper face to define spaced type receiving grooves 35. The grooves 35 are arranged to receive type blocks 36 having character forming faces 37 preferably of the conventional 72 point size, and these blocks provide a printing form. The form holder 31 is adapted to be removably received on the upper surface of the bed facing 18, and it is located and aligned in correct printing position by positioning its inner longitudinal edge under the overhanging lip 21 of the guide rail 20. In this position, the forward longitudinal edge 38 of the form holder 31 engages the rear edge of a fixed form holder 40 which is supported on the bed facing 18 adjacent the forward edge of the bed 15, and the end edges of the form holder engages the inner edges of the base strips 45, thus securing the form holder against movement relative to the bed. The form holder 40 is provided with a rectangular recess 41 adapted to snugly receive a relatively large type block 42 having a character-forming face 43. The type blocks 36 and 42 are of the same printing height, so that their character-forming faces will simultaneously print during a single printing impression, as will be more fully explaned hereinafter.

Base strips 45 are secured to the upper face of the bed facing 18 and extend therealong from front to rear immediately adjacent the side members 17, as best seen in Figures 1, 2 and 4. Each base strip 45 is provided with spaced shallow apertures 46 (Figures 4 and 5) for the reception of the lower terminals of helical springs 47, and the upper terminal of each spring 47 is received within a shallow aperture 48 formed in the lower face of a platform rail or member 50. Each platform rail 50 is guided for vertical movement relative to a base strip 45 by spaced dowels or pins 51 which have their lower terminals secured to the bed 15, and their upper portions slidably received in apertures 52 formed in the platform rails 50. By this arrangement, the platform rails 50 are yieldably supported by the springs 47 which are operably interposed between the base strips 45 and the platform rails 50.

A bag holder or platen 55 is provided, and this platen includes a body 56 having laterally-extending flanges 57 and also forwardly extending and rearwardly extending flanges 58. The lower surface of the platen body 56 has a transversely extending blanket or packing strip 59 secured thereto (Figures 2 and 3) which is covered by a tympan strip 60. The tympan strip 60 is preferably formed of gasket rubber, and the blanket or packing strip is preferably formed of sponge rubber, thus providing an effective impression face to cooperate with the character-forming surfaces of the type members, for a purpose which will be explained hereinafter.

The forward portion of the lower face of the platen body 56 has a relatively small rectangular and longitudinally-extending packing or blanket strip 61 secured thereto, and the blanket strip 61 is covered by a tympan strip 62 of the same configuration, and this tympan strip is located to cooperate with the character-forming face 43 of the type block 42. The upper face of the platen body 56 has two longitudinally-extending wear plates or straps 63 secured thereto, and these plates are located to be engaged by the plates 30 carried by the feet 28 of the impression lever 23 when the components are moved to printing relationship.

A bag stretching or tensioning frame 65 is provided, and it includes spaced side rails or members 66 and spaced end rails or members 67 which are united to form a composite structure. The forward corners of this frame are reinforced by obliquely-extending legs 68 which are disposed so that their inner edges 69 cooperate with the obliquely-disposed edges 70 formed on the forward portion of the platen 55, for a purpose to be later explained. Apertures 71 are formed in the frame 65 to receive the dowels 51 to guide the movement of the frame 65 and platen 55 relative to the frame.

The shaft 22 has a pawl 80 secured thereto, and this pawl is adapted to operably engage a releasing member or bell crank 81 which rocks about a pivot or fulcrum 82. A rod or bar 83

is slidably supported in bearing members 85, and one terminal of this rod engages an arm of the bell crank 81, while its opposite terminal is engaged by the lower arm 86 of a lever 87 which is pivotally supported, as indicated at 88. The bell crank 81 is biased by a spring 90 for movement about its pivot 82, so that it engages the rod 83 and tends to force the rod toward the lever 87. The movement of the lever 87 about its fulcrum 88, responsive to the tension exerted by the spring 90 through the interposed rod 83, is resisted by a stop pin 91 which engages the lever to limit its movement about the pivot 88.

In operation, selected type blocks 36 and 42 are positioned in the form holders 31 and 40, and then the removable form holder 31 is positioned in printing location on the bed 15. Now the type is inked by passing a conventional inking roller or brayer, not shown, over their character-forming faces 37 and 43.

The bag B, which is to be printed, is placed around the platen 55 (Figures 3 and 4) so that the portions of the bag which are to receive the printing impressions cover the impression faces 60 and 62 which are carried by the platen or bag holder. After the platen 55 has been positioned within the bag B, the bag stretching frame 65 is placed around the platen with the inner faces of the platen flanges 57 and 58 engaging the side and end rails 66 and 67 of the frame 65. When the bag stretching frame 65 is placed around the platen 55, the material of the bag is tautly drawn over the impression faces 60 and 62. Now the platen 55 and the frame 65 are positioned on the platform rails 50, with the components of the frame 65 engaging the upper surfaces of the platform, and with the dowel 51 positioned in the aligning apertures 71 formed in the frame 65. By this arrangement, the impression faces 60 and 62 of the platen 55 are located to properly align or register with the character-forming faces 37 and 43 of the forms which are supported on the bed 15.

With the components so located in the machine, the operator grasps the handle of the release lever 87 and rocks this lever about its fulcrum 88, thereby causing the bell crank 81 to move from engagement with the pawl 80, thus releasing the impression lever 23. The impression lever gravitates until its plates 30 engage the plates 63 of the platen, and then the momentum of the weighted lever 23 forces the platen 55 downwardly against the tension of the platform springs 47 until the bag material which covers the impression faces of the platen 55 are forced into printing engagement with the printing faces of the type supported in the form holders. This action impresses the required printing impressions on the bag material, and after these printing impressions are completed, the platform springs 47 move the platen 55 upwardly so that the bag material is moved from engagement with the type faces. Now the operator grasps the handle 26 of the impression lever 23 and moves the lever upwardly until the pawl 80 snaps to locking engagement with the lever 81, thereby holding the impression lever 23 in its elevated position preparatory to the next printing operation.

In the form of my invention disclosed in Figures 6 to 11, there is disclosed a bed 15*a* which supports a removable form holder 31*a* and a fixed type holder 40*a*. The bed also rotatably supports a shaft 22*a*, and the shaft 22*a*, in turn, supports an impression lever 23*a* which is rotatable relative to the shaft.

A platen 55*a* is provided, and it has rearwardly extending arms 95 which are secured to the shaft 22*a* by pins 96 or other suitable securing devices. Each arm 95 has a bar or rod 97 secured thereto by positioning the rod 97 in an aperture formed in the arm 95 and clamping the rod to the arm by nuts 98 which are threadedly secured to the rod. The outer terminal of each rod 97, is provided with a laterally-extending finger 100 which is received within an aperture 101 formed in each supporting leg 25*a* of the impression lever 23*a*. A cushion block 102 is preferably positioned in one terminal of each aperture 101, for a purpose to be hereinafter disclosed.

A bag stretching frame 65*a* is yieldably supported on the bed 15*a* through the instrumentality of helical compression springs 47*a* which normally maintains the frame in spaced relation to the bed 15*a*, and the upward movement of the frame 65*a* is limited by stop members or brackets 103 which are carried by the bed 15*a* and overhang the side rails of the frame 65*a*. In this position the frame 65*a* is disposed between the bed 15*a* and the platen 55*a* in the path of movement of the platen, so that the inner surfaces of the frame 65*a* engage the outer surfaces of the platen 55*a*, similar to the arrangement hereinbefore disclosed. In order to insure that the frame 65*a* is constrained to movement in the path of travel of the platen 55*a*, guide pins or dowels 15*a* are threadedly secured to the side rails 66*a* of the frame, as best seen in Figure 11. The outer or lower terminal of each guide pin 51*a* is slidably received in an aperture 71*a* formed in the bed 15*a*.

The outer terminals of the impression lever supporting legs 25*a* are provided with lugs 108, and each lug has an arcuate recess 110 formed therein for cooperable engagement with a yieldable detent 111 which is slidably mounted in a bracket 112 which extends from the bed 15*a*. A helical compression spring 113 is received within an aperture 115 formed in each bracket 112 and each spring 113 is operably positioned between the inner terminal of a detent 111 and a stop plug 114, the stop plug being threadedly secured within the outer terminal of each aperture 115.

In the operation of this form of my invention, when the impression lever 23*a* is moved upwardly above the shaft 22*a* to the operable limit of its movement, each detent 111 snaps into engagement with a recess 110, thereby holding the impression lever 23*a* in its uppermost position. As the impression lever 23*a* is moved upwardly, the fingers 100 carried by the platen arms 95 are engaged by the cushion blocks 102 supported in the recess 101 formed in the impression lever legs 25*a*. When the fingers 100 are engaged by the cushion blocks 102, the platen 55*a* is moved upwardly with the impression lever 23*a* about the shaft 22*a* and remains suspended from the impression lever 23*a* in position to conveniently receive the bag B. The bag is then placed over the platen 55*a*, so that the bag material covers the impression faces of the platen, as best seen in Figure 9.

After the bag has been positioned around the platen 55*a*, the manipulating handle 26*a* of the impression lever 23*a* is grasped, and then the lever is moved downwardly about the axis of the fulcrum shaft 22*a*. During the initial downward movement of the impression lever 23*a*, the platen 55*a*, which is suspended from the impression lever 23*a*, moves downwardly with it until the platen engages the frame 65*a*. At this point of the op-

eration, the downward movement of the platen 55a is resisted by its engagement with the frame 65a but the continued downward movement of the impression lever 23a causing the lower face 30a of the impression lever to engage the upper face 63a of the platen, to thus force the platen into the frame 65a, thereby causing the frame to stretch the material of the bag B over the impression faces of the platen. After the bag B has been stretched by the engagement of the platen 55a with the frame 65a, continued downward movement of the impression lever 23a forces the impression faces of the platen 55a into operable engagement with the faces of the type carried in the forms supported on the bed 15a, thereby printing the impressions on the material of the bag. After the printing impressions have been completed, the impression lever 23a is again moved upwardly, and its initial upward movement is assisted by the compression springs 47a, which bias the frame 65a for upward movement. When the frame 65a reaches the limit of its upward movement it engages the stops 103 which arrest further upward movement, and then the platen 55a is withdrawn from the frame 65a, thereby releasing the printed bag. When the impression lever 23a reaches the upper limit of its operable movement, the platen 55a is suspended in position to permit bag B to be conveniently removed therefrom. The machine is now in position to receive the next bag preparatory to the next printing operation.

With this construction and arrangement, the operable function of the printing components of the machine are automatically performed when the impression lever 23a is manipulated to move it to and from the bed 15a, assuming, of course, that the bag B is properly positioned on the platen 55a and that the printing faces of the type are linked by the usual roller or brayer.

I claim:

1. In a printing machine, a bed, a printing form supported by the bed, a platen movable relative to the form, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen to tautly secure the material to be printed to the platen in position to engage the form, and means movable relative to the machine and platen for engaging the platen to move it to operably engage the form to print impressions on the said material.

2. In a printing machine, a bed, a printing form supported by the bed, a platen movable relative to the form, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen to tautly secure the material to be printed to the platen in position to engage the form, means for normally supporting the frame and platen in spaced relation to the form and yieldable to permit the platen to operably engage the form, and means movable relative to the machine and platen for engaging the platen to move it to operably engage the form to print impressions on the said material.

3. In a printing machine, a bed, a printing form supported by the bed, a platen movable relative to the form, guiding means for maintaining the movable platen in parallel relation to the form, means for tautly securing the material to be printed to the platen in position to engage the form, and means movable relative to machine and platen to engage the platen to move it to operably engage the form to print impressions on the said material.

4. In a printing machine, a bed, a printing fo supported by the bed, a platen movable relati to the form, a frame having inner faces int fitting with and dimensioned to surround ou faces of the platen to tautly secure the mater to be printed to the platen in position to enga the form, guiding means for maintaining t platen in parallel relation to the form, and mea movable relative to the machine and platen engaging the platen to move it to operably enga the form to print impressions on the said materi

5. In a printing machine, a bed, a printing fo supported by the bed, a platen movable relati to the form, a frame having inner faces int fitting with and dimensioned to surround ou faces of the platen to tautly secure the mater to be printed to the platen in position to enga the form, guiding means for maintaining t movable platen in parallel relation to the for means for normally supporting the frame a platen in spaced relation to the form and yiel able to permit the platen to operably enga the form, and means movable relative to t machine and platen for engaging the platen move it to operably engage the form to pri impressions on the said material.

6. In a printing machine, a bed, a printing fo supported by the bed, a platen movable relati to the form, means for tautly securing the mat rial to be printed to the platen in position engage the form, weighted impression lever pi otally supported by the machine and moval by gravity relative to the platen for engaging t platen to move it to operably engage the fo to print impressions on the said material, a detent means on said base for holding the i pression lever from engagement with the plat said detent means being releasable to permit sa lever to move into engagement with said plat

7. In a printing machine, a bed, a printing fo supported by the bed, a platen movable relati to the form, a frame having inner faces int fitting with and dimensioned to surround ou faces of the platen to tautly secure the mat rial to be printed to the platen in position engage the form, an impression lever pivota supported by the machine and movable relati to the platen for engaging the platen to move to operably engage the form to print impressio on the said material.

8. In a printing machine, a bed, a printing fo supported by the bed, a platen movable relati to the form, a frame having inner faces int fitting with and dimensioned to surround ou faces of the platen to tautly secure the mater to be printed to the platen in position to enga the form, an impression lever pivotally support by the machine and movable relative to the plat for engaging the platen to move it to operat engage the form to print impressions on the sa material, and releasable means for holding t impression lever from engagement with t platen.

9. In a printing machine, a bed, a printing fo supported by the bed, a platen movable relati to the form, a frame having inner faces int fitting with and dimensioned to surround ou faces of the platen to tautly secure the mater to be printed to the platen in position to enga the form, means for normally supporting t frame and platen in spaced relation to the fo and yieldable to permit the platen to operat engage the form, and an impression lever pi otally supported by the machine and moval relative to the platen for engaging the platen

move it to operably engage the form to print impressions on the said material.

10. In a bag-printing machine, a bed, a printing form holder removably secured to the bed, a printing form supported by the form holder, means for locking the form holder in printing position in the bed, a removable platen having an impression face adapted to be positioned in the bag to be printed, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen to tautly secure the portion of the bag which is to be printed over the impression face of the platen, and an impression lever pivotally secured to the machine and adapted to engage the platen to move it so that its impression face operably engages the form to print impressions on the bag.

11. In a bag-printing machine, a bed, a printing form holder removably secured to the bed, a printing form supported by the form holder, means for locking the form holder in printing position in the bed, a removable platen having an impression face adapted to be positioned in the bag to be printed, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen to tautly secure the portion of the bag which is to be printed over the impression face of the platen, an impression lever pivotally secured to the machine and adapted to engage the platen to move it so that its impression face operably engages the form to print impressions on the bag, and means for releasably securing the impression lever in a position away from engagement with the platen.

12. In a bag-printing machine, a bed, a printing form supported by the bed, a platform yieldably supported by the bed, a removable platen having an impression face and adapted to be positioned in the bag to be printed, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen to tautly secure the portion of the bag which is to be printed over the impression face of the platen, means for removably securing the frame and platen to the platform with the platen in spaced relation to the form, and an impression lever pivotally supported by the machine and adapted to engage the platen and move it so that its impression face operably engages the form to print impressions on the bag.

13. In a bag-printing machine, a bed, a printing form supported by the bed, a platform yieldably supported by the bed, a removable platen having an impression face and adapted to be positioned in the bag to be printed, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen to tautly secure the portion of the bag which is to be printed over the impression face of the platen, means for removably securing the frame and platen to the platform with the platen in spaced relation to the form, a weighted impression lever pivotally supported by the machine, releasable means for holding the impression lever from engagement with the platen, and means to actuate the said releasing means to release the impression lever whereby the lever gravitates into engagement with the platen and forces the impression face of the platen into printed engagement with the form to thereby print impressions on the bag.

14. In a printing machine, a bed, a printing form supported by the bed, a platen movable relative to the form and cooperable therewith to print impressions on material located between the form and platen, an impression lever pivotally supported in the machine and movable about its pivot to operably engage the platen and force it into printing engagement with the form, a pawl movable with the impression lever, a movable member adapted to engage the pawl to lock the impression lever against movement towards the platen, and manually-operable means for moving the movable member to release the pawl to permit the impression lever to move about its pivot to operable engagement with the platen.

15. In a printing machine, a bed, a printing form supported by the bed, a platen movable about a pivot relative to the form and having an impression face adapted to cooperably engage the printing form, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen and yieldably supported between the form and platen in the path of movement of the platen towards the form, said frame being adapted to tautly draw the material to be printed over the impression face of the platen when the platen engages the frame in its movement toward the form, and an impression lever movable about a pivot relative to the platen and adapted to engage the platen and move it into operable engagement with the frame to secure the said material to the platen and to further move the platen into operable engagement with the form to print impressions on the material.

16. In a printing machine, a bed, a printing form supported by the bed, a platen movable about a pivot relative to the form and having an impression face adapted to cooperably engage the form, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen and yieldably supported between the form and platen in the path of movement of the platen towards the form, said frame being adapted to tautly draw the material to be printed over the impression face of the platen when the platen engages the frame in its movement toward the form, an impression lever movable about a pivot relative to the platen and adapted to engage the platen and move it into operable engagement with the frame to secure the said material to the platen and to further move the platen into operable engagement with the form to print impressions on the material, means for releasably securing the impression lever in a position of disengagement from the platen, and means for supporting the platen in a position of disengagement from the form and frame.

17. In a printing machine, a bed, a printing form supported by the bed, a platen movable about an axis and having an impression face adapted to cooperably engage the printing form, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen and yieldably supported between the form and the platen in the path of movement of the platen towards the form and adapted to tautly draw the material to be printed over the impression face of the platen when the platen engages the frame in its movement towards the form, an impression lever movable about the said axis relative to the form and adapted to engage the platen and move it into operable engagement with the frame to secure the said material to the platen and to further move the platen to operably engage the form to print impressions on the said material, means for releasably securing the impression lever in a position of disengagement from the platen, and means for suspending the platen from the impression lever in a position of disengagement from the form and frame, the said

platen suspending means permitting limited movement of the platen relative to the impression lever.

18. In a printing machine, a bed, a printing form supported by the bed, a platen movable to and from printing engagement with the form and having an impression face normally supported in spaced relation to the form in a position in which a bag may be conveniently placed around the platen to cover its impression face, a frame having inner faces interfitting with and dimensioned to surround outer faces of the platen and yieldably supported in the path of movement of the platen, said frame being adapted to be engaged by the platen in its movement toward the form to thereby tautly draw a portion of the bag over the impression face of the platen, an impression lever movable relative to the form and adapted to engage the platen and move it into operable engagement with the frame and into printing engagement with the form to print impressions on the bag.

19. In a printing machine, a bed, a printing form supported by the bed, a platen movable relative to the form and cooperable therewith to print impressions on material located between the form and platen, an impression lever pivotally supported in the machine and movable by its own weight about its pivot to operably engage the platen and force it into printing engagement with the form, means for normally holding said impression lever out of engagement with said platen, and manually operable means to release the holding means so as to permit the impression lever to move about its pivot to operable engagement with the platen.

NICHOLAS J. PANTAZAKOS.

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Certificate of Correction

July 1, 1947.

Patent No. 2,423,112.

NICHOLAS J. PANTAZAKOS

It is hereby certified that errors appear in the printed specification of the above numbered patent requiring correction as follows: Column 6, line 31, for "15a" read *51a*; column 8, line 31, claim 6, after "form," insert the article *a*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 2nd day of September, A. D. 1947.

[SEAL]

LESLIE FRAZER,
First Assistant Commissioner of Patents.