

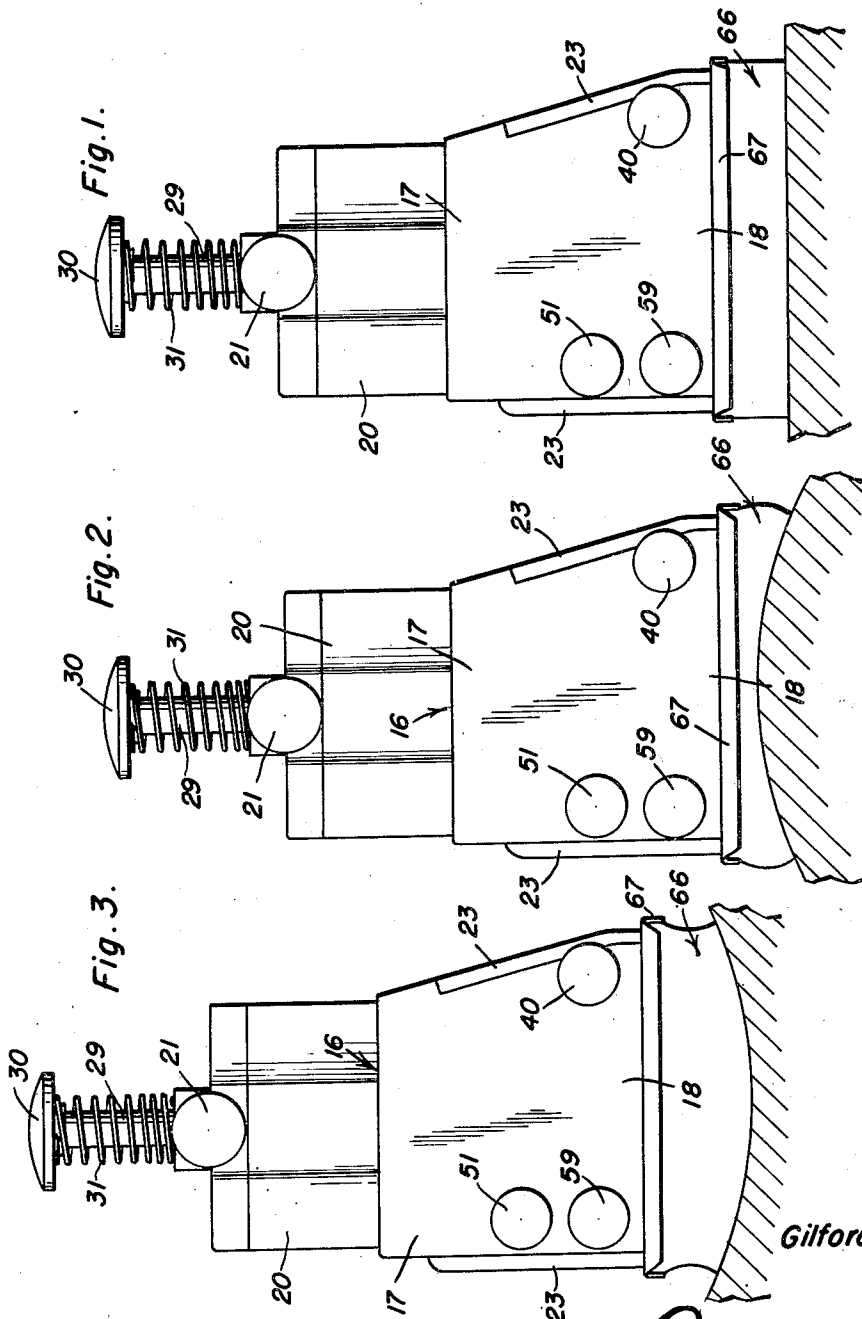
March 7, 1950

G. E. DYAL
STENCILING MACHINE

2,499,472

Filed Oct. 30, 1947

3 Sheets-Sheet 1



Inventor

Gilford E. Dyal

By

Clarence A. O'Brien
and Harvey B. Jacobson
Attorneys

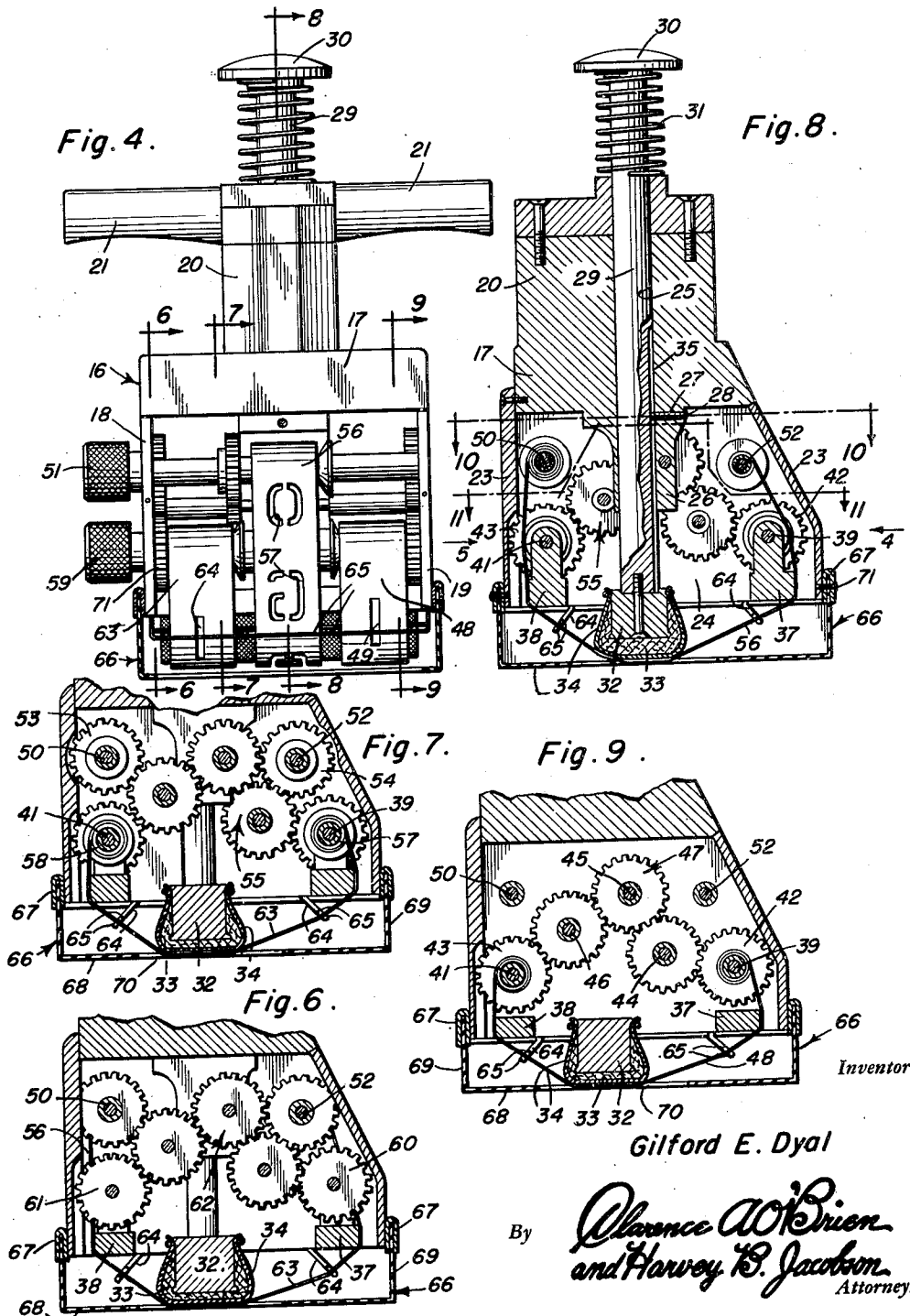
March 7, 1950

G. E. DYAL
STENCILING MACHINE

2,499,472

Filed Oct. 30, 1947

3 Sheets-Sheet 2



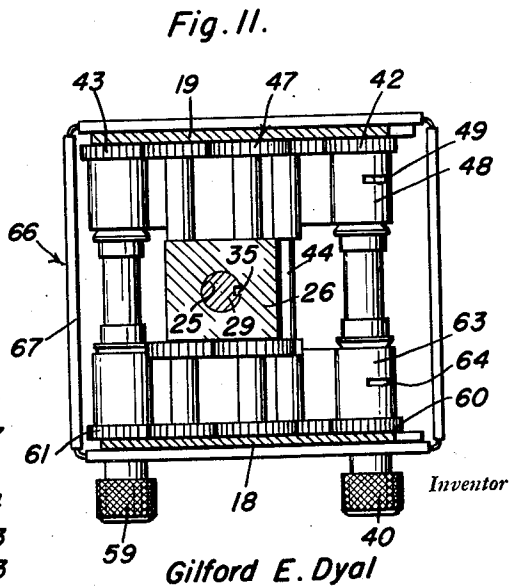
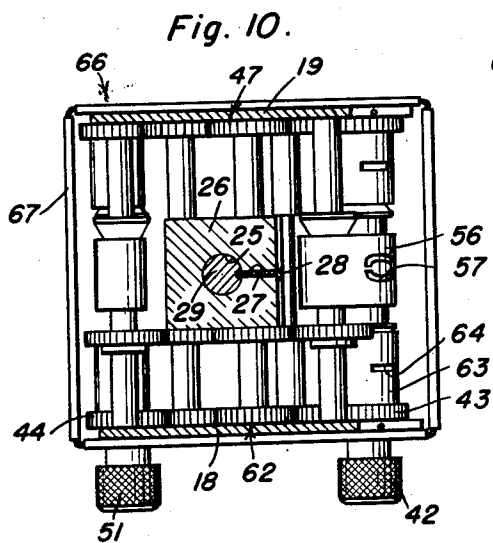
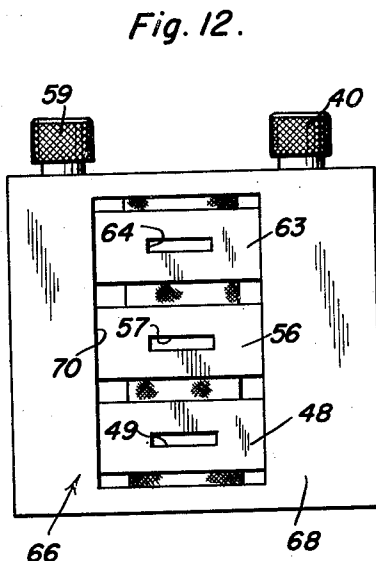
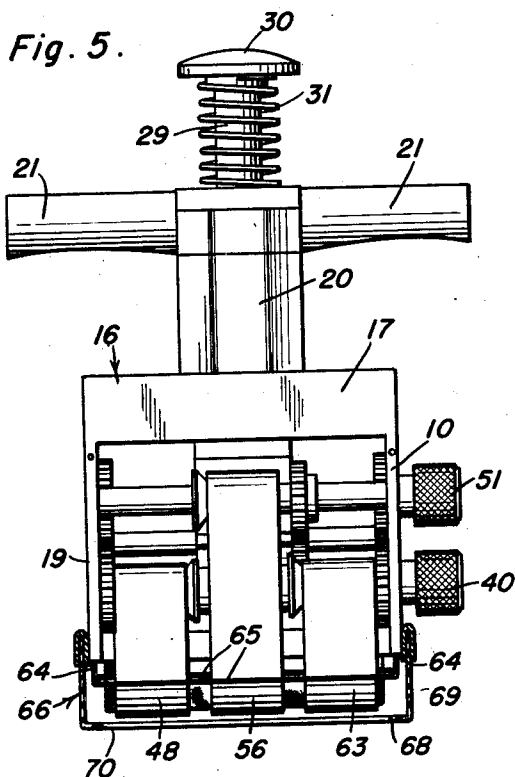
March 7, 1950

G. E. DYAL
STENCILING MACHINE

2,499,472

Filed Oct. 30, 1947

3 Sheets-Sheet 3



Inventor
Gilford E. Dyal
By *Clarence A. O'Brien*
and *Harvey B. Jacobson*
Attorneys

UNITED STATES PATENT OFFICE

2,499,472

STENCILING MACHINE

Gilford E. Dyal, San Antonio, Tex., assignor of one-fourth to George E. Hancock and one-fourth to Henry C. Mills, both of San Antonio, Tex.

Application October 30, 1947, Serial No. 783,058

2 Claims. (Cl. 101—121)

1

This invention relates to a stencilling machine and has for its primary object to apply stencil marks to packages and the like.

Another object is to effectively stencil either a flat or curved surface which latter may be either concave or convex.

A further object is to facilitate the marking of packaged merchandise with a price mark so that the prospective purchaser may be apprised of the price of the merchandise and to save the time of a checker when determining the value of merchandise being paid for by a customer.

The above and other objects may be attained by employing this invention which embodies among its features an ink pad movable in a rectilinear path, a group of stencil strips extending across said pad in juxtaposed relation, each strip having a longitudinal row of stencil openings extending therethrough, means to move the strips to align the openings in a row which lies perpendicular to the direction of movement of the strips, a flexible shield enclosing the ink pad and stencil strips and a window in said shield through which the perpendicular row of stencil openings is exposed.

Other features include a hand stencil comprising a frame in which the stencil pad is movable axially, means projecting through one end of the frame for advancing the stencil pad, spring means cooperating with the frame and the advancing means for retracting the stencil pad, a plurality of parallel strips or ribbons mounted in the frame for movement across the face of the pad, each stencil strip having a longitudinal row of stencil openings therein, means operable from the exterior of the frame to move the strips and the stencil openings into a position to form a row of stencil openings which extends perpendicular to the direction of movement of the strips, a shield enclosing the stencil pad and strips, and a window in said shield through which the perpendicular row of stencil openings is exposed.

In the drawings:

Figure 1 is a side view of the stencilling machine embodying the features of this invention illustrating it in use in stencilling a flat surface;

Figure 2 is a view similar to Figure 1 showing the stencilling machine in use in stencilling a convex surface;

Figure 3 is a view similar to Figures 1 and 2 illustrating the stencilling machine in use in stencilling a concave surface;

Figure 4 is an end view of the stencilling machine showing one of the end plates removed;

2

Figure 5 is a view similar to Figure 4 of the opposite end of the machine showing the opposite end plate removed and the shield in section;

Figure 6 is a fragmentary sectional view taken substantially along the line 6—6 of Figure 4;

Figure 7 is a fragmentary sectional view taken substantially along the line 7—7 of Figure 4;

Figure 8 is a vertical sectional view taken substantially along the line 8—8 of Figure 4;

Figure 9 is a fragmentary sectional view taken substantially along the line 9—9 of Figure 4;

Figure 10 is a transverse sectional view taken substantially along the line 10—10 of Figure 8;

Figure 11 is a transverse sectional view taken substantially along the line 11—11 of Figure 8, and;

Figure 12 is a bottom plan view of the stencilling machine.

Referring to the drawings in detail this improved stencilling machine comprises a frame designated generally 16 which includes a head 17 from opposite ends of which extend spaced parallel end walls 18 and 19.

Projecting from the head 17 in a direction opposite the end walls 18 and 19 is a handle 20, and extending laterally from the handle 20 adjacent the end remote from the head 17 are oppositely extending finger grips 21 which are adapted to be grasped in the hand of the user to facilitate the manipulation of the stencilling machine. Removably supported on the front and rear sides respectively of the frame are cover plates 22 and 23 which form in conjunction with the end walls 18 and 19 a hollow chamber 24 in which the mechanism for adjusting the stencilling strips or ribbons to be more fully hereinafter described is housed. Extending through the head 17 and the handle 20 is an axial opening 25 and projecting into the chamber 24 from the underside of the head 17 is a guide and supporting sleeve 26 which terminates substantially midway between the upper and lower ends of the chamber. Extending radially through the sleeve 26 adjacent the junction with the head 17 is an internally screw threaded opening 27 for the reception of a guide screw 28 the purpose of which will be more fully hereinafter explained.

Mounted for longitudinal movement in the axial opening 25 is a plunger 29 carrying at one end a head 30 and surrounding the plunger 29 between the head 30 and the upper end of the handle 20 is a compression coil spring 31 which yieldingly holds the plunger in retracted

position. Fixed to the end of the plunger 29 opposite the head 30 to work within the chamber 24 is a cross piece 32 carrying a cushion 33 which is enclosed in a flexible cover 34 which together with the cushion and cross piece forms an ink pad. Extending longitudinally of the plunger 29 is a groove 35 into which the inner end of the screw 28 extends, in order to hold the plunger 29 against rotation and at the same time permit it to move longitudinally in the opening 25.

Extending longitudinally through the chamber 24 adjacent the front and back walls thereof are bars 37 and 38 respectively which serve to bridge the gap between the end walls 18 and 19 and hold said walls in spaced parallel relation.

Mounted in the end walls for rotation about a horizontal axis directly above the longitudinal bar 37 is a shaft 39 which projects through the end wall 18 and is fitted with a knurled thumb piece 40 by which rotation of the shaft 39 may be manually controlled. Journaled in the walls 18 and 19 to rotate about a horizontal axis directly above the bar 33 is a shaft 41, and fixed to the shaft 39 adjacent the wall 19 is a spur gear 42. A similar spur gear 43 is fixed to the shaft 41 to rotate in the plane of rotation of the spur gear 42, and extending longitudinally through the chamber 24 in spaced parallel relation are shafts 44, 45 and 46 upon which a train of meshing gears designated generally 47 are mounted to rotate. The endmost gears in the train 47 mesh with the gears 42 and 43, so that when the shaft 39 is rotated the shaft 41 will rotate in unison therewith. Fixed to the shaft 39 adjacent the gear 42 is one end of a stencil strip or ribbon 48, the opposite end of which is fixed to the shaft 41. It will thus be seen that when the shaft 39 is rotated the strip or ribbon 48 may be wound upon or payed out, and when the strip or ribbon is being wound upon the shaft 39 it will be payed out from the shaft 41 and vice versa. This ribbon or strip 48 is provided with a longitudinal row of perforations 49 which preferably take the form of numerals with their vertical axes aligning longitudinally with the longitudinal axis of the ribbon or strip.

Mounted for rotation in the walls 18 and 19 and extending longitudinally of the chamber 24 in parallel spaced relation with the shaft 41 is a shaft 50, one end of which extends through the end wall 18 and has fixed thereto a knurled thumb piece 51 by means of which the shaft may be rotated. A similar shaft 52 is mounted to rotate about a horizontal axis in spaced relation to the shaft 39 within the chamber 24 near the front cover of the chamber and fixed to the shaft 50 and to the shaft 52 respectively are toothed gears 53 and 54 respectively. These gears 53 and 54 are fixed to the shafts 50 and 52 intermediate their ends to rotate in a plane in spaced relation to the plane of rotation of the gears 42 and 43 and mounted on the shafts 44, 45 and 46 for rotation in the plane of rotation of the gears 53 and 54 are meshing gears forming a gear train designated generally 55, the gears at opposite ends of which have mesh engagement with the gears 53 and 54 so that when the thumb piece 51 is rotated both shafts 50 and 52 will be moved in unison. Fixed to the shaft 50, is one end of a stencil strip or ribbon 56, the opposite end of which is fixed to the shaft 52 so that when the thumb piece 51 is turned the ribbon or strip 56 may be wound or unwound as the case may be

with relation to the respective shafts 50 and 52. Like the strip or ribbon 49, the strip or ribbon 56 is provided with a longitudinal row of longitudinally spaced perforations 57 which preferably take the form of numerals, the longitudinal axes of which lie coincident with the longitudinal axis of the strip 56.

Mounted for rotation about the shafts 39 and 41 respectively adjacent the end wall 18 are sleeves 57 and 58 respectively. The end of the sleeve 58 projects through the wall 18 to the exterior of the chamber 24 and secured to said sleeve is a knurled thumb piece 59 by means of which the sleeve may be manually rotated. Fixed to the sleeve 57 adjacent the inner face of the wall 18 is a spur gear 60 and a similar spur gear 61 is fixed to the sleeve 68 to rotate in the plane of rotation of the gear 60. Mounted on the shafts 44, 45 and 46 adjacent the inner face of the end wall 18 is a group of meshing spur gears forming a gear train designated generally 62, the gears at opposite ends of which mesh with the gears 60 and 61 so that when the thumb piece 59 is rotated the sleeves 57 and 58 will rotate in unison therewith. A stencil ribbon or strip 63 has one end secured to the sleeve 57 while its opposite end is secured to the sleeve 58 so that when the thumb piece 59 is rotated the ribbon will be wound or unwound from one or the other of the sleeves. Like the ribbons or strips previously described the ribbon or strip 63 is provided with a longitudinal row of longitudinally spaced perforations 64 which preferably take the form of numerals, the longitudinal axes of which coincide with the longitudinal axis of the ribbon or strip 63. It will be understood of course that the ribbons or strips are led downwardly across the face of the ink pad formed by the cushion 33 and the cover 34 so that when the perforations 49, 57 and 64 are aligned across the face of the ink pad and pressure applied to the head 30, the ink on the ink pad will form a group of numerals on a surface to be marked.

In order properly to guide the ribbons across the face of the ink pad each end wall 18 and 19 is provided on its bottom edge with a pair of outwardly extending angle brackets 64 which project in opposite directions away from the head 30 forming the ink pad and extending between the brackets at opposite ends of the frame are closely spaced parallel bars 65 between which the ribbons or strips are guided.

In order to confine the stencilling operation to a limited area of the surface to be marked, I provide a shield designated generally 66 which comprises a rectangular frame 67 adapted to be fitted around the lower open end of the frame 16, and fixed in the frame 67 is a flexible shield comprising a bottom 68 of substantially rectangular form having upwardly extending side and end walls 69 forming a substantially box-like structure. This shield is preferably formed of rubber or a similar flexible material and the bottom 68 is formed with a window 70 through which the stencil strips or ribbons are exposed in the vicinity of the ink pad. The frame 67 is provided at spaced intervals with openings for the reception of screws 71 by means of which it may be fixed to the open end of the frame 16 as will be readily understood upon reference to the drawings.

In use it will be understood that the proper numerals may be brought into alignment across the face of the ink pad so as to be exposed through the window 70 by manipulating the

5

thumb pieces 40, 51 and 59. The user then grips the bars 21 with the head 30 resting in the palm of the hand and by placing the shield 66 over the items to be marked as illustrated in Figures 1, 2 and 3, and exerting pressure on the head 30, the ink pad will be moved against the strips or ribbons 48, 56 and 63 so as to advance them against the surface to be marked and by reason of the openings 49, 57 and 64 in the respective strips or ribbons it will be evident that the ink contained by the ink pad will be impressed against the item to be marked, leaving a mark thereon conforming to the shapes of the perforations. By forming the perforations in the nature of numerals it is obvious that the device may be used for pricing items and for similar operations.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. A stencilling machine which includes a frame, a handle projecting from one end of the frame, a plunger movable axially through the handle and the frame, a stencil pad on the plunger below the frame, stencil strips mounted within the frame and movable in parallel substantially juxtaposed relation beneath the stencil pad, each stencil strip having a longitudinal row of stencil openings extending therethrough, means in the frame for moving the strips to align the stencil openings of adjacent strips and form a row of stencil openings which lies across the stencil pad perpendicular to its direction of movement, a flexible shield closing the end of the frame remote from the handle and a window in the shield through the perpendicular row of stencil openings is exposed and a stencil strip

6

guide carried by the frame on each side of the window between the frame and the shield to hold the stencil strips in parallel relation beneath the pad.

2. A hand stencilling machine which includes a frame, a handle extending axially from one end of the frame, oppositely projecting finger grips at the end of the handle remote from the frame, a plunger movable axially through the handle and the frame, a stencil pad on the plunger within the frame, a head on the end of the plunger remote from the stencil pad for engagement with the palm of the hand of the user when the finger grips are grasped, a spring surrounding the plunger and bearing on the frame and on the head yieldingly to hold the plunger retracted with the stencil pad below the frame, parallel stencil strips supported within the frame to move beneath the stencil pad, each stencil strip having a longitudinal row of stencil openings therein through which portions of the stencil pad are exposed, means carried by the frame and manually operable from the exterior of the frame to move the stencil strips to produce a row of stencil openings which lies perpendicular to the direction of movement of the strips, a flexible shield carried by the frame and enclosing the stencil strips and pad and a window in the shield through which the perpendicular row of stencil openings is exposed.

GILFORD E. DYAL.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
486,964	Bates	Nov. 29, 1892
542,131	Bates	July 2, 1895
1,398,363	Cressler	Nov. 29, 1921