March 6, 1973 L. F. HAMMEL 3,719,140

STENCIL HAND STAMP WITH FLUID-CONTAINING HANDLE AND TORSION-SPRING SUPPORTS

Filed July 27, 1970 2 Sheets-Sheet 1

FIG. 1

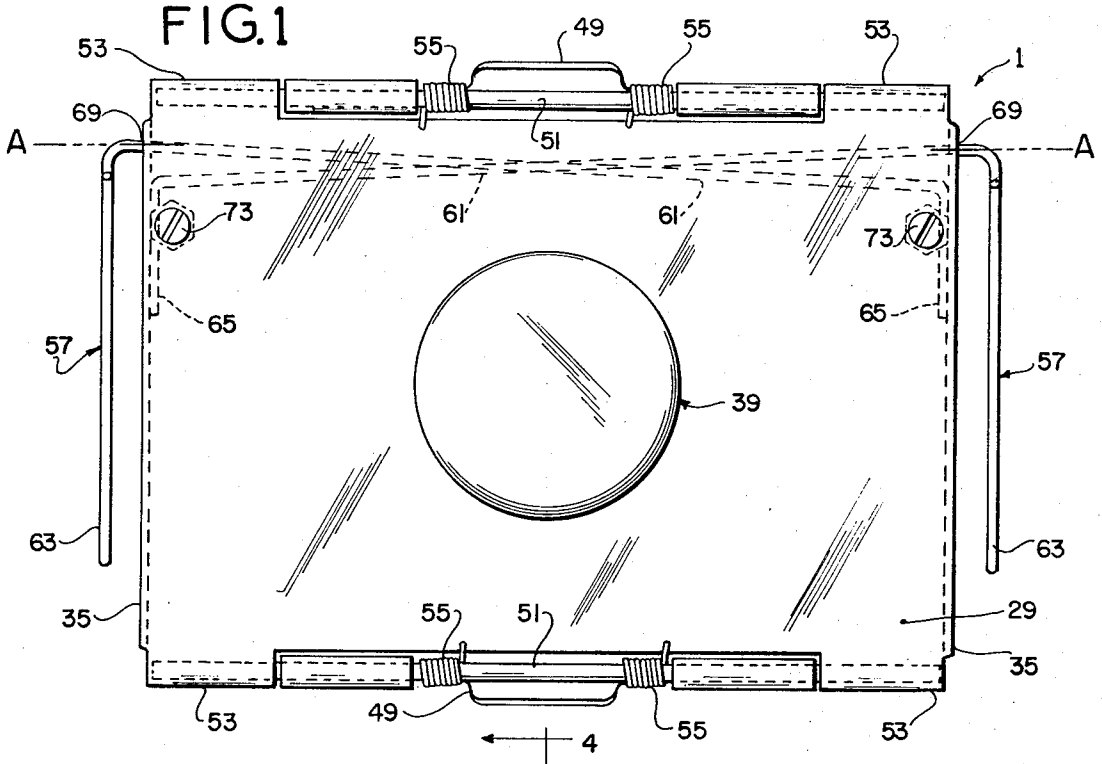
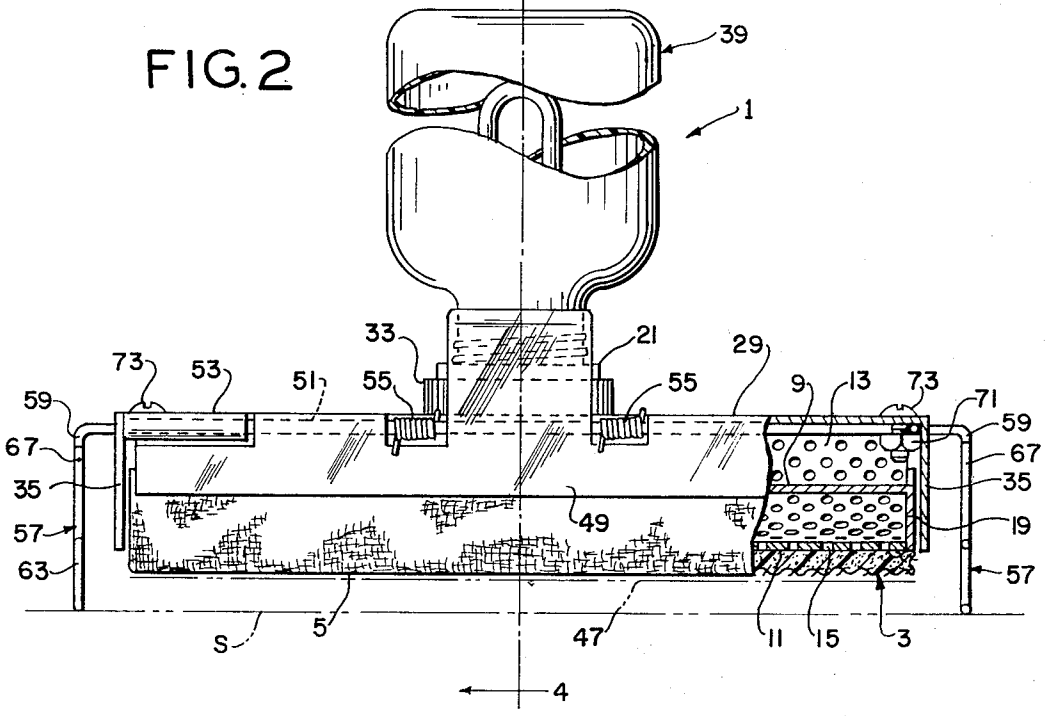


FIG. 2



Larry F. Hammel,
Inventor.
Koenig, Senniger,
Powers and Leavitt
Attorneys.

FIG. 3

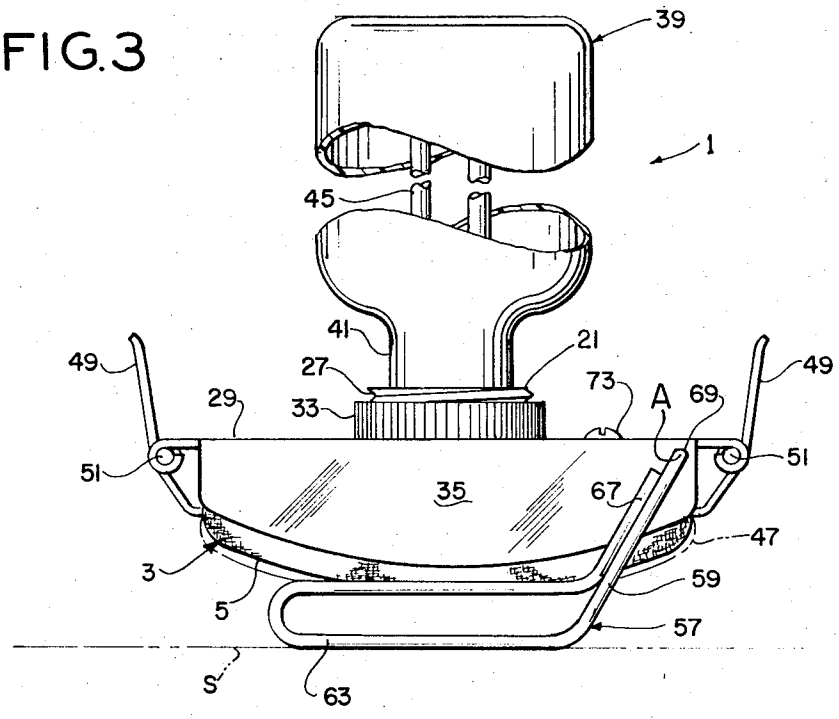
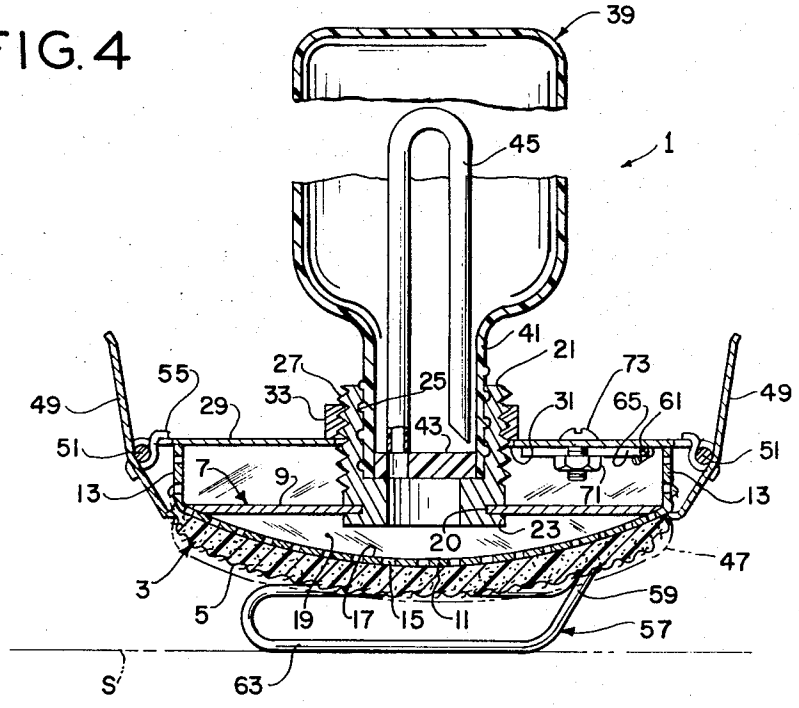

39
1
45
41
21
27
73
A
69
49
49
29
33
51
51
35
67
47
3
59
5
57
S
63

FIG. 4


39
45
1
41
21
27
73
55
25
49
49
33
29
31
65
61
43
51
51
7
9
13
71
13
20
23
47
3
59
5
19
17
15
11
57
S
63

United States Patent Office 3,719,140 Patented Mar. 6, 1973

3,719,140

STENCIL HAND STAMP WITH FLUID-CONTAINING HANDLE AND TORSION-SPRING SUPPORTS

Larry F. Hammel, Herrin, Ill., assignor to Diagraph-Bradley Industries, Inc., Herrin, Ill.

Filed July 27, 1970, Ser. No. 58,494
Int. Cl. B41k 1/22
U.S. Cl. 101—125 4 Claims

ABSTRACT OF THE DISCLOSURE

A hand stamp printing implement or duplicator having an inking pad with a convexly curved bottom face with clamps for holding a stencil in place on said face and a pair of spring-biased supports at the ends of the pad for holding the pad lifted off a surface with the bottom of the pad facing downwardly and in position for being moved down toward said surface for contact of the stencil with said surface and rocking of the pad over said surface.

BACKGROUND OF THE INVENTION

This invention relates to a hand stamp printing implement, and more particularly to a stenciling implement of this class.

The invention is particularly concerned with a hand stamp printing implement of the type having an inking pad with a convex bottom face, an ink reservoir for supplying ink to the pad, and means for holding a stencil in place on the bottom face of the pad for printing via manual application of the stencil to the surface to be imprinted. The manual application of the stencil to the surface to be imprinted involves a rocking action of the implement in effect to roll the stencil on the stated surface. One of the problems attendant upon such an implement is that of positioning it with the stencil or bottom face of the inking pad out of contact with the supporting surface on which the implement is to rest between uses. The implement could be tilted over on its side, but this has the disadvantage that the ink tends to drain away from the pad.

SUMMARY OF THE INVENTION

Among the several objects of this invention may be noted the provision of a hand stamp stenciling printing implement having means for holding itself lifted off a supporting surface, with its inking pad in a substantially horizontal position, with this means adapted readily to permit the rocking action of the implement for stenciling; and the provision of such an implement which is of relatively economical construction and relatively simple to assemble (and disassemble, if need be).

In general, an implement of this invention comprises an inking pad of rectangular outline, having a bottom face convexly curved from one side thereof to the other adapted to hold a stencil, a handle for said pad, and means for holding said implement lifted off a surface with the bottom face of the pad facing downwardly and in position for being moved down toward said surface and rocked over said surface comprising a pair of supports for the implement at the ends of the pad, said supports being pivoted for swinging movement relative to the pad on a horizontal axis extending parallel to the sides of the pad adjacent one of said sides and being biased to swing downwardly relative to the pad to a pad-elevating position wherein they extend downwardly from their pivots with their lower end portions below the bottom of the pad, said supports being adapted to swing upwardly relative to the pad on their pivots against said bias when the pad is moved downwardly toward

said surface and permitting rocking of the pad with a stencil on its curved bottom face in contact with said surface. Other objects and features will be in part apparent and in part pointed out hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan of an implement of this invention;

FIG. 2 is a front elevation of the implement with parts broken away and shown in section;

FIG. 3 is a right end elevation of FIG. 1; and

FIG. 4 is a section on line 4—4 of FIG. 2.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, a hand stamp printing implement made in accordance with this invention, indicated in its entirety by the reference numeral **1**, is shown to comprise an inking pad **3** of foam rubber or the like, this pad being of rectangular form in plan and having a bottom face **5** which is convexly curved from one side of the pad to the other. The pad is mounted on the bottom of a head generally designated **7** including a rectangular head plate **9** and an arcuate bottom plate **11** extending convexly between the sides of the head plate **9** and having flange portions **13** at its sides extending up above the head plate. The arcuate plate **11** has a multiplicity of perforations as indicated at **15** for passage of ink from the space **17** in the head **7** between the plates **9** and **11** to the pad **3** which is mounted on the bottom face of the curved plate **11**, with a cloth cover for the pad constituting its bottom face **5**, this cover being cemented to the flanges **13**. The head plate **9** has end flanges **19**, a central opening **20** and a tubular stem **21** extending upwardly therefrom in communication with this opening, the stem being riveted at its lower end in the opening as indicated at **23**. This stem is threaded both internally and externally, as indicated at **25** and **27**.

A rectangular cover plate **29** is provided on top of the head **7**, bearing on the flanges **13** and held spaced thereby from the head plate **9**. This cover plate has a central opening **31** receiving the stem **21**. A ring nut **33** is threaded externally on the stem and clamps the cover plate **29** down against the upper edges of the flanges **13**. The cover plate **29** has end flanges **35** which cover the end flanges **19** of the pad head plate **9**. A combination ink reservoir and handle **39** is threaded internally in the steam **21** and extends upward therefrom. More particularly this combination reservoir and handle is a plastic squeeze bottle having a threaded neck **41** which is threaded in the stem, a plug **43** for the neck and a siphon **45** having one end fitted in an opening in the plug.

A stencil indicated in phantom at **47** is adapted to be applied to the cloth-covered bottom face **5** of the inking pad **3** and to have its side margins clamped against the side margins of the pad by means of spring clamps **49** carried by the cover plate at opposite sides thereof. Each clamp is pivoted on a hinge pin **51** extending along the respective side of the cover plate having its ends mounted in hinge eyes **53** formed at the sides of the cover plate. Torsion springs for the clamps are indicated at **55**.

In accordance with this invention, means is provided for holding the implement **1** lifted off a surface S such as a surface to be imprinted with the bottom face **5** of the pad **3** facing downwardly and in position for being moved down toward surface S and then rocked over this surface. This means comprises a pair of supports, each generally designated **57**, for the implement at the ends of the pad, these supports being pivoted for swinging move-

ment relative to the pad 3 on a horizontal axis extending parallel to the sides of the pad adjacent one of its sides (its right side as viewed in FIGS. 3 and 4). This axis is indicated at A—A in FIG. 1 and at A in FIG. 3. The supports 57 are spring biased, as will appear, to swing downwardly relative to the pad to their pad-elevating position of FIGS. 2–4 wherein they extend downwardly from their pivots with their lower end portions below the bottom of the pad. They are adapted to swing upwardly relative to the pad on their pivots against the bias when the pad is moved downwardly toward surface S and permit rocking of the pad with its curved bottom face 5 in contact with the surface.

Each of the supports 57 is formed of a length of wire bent to have a leg 59 extending generally at right angles from one end of a torsion bar spring portion 61 of the wire, with a foot 63 extending the lower end of the leg 59 and a finger 65 at the opposite end of portion 61. The foot is constituted by a loop of the wire having its end portion 67 welded to leg 59 for reinforcing the leg. The torsion bar spring portion 61 of each wire extends through a hole 69 in a respective end flange 35 of the cover plate 29 on the bottom of plate 29 in the space between the plates 29 and 9, with the leg 59 extending down at an angles as appears in FIG. 3 on the outside of the flange 35 and the finger 56 held flat against the bottom of cover plate 29 just inside the opposite end flange 35 by a nut 71 on a bolt 73 extending through a hole in the cover plate.

FIGS. 2–4 show the implement 1 with the supports 57 in their pad-elevating position on surface S, the angling of the supports relative to the fingers 65 being such that with the supports in this position, the plates 9 and 29 are generally horizontal, and pad 3 is thus generally horizontal raised above the surface S. The arrangement may be such, if desired, that the pad is inclined slightly upward from right to left as viewed in FIGS. 3 and 4 instead of being horizontal. The implement is adapted to be pushed down toward surface S for contacting the stencil 47 with the surface S and then rocked with the stencil in contact with the surface S for printing on the latter. On being pushed down, the pivots for the supports constituted by portions 61 of the wires where they extend through the holes 69 swing down and back (toward the right as viewed in FIGS. 3 and 4) and portions 61, acting as torsion bars, twist on their axes to provide a spring bias tending to return the implement upward so that, when the implement is released, it is raised back up off surface S to the raised position of FIGS. 3 and 4.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A hand stamp printing implement comprising an inking pad of rectangular outline, having a bottom face convexly curved from one side thereof to the other, a handle for said pad, and means for holding said implement lifted off a surface to be imprinted with the bottom face of the pad facing downwardly and in position for being moved down toward said surface and rocked over said surface comprising a pair of supports for the implement at the

ends of the pad, said supports being pivoted for swinging movement relative to the pad on a horizontal axis extending parallel to the sides of the pad adjacent one of said sides and being biased to swing downwardly relative to the pad to a pad-elevating position wherein they extend downwardly from the pivot with their lower end portions below the bottom of the pad, said supports being adapted to swing upwardly relative to the pad on their pivots against said bias when the pad is moved downwardly toward said surface and permitting rocking of the pad with its curved bottom face in contact with said surface, said implement further having a hollow head on the bottom of which the pad is held, said head having a central opening and a tubular stem extending up from the head in communication with the opening, said stem being internally and externally threaded, a cover plate on top of the head having an opening receiving said stem, means holding the cover plate spaced from the head, and a nut threaded externally on the stem for clamping the cover plate on said head, said handle comprising a combination ink bottle and reservoir threaded internally in said stem and extending upwardly therefrom, said cover plate having downwardly depending end flanges, and said supports having pivot means at their upper ends whereby they are pivoted in said flanges.

2. A hand stamp printing implement as set forth in claim 1 having clamp means at opposite sides of said cover plate for clamping a stencil in place on the curved bottom face of the pad.

3. A hand stamp printing implement as set forth in claim 2 wherein each support is formed of a length of wire bent to have a portion acting as a torsion bar spring extending through a hole in a respective flange of said cover plate in the space between the cover plate and said head, a leg extending down from the outer end of said torsion bar spring portion, and a foot extending from the lower end of the leg in the direction toward the other side of the pad.

4. A hand stamp printing implement as set forth in claim 3 wherein said head has a head plate and a perforated curved bottom plate extending between the sides of said head plate backing the inking pad, said bottom plate having flange portions at its sides extending up above the head plate constituting the means for holding the cover plate spaced from the head.

References Cited

UNITED STATES PATENTS

1,789,463	1/1931	Gorr	101—125
1,566,865	12/1925	Guthrie	101—125
2,919,642	1/1960	Mooney	101—125
2,966,116	12/1960	Harris et al.	101—405 X
894,519	7/1908	Mills	401—185

FOREIGN PATENTS

329,668	12/1917	Germany	101—405
493,192	10/1938	England	101—125
162,548	3/1958	Sweden	101—405

ROBERT E. PULFREY, Primary Examiner

P. F. SUTTER, Assistant Examiner

U.S. Cl. X.R.

101—127.1, 333, 405