

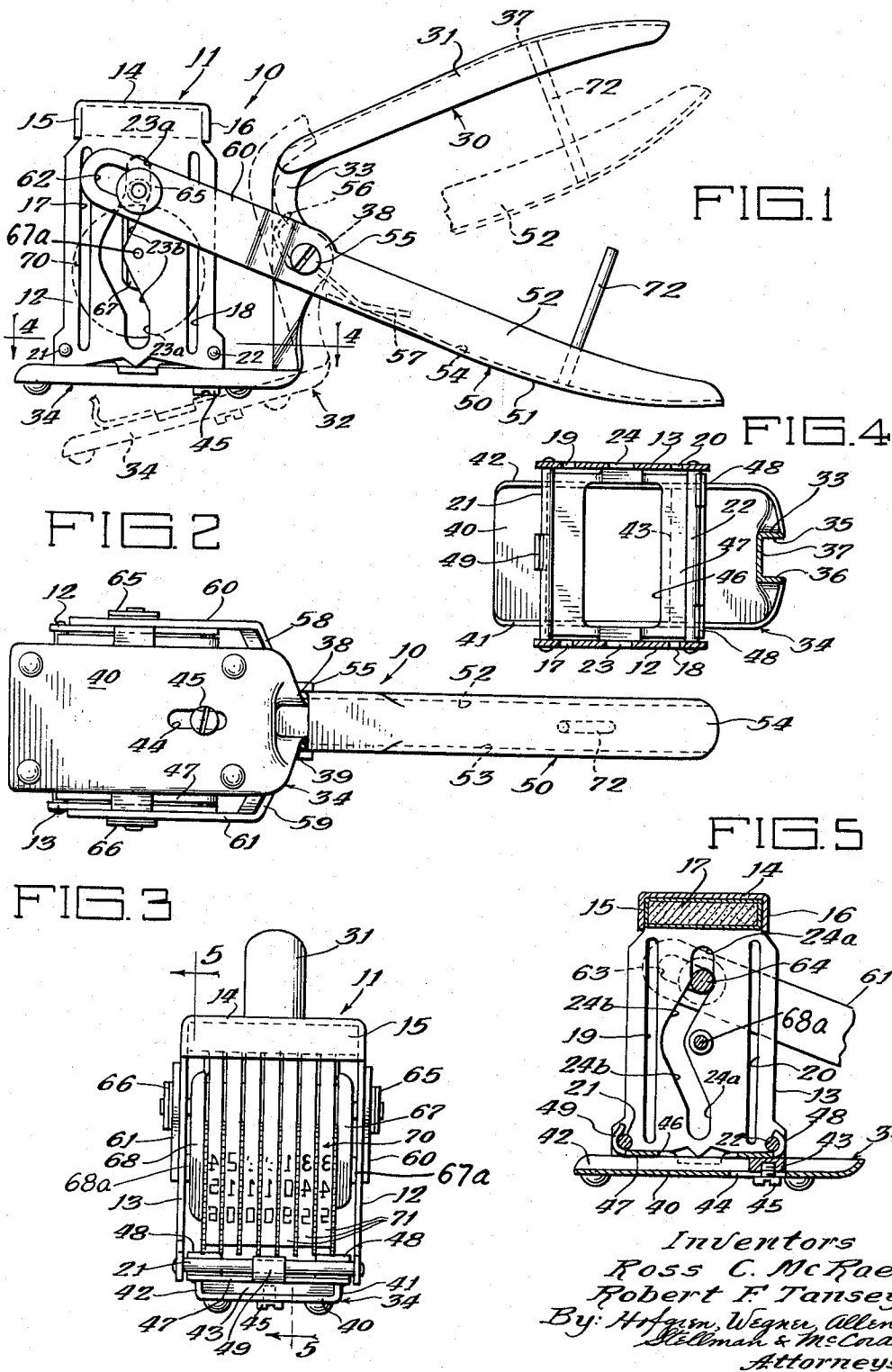
April 5, 1966

R. C. McRAE ETAL

3,244,097

SELF-INKING STAMP WITH PLIER ACTION

Filed Sept. 6, 1963



1

3,244,097

SELF-INKING STAMP WITH PLIER ACTION
 Ross C. McRae, Mundelein, and Robert F. Tansey,
 Palatine, Ill., assignors to Consolidated Stamp Manu-
 facturing Co., Inc., a corporation of Illinois
 Filed Sept. 6, 1963, Ser. No. 307,108
 7 Claims. (Cl. 101-334)

This invention relates in general to marking apparatus, and more particularly to an improved hand operated stamping device.

A general object of the present invention is to provide an improved device of the character described.

Another object of the invention is to provide an improved hand operative stamping device which is light in weight and easy to manipulate so as not to tire the operator.

A further object of the invention is to provide a self-inking stamping device wherein the printing means are easily accessible for adjustment purposes.

A still further object of the invention is to provide a self-inking stamping device having a tumbler which is operative between an inking position and a stamping position with means for positively locating the tumbler in the stamping position.

Still another object of the invention is to provide a self-inking stamping device with improved means for releasing the printing means from its support so that the printing means are readily accessible.

A still further object of the invention is to provide a self-inking stamping device as described above with improved means for holding the article to be stamped.

And still another object of the invention is to provide a self-inking stamping device as described above which is simple in construction, efficient in operation, well adapted for its intended purposes, and relatively inexpensive to manufacture and maintain.

These and other objects of the invention will hereinafter become more fully apparent from an examination of the following description, taken in connection with the annexed drawing wherein:

FIGURE 1 is a side elevational view of a stamping device embodying the principles of the present invention;

FIGURE 2 is a bottom plan view of the structure illustrated in FIGURE 1;

FIGURE 3 is a front elevational view of the structure illustrated in FIGURE 1;

FIGURE 4 is a view taken substantially as illustrated along line 4-4 of FIGURE 1; and

FIGURE 5 is a view taken substantially as indicated along line 5-5 of FIGURE 3.

While this invention is susceptible to embodiment in many different forms, there is shown in the drawing and will herein be described in detail one specific embodiment, with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated. The scope of the invention will be pointed out in the appended claims.

Referring now to the drawing, wherein like reference characters designate like or corresponding parts throughout the several views, a preferred embodiment of the stamping device 10 includes a generally U-shaped frame 11 having spaced sides 12 and 13 and a bight portion 14 extending transversely therebetween. The sides of bight portion 14 are bent over as at 15 and 16 to provide a downwardly open channel (FIGURE 5) for reception of a suitable ink pad 17. Sides 12 and 13 include spaced generally vertically extending slots 17 and 18,

2

and 19 and 20, respectively. Rods 21 and 22 span the lower ends of sides 12 and 13, to add rigidity to the structure, with the rods 21 and 22 being secured to the sides 12 and 13 in any suitable fashion, as by riveting or the like. Sides 12 and 13 are further provided with a generally centrally disposed slot 23 and 24, respectively, with the slots having aligned generally vertically extending upper and lower portions 23a, 24a, and aligned angularly disposed mid-portions 23b, 24b.

Stamping device 10 further includes a first handle, indicated generally at 30, and having a gripping portion 31 extending generally upwardly and outwardly from frame 11. Handle 30 also includes a generally L-shaped portion 32 having a vertically extending member 33 that can be formed integrally with gripping portion 31, or formed separately therefrom and secured thereto in a suitable manner as by riveting. L-shaped portion 32 further includes a forwardly extending leg 34, which defines a shelf portion upon which frame 11 is seated. As can be best seen in FIGURE 4, handle portion 33 is generally U-shaped in cross section, with sides 35 and 36 extending generally transversely with respect to a central bight portion 37. Handle portion 33 includes, adjacent its central section, rearwardly extending ears 38 and 39 having aligned openings, the purpose of which will hereinafter become more fully apparent.

As can be best seen in FIGURE 3, shelf portion 34 is generally U-shaped in front elevation with a generally rectangular bight portion 40, and with sides 41 and 42 extending upwardly from opposed edges of the bight portion 40. This upwardly open channel having a forwardly open end is formed, which is adapted to receive therein the material to be marked by the stamping device. A stop member 43, which is generally rectangular in cross section, is positioned in the channel formed by shelf portion 34, and serves as an abutment for the card or article to be stamped, and stop 43 provides an adjustable rear wall in shelf portion 34 and properly positions the article to be stamped relative to the printing means to be hereinafter described. Means are provided for adjusting stop 43 along shelf 34 so that the stamping device is capable of accommodating articles to be stamped of different sizes, and include a longitudinally extending slot 44 in bight portion 40. A screw 45 passes through slot 44 and engages a suitably threaded hole in stop 43 to secure stop 43 in the adjusted position.

Means are provided for releasably securing frame 11 to shelf 34, and include a plate 47 extending across shelf 34 and secured to the upper portion of sides 41 and 42. Plate 47 includes a central opening 46 through which the printing means to be hereinafter described projects to engage the article seated on shelf portion 34. The forward portion of plate 47 is provided with a centrally disposed upwardly directed hook 49 that is releasably engageable with transverse rod 21. The rearward end of plate 47 is provided with a pair of spaced upwardly directed hooks 48 which releasably engage transverse rod 22. Hooks 48 and 49 are yieldable so that frame 11 can be disconnected from shelf portion 34 by pulling upward on frame 11 and downward on shelf 34. However, it should be noted that hooks 48 and 49 grip rods 21 and 22 with sufficient force to prevent accidental displacement of frame 11 during the stamping operation.

Stamping device 10 further includes a second handle 50 which extends generally downwardly and rearwardly from frame 11. Handle 50 includes a gripping portion 51 which is generally U-shaped in cross section and consists of spaced sides 52 and 53 joined by a central portion 54. Sides 52 and 53 are provided with suitable apertures that are aligned with the apertures in ears 38 and 39 with a pivot pin 55 impaling each of the aligned aper-

tures. A suitable spring is positioned around pivot pin 55 and includes end portions 56 and 57 that bear against handle portions 37 and 54, respectively, to urge the handles into the full line inking position illustrated in FIGURE 1.

As is best seen in FIGURE 2, the forward end of handle 50 is substantially Y-shaped, with angularly disposed arms 58 and 59 terminating in forwardly directed parallel arms 60 and 61 which embrace the sides 12 and 13, respectively, of frame 11. The end portions of arms 60 and 61 are provided with longitudinally extending slots 62 and 63, respectively. A transversely extending pin 64 extends outwardly through slots 23 and 24 and impales slots 62 and 63 with suitable washers 65 and 66 being provided to retain the ends of pin 64. A suitable printing device in the form of a tumbler 70 is carried by a pair of spaced arms 67 and 68, that are secured to transverse pin 64. Printing device 70 is of the well known type having a plurality of individually adjustable bands 71, each having a plurality of characters thereon. Such printing devices are conventionally pivotally and reciprocally mounted for tumbling action, as by the engagement of pins 67a and 68a with slots in arms 67 and 68, respectively. Such printing devices are conventionally pivotally and reciprocally mounted for tumbling action as by the engagement of pins 67a and 68a with slots in arms 67 and 68, respectively. Such slots extend substantially from end to end of arms 67 and 68, and the slot in arm 67 is clearly visible in FIGURE 1. The action of the afordescribed tumbler is believed to be readily apparent to those skilled in the art and will hereinafter be described in detail.

With particular reference to FIGURE 1, it will be noted that a generally transversely extending arm 72 is secured to the bight portion 54 or arm 50. Arm 72 is engageable with the bight portion 37 of arm 30 when handle 50 moves about pivot 55 to locate the tumbler in the printing position. When the tumbler is in the inking position shown in FIGURE 1, the rod 64 is disposed adjacent the right or inner end of slots 62 and 63. As handle 50 is pivoted about pin 55, arms 60 and 61 initially force transverse rod 64 downwardly along the upper vertical portions 23a and 24a of grooves 23 and 24. Since the upper vertical groove portions 23a and 24a are relatively short in length, the tumbler 70 carried by the rod 64 will move vertically downward only a correspondingly small amount. As rod 64 begins to ride over the upper inclined cam portions 23b and 24b, it moves outwardly in slots 62 and 63, respectively, of arms 60 and 61, and also moves outwardly relative to pins 67a and 68a. The distance between pins 67a and 68a, and rod 64 is, in effect, a lever arm through which the arms 60 and 61, bearing on rod 64, pivot the tumbler 70 about pins 67a and 68a. When the rod 64 reaches the apex of inclined portions 23b and 24b, the rod 64 is disposed adjacent the outer or left end of slots 62 and 63 as viewed in FIGURE 1. As rod 64 moves over the apex of inclined portions 23b and 24b and down to the lower vertical groove portions 23a and 24a, the rod 64 moves inwardly or to the right as viewed in FIGURE 1, and the printing device 70 pivots approximately 180 degrees from the inking position shown in FIGURE 1 to a position immediately above the stamping position. As the rod 64 rides down the lower vertical groove portions 23a and 24a, the tumbler moves downwardly into the stamping position with the appropriate characters in engagement with the article to be stamped that is as positioned on shelf 34. Arm 72 has an appropriate length so that the printing device 70 will engage the article to be marked with the proper amount of force, thereby preventing smearing of the ink and awarding the application of an undue load to the structure. Thus, the slots 62 and 63 define lost motion means connecting the arm 50 with the tumbler 70 and enabling the tumbler to move between the inking and stamping positions. Since the

spring ends 56 and 57 urge the handles 30 and 50 apart, the rod 64 will be urged toward the upper end of slots 23 and 24 so that the selected characters on the bands 71 of the printing device will be returned into engagement with pad 17 when the handles are released. When it is desired to change the characters on printing device 70, it is necessary merely to pivot shelf 34 away from frame 11 around pivot 55, and the means for changing the bands 71 will then be readily accessible. Pivotal movement of shelf 34 may be accomplished by grasping the upper portion of frame 11 with one hand and grasping shelf 34 with the other hand, and then twisting in opposite directions to free rods 21 and 22 from hooks 48 and 49 and pivot frame 11 about rod 64. To replace frame 11 in the proper position, rod 22 is positioned under hooks 48, and a downward force is then applied to frame 11 to force rod 21 under hook 49 with a snap action.

We claim:

1. A self-inking stamping device comprising: a frame; an ink pad on said frame; a tumbler with printing means thereon; means mounting said tumbler for pivotal and reciprocal movement relative to said frame between an inking and a stamping position and including a cam slot in said frame and cam slot follower means on said tumbler, said cam slot having an offset portion for pivoting said tumbler as said cam slot follower means moves therealong; a first handle having an upright intermediate portion, a shelf portion extending forwardly from the lower end of said intermediate portion, and a manually engageable gripping portion extending rearwardly from the upper end of said intermediate portion; means on said shelf portion for retaining said frame thereon; further means on said shelf portion forming a shallow article receiving channel and defining the stamping position for said tumbler; a second handle having an intermediate portion pivotally mounted between the upper and lower ends of the intermediate portion of said first handle, said second handle having a manually engageable gripping portion extending rearwardly from the second handle intermediate portion, said second handle further having a pair of spaced forwardly extending arms embracing opposite sides of said frame, means formed on said spaced arms cooperating with means on said tumbler forming a lost motion connection therebetween to guide the tumbler in its movement relative to said spaced arms as said cam slot follower means moves along said slot when said first and second handle gripping portions are moved toward each other; and spring means urging said tumbler toward inking position.

2. A self-inking stamping device comprising: a frame; an ink pad on said frame; a tumbler with printing means thereon; means mounting said tumbler for pivotal and reciprocal movement relative to said frame between an inking and a stamping position, and including a cam slot in said frame and cam slot follower means on said tumbler, said cam slot having an offset portion for pivoting said tumbler as said cam slot follower means moves therealong; a first handle including a shelf portion having means thereon forming a shallow article receiving channel and defining the stamping position for said tumbler; means on said shelf portion for retaining said frame; a second handle pivotally mounted on said first handle and engaging said tumbler for actuation thereof, means formed on said second handle cooperating with means on said tumbler forming a lost motion connection therebetween to guide the tumbler in its movement relative to said second handle as said cam slot follower means moves along said slot when said second handle is moved relative to said first handle; and spring means urging said tumbler toward inking position.

3. A self-inking stamping devices as defined in claim 2 wherein the means on said second handle cooperating with the means on said tumbler includes a longitudinally extending slot in said second handle.

5

4. A stamping device as defined in claim 2 wherein said tumbler is pivotally mounted on said second handle, and the retaining means on said shelf portion are releasable to free said tumbler for pivotal movement relative to said second handle.

5. A stamping device as defined in claim 2 wherein said means defining an article receiving channel includes a bottom surface with side walls and an end wall extending upwardly therefrom.

6. A stamping device as defined in claim 5 wherein means are provided for adjusting the location of said end wall in said channel.

7. A stamping device as defined in claim 2 wherein a stop member is provided on one of said handles and is engageable with the other of said handles to locate said tumbler in the stamping position when said second handle is pivoted relative to said first handle.

6

References Cited by the Examiner

UNITED STATES PATENTS

109,814	12/1870	Fish	101—104
636,115	10/1899	Cameron	101—26
794,800	7/1905	Hill	101—407
1,164,998	12/1915	Doyle	101—407
1,257,717	2/1918	Leo	101—3
1,857,123	5/1932	Baber	101—3 X
2,038,338	4/1936	Baumgarten	101—103
2,731,915	1/1956	Garvey	101—103 X
3,140,658	7/1964	Marshall	101—407

FOREIGN PATENTS

328,114	4/1930	Great Britain.
---------	--------	----------------

WILLIAM B. PENN, *Primary Examiner.*