

PATENT SPECIFICATION

(11) 1315 769

DRAWINGS ATTACHED

- (21) Application No. 48432/71 (22) Filed 18 Oct. 1971
 (31) Convention Application No. 104 439 (32) Filed 21 Oct. 1970 in
 (33) Japan (JA)
 (44) Complete Specification published 2 May 1973
 (51) International Classification B41K 1/02, 1/38
 (52) Index at acceptance B6D 4



(54) STAMPING DEVICE

(71) I, TAKAJI FUNAHASHI, a citizen of Japan, of 1, 2-chome, Kitatakascho-machi, Nishi-ku, Nagoya, Japan, do hereby declare that the invention for which I pray that a Patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to an improved stamping device.

A stamping device is already known which includes a stamping block having numerous continuous pores and eliminates the necessity of impregnating the face of the stamping block with ink each time the device is used for impression. But this stamping device has been liable to stain an adjacent object because of the exposure of the stamping face having ink oozing thereon even when the device is not in use. In order to solve this problem, a hood has been provided on the stamping device in the prior art. This hood is such that when the device is not used, the lower edges of the hood stay below the stamping face, while when the device is used for stamping an impression on a surface, the lower edges of the hood are raised to be flush with the stamping face. But the device having such a hood is fairly complicated in construction, hence requiring complicated steps in the manufacture thereof. Moreover, such a hood easily becomes unable to move smoothly.

According to the present invention there is provided a stamping device comprising a frame housing a stamping block made of porous material, an ink storage block mounted on the stamping block, means connected with the storage block for supplying ink thereto, support means for holding the stamping face of the stamping block in a spaced relation to a surface to be stamped when the device is not in use and resilient means which hold the stamping block in the retracted position and which are overcome to move the stamping face into engagement with the surface to be stamped.

A preferred embodiment of the invention [Price 25p]

will now be described, by way of example only, with reference to the accompanying drawings, in which:

FIGURE 1 is a front elevational view, partly in section, of a preferred embodiment of the invention;

FIGURE 2 is a side elevational view, partly in section, of the stamping device shown in FIGURE 1;

FIGURE 3 is an exploded view, partly broken away, of the stamping device shown in FIGURE 1; and

FIGURE 4 is an exploded view of a part of another embodiment of the invention.

Referring to the drawings, a metal frame 3, which is made of springy metal and is generally rectangular in plan, comprises two pairs of oppositely disposed depending side walls 2 and 2'. The side walls 2 and 2' are not fully joined together, but are partly separated from each other. The lower-most portions of the side walls 2 and 2' are inwardly bent to form an integral supporting edge 1a. The upper edge of each of the side walls 2 is formed with an inwardly projecting flange 1. A stamping block 4 made of porous material having numerous continuous pores is housed within the metal frame 3, and is supported on the supporting edge 1a. The lower surface 4a of the stamping block 4 is projected downward through the opening defined by the supporting edge 1a.

A substantially rectangular ink storage block 5 is also housed within the metal frame 3, and mounted on the stamping block 4. An inner frame 8 made of ink-resistant synthetic resin has a channel-shaped section when viewed sideways, and comprises a substantially rectangular top portion 6 and a pair of oppositely disposed side walls 8a depending from the longer edges 6a of the substantially flat top portion 6. The lower edges of the side walls 8a of the inner frame 8 terminate in a position above the lower face 4a of the stamping block 4. An engaging member 8b is projected from each of the other or shorter edges 6b. As shown in the drawings, the flat top

portion 6 is provided approximately in the centre thereof with a vertically extending tubular portion 7 for supplying ink to the ink storage block 5. The tubular portion 7 has a reduced outside diameter at 7a to define a tubular portion 7b extending therefrom. The top plate 6 is further provided with a plurality of holes 15 for furnishing an additional supply of ink to the ink storage block 5. The frame 8 is inserted over the metal frame 3 with the side walls 8a enclosing the longer side walls 2' and the members 8b being engaged by and under the flanges 1. It will thus be noted that the springy nature of the metal frame 3 urges the side walls 2' against the side walls 8a of the frame 8 and thereby prevents the frame 8 from being disengaged from the frame 3. It will further be noted that the top portion 6 of the inner frame 8 presses the ink storage block 5 against the stamping block 4, so that the stamping block 4 is firmly supported on the edge 1a of the metal frame 3.

An outer frame 11 made of synthetic resin comprises a substantially flat top portion 9, and a pair of oppositely disposed side walls 11a depending from the longer edges of the top portion 9. The outer frame 11 is inserted over the inner frame 8. The width of the side walls 11a of the outer frame 11 is larger than that of the side walls 8a of the inner frame 8. The same letters and/or other symbols as those inscribed on the stamping block 4 are engraved on the top surface 9 of the outer frame 11. A transparent cover 16 is placed on the outer frame 11. The top portion 9 of the outer frame 11 is formed approximately in the centre thereof with a tubular hole 10. The tubular portion 7 of the inner frame 8 is slidably passed through the tubular hole 10 of the outer frame 11, and extends beyond the upper end of the tubular portion 10 when the outer frame 11 is inserted over the inner frame 8. The cover 16 however may be omitted.

A grip member 12 has a longitudinally formed substantially cylindrical bore 12a extending through the lower portion thereof and terminating at 12b. The bore 12a is reduced in diameter at 12b to define a longitudinal bore 12c communicating with the bore 12a. The tubular portion 7b extending from the inner frame 8 is frictionally engaged with the bore 12c, and the tubular hole 10 extending from the outer frame 11 and housing the tubular portion 7 is received within the lower bore 12a of the grip 12 in such a manner that the grip 12 can move in relation to the tubular hole 10 when it is pressed down or released.

A snap ring 14 is fitted around the lowermost portion of the tube 7b and rests on the lower tubular portion 7 at 7a. The grip 12 inserted over the tube 7b rests on the snap ring 14 at 12b. A compression spring 13 is located around the upper portion of the tubular portion 7 and in the space defined between

the snap ring 14 and the upper edge of the tube 10. Accordingly, as long as the device is not in use, the inner frame 8 is kept by the spring 13 in its raised position where the inner frame 8 is urged against the outer frame 11, and the lower surface 4a of the stamping block 4 is in a retracted position above the lower edges of the side walls 11a of the outer frame 11.

In operation, the stamping device according to this invention is placed on the paper P on which the letters and/or other symbols inscribed on the stamping block are to be reproduced. The grip member 12 is then pressed down by contracting the spring 13. The pressure thus applied to the grip 12 is transmitted to the tube 7b, and the inner frame 8, the ink storage block 5, the stamping block 4 and the metal frame 3 lowered together, whereupon the lower surface 4a of the stamping block 4 becomes flush with the lower edges of the outer frame 11 and makes an impression on the paper P. Upon completion of the stamping operation, the stamping block 4 is brought back to its raised or retracted position by the expansion of the spring 13. Since the stamping block 4 is made of porous material having numerous continuous pores and is capable of receiving a constant supply of ink from the ink storage block 5, clear impressions can be obtained continuously by simply pressing down the grip 12 without using a stamp pad.

It will be quite apparent from the foregoing description that the stamping block 4, which is kept in its retracted position above the lower edges of the outer frame 11 as long as the grip 12 is not pressed down for stamping, will never be inadvertently brought into contact with and stain any adjacent object. Furthermore, as the same letters and/or other symbols as those inscribed on the stamping block are engraved on the top surface 9 of the outer frame 11, no trial impression is necessary to see that a particular stamping device is the right one to be used in a particular situation. As an alternative, the outer frame 11 (see FIGURE 4) may be made of transparent synthetic resin, and an indicating plate 17 carrying the same letters and/or other symbols as those inscribed on the stamping block may be inserted between the inner frame 8 and the outer frame 11.

WHAT I CLAIM IS:—

1. A stamping device comprising a frame housing a stamping block made of porous material, an ink storage block mounted on the stamping block, means connected with the storage block for supplying ink thereto, support means for holding the stamping face of the stamping block in a spaced relation to a surface to be stamped when the device is not in use and resilient means which hold the stamping block in the retracted position and which are overcome to move the stamping face

portion 6 is provided approximately in the centre thereof with a vertically extending tubular portion 7 for supplying ink to the ink storage block 5. The tubular portion 7 has a reduced outside diameter at 7a to define a tubular portion 7b extending therefrom. The top plate 6 is further provided with a plurality of holes 15 for furnishing an additional supply of ink to the ink storage block 5. The frame 8 is inserted over the metal frame 3 with the side walls 8a enclosing the longer side walls 2' and the members 8b being engaged by and under the flanges 1. It will thus be noted that the springy nature of the metal frame 3 urges the side walls 2' against the side walls 8a of the frame 8 and thereby prevents the frame 8 from being disengaged from the frame 3. It will further be noted that the top portion 6 of the inner frame 8 presses the ink storage block 5 against the stamping block 4, so that the stamping block 4 is firmly supported on the edge 1a of the metal frame 3.

An outer frame 11 made of synthetic resin comprises a substantially flat top portion 9, and a pair of opposingly disposed side walls 11a depending from the longer edges of the top portion 9. The outer frame 11 is inserted over the inner frame 8. The width of the side walls 11a of the outer frame 11 is larger than that of the side walls 8a of the inner frame 8. The same letters and/or other symbols as those inscribed on the stamping block 4 are engraved on the top surface 9 of the outer frame 11. A transparent cover 16 is placed on the outer frame 11. The top portion 9 of the outer frame 11 is formed approximately in the centre thereof with a tubular hole 10. The tubular portion 7 of the inner frame 8 is slidably passed through the tubular hole 10 of the outer frame 11, and extends beyond the upper end of the tubular portion 10 when the outer frame 11 is inserted over the inner frame 8. The cover 16 however may be omitted.

A grip member 12 has a longitudinally formed substantially cylindrical bore 12a extending through the lower portion thereof and terminating at 12b. The bore 12a is reduced in diameter at 12b to define a longitudinal bore 12c communicating with the bore 12a. The tubular portion 7b extending from the inner frame 8 is frictionally engaged with the bore 12c, and the tubular hole 10 extending from the outer frame 11 and housing the tubular portion 7 is received within the lower bore 12a of the grip 12 in such a manner that the grip 12 can move in relation to the tubular hole 10 when it is pressed down or released.

A snap ring 14 is fitted around the lowermost portion of the tube 7b and rests on the lower tubular portion 7 at 7a. The grip 12 inserted over the tube 7b rests on the snap ring 14 at 12b. A compression spring 13 is located around the upper portion of the tubular portion 7 and in the space defined between

the snap ring 14 and the upper edge of the tube 10. Accordingly, as long as the device is not in use, the inner frame 8 is kept by the spring 13 in its raised position where the inner frame 8 is urged against the outer frame 11, and the lower surface 4a of the stamping block 4 is in a retracted position above the lower edges of the side walls 11a of the outer frame 11.

In operation, the stamping device according to this invention is placed on the paper P on which the letters and/or other symbols inscribed on the stamping block are to be reproduced. The grip member 12 is then pressed down by contracting the spring 13. The pressure thus applied to the grip 12 is transmitted to the tube 7b, and the inner frame 8, the ink storage block 5, the stamping block 4 and the metal frame 3 lowered together, whereupon the lower surface 4a of the stamping block 4 becomes flush with the lower edges of the outer frame 11 and makes an impression on the paper P. Upon completion of the stamping operation, the stamping block 4 is brought back to its raised or retracted position by the expansion of the spring 13. Since the stamping block 4 is made of porous material having numerous continuous pores and is capable of receiving a constant supply of ink from the ink storage block 5, clear impressions can be obtained continuously by simply pressing down the grip 12 without using a stamp pad.

It will be quite apparent from the foregoing description that the stamping block 4, which is kept in its retracted position above the lower edges of the outer frame 11 as long as the grip 12 is not pressed down for stamping, will never be inadvertently brought into contact with and stain any adjacent object. Furthermore, as the same letters and/or other symbols as those inscribed on the stamping block are engraved on the top surface 9 of the outer frame 11, no trial impression is necessary to see that a particular stamping device is the right one to be used in a particular situation. As an alternative, the outer frame 11 (see FIGURE 4) may be made of transparent synthetic resin, and an indicating plate 17 carrying the same letters and/or other symbols as those inscribed on the stamping block may be inserted between the inner frame 8 and the outer frame 11.

WHAT I CLAIM IS:—

1. A stamping device comprising a frame housing a stamping block made of porous material, an ink storage block mounted on the stamping block, means connected with the storage block for supplying ink thereto, support means for holding the stamping face of the stamping block in a spaced relation to a surface to be stamped when the device is not in use and resilient means which hold the stamping block in the retracted position and which are overcome to move the stamping face



* C L M S *

into engagement with the surface to be stamped.

2. A stamping device according to Claim 1 in which the stamping block has numerous continuous pores, said device having an inner frame mounted on said ink storage block and provided with a tubular portion for supplying the ink to said ink storage block; a channel shaped outer frame inserted over said inner frame, said outer frame having a tubular portion extending from a substantially flat top portion thereof and receiving said tubular portion of said inner frame therein slidably in relation to said tubular portion of said outer frame, said support means being constituted by a pair of depending side walls of said outer frame which walls are larger in width than a corresponding pair of depending side walls of said inner frame, said resilient means keeping the lower surface of the stamping block in a raised position above the lowered edges of said side walls of said outer frame.

3. A stamping device according to Claim 1 or 2, in which said first mentioned frame is made of metal and includes two pairs of oppositely disposed depending side walls which are not fully joined together, but are partly separated from each other, the lower edges of said side walls being inwardly bent to define an integrally formed supporting edge, and the upper edges of one pair of side walls being inwardly bent to define a pair of flanges.

4. A stamping device according to claim 3, in which said inner frame is made of ink-resistant synthetic resin and has a channel-shaped section, the lower edge of the side walls of said inner frame terminating at a position above the lower face of said stamping block, and further includes a pair of engaging members projecting outwardly from a pair of edges thereof and adapted for engagement by and under the pair of flanges formed on said metal frame, whereby said inner frame is secured to the metal frame to hold said ink storage block and said stamping block in position within said metal frame where the stamping block rests on the supporting edge of the metal frame along the four edges thereof and projects

through the opening defined by said supporting edge.

5. A stamping device according to claim 2, wherein said inner frame includes a plurality of holes provided through a substantially flat top portion thereof for furnishing an additional supply of ink to the ink storage block.

6. A stamping device according to Claim 2, further including a grip member inserted over said tubular portion of said inner frame, said resilient means being a compression spring disposed around said tubular portion of said inner frame and within the space defined by said grip member and the upper edge of said tubular portion of said outer frame, whereby the stamping face of said stamping block is kept in a raised position above the lower edges of said side walls of said outer frame as long as the device is not used, and lowered to a position where it becomes flush with the lower edges of said side walls of said outer frame to permit a stamping operation when said grip member is pressed down.

7. A stamping device according to Claim 5, further including a cover of transparent material placed over said substantially flat top portion of said outer frame carries an inscription of the letters and/or other symbols inscribed on the stamping face of the stamping block.

8. A stamping device according to Claim 5, wherein said outer frame is made of transparent material, and a plate for indicating the letters and/or other symbols inscribed on said stamping block is disposed between the flat top portion of said inner frame and the top portion of said outer frame.

9. A stamping device substantially as herein described with reference to and as shown in the accompanying drawings.

For the Applicants,
LLOYD WISE, BOULY & HAIG,
Chartered Patent Agents,
Norman House, 105—109 Strand,
London, W.C.2.

