Jan. 28, 1936. H. SCHÖNFELDER 2,029,128

STAMP

Filed Dec. 14, 1932

Fig.1

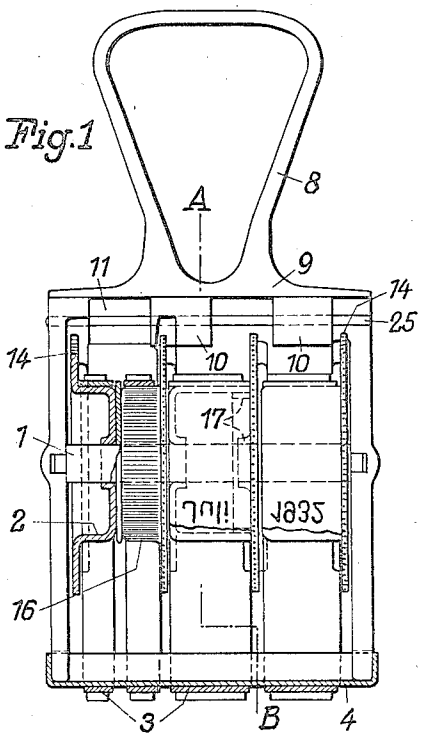


Fig.2

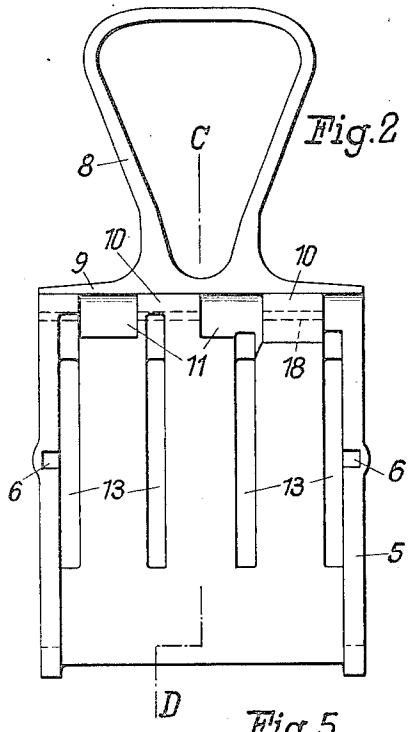


Fig.5

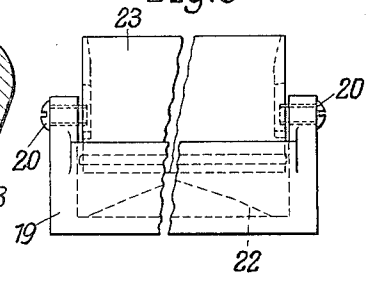


Fig.3

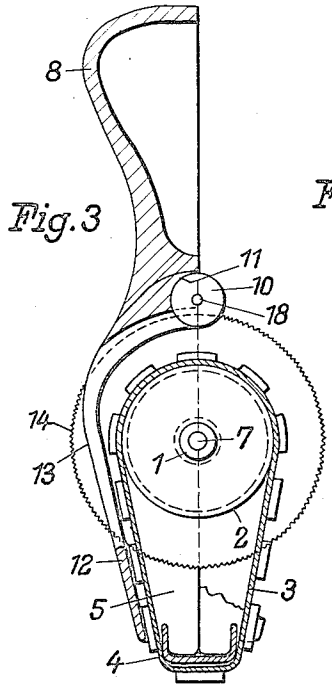


Fig.4

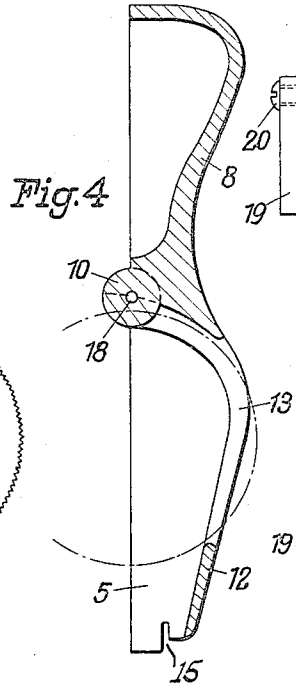
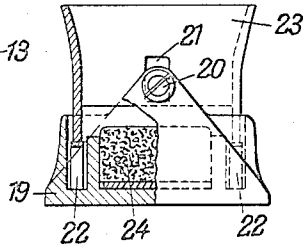


Fig.6



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UNITED STATES PATENT OFFICE

2,029,128

STAMP

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Application December 14, 1932, Serial No. 647,204
In Germany May 3, 1932

5 Claims. (Cl. 101—111)

This application was filed in Germany on the 3rd May, 1932.

The present invention relates to adjustable rubber stamps, of the kind used as date stamps or for other purposes, in which a set of endless rubber bands carrying printing characters and extending over a fixed support and a set of independent pulleys are used, the pulleys being adapted to be turned independently to bring any character into printing position.

One very unpleasant drawback of these known stamps is the fact that in using the stamps the hands, the paper and other objects are liable to be soiled owing to the fact that the rubber bands carrying the printing characters are laterally not covered. Another drawback of this lack of lateral cover is the fact that the stamp bands and the printing characters become very rapidly soiled, whereby the setting of the printing characters is rendered difficult. The durability of the stamp is also very considerably reduced. The known constructions of these stamps are somewhat difficult to put away and it is therefore usual to put a stamp after use upon an open ink pad, which again leads to soiling of the stamp bands by the ink of the pad.

In order to obviate these drawbacks it has already been proposed to make the stamp frame or casing in the form of a container consisting of several parts, which has only the necessary openings for setting the bands and for making the impression. The construction of these improved band stamps is, however, very complicated, which makes the manufacture very expensive and also renders the assembling and dismantling of the parts very difficult.

The present invention consists in an improved construction in which the container-like frame of the stamp consists of only two identical parts which are connected together by a very simple means so that an extremely simple construction is attained. This object is, according to the invention, attained by using a container-like frame which has only such openings as are required for setting the bands and for making the impression, and is divided along a symmetry plane passing through the axis of the pulleys and the printing bar in the longitudinal direction, so that the container consists of two entirely identical halves which are connected together by any suitable means. Preferably the two container halves are inserted in known manner with the lower ends of their end walls into the cup-shaped printing bar so that the latter is utilized as a means for connecting the two halves. The halves are, moreover, connected above the pulleys by means of eyes which engage each other and a pin passed through the eyes. In order to dispense with further separate parts, the stamp handle or knob is likewise divided along the plane of division of the container, each half of the handle or knob being made in one piece with the corresponding container half. This construction facilitates the manufacture of the stamp container from a pressed and artificial material, such as bakelite, papier mâché, celluloid and the like, whereby reduction of the weight of the stamp and a very pleasant appearance are obtained. The manufacture of the stamp is, moreover, simplified by the fact that the band pulleys together with the hand discs serving for their setting are drawn from sheet iron, and pulleys being, during the drawing operation, slightly ribbed and consequently roughened upon their peripheral surfaces bearing the rubber bands, for the purpose of increasing frictional resistance between the rubber bands and the pulleys. When using wide band pulleys, a cover disc is pressed into the cavity of the pulley, whereby two bearing surfaces are obtained between the pulley and the spindle.

According to the invention the stamp pad container is provided with a vertically guided frame which serves for receiving the lower end of the stamp, and is for the purpose of inking the stamp, depressed together with the stamp against the action of pressure springs. When the stamp is inserted into the frame, it is normally held by the springs away from the inking pad.

The accompanying drawing shows by way of example one construction embodying the features of the invention.

Fig. 1 is an elevation of the stamp, the front half of the container being removed, and one of the pulleys being shown in section.

Fig. 2 is an inner view of one of the container halves.

Fig. 3 is a section on the broken line A—B of Fig. 1.

Fig. 4 is a section on line C—D of Fig. 2.

Fig. 5 is a partial elevation of the inking pad container, and

Fig. 6 is a section and partly an end view of the inking pad container.

The stamp comprises as usual several band pulleys 2 mounted upon a spindle 1, over which run endless rubber bands 3 bearing the printing characters the bands being also guided over a printing or support bar 4. The printing bar con-

sists of a piece of sheet iron having upturned longitudinal edge portions and similarly upturned end edge portions. The printing bar 4 and the pulley spindle 1 are held by the stamp container at such a distance apart as to put the rubber bands under a slight tension. Whereas in the known rubber bands, the frame is in the form of a U, the pulley spindle being mounted in the lateral limbs and the handle being fixed to the middle portion of the U, the container is, according to the invention, divided along a plane of symmetry passed through the axis of the pulley spindle and the longitudinal middle line of the printing bar. The two halves of the container are completely identical, each half having two end walls 5 in which are provided the bearings 6 for the pivot pins 7 of the pulley spindle 1, and an upper wall 9. The wall 9 is formed with a knob half portion 8 and with projecting hinge eyes 10 which alternate with intervening recesses 11 of corresponding width. Each container half moreover has a lateral enclosing wall 12 which conforms to the periphery of the band pulleys and the path of the bands. In this lateral enclosing wall are provided slots 13 through which project peripheral segments of operating or setting discs 14 appertaining to the band pulleys. In the bottom edge of each end wall 5 is formed a notch 15. The four notches 15 serve for receiving the upturned edges of the printing bar 4.

The band pulleys 2 are each drawn in one piece with the appertaining operating disc 14, the edge portion of the pulley end wall bordering the opening through which the spindle passes, being bent inwards in order to provide a sufficiently large running and bearing surface of the pulley upon the spindle. The cylindrical peripheral surface of the band pulley upon which the band runs is, during the drawing operation, slightly ribbed by the use of a suitably shaped matrix, as indicated at 16 in Fig. 1. Those pulleys which have a considerable width are provided with a pressed-in end cover 17, which serves for reinforcing the pulley and is provided adjacent to the spindle with a running and bearing surface. The wide pulleys have therefore two bearing and running surfaces.

The assembling of the stamp parts is effected in the following manner. The pulleys together with the rubber bands are first slid upon the pulley spindle. The printing bar is passed through the bands and is inserted with its lateral flanges into the notches 15 of the container halves, the spindle is then inserted with its pivots 7 into the bearings 6 of one container half, the bands being at the same time slightly tensioned. The other container half is then pressed into the first container half. The eyes 11 of the two container halves engage between each other and into the corresponding recesses of the other half, whereby the bores 18 of the hinge eyes 10 of both container halves are brought into line. A pin 25 is then inserted through the registering hinge eyes. It will be seen that the whole inner mechanism is entirely enclosed by the container, with the exception of the small opening required for printing and the small openings required for peripheral segments of the operating discs 14. These openings are formed by slots 13 of the container halves. The two knob halves 8 form together a closed knob, the cavity of which may be utilized for the reception of spare parts, stamp bands, pulleys and the like.

The container halves may be made of any material capable of being pressed or cast, for instance sheet iron, artificial substances such as bakelite or the like, and other ordinary casting or spray casting may be employed. The pulleys of the stamp bands may also be made of similar artificial materials. The container may comprise several parts, for instance the knob may form a separate part.

The inking pad container 19 shown in Figs. 5 and 6 has a frame portion 23 which is vertically guided against the pressure of springs 22 by means of pins 20 and grooves 21, and is so adapted to the lower end of the stamp that upon insertion of the stamp into the frame, the printing characters located upon the printing bar are held away from the inking pad 24. The inking of the characters can be effected only by depressing the stamp together with the frame 23 against the action of the springs. In this way the inking pad container is utilized both for the reception of the stamp when the latter is not used, and serves also for protecting the stamp against soiling.

I claim:

1. In a stamp the combination of: a casing including a knob; a spindle mounted in said casing; a printing bar carried by the casing; a plurality of pulleys independently rotatable upon said spindle and provided with discs slightly projecting from said casing, said disc serving for setting said pulleys from the outside; bands carrying printing characters, said bands being passed each over a pulley and the printing bar; said casing including the knob consisting of two identical halves, the plane of division of the casing passing through the axis of the spindle upon which the pulleys are mounted, and also passing through the printing bar, substantially as described.

2. In a stamp the combination of: a casing; a spindle mounted in said casing; a printing bar carried by the casing; a plurality of pulleys independently rotatable upon said spindle and provided with discs slightly projecting from said casing, said discs serving for setting said pulleys from the outside; bands carrying printing characters, said bands being passed each over a pulley and the printing bar; said casing forming a container substantially enclosing completely the pulleys and the bands, with the exception of an opening corresponding to the printing bar and with the exception of slots for the passage of portions of the peripheries of the setting discs, said casing being composed of two substantially identical halves, the plane of division passing through the axis of the spindle upon which the pulleys are mounted and the longitudinal middle line of the printing bar; each half of the casing having at its lower end notches for the reception of the printing bar and also having above the pulleys hinge eyes alternating with recesses of corresponding width, said two halves of the casing being secured together at one end by the printing bar inserted into the notches, and at the other end by a pin passed through the hinge eyes, substantially as described.

3. In a stamp the combination of: a casing; a spindle mounted in said casing; a printing bar carried by the casing; a plurality of pulleys independently rotatable upon said spindle and provided with discs slightly projecting from said casing, said discs serving for setting said pulleys from the outside; bands carrying printing characters, said bands being passed each over a pulley and the printing bar; said casing forming

a container substantially enclosing the pulleys and the bands with the exception of an opening corresponding to the printing bar and slots for portions of the edges of the setting discs; said casing consisting of two substantially identical halves, the plane of division passing through the axis of the spindle upon which the pulleys are mounted and the longitudinal middle line of the printing bar; each casing half being made in one piece with a hollow member constituting one half of knob, the cavity within the knob serving for the reception of spare parts, substantially as described.

4. In a stamp the combination of: a casing; a spindle entirely enclosed within said casing; a printing bar carried by the casing; a plurality of pulleys independently rotatable upon said spindle and provided with discs slightly projecting from said casing, said discs serving for setting said pulleys from the outside; bands carrying printing characters, said bands being passed each over a pulley and the printing bar; said casing consisting of two exactly identical halves, the plane of division of the casing passing through the axis of the spindle upon which the pulleys are mounted, and also passing through the printing bar; each casing half having internal half cylindrical recesses outwardly closed, the recesses of both casing halves forming bearings of said entirely enclosed spindle, substantially as described.

5. In a stamp the combination of: a casing including a knob; a spindle mounted in said casing; a printing bar carried by the casing; a plurality of pulleys independently rotatable upon said spindle and provided with discs slightly projecting from said casing, said discs serving for setting said pulleys from the outside; bands carrying printing characters, said bands being passed each over a pulley and the printing bar; said casing consisting of two exactly identical halves, the plane of division of the casing passing through the axis of the spindle upon which the pulleys are mounted, and also passing through the printing bar and a knob, said knob consisting of two identical halves each formed integrally with one of the identical halves of said casing substantially as described.

HERBERT SCHÖNFELDER.