A. H. ROGERS.

RUBBER STAMP OF THE BAND TYPE.

APPLICATION FILED FEB. 19, 1917.

1,247,014.

Patented Nov. 20, 1917.

Fig. 1.

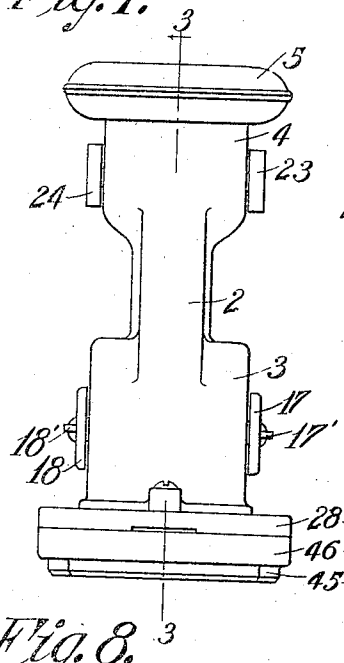


Fig. 2.

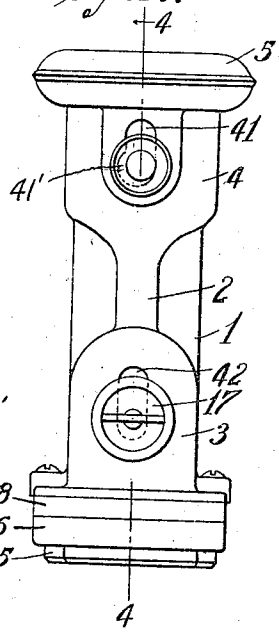


Fig. 3.

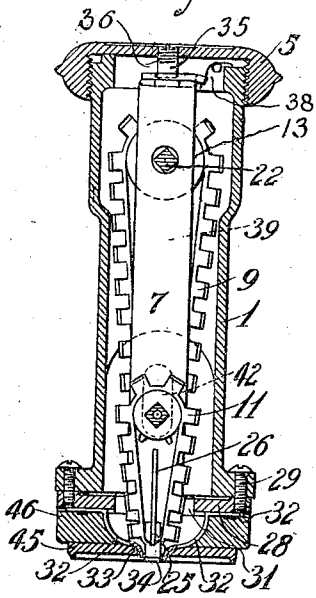


Fig. 8.

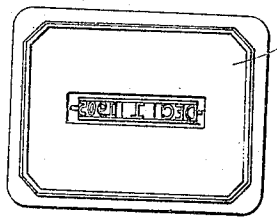


Fig. 4.

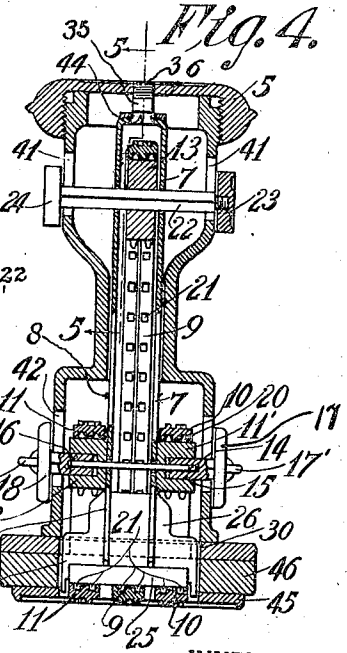


Fig. 5.

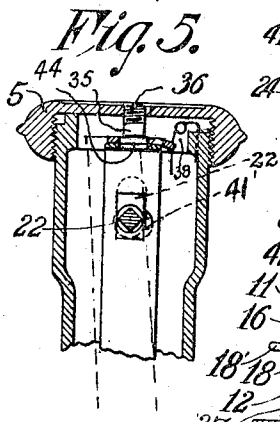


Fig. 6.

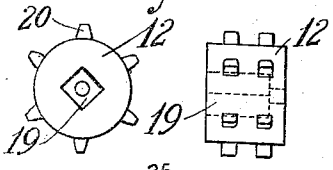
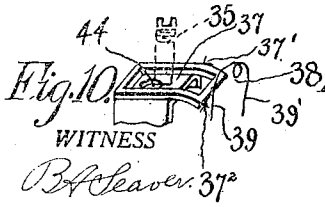


Fig. 10.



WITNESS

B. A. Seaver.

Fig. 7.

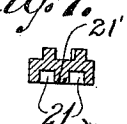


Fig. 9.

INVENTOR.

Arthur H. Rogers,

BY

Harry N. Bowen.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ARTHUR H. ROGERS, OF SPRINGFIELD, MASSACHUSETTS.

RUBBER STAMP OF THE BAND TYPE.

1,247,014. Specification of Letters Patent. Patented Nov. 20, 1917.

Application filed February 19, 1917. Serial No. 149,386.

To all whom it may concern:

Be it known that I, ARTHUR H. ROGERS, a citizen of the United States of America, residing in the city of Springfield, county of Hampden, and State of Massachusetts, have invented certain new and useful Improvements in Rubber Stamps of the Band Type, of which the following is a specification.

This invention relates to improvements in dating stamps of the type in which continuous type bands are used bearing the year, month, and day of the month type characters.

Broadly, the invention comprises an inclosing casing within which is mounted a slidable frame with means for locking the same in different positions of adjustment. An object of the invention is to provide means for automatically alining the type so that when the stamp is used the printing type on each band will correctly stand in line with each other. Heretofore, in this class of stamps, unless great care is taken to aline the type on the bands they will not be arranged correctly when the printing is effected. A further object of the invention is to provide means for individually rotating the bands for bringing the printing type into alinement when the slidable frame is moved into its printing position. A further object is to provide means for cushioning the bands which bear the type. Other objects of the invention will fully appear in the body of the specification and be particularly pointed out in the claims.

Referring to the drawings:

Figure 1 is an elevational view showing the exterior of the casing and the button devices for rotating the type carrying bands;

Fig. 2 is a view at right angles to Fig. 1, showing in side elevation the offset opening to permit the operation of the interiorly located devices for locking and unlocking the movable frame which carries the type bands;

Fig. 3 is a vertical sectional view through the center of the casing on the line 3—3 of Fig. 1, illustrating the movable type band carrying frame, the guiding devices for the frame at the top and bottom portions of the casing and the inclined and curved edges of the opening through which the type on the bands projects for alining the same;

Fig. 4 is a vertical sectional view on the line 4—4 of Fig. 2, showing the threaded adjustment and stop pin in the cap for guiding and adjusting the movable frame, also the construction of the shafts, whereby the individual type bands are turned when desired, and the plate or bridge piece at the lower end of the movable frame for guiding the bands;

Fig. 5 is a sectional view on the line 5—5 of Fig. 4, illustrating in detail the construction of the spring and adjustable stop pin for normally retaining the movable frame in printing position, the full line position shown being that in which the movable frame can be raised for adjusting the type and in exaggerated dotted lines the position of the movable frame in the printing position;

Fig. 6 is an end and side elevational view of one of the sprocket wheels over which the type bands pass;

Fig. 7 is a sectional view of the type-band showing the cushion recesses which receive the teeth of the sprocket wheels, and also the embedded strengthening thread;

Fig. 8 illustrates the removable name plate;

Fig. 9 is a perspective detail view of a section of the type band, showing the strengthening thread in dotted lines; and

Fig. 10 is a detail view of the upper end of the movable type carrying frame, the adjusting and stop screw pin in the cover being shown in the position to lock the frame against upward movement.

Referring to the drawings in detail, the inclosing casing is indicated at 1, and is formed wth an intermediate neck portion 2 and enlarged portions 3 and 4. The upper end is preferably made circular and is formed with a thread for receiving the perforated cap 5. Formed in the center of this cap is a threaded opening in which is located the threaded adjusting and stop pin. A slidable frame is mounted in the inclosing casing 1 and is formed with the side plates 7 and 8 that extend substantially the entire length of the interior of the inclosing casing. This frame supports the three endless rubber type carrying bands 9, 10 and 11 (see Fig. 4) which is formed with the type for printing the year, month and day, respectively, the day band 9 being the longest since there are more numerals in the month than in either the year or month bands. If desired this band may be made shorter and the numbers corresponding to the days of the month put on more than one band.

In order to rotate these bands sprocket wheels 11′, 12, and 13 are provided which

are rotatably mounted in the frame; the sprocket wheels 11′ and 12 are mounted for independent rotation with relation to each other on the small pin or shaft 14 which consists of a round pin that extends through openings in the sides 7 and 8 of the movable frame and terminates within the hubs 15 and 16 of the band operating buttons 17 and 18. The hubs of these buttons are rectangular for engaging similar shaped recesses 19 in the sprocket wheels 11′ and 12. The teeth 20 of these sprocket wheels enter recesses 21 in the type bands, whereby not only a rotative effect is transmitted to the bands but a cushioning effect where it passes over the bridge at the lower end of the movable frame.

The day of the month band 9 is similarly rotated by means of the sprocket wheel 13 by means of the rectangular or suitably constructed shaft 22 which passes therethrough. This shaft passes through openings in the opposite sides of the movable frame and through a rectangular shaped opening in the sprocket wheel 13 over which the type band passes that carries the days of the month numbers. This shaft carries the operating buttons 23 and 24 at its opposite ends for rotating the sprocket wheel 13. In order to form a suitable surface over which the lower portions of each of the type bands pass, a bridge piece 25, having its lower surface curved, is provided. This piece is mounted on a detachable plate 26 which is supported in and frictionally secured to the side plates 7 and 8 at their lower ends, as shown in Figs. 3 and 4 by means of the slits therein, as indicated in Fig. 4 at 27. This piece 25 may be made adjustable, if desired. The opposite ends of the plate 26 engage oppositely located vertically arranged grooves 30 in the face plate 28 which is secured to the frame 1 at its lower end by means of the screws 29 (see Fig. 3). The plate 28 is formed with a large rectangular shaped opening 31 through which the three type carrying bands pass. Secured to the plate 28 near the opening 31 are downwardly extending plates 32 which are spaced from each other and are formed with the curved shoulders or throat surfaces 33 that are adjacent the space 34 between the plates 32 through which the type of the several type bands project, as clearly shown in Figs. 3 and 4 when in printing position. Above the opening 34 the plates are inclined. The curved surfaces 33 are for the purpose of automatically alining the type characters when the same are pushed downward through this opening by means of the operating buttons 23 and 24. The movable type band carrying frame is adapted to be retained in its lowermost position by means of the screw pin 35, the upper end of which is secured to the cap 5 by the threads 36. The lower end of this pin normally engages the bridge piece 37 (see Fig. 10) of the small frame 37′ that is secured to the upper end of the movable type carrying frame. The type-carrying frame is normally held in the position shown in Figs. 5 and 10 by means of the spring 38; the end 39 of which engages the edge 37^2 and the end 39′ enters an opening in the inclosing casing (see Fig. 5). The type carrying frame is held against vertical movement when in this position by means of the pin 35 which engages the bridge piece 37 and the recessed slots 41′ when the stamp is used for printing. When the type is to be moved in order to print a different date the operator first moves the shaft 22 out of the recesses 41′ by grasping the buttons 23 and 24, bringing this shaft in alinement with the elongated slot 41 in the side of the casing, and, at the same time the lower end of the pin 35 is brought over the opening 44 in the frame 37^2 whereby the type carrying frame, as a whole, can be lifted upward away from the lower opening 34 permitting the several type-bands to be adjusted by means of the buttons 23, 24, 17 and 18. After the type bands have been adjusted to the correct dates the operator again moves the frame downward carrying the type of the bands through the opening 34 and at the same time the spring 38 moves the shaft 22 into the locking recesses 41′. In order to vertically adjust the type carrying frame the screw 35 is operated to move this frame downward the correct distance so that it will cause the type to project the correct distance beyond the face of the lower printing die 45. The operator then pushes downward on the buttons 23 and 24 thus forcing the type on the three bands through the opening 34 and by reason of the shelving or inclined surfaces 33 on the plates 32, the type on each of the bands is automatically alined or pinched into alinement in this opening. As he pushes downward on the buttons the spring 38 automatically snaps the shaft 22 back into locking engagement with the recesses 41′ and holds the type carrying frame locked in the printing position and the end of the pin 35 engaging the surface 37 (see Fig. 10). In order to accurately adjust the extent of projection of the type through the opening 34 the pin 35, as stated, engages the bridge 37′. The rotation of the pin 35, therefore, causes the frame carrying the three rubber bands to be moved relative to the casing 1, it being understood that the type carrying frame is locked against upward movement by means of the spring 38 and pin 35. The printing die 45 is cemented to the cushion pad 46 in the usual manner.

From this construction it will be seen that I have provided a device for quickly and automatically alining the type of the three bands by means of the pieces 32 having the

inclined and curved surfaces 33 adjacent the opening 34 and I have provided means for accurately adjusting the position of the type carrying frame relative to the casing 1, also means for automatically locking the carrying frame in the adjusting position, also, means for cushioning the bands on the bridge piece over which the bands are passed. It is to be understood that the stamp can be readily taken apart and new bands substituted when desired. The shaft 22 can be readily removed by unscrewing the cap 23 and the bands 10 and 11 can be removed by simply withdrawing the buttons 17 and 18 from their sprocket wheels and the pin 15; this pin permits the sprocket wheels to rotate independent of each other. The buttons 17 and 18 are easily rotated by means of the ribs 17′ and 18′. It will be seen that the fixed and spaced curved surfaces 33 afford means for automatically alining the type on the bands when the movable frame is moved downward.

Referring to Figs. 7 and 9, 21′ designates threads which are embedded in the rubber of the type printing bands in order to prevent stretching and for strengthening the same against breakage. The ends of this band are suitably secured together, as by sewing. These bands, as shown, are formed with recesses to receive sprocket wheels. The thickness of the web of rubber between the type is substantially equal to the thickness of the threadlike element.

It is to be understood that the present invention is not limited to a dating stamp as the same construction may be used for a numbering or lettering stamp.

What I claim is:

1. In a dating stamp the combination, an inclosing casing, a type carrying frame slidably mounted therein, means for supporting type carrying bands on said frame, means for adjusting the bands relative to the frame and means for automatically alining the type of the bands when the frame is moved relative to the casing, as described.

2. In a dating stamp the combination, an inclosing casing formed with enlarged upper and lower portions, and a connecting neck, a slidable frame formed with plate members mounted therein, sprocket wheels supported in the enlarged portions of the frame, type bands formed with recesses to receive the teeth of the sprocket wheels, a bridge piece at the lower end of the carrying frame over which the bands pass, the recesses serving to cushion the type, a plate secured to the lower portion of the casing, plates with inclined surfaces secured to said plate and spaced from each other for automatically alining the type when the same is forced through the space between the plates, and means for retaining the frame in different positions of adjustment.

3. In a dating stamp, the combination, an inclosing casing, a type band carrying frame mounted therein, movable devices supported in the frame for operating the bands, a bridge piece at the lower end of the carrying frame over which the bands pass, plates secured to the casing and formed with inclined and curved surfaces spaced from each other for alining the type on the bands when the same is forced into the space between the plates, means for retaining the frame in different positions of adjustment, said plates having grooves for guiding the movements of the lower end of the slidable frame.

4. In a changeable dating stamp, the combination with an inclosing casing, a type band carrying frame slidably mounted therein, means for adjustably locking said frame, comprising a pin engaging the upper end of the frame and a slotted recess portion in the inclosing casing to receive a transversely located element, on the carrying frame, and a spring interposed between the casing and the carrying frame to retain said element in the recessed portion, as described.

5. In a dating stamp, the combination, with an inclosing casing, a frame for supporting the type carrying bands, sprocket wheels carrying said bands, said wheels being independently rotatable, externally located buttons for rotating said wheels, a bridge piece at the lower end of the frame over which the bands pass, and fixed means for automatically alining the type, as described.

6. The combination in a dating stamp with an inclosing casing, a movable type carrying frame mounted therein, sprocket wheels mounted in said frame, a bridge piece, type bands passing around the sprocket wheels and bridge piece and movable by said wheels, fixed plates having inclined and curved surfaces and spaced from each other to receive the type therebetween for alining the same when the type is forced against the inclined and curved surfaces, as described.

7. In a dating stamp the combination with a casing, of a movable type carrying frame therein, means for supporting a series of type bands on the frame, means for automatically locking the frame comprising a threaded pin and a spring engaging the frame to move the frame into locking position with respect to said pin, as described.

8. In a dating stamp the combination with an inclosing casing, a movable frame therein for supporting a series of type carrying bands, independently movable means for supporting the bands, means comprising a cap having a pin therein for adjusting the movable frame and for locking the frame against upward vertical movement, and

means to permit the movable frame to be moved out of its locking position to permit adjustment of said bands.

9. In a dating stamp the combination with an inclosing casing, a movable type carrying frame therein for supporting a plurality of endless type bands, means located on the exterior of said casing for operating the bands, a cap piece, a pin therein for adjusting the movable type carrying frame, and means operable by one of the exteriorly located band operating means to unlock the movable frame to permit adjustment of said bands.

10. A dating stamp comprising an inclosing casing, a movable frame therein, sprocket wheels mounted in the frame for supporting and operating a series of endless type carrying bands, said bands having recesses oppositely disposed to the type to receive the teeth of said wheels and for cushioning the type, as described, a bridge piece on the movable frame around which all of the bands pass, and button devices exteriorly located with reference to the inclosing casing for severally operating the bands, and means secured to the inclosing casing for alining the type of the bands as the movable frame is moved into its printing position.

11. A dating stamp comprising an inclosing casing, a movable frame therein, means for locking the frame in the casing against movement, shafts in the frame for supporting sprocket wheels over which the type carrying bands pass, means for unlocking the frame by means of one of the shafts passing through openings in the side of the casing, said unlocking means also serving to operate one of the sprocket wheels, and spaced plates for alining the type as the movable frame is moved downward by said unlocking shaft.

12. In a dating stamp in which a plurality of endless bands are employed, a slidable frame for supporting the bands, a pair of fixed spaced reversely curved plates on an inclosing casing for automatically alining the type as the frame is moved into printing position, and a screw in the upper end of the casing for adjusting the frame supporting bands.

13. A type band for printing stamps consisting of an integral piece of molded rubber, having the type on one side and recesses on the other and within the type character itself to receive the teeth of sprocket wheels for actuating the band and for cushioning purposes during the printing operation, an inextensible thread-like element embedded within the rubber as described.

ARTHUR H. ROGERS.

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