July 19, 1938. H. J. MELIND 2,123,952

STAMP

Filed Jan. 27, 1937 2 Sheets-Sheet 1

Fig. 1.

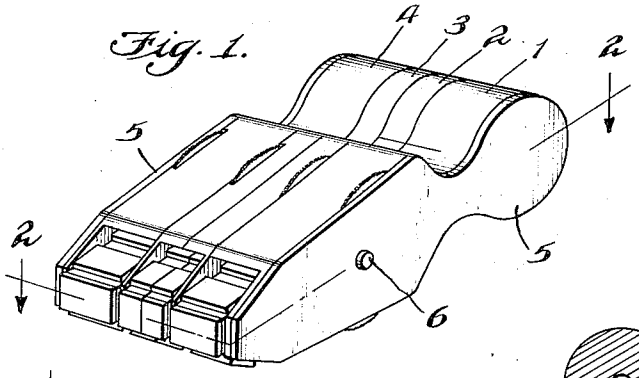


Fig. 2.

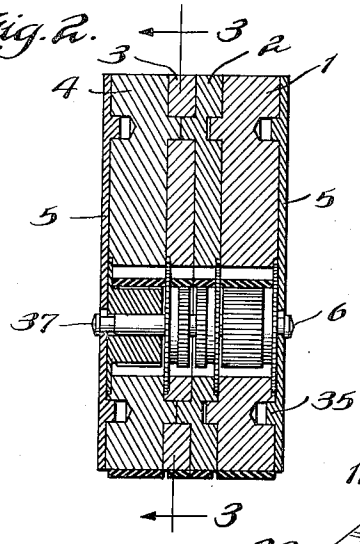


Fig. 3.

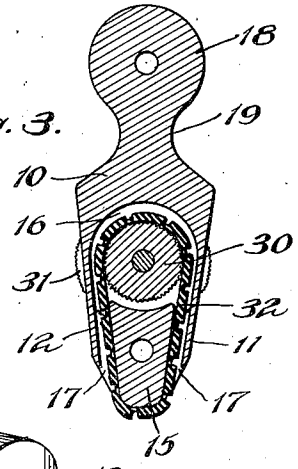


Fig. 4.

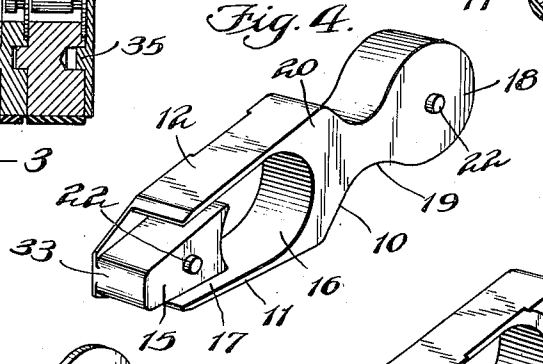


Fig. 5.

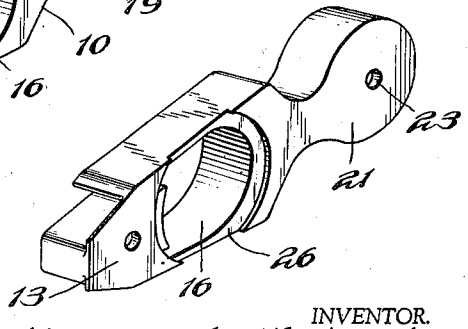
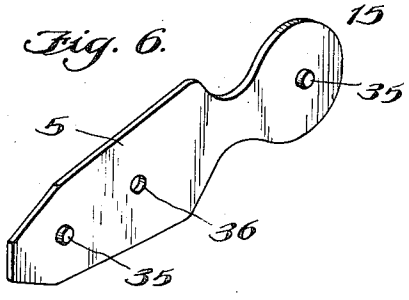


Fig. 6.



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STAMP

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Fig. 7.

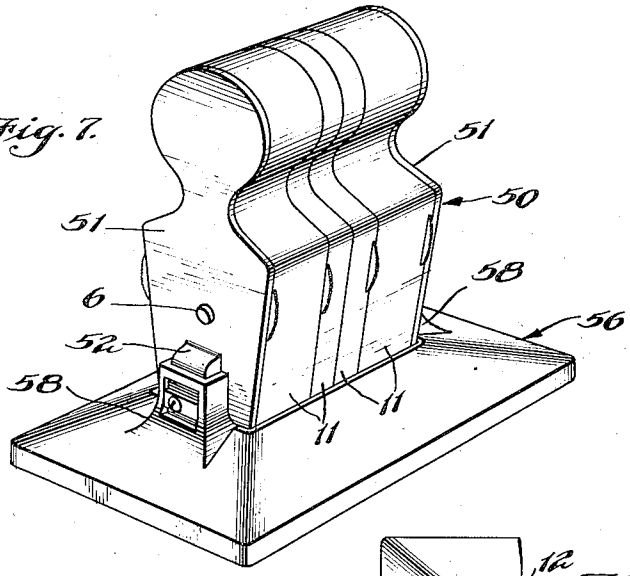


Fig. 8.

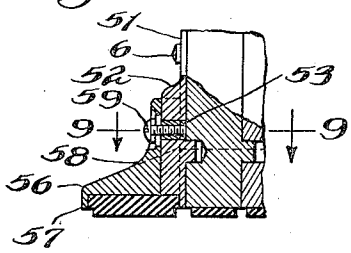


Fig. 9.

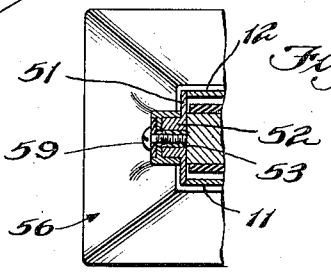


Fig. 11.

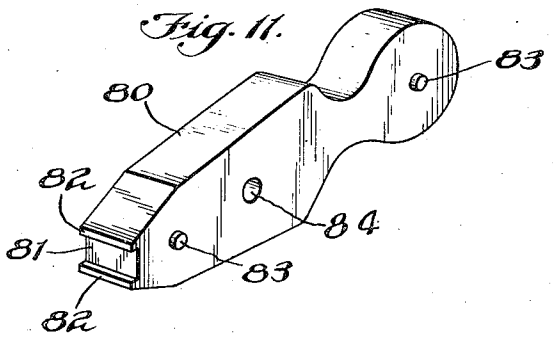
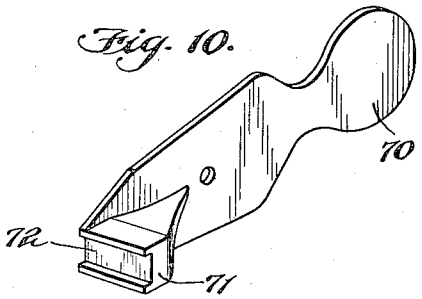


Fig. 10.



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Patented July 19, 1938 2,123,952

UNITED STATES PATENT OFFICE

2,123,952

STAMP

Henry J. Melind, Chicago, Ill.

Application January 27, 1937, Serial No. 122,546

13 Claims. (Cl. 101—111)

This invention relates to band type stamps, more particularly to changeable band type stamps such as band dating stamps, band numbering stamps and the like.

It is a main object of the invention to provide a new and improved band type stamp in which each band of type is encased and supported in a self-contained unit, which unit may be removed from the assembly without disassembling the same.

A further object of the invention is to provide a changeable band type stamp in which the bands of type are shielded so that the operator does not touch them as the stamp is being changed from one setting to another.

A further object of the invention resides in the provision of a stamp built up of a plurality of independent self-contained units which are aligned and held together in such a manner that they may be readily separated without the use of special tools.

Another object of the invention is to provide a so-called "bridgeless" band type stamp.

Still another object of the invention is to provide an improved die plate dater or numberer embodying the improved band type stamp.

Further objects of the invention, not specifically mentioned here, will be apparent from the detailed description and claims which follow, reference being had to the accompanying drawings in which a preferred embodiment of the invention is shown by way of example and in which:

Fig. 1 is a perspective view of a band type dating stamp embodying the teachings of the invention;

Fig. 2 is a cross-sectional view of the stamp taken along the line 2—2 of Fig. 1, looking in the direction of the arrows;

Fig. 3 is a cross-sectional view along the line 3—3 of Fig. 2 looking in the direction of the arrows;

Fig. 4 is a front side perspective view of one of the frame units;

Fig. 5 is a back side perspective view of one of the frame units;

Fig. 6 is a perspective view of the end or cover plate unit;

Fig. 7 is a perspective view of a die plate stamp embodying my improved changeable band type dater;

Fig. 8 is a fragmentary elevational view of Fig. 7 partly in cross-section;

Fig. 9 is a cross-sectional view, taken along the line 9—9 of Fig. 8, looking in the direction of the arrows;

Fig. 10 is a perspective view of an end plate provided with an extension adapted to hold type characters; and

Fig. 11 is a perspective view of a section adapted to hold type characters and to fit in the band type stamp assembly.

Band type dating stamps, band type numbering stamps, price markers, and the like are old in the art. Heretofore these stamp devices have usually consisted of a metallic frame of generally U shape, having a handle projecting from the closed end of the U and having a printing bridge, which has been a separate piece, extending between the open ends of the frame. A shaft extends from side to side of the frame near the closed end of the U and supports a plurality of traction wheels. Bands or ribbons of type encircle the traction wheels and printing bridge and are movable by rotation of serrated discs attached to the traction wheels and extending beyond the sides of the frame. It is to a stamp device of this general class that the present invention specifically refers.

A band type dater usually contains four bands upon one of which are the months of the year, upon two of which are numerals which may be set to indicate the days of the month, and upon the fourth band are the years and such other usual legends as "received", "paid", "entered", etc.

In the present invention, each of the foregoing bands of type is encased in a self-contained individual unit, which is assembled in aligned relation with respect to the other and similar units to form the complete stamp. There is no separate bridge and the assembly thus formed is closed by suitable cover plates and held together by a single pin extending through the units and cover plates. The elimination of the separate bridge from the stamp forms a device known to the trade as a "bridgeless stamp".

The present invention is also applicable to die plate stamps and to changeable band type stamps having one or more series of characters which are not changed. In stamps of the latter class the fixed characters may be inserted upon an individual unit of the assembly or upon an extension carried by the end plate, as will presently appear.

Referring now to Fig. 1, in which a dating stamp is shown by way of example, the four units are 1, 2, 3 and 4. Unit 1 may conveniently be the unit upon which are the months of the year, units 2 and 3, the units upon which are the numbers indicating the days of the month, and unit 4 the unit upon which are the years and

such other legends as are usually provided. The stamp is completed by cover plates or end sections **5** and the assembly held together by a pin **6**.

As will be seen in Figures 3, 4 and 5, each of the above units comprises a frame consisting of a generally U shaped section **10** having arms **11** and **12** which converge from the closed end of the U. A wall section **13** aligned with and extending from on edge of the arms **11** and **12** connects these arms together and extends beyond the ends thereof. A bridge member **15** is fixed upon the wall section **13** and extends into the open end or throat of the U so as to divide the space or cavity within the U into two portions, the first a generally cylindrical portion **16** which extends completely through the unit, and the second, channel portions **17** which open into but one face of the unit and converge from this cylindrical portion.

A handle portion of the frame structure projects from the closed end of the U section and may comprise a generally cylindrical portion **18** separated from the U member by a throat **19** as shown in the drawings. The particular shape of the handle may be changed within the teachings of the invention so as to permit making stamps of various designs.

The frame unit thus formed has opposed parallel faces **20**, Fig. 4 and **21**, Fig. 5. In the face **20** are tenons or pins **22** that are arranged to cooperate with mortises or sockets **23** in the face **21**, these tenons and mortises serving to align the frame units one to the other, as will be best seen in Fig. 2.

The thickness of the frame, that is the distance between parallel faces **20** and **21** will depend upon the width required of the band of type that the frame is to contain. As will be seen in Figures 1 and 2, the frames of sections **1** and **4** are approximately twice as thick as the frames of sections **2** and **3**. The frames thus described may be composed of a metal or plastic material, molded to the desired shape by any desired process such as die casting, or if desired, the frame sections may be formed from sheet metal parts drawn to the required shape and assembled together.

As will be seen in Fig. 5, the face **21** of the frame member contains a depressed portion or recess **26** which is circular in shape, has a diameter larger than the diameter of the cylindrical cavity **16** within the frame and is centered on the axis of that cavity. A traction wheel **30**, Figures 2 and 3 is disposed concentrically within the cylindrical cavity **16** in the frame and a disc **31** is disposed in the recess **26**, the disc being fastened to the traction wheel **30** so as to drive the same. The depth of recess **26** is preferably substantially equal to the thickness of disc **31**. The outer surface of the traction wheel is knurled to form a high friction driving surface and the periphery of the disc is serrated to facilitate turning the same.

The band of type **32** encircles the traction wheel and extends through the channel **17** and around the free end of the bridge **15**. As will be seen in Figures 3, 4 and 5, the corners of the free end of the bridge are rounded and the end **33** thereof is flat. The band of type is rotated by a rotation of the traction wheel and slides over the rounded corners of the bridge without unduly bending the type characters, the band being shown in Fig. 3 with characters bent over the rounded corners of the bridge. The bands of type per se are old, being of the same kind and of the same construction as have been used heretofore in stamps of this character.

The unit thus formed is self-contained and may be handled as much as is necessary in the assembly of the stamp without danger of the composite parts thereof falling apart.

As will be seen in Fig. 2, units **1** and **2** are positioned so that the tenons **22** project to the left and unit **4** so that the tenons project to the right. Unit **3** differs from the others in that it has no tenons but rather the mortises **23** extend completely through the unit, thus extending inwardly from each of the two parallel faces of the unit. The registration of the tenons of one unit with the mortise of the adjacent unit aligns the two units together.

The stamp is completed by the addition of cover plates **5** which are made in the same general shape as the frames of the intermediate units and are provided with tenons **35** which are registered with the mortises in the outer ones of the intermediate units to align the covers with respect to the assembly. The cover plates **5** are also provided with a circular opening **36** which is concentric with the axes of the cylindrical cavities **16** of the intermediate units. The cover plates **5** may be composed of a casting of metal or molded plastic, or may be a sheet metal stamping, if desired.

Each of the traction wheels **30** and discs **31** contains an axially located opening which is aligned with the openings **36** in the cover plates. The pin **6** extends through these openings and beyond the outer faces of the cover plates **5**. As will be seen in Fig. 2, this pin is collared to provide shoulders **37** which extend over the outer surfaces of the cover plates to lock the assembly together. The pin **6** serves the dual purpose of holding the assembly together and also as a shaft or axle upon which the traction wheels and discs may rotate.

Referring now to Figures 7, 8 and 9, the die plate stamp device shown, comprises changeable band type stamp indicated generally at **50** which stamp is in the main identical with that shown in Figures 1, 2, 3 inclusive. End plates **51** of the stamp **50** are each provided with guide bosses **52** which may be formed integral therewith or may be formed separately and attached thereto. Preferably, if the plates are die castings or formed of a molded plastic, the guide bosses will be formed integrally. As will be seen best in Figure 8, the bosses **52** extend from a point just below the pin **6** downwardly toward the bottom end of the end plate. The bosses contain threaded ferrules **53** adapted to receive mounting screws, as will presently appear.

A die plate, indicated generally at **56**, Figure 7, is provided with a central opening that is of such size and shape as to permit the dating device **50** to extend therethrough. The die plate is shaped to conform to the design characteristics of the stamp **50** so that its appearance will harmonize therewith. As shown, the die plate is shaped substantially as a frustrum of a pyramid, and is of such thickness adjacent to the opening in which stamp **50** is located as to extend above the bottoms of wall sections **11** and **12** of the individual units of the stamp. The particular shape shown may be varied within the teachings of the invention.

Die plate **56** itself may be a die casting or may be made of a molded plastic, or if desired may be formed from sheet metal. As will be seen in Fig. 8, the under-surface of the die plate

is flat and adapted to receive suitable type characters which are secured thereto. A flange 57 projects below this flat surface to guard the type characters in the manner usual in stamps of this kind.

Die plate 56 is provided with mounting ears or lugs 58 preferably formed integrally therewith and upstanding at the ends of the opening in which stamp 50 is nested. Ears 58 are shaped to conform to the general design of the die plate and stamp and are of generally U shaped section and are arranged to fit snugly over mounting bosses 52 on the end plates. The ears are slotted as shown in Figures 8 and 9, the slots opening into a depression or recess in the outer face of the ear. The bottom surfaces of these recesses are serrated. A square washer is fitted in the recess, this washer having serrations which cooperate with the serrations on the ear. Mounting screws 59 extend through the washers and slots in the ears 58 and are threaded into ferrules 53 to fix the die plate upon the stamp. The slots in the ears 58 permit limited movement of the stamp relative to the die plate so that the type faces upon these members can be readily brought in the same plane, and the engagement of the side portions of the ears 58 with the side walls of bosses 52 insure that the stamp will be perpendicular to this plane. When screws 59 are tightened the serrations on the washer and ears cooperate to lock the parts of the assembly against relative movement.

It will be noted that in the assembly thus formed, the wall sections 11 and 12 of the stamp 50 project below the upper surface of the die plate and that the bands of type in the stamp are completely covered. This insures that the fingers of an operator will not come into engagement with the type bands during the use of the device.

The precise size and particular shape of the die plate 56 may be altered within the teachings of the invention to meet the specific requirements of the stamp then being constructed. Die plate stamps of this type are frequently employed and equipped with type characters, indicating the name of the corporation or department therein, the date as formed by the band dater 50 and such other notations as "received", "paid", "entered", etc.; oftentimes shapes other than the rectangle shown will be required, and these are contemplated within the scope of the invention.

In Figures 10 and 11 I have shown die units adapted to receive 3 or 4 type characters. These units may be combined with band numbering stamps, band daters and price markers so as to include therein certain characters which are fixed. In the embodiment shown in Fig. 10, an end plate 70 which is similar to the end or cover plate 5 is equipped with an extension 71 shaped to conform to the general design of the stamp. Extension 71 is equipped with a groove 72 that is adapted to receive the type characters, and flanges upstanding from the sides of the groove serve to steady the type characters. This arrangement is the same as now commonly employed in the construction of rubber stamps. End plates 70 may be formed of a molded plastic or die cast metal in which case the extension will be cast integral therewith or the plate may be formed of a sheet metal stamping in which case the extension 71 will be formed separately and fixed thereto.

In Fig. 11, I have shown a frame similar to the unit frame shown in Figures 4 and 5, in which the cavities and channels for receiving the band of type have been omitted. In this unit 80, there is provided a type groove 81 on the opposite sides of which are flanges 82. Type characters positioned in this groove 81 are guided by these flanges. Unit 80 is provided with tenons 83 which correspond in construction and purpose to the tenons 22 of Fig. 4 and with mortises similar to 23, Fig. 5, which are located upon the back side of the unit in Fig. 11 and therefore not shown in this figure. Unit 80 is also provided with an opening 84 which will be aligned with the openings 36 in the cover plates 5 or 70, and through which the pin 6 extends.

The unit thus formed may be equipped with suitable type characters and inserted in the assembly either in lieu of one of the units 1–4, Fig. 1, or in addition thereto. When so assembled the type in groove 81 will be positioned with its printing face in the same plane as the printing faces of the bands of type of the other units.

The stamp units embodying the teachings of the present invention as hereinbefore described are possessed of many advantages. In the band dater, numbering stamp, or price marker, the bands of type which extend through the channels of the frame of the individual self-contained units are guided by the walls of the unit and the adjacent face of the adjacent unit. This permits the use of less tension on the band than has been possible in band type stamps constructed heretofore, since in these prior art stamps the tension of the band was the only means for maintaining alignment of the bands upon the printing bridge. Since less tension is employed, the bands are subjected to less wear and may be more easily changed from one setting to another.

The outer portions of the frame work of the unit in which the band is located, overlie the greater portion of the band and serve to protect the band from damage and also to permit the operator to change the band from one setting to another without touching the same.

The units of the stamp are individual and self-contained and any desired number of such units may be fitted together to form a stamp of the required character, it being only necessary to provide a pin of the proper length for holding the assembly together. The individual sections are interchangeable in the assembly itself and with other assemblies.

The stamp thus formed may be disassembled readily without the use of special tools should it be desirable to do so.

When incorporated in a die plate stamp, the improved changeable band type dater of the present invention forms a solid mounting for the die plate assembly, and the type characters of the band dater are all completely encased so that they do not come into contact with the fingers of the operator during the use of the device.

Type receiving sections may be employed interchangeably with the band carrying sections as desired.

While I have chosen to illustrate my invention by showing and describing a preferred embodiment of it, I have done so by way of example only and am not to be limited to the specific details described as I am aware that many modifications and adaptations can be made by one skilled in the art, within the teachings of the invention.

What I consider new and desire to have protected by Letters Patent is pointed out in the appended claims.

What is claimed is:

1. A self-contained band type stamp unit comprising a frame consisting of main and handle forming portions, a band of type, means in said main portion for turning said band of type, means for guiding and shielding said band of type and for holding the same during printing, means on said unit for aligning a similar unit therewith, and means for holding a plurality of said units together in alignment to form a changeable band type stamp.

2. A self-contained band type stamp unit comprising a frame consisting of main and handle forming portions, a band of type, means in said main portion for turning said band of type, means for guiding and shielding said band of type and means including cover plates for holding a plurality of said units together in alignment to form a changeable band type stamp.

3. A changeable band type stamp comprising a plurality of independent individual self contained sections each containing a band of type and a traction wheel and bridge therefor, pivot means for said traction wheels and means cooperating with said pivot means for holding said sections together.

4. A self contained band type stamp unit comprising a frame containing a traction wheel, a bridge, and a band of type encircling the wheel and bridge, pivot means for said traction wheels, and means including said pivot means for holding a plurality of said units together in fixed alignment to form a changeable band type stamp.

5. In a stamp of the class described a plurality of independent frame sections, printing means contained in each section, a bridge in each section having a flat surface supporting said printing means in printing position, means for aligning said sections one with the other, and means extending through said independent frame sections for holding the assembly together.

6. In a stamp of the class described, a plurality of independent frame sections, a bridge in each section having a flat surface, type means in each section extending across said flat surface, means in each bridge cooperating with bridge of the adjacent section to align said bridges, and means extending through said independent frame sections for holding the assembly together.

7. A bridgeless changeable band type stamp comprising a plurality of self contained units each containing a band of type, means for moving said band, means for supporting said band, means for aligning the supporting means with the supporting means of the adjacent unit, and means comprising a pivot for said band moving means for holding the assembly together.

8. A changeable band type stamp comprising a plurality of sections disposed side by side and aligned with each other, each section containing a cavity closed by the adjacent section, and opening into the operating end of the stamp, a band of type, traction wheel and printing bridge in each cavity, said band being moved by said wheel and guided by the walls of the cavity and bridge, and means for holding said units together.

9. In a device of the class described, a plurality of section members each containing a generally U shaped cavity, a bridge member projecting into said cavity and dividing the same into a generally cylindrical portion with channels converging therefrom, a traction wheel in said cavity, a band of type encircling said wheel and extending through said channels around said bridge member, a shaft extending through said cavities upon which said traction wheels are journalled, and means cooperating with said shaft for holding the assembly together.

10. In a changeable band type stamp, a plurality of formed sections each containing channels and a cavity, a traction wheel in said cavity, a band of type in said channels and encircling said traction wheel, means on each of said sections adapted to be registered with cooperating means on the adjacent sections to locate the sections with respect to each other, cover plates, means on said cover plates adapted to register with said section means to locate said plates with respect to said sections, and a pin engaging said cover plates and extending through said sections for holding the assembly together.

11. In a changeable band type stamp, a plurality of formed section members each having opposed parallel faces and each containing a generally U shaped cavity opening into one of said faces, a bridge member projecting into said cavity and dividing the same into a generally cylindrical portion with channels converging therefrom, said cylindrical portion of said cavity opening also into the other one of said faces, a circular depression in said other face centered on the axis of said cylindrical portion and having a greater diameter than said portion, means for aligning said sections with respect to each other, a traction wheel in each cylindrical cavity, an operating disc in each circular depression and fixed to the associated wheel, said discs extending beyond the edges of the section to permit turning the wheel, a band of type disposed in said converging channels and encircling said wheel and said bridge member, and means for holding said section members together.

12. In a changeable band type stamp, a plurality of formed section members each having opposed parallel faces and each containing a generally U shaped cavity opening into one of said faces, a bridge member projecting into said cavity and dividing the same into a generally cylindrical portion with channels converging therefrom, tenon and mortise means in said faces cooperating to position the sections with respect to each other, a traction wheel in each cavity, a band of type encircling each wheel and the associated bridge member, cover plates having perforations, tenon means on said plates adapted to register with the mortise means on the end ones of said sections to align said perforations with the axis of said cylindrical cavities and a pin extending through the assembly and engaging said plates to hold the assembly together.

13. A self contained band type stamp unit comprising a generally U shaped frame, a wall section joined to one side of the side legs of said frame and extending therebeyond, a bridge fixed on said wall section and disposed in the open end of said frame to shape the cavity formed thereby into a cylindrical portion extending through the unit and converging channels open on one side thereof, a traction wheel in said cylindrical portion, a band of type in said channels and encircling said bridge and traction wheel, said band being guided by said bridge, wall, and the legs of said frame and being shielded by the legs of said frame, a handle forming projection extending from the closed end of said frame, means on the frame and handle projection for aligning other and similar units with said unit, and means for holding said units together to form a changeable band type stamp.

HENRY J. MELIND.