Dec. 1, 1964 T. S. DZIEKAN 3,159,101

HAND STAMPER WITH REMOVABLE BELT STAMP UNITS

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Fig 1.

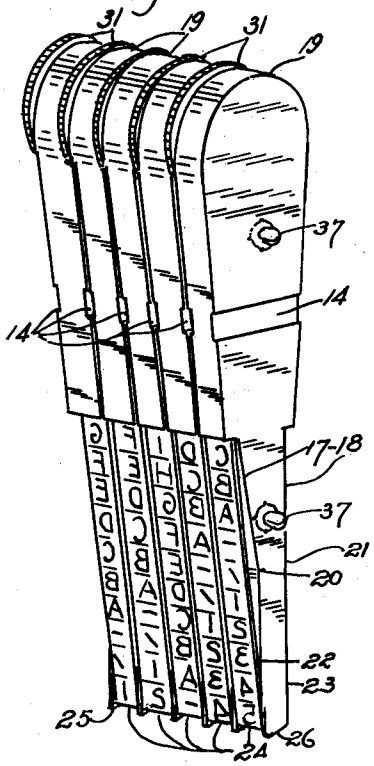


Fig 2.

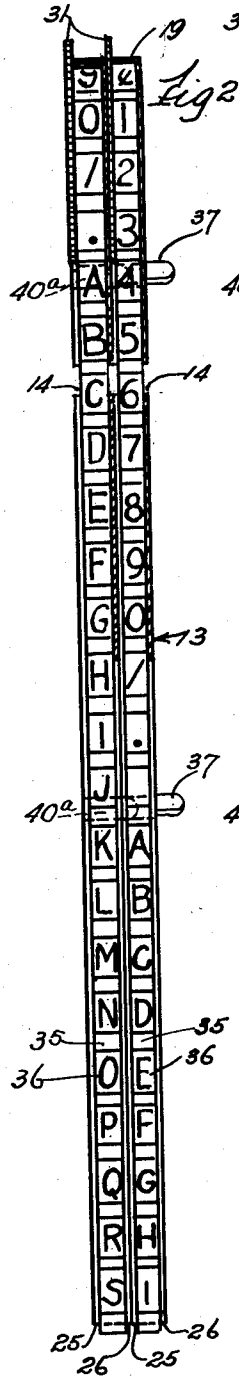


Fig 3.

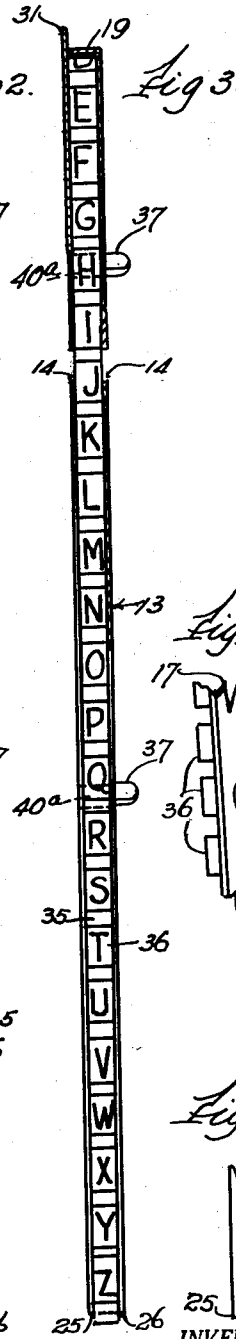


Fig 4.

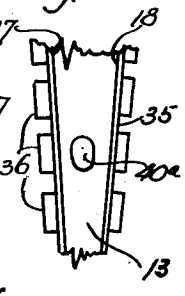


Fig 5.

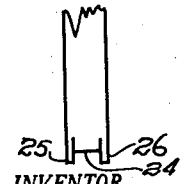
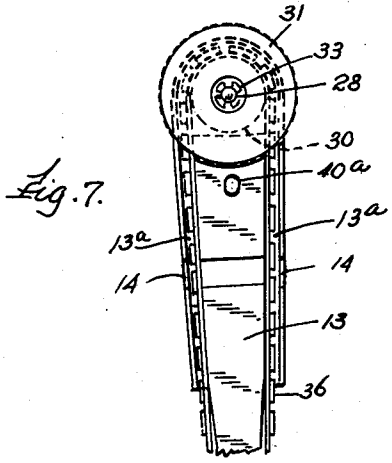


Fig 7.



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Fig. 6.

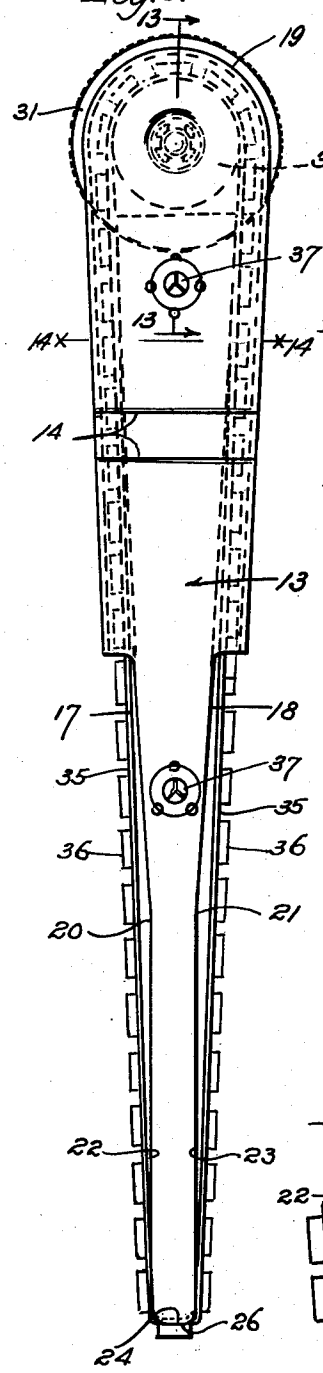


Fig. 9.



Fig. 10.

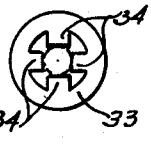


Fig. 11.

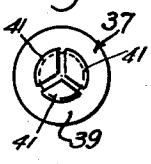
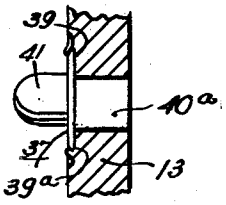


Fig. 12.



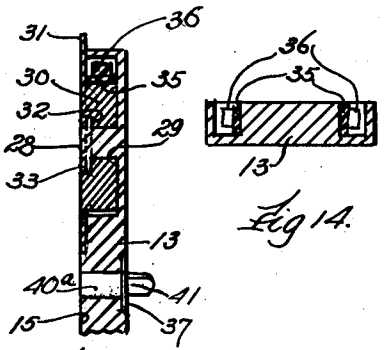
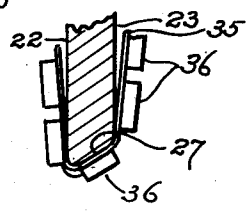


Fig. 13.

Fig. 14.

Fig. 8.



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HAND STAMPER WITH REMOVABLE BELT STAMP UNITS

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1 Claim. (Cl. 101—111)

The present invention relates to hand stamper units for stamping indicia on chassis beside electronic components, and is particularly concerned with stamping devices which are long and thin and adapted to be inserted between electronic components mounted on a chassis for identifying the components with letters, numbers, or symbols by means of which the components may be replaced or identified as required by the electronic industry.

Since the electronic industry has been miniaturizing its assemblies, it has become increasingly difficult to mark the chassis, the sub-assemblies, the separate components, etc.

This marking has been accomplished by utilizing relatively long peg stamps comprising a rectangular peg as long as a pencil and bearing a rubber word, symbol or letter at its lower end for stamping the symbol on the chassis by reaching down with the peg between the components.

Where a component is identified by a succession of letters or numbers or symbols, a plurality of peg stamps are assembled side by side and the chassis has been stamped while the user endeavors to hold the peg stamps in alignment.

For this purpose it has been necessary to provide a multiplicity of different pegs and to provide a filing cabinet for holding the pegs classified so that the user may find the one he wishes to use.

One of the objects of the invention is the provision of an improved hand stamping unit which is compact, slim, elongated, and which is adapted to stamp any one or more of a plurality of numbers, symbols, letters, or any succession of characters on the chassis in very close areas where there is no excess space allowed other than the space required for the characters to be applied.

Another object of the invention is the provision of an improved hand stamping unit which is provided with an endless band or web which supports all of the alphabet, the numerals, and the other symbols or characters which may be required, and in which the stamping unit is narrow, thin, and elongated.

Another object of the invention is the provision of improved stamper units which are adapted to be secured removably to each other and in alignment with each other in such manner that all the numbers, letters, or symbols may be simultaneously stamped on the chassis in alignment with each other.

Another object is the provision of improved stamp units having a multiplicity of characters on a rubber band which are covered by a shield to protect the hand of the user from the ink on the characters.

Another object of the invention is the provision of an improved stamper unit which is provided with spring devices for assuring the aligment of a plurality of stamper units and permitting the simultaneous application of letters, numbers, or symbols in a minimum amount of time.

Another object of the invention is the provision of improved stamper units provided with a simple means for securing a plurality or a multiplicity of these units

in alignment with each other, which also permits them to be easily separated by applying a knife or a screwdriver between the units.

Another object of the invention is the provision of an improved stamping unit which is simple in construction, which has a minimum number of parts, which provides a plurality of different letters, numbers, or symbols on the same unit, and which is adapted to be manufactured at a minimum cost and used over and over again.

Another object of the invention is the provision of an improved stamper unit which may be applied at an angle other than the usual right angle.

Other objects and advantages of the invention will be apparent from the following description and the accompanying drawings, in which similar characters of reference indicate similar parts throughout the several views.

Referring to the drawings, of which there are two sheets,

FIG. 1 is a view in perspective of a stamping unit assembly in which five stamp units have been secured to each other side by side for simultaneously stamping five characters on a chassis between the electrical components;

FIG. 2 is a front elevational view of an assembly of stamping units including the two stamping units side by side;

FIG. 3 is a view similar to FIG. 2, showing a front elevation of one of the stamping units of FIG. 2;

FIG. 4 is a fragmentary side elevational view showing the shape of one of the sockets for receiving the spring fasteners that secure the different stamping units together;

FIG. 5 is a fragmentary front elevational view showing the structure of the end of the stem or body which has a shallow groove bordered by two narrow flanges;

FIG. 6 is a side elevational view of the stamping unit of FIG. 3, taken from the right side;

FIG. 7 is a fragmentary side elevational view of one of the units of FIG. 1 taken from the left side of FIG. 1;

FIG. 8 is a fragmentary side elevational view of a modification adapted to apply indicia at an angle;

FIG. 9 is an edge view of a spring fastener washer adapted to hold the roller on its shaft;

FIG. 10 is a plan view of the washer of FIG. 9;

FIG. 11 is an enlarged plan view of one of the spring fasteners used for securing the separate stamp units together;

FIG. 12 is a fragmentary sectional view showing a side elevation of one of the spring fasteners of FIG. 11;

FIG. 13 is a fragmentary sectional view taken on the plane of the line **13—13** of FIG. 6, looking in the direction of the arrows;

FIG. 14 is a fragmentary sectional view taken on the plane of the line **14—14** of FIG. 6.

Referring to FIG. 3, this is a front elevational view of a stamper unit embodying the invention; and FIG. 6 is a side elevational view taken from the right side of FIG. 3.

The stamper unit is provided with a body comprising a relatively thin piece of cast metal, such as steel, stainless steel, sheet aluminum, or plastic, which is provided with a partially circular curved end **19** having a cylindrical recess and a pair of tapering side edges **17** and **18** which approach each other to the points **20** and **21**, from which the side edges **22** and **23** may be parallel.

At its lower end **24** the end edge is straight and pro-

vides a backing surface for a rubber band 35 and provided with a pair of side flanges 25 and 26 which project from the end 24 at each of its borders for guiding the rubber band which carries the characters.

At its upper end the round edge 19 projects upwardly beyond the drive roller 30, which has a cylindrical body 30 and a radially projecting driving flange 31. The edge of the flange 31 is knurled for engagement with the finger or thumb in rotating the roller.

The roller 30 has a cylindrical bore 29 by means of which it is rotatably mounted on the stub shaft 28, which is integrally attached to the body 13; and the roller 30 is provided with an annular recess 32 about the bore 29 and adapted to receive the spring washer 33, which is pressed into the recess 32 to hold the roller 30 on the stub shaft.

The body 13 is formed with a cylindrical recess on one face at the top to receive the roller 30 and rubber band. A groove 13*a* extends down each edge on the same face to house the rubber band.

Referring to FIGS. 9 and 10, these are enlargements of a spring washer or thrust member 33, which is circular in shape, and which has an enlarged aperture provided with resilient tongues 34, the ends of which engage the stub shaft 28 to hold the roller on the stub shaft.

The parts are assembled by merely pressing the sprring washer 33 on the shaft 28.

The roller supports the endless rubber band 35 which carries a multiplicity of spaced blocks 36 of the same material carrying letters, symbols, numbers, or any other characters which are to be stamped on a chassis. The width of the blocks 36 is such that each block 36 substantially covers the end 24 of the stamp body, while the rubber band 35 between the blocks is adapted to bend about the corners of the end 24. The roller 30 has its radial flange 31 provided with a face that is substantially flush with the face 15 of the body 13.

The rubber band 35 is tensioned about the roller 30, and the end 24 so that the roller 30 drives the rubber band.

Thus the stamp construction is reduced to a minimum in thickness, width, and size; and it is elongated so that it can be inserted between the closely spaced electronic components to stamp the chassis with numbers, letters, or other symbols identifying the parts.

The modification shown in FIG. 8 shows the end 27 beveled at an angle of approximately 30 degrees in order to permit the stamping of the chassis with the axis of the body at an angle.

The angularirty of the end surface 27 may vary from 90 degrees to 45 degrees.

In order to secure a plurality of the marking units together the body 13 is provided with a pair of apertures 40*a* large enough to receive the spring fasteners of the type indicated at 37 in FIG. 11. Each spring fastener 37 has a radial border flange 39 and a plurality of tongues 41 pressed out of its body and shaped to provide three tongues 41, each of which is curved at its outer side and end; and the tongues are spaced from each other so that they may be forced into an aperture, such as the aperture 40*a* in the body 13.

Each body is provided with a pair of such fasteners 37 and each body is provided with a countersunk recess for the flange 39; and when the fastener is forced into the aperture 40*a* in each case, it expands again to the position of FIG. 12 and presents an appearance as shown in FIGS. 2 and 3.

Each spring fastener unit 37 has its border flange mounted in an enlarged bore 39*a* against an annular shoulder so that its spring head protrudes from the face of the body. The border flange is secured by deforming the metal above the border flange to hold the spring fastener in the enlarged bore.

Behind the spring fastener there is a small bore 40*a* in each case into which the spring fastener may be pressed

to secure two units together. Two such spring fasteners are preferably provided on each unit located to register with the sockets on all other units.

Thus the tongues which protrude from the right of one stamp unit may be pressed into the apertures of the next stamp unit, the tongues expanding and holding the two stamp units together. In order to separate the stamp units, each of the bodies 13 is provided with a shallow groove 14 in each face so that a knife or a screwdriver may be inserted between two stamp units and with a slight twist they may be spread apart to separate them.

The present stamping unit may have its endless rubber band provided with letters, symbols, numbers, or any indicia which it is desired to apply to a chassis. The stamps may be used for identification of components, components on chassis, for chassis, panels, brackets, or sub-assemblies, for drafting and layout.

The stamp units may be used for experimental laboratories for prototype marking, for repair departments, and for marking any production in manufacture or for small runs.

The stamps are quickly adjusted to utilize any symbol, letter, or figure which appears on the rubber band; and thus the separate wooden peg stamps may be replaced by the present universal marking stamp.

While I have illustrated a preferred embodiment of my invention, many modifications may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of construction set forth, but desire to avail myself of all changes within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

A hand stamper unit, comprising a thin, elongated, supporting body, having a round, partially cylindrical upper end having the axis of said cylindrical end, transverse to the length of said body, and said body having opposite tapered edges, extending from said round end to a lower rectangular end surface forming a backing surface and being of minimum width and breadth to provide a backing for a single printed character, said round upper end serving as a handle and having one side closed and the opposite side provided with a partially cylindrical recess, said cylindrical recess supporting a centrally located stub shaft and said stub shaft rotatably supporting a narrow cylindrical drive roller in said recess, said drive roller supporting an integral radially extending drive flange, having a knurled outer edge, said flange being located on said drive roller at the outer end of said drive roller and overlapping and projecting beyond said cylindrical wall and closing said cylindrical recess, and a spring washer frictionally mounted on said shaft to retain said drive roller on said shaft, an endless resilient rubber band of substantially uniform cross section and of sufficiently large width to cover said drive roller and said rectangular backing surface on said body, said rubber band being tensioned about said backing surface and said drive roller sufficiently to be driven by said drive roller, and said band supporting a plurality of longitudinally spaced, integral rubber blocks on its outer side and formed with characters on the outer surface of said blocks, the spacing of said blocks facilitating the bending of said rubber band tightly about said backing surface, said supporting body carrying a pair of thin, downwardly projecting guide flanges, beside the rubber band on the backing surface, said supporting body having a pair of longitudinally spaced, through bores, and said body having in each of its plane wall portions, a screw driver slot extending inward from the tapered edge of said body, between said bores for insertion of a screw driver to pry units apart, and a pair of resilient studs, each having a cylindrical body mounted in an enlarged bore over one of said through bores, and each resilient stud having a spring head, pressed into the back of one of said through bores in the

opposite side of another unit, said spring head in each case being split to be received in said through bores, to secure one unit to another, side by side, to apply a plurality of characters simultaneously to a chassis.

References Cited in the file of this patent

UNITED STATES PATENTS

487,822	Booth et al.	Dec. 13, 1892
762,419	Lawson	June 14, 1904
785,360	Hill	Mar. 21, 1905
1,117,007	Dowling	Nov. 10, 1914
1,237,201	Green	Aug. 14, 1917
1,540,508	White	June 2, 1925
1,724,064	Auston	Aug. 13, 1929
2,086,220	Grant	July 6, 1937
2,123,952	Melind	July 19, 1938
2,500,377	Poupitch	Mar. 14, 1950
2,647,461	Robinson	Aug. 4, 1953