

March 10, 1942.

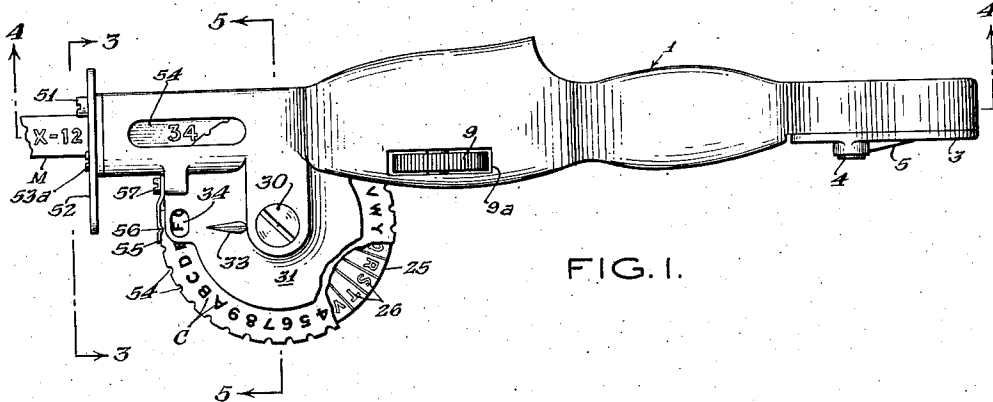
F. W. ZIFF

2,275,670

MARKING TOOL

Filed Nov. 1, 1940

2 Sheets-Sheet 1



March 10, 1942.

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MARKING TOOL

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2 Sheets-Sheet 2

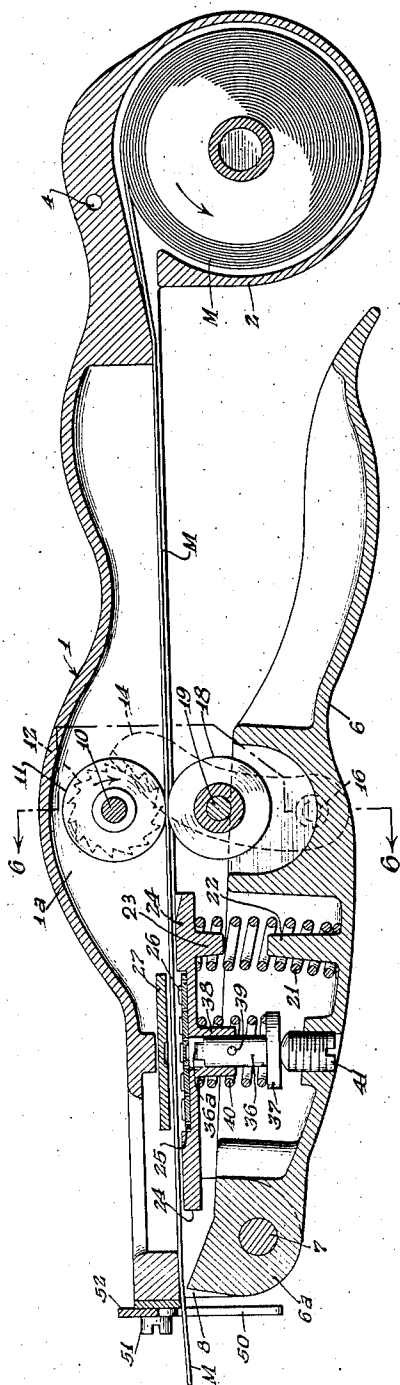


FIG. 4.

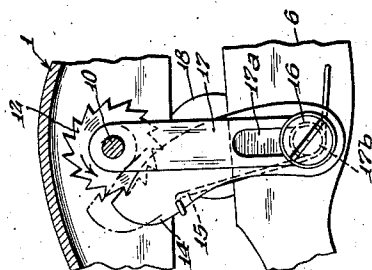


FIG. 7.

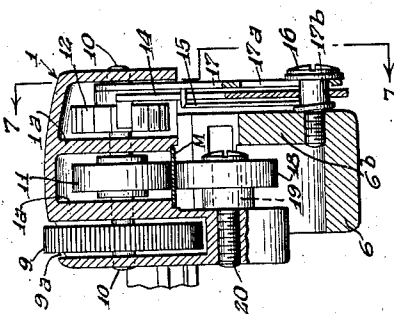


FIG. 6.

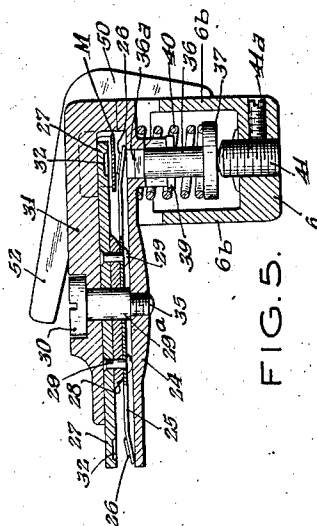


FIG. 5.

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2,275,670

MARKING TOOL

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ration of New York

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6 Claims. (Cl. 197-6.7)

My invention relates to a new and improved marking tool.

One of the objects of the invention is to improve the type of marking tool which is described in U. S. Patent 2,079,236 issued on May 4, 1937.

The general objects of the invention are to produce a tool of simpler, more rugged and efficient type, and which can be more easily handled and manipulated.

Another object of the invention is to provide a tool which has a magazine in which the strip material is located and from which the strip material is fed longitudinally and intermittently to the embossing means.

Other objects of the invention will be stated in the annexed description and drawings, which illustrate a preferred embodiment thereof.

Fig. 1 is a side elevation of the improved tool, part of the representation of the plate 27 having been omitted.

Fig. 2 is a bottom plan elevation of Fig. 1.

Fig. 3 is an end view on the line 3-3 of Fig. 1.

Figs. 4 and 5 are respectively sectional views on the lines 4-4 and 5-5 of Fig. 1.

Fig. 6 is a sectional view on the line 6-6 of Fig. 1.

Fig. 7 is an elevation, partially in section, on line 7-7 of Fig. 6.

The tool comprises a body member 1, which is integral with a magazine 2, which is provided with a cover 3. The cover 3 is pivotally connected to the magazine 2, by means of a pivot screw 4. The cover 3 is provided with a rib 5 by means of which the cover 3 can be readily turned.

The operating handle 6 is provided with a reduced outer end-portion 6a, which is located between the lugs 8, which are integral with the body member 1. Said operating handle 6 has lateral walls 6b, which define a longitudinal channel. The pivot pin 7 pivotally connects the end-portion 6a to the lugs 8. The wall of the body member 1 which faces the handle 6 is channeled, so as to provide a guide for the movement of the metal or other strip M which is to be embossed. This is clearly shown in Fig. 6, which shows the lateral walls 1a of the body member 1. Said walls 1a are integral with the body member 1, and the ends of said lateral walls 1a are shaped to provide a longitudinal guide groove for guiding the longitudinal movement of the strip M.

As shown in Fig. 4, the strip M, which is made of metal or other material, is coiled in the magazine 2. If desired, the strip M can be fed forwardly, and therefore away from the magazine 2, by manually turning the knurled wheel 9. This wheel 9 projects partially through an opening 9a of body member 1.

The wheel 9 is keyed to a shaft 10. For convenience, the device may be described with re-

spect to its position shown in Fig. 1, in which the shaft 10 is vertical, although in actual use the shaft 10 will be normally held horizontally.

The friction wheel 11, which is made of vulcanized resilient rubber or other suitable resilient material, is also keyed to the shaft 10. The ratchet wheel 12 is also keyed to the shaft 10. Elements 9, 11 and 12 can be connected to the shaft 10 so that said elements 9, 11 and 12 turn in unison, in any suitable manner. For example, there may be a drive fit between the shaft 10 and the bores of the elements 9, 11 and 12.

When the member 6 is turned so as to bring it closer to the member 1, the pawl 14 is operated so as to slip over the teeth of the ratchet 12, but without turning said ratchet. The usual wire torsion spring 15 keeps the tooth of the pawl 14 in contact with the teeth of the ratchet 12. The torsion spring 15 is wound around the shank of the screw 16, which is fixed to the member 6. The shank of the screw 16 passes through the slot 17a of a guide 17, which is suitably connected to the element 1. The shaft 10 fits in a bore of said guide 17. The slot 17a has an end-wall 17b. The friction roll 11 is located in a longitudinal channel of the member 1, and the ratchet 12 is located in a supplemental longitudinal channel of said body member 1. One end of the guide member 17 is rigidly fastened to a lateral wall of said supplemental longitudinal channel. The shank of screw 16 is slidable relative to said slot 17a, and pawl 14 is mounted turnably on the unthreaded part of the shank of screw 16. One or more turns of spring 15 are wound on the unthreaded part of the shank of screw 16, between the pawl 14 and the adjacent lateral wall 6b of the member 6. Element 1 may be an integral casting, so as to provide a simple and sturdy construction. The supplemental feed roll 18 is mounted turnably upon the smooth shank 19 of a screw 20, whose threaded end is screwed into the adjacent integral lateral lug of the member 1.

An opening spring 21 partially encircles an integral stud 22 of the element 6 and an integral stud 23 of a plate 24. This plate 24 is connected at the edge thereof which is adjacent guide 17, to the member 1, by suitable screws or the like. The plate 24 serves as a rigid support for the turnable embossing plate 25. The embossing plate 25 has radial slots, so as to provide flexible teeth which can be bent independently of each other. These teeth have the raised die portions 26 at their free tips. The plate 25 turns in unison with the hand-operated plate 27. As shown in Fig. 5, the plate 27 has a raised portion 28 which is connected by means of rivets 29 to the central unslotted portion of the element 25. Said plate 27 has peripheral radial recesses or notches 54. A pivot pin 29a has a head 30 which is countersunk in the recess of a plate 31, which is

an integral lateral extension of the member 1. The member 27 has a series of depressions 32 which correspond to the raised elements 26, so that each pair of elements 26 and 32 operate as a stamping die. The outer surface of the plate 27 has a series of characters C, as shown in Fig. 1, which correspond to various numbers, letters and the like. The plate 31 is provided with an index 33 which points to a cutout 34 of said plate 31. The pin 29a has a threaded portion 35 which is screwed into the rigid plate 24.

Pressure is exerted upon a selected opposed pair of elements 26 and 32, in order to emboss a character in the metal strip M. For this purpose, and as shown in Figs. 4 and 5, a plunger 36, which has a head 37, is slidably located in a sleeve 38, which is integral with the plate 24. The sleeve 38 has a longitudinal slot, and the plunger 36 has a lateral pin 39 which moves in said slot, so as to prevent the plunger 36 from turning relative to the sleeve 38. A compression spring 40 normally holds the head 37 of the plunger 36 against the adjustable threaded member 41, which is adjustably secured in a tapped socket of the member 6. The threaded member 41 is fixed in its adjusted position by set screw 41a. The inner end of the plunger 36 is reduced at 36a, so that said reduced inner end 36a can inwardly bend one of the radial flexible segments of the radially slotted plate 25.

The operation of the device is as follows:

The end of a metal strip M is inserted between the resilient rolls 11 and 18, as shown in Fig. 6. In order to do this, the knurled wheel 9 can be turned manually. The operator then holds the instrument in one hand, like a pair of scissors, and moves the handle 6 towards the body-member 1. The pawl 14 will turn the ratchet 12, through a distance corresponding to one tooth of the ratchet 12, for each complete rocking movement of the element 6 towards and away from the element 1. The ratchet 12 will be turned through the distance of one tooth, only during the turning movement of handle 6 away from the body-member 1. The plate 27 is turned in unison with the plate 25, until one of the characters C is located in the cutout 34. In such position, the die elements 26 and 32, which correspond to the character C which is located in the slot 34, are aligned with the plunger 36. Upon the next movement of the element 6 towards the element 1, and while the strip M remains stationary, the plunger 36 is operated so as to bend the respective flexible segment of the plate 25 towards the plate 27, so that the respective part of the strip M is embossed by the selected die-members 26 and 32, with the character which corresponds to the character C which is visible in the slot 34.

Therefore, by moving the element 6 intermittently towards and away from the element 1, the strip M is fed intermittently and it is embossed with the desired character while the strip is stationary. After a required length of the strip has been embossed with the successive markings and fed forwardly out of the device, the projecting length of the strip is cut off the remainder of the strip, by means of the knife 50, which is connected by the pivot pin 51 to the end of the body-member 1. This knife 50 is provided with a handle 52. The front end of the body-member 1 is provided with a supplemental knife 53 which is fixed by screw 53a to the end of the element 1. Body-member 1 is provided with a cutout 54 through which the respective part

of the strip M is visible. After a length of the strip has been embossed with the required number of characters, the wheel 9 can be turned so as to additionally feed the strip out of the device but without embossing the same, so as to secure the proper margin between the last-embossed character and the rear end of the part of the strip which is to be cut off. The cutting device is then operated so as to cut off the required length of the strip.

The movement of the metal strip is thus longitudinal instead of being transverse as in U. S. Patent No. 2,079,236. This makes it possible to provide a magazine for the strip which is located very conveniently and which can be utilized conveniently. Likewise, the springs 22 and 40 are substantially concealed and they are located between the forward end of the device and the feed wheels 11 and 18, thus providing greater leverage for the hand of the operator.

As shown in Fig. 1, a detent spring 55 is connected by screw 57 to body-member 1. This spring 55 has a tooth 56 which releasably engages one of the notches 54, in order to hold plate 27 releasably in its adjusted position. Body-member 1 has a stop-screw 53a at its front end, for limiting the turning movement of knife 50. The shanks of screws 51 and 53a pass through the fixed knife 53, and the ends of said shanks are screwed into the respective front end-wall of body-member 1.

I have described a preferred embodiment of my invention, but it is clear that numerous changes and omissions can be made without departing from its spirit.

I claim:

1. A marking tool having a longitudinal axis and comprising a body-member having a magazine which is adapted to hold a strip of material to be marked, a handle-member pivotally connected to said body-member, feed-means adapted to be operated intermittently by said handle-member and only when the handle-member is turned away from the body-member, said body-member and said handle-member having cooperating marking means adapted to mark said strip when said handle-member is turned towards said body-member, said feed-means being arranged to feed the strip directly from said magazine towards said marking means in a single run which is parallel to said longitudinal axis, said body-member and said handle-member being shaped so that they can be held in a single hand of the operator.

2. A marking tool which has a longitudinal axis and comprising a body-member, said body-member having lateral walls which define a longitudinal channel, said lateral walls having a longitudinal guide groove at their free ends for guiding the longitudinal movement of a strip, said body-member having a longitudinal pocket which is offset laterally relative to said longitudinal channel, a channel-shaped handle which is pivotally connected at its front end to said body-member, a magazine connected to said body-member at the rear end of said body-member and having an outlet which communicates with the rear end of said guide groove, a ratchet-wheel located in said pocket, a first feed wheel located in said longitudinal channel, a second wheel located laterally of said longitudinal channel, said ratchet-wheel and said first feed wheel and said second wheel being mounted on a common lateral shaft which is connected to said body-member, said second wheel projecting par-

tially out of an opening in the wall of the body-member, an auxiliary feed wheel turnably connected to said body-member and associated with said first feed wheel so that said feed wheels are adapted to feed a strip longitudinally from said magazine forwardly through said groove, a lateral guide member rigidly connected to said body-member and having a slot, a pin-member connected to said handle and located slidably in said slot, a pawl turnably mounted on said pin-member, a spring connected to said pin-member and adapted to urge the pawl into contact with the teeth of said ratchet wheel so that the ratchet wheel is turned intermittently by said pawl only during the turning movement of said handle away from said body-member, said body-member having complementary marking members which are normally separated and between which the strip is fed, a plunger operated by said handle when said handle is moved towards said body-member, said plunger being adapted to move one of said marking members towards the other marking member to form a marking on the strip, and spring means located between said lateral guide member and said marking members and adapted to hold the handle spaced from said body-member and in a position in which said marking members are in non-marking relative position.

3. A marking tool comprising a body-member, a handle pivotally connected at its front end to said body-member by a pivot member, said body-member and said handle having respective longitudinal axes which are parallel to each other, said body-member having a first marking disk and a second marking disk pivotally connected thereto and turnable in unison around a predetermined axis of revolution, the edge portions of the adjacent faces of said disks having pairs of complementary marking members which are radially equidistant from said axis of revolution, said disks being normally spaced from each other, the second disk being bendable from a predetermined normal shape so that its marking members can be moved towards and away from the marking members of the first disk, the body-member having longitudinal guide means parallel to its longitudinal axis and adapted to guide a strip of material longitudinally in a direction parallel to said longitudinal axis between said marking disks, a plunger mounted to move back and forth in a direction parallel to said axis of revolution and aligned with the portion of the second disk in which the marking members of the second disk are located, said plunger being spring-biased to an inoperative position in which the second disk has its predetermined normal shape, one end of said plunger abutting a portion of the handle, said handle actuating said plunger towards the second marking disk to bend the second marking disk and to move a selected marking member thereof towards the respective marking member of the first disk when the handle is turned towards the body-member.

4. A marking tool comprising a body-member, a handle pivotally connected at its front end to said body-member by a pivot member, said body-member having a first marking disk and a second marking disk pivotally connected thereto and turnable in unison, the edge portions of the adjacent faces of said disks having pairs of complementary marking members, said disks being normally spaced from each other, the second disk being bendable so that its marking members

can be moved towards and away from the marking members of the first disk, the body-member having longitudinal guide means adapted to guide a strip of material longitudinally between said marking disks, the body-member having a lateral guide sleeve connected thereto, said guide sleeve being located adjacent the second marking disk and being radially aligned with the marking members of the second marking disk, and a plunger slidably located in said guide sleeve and adapted to be actuated by said handle when said handle is moved towards said body-member, to move the respective aligned marking member of the second disk towards the corresponding marking member of the first disk.

5. A marking tool comprising a body-member, a handle member pivotally connected to said body-member, a rigid plate fixed to said body-member, a first marking disk adjacent said rigid plate, a second marking disk, means holding said marking disks normally spaced from each other and turnably connecting said marking disks to said body-member so that said marking disks are turned in unison, the edge portions of said marking disks having pairs of complementary marking members which are equidistant from the common axis of rotation of said marking discs, the first marking disk being flexible so that its marking members can be moved towards the marking members of the second marking disk, said rigid plate having a lateral sleeve, a plunger located in said lateral sleeve, the radial distance of said sleeve from said common axis of rotation being substantially equal to the radial distance of each marking member from said common axis of rotation, said plunger being adapted to be actuated by said handle member when said handle member is moved towards said body-member so that said plunger then moves the respective aligned marking members of the first disk towards the complementary marking member of the second disk.

6. A marking tool comprising a body-member, a handle member pivotally connected to said body-member, a rigid plate fixed to said body-member, a first marking disk adjacent said rigid plate, a second marking disk, means holding said marking disks normally spaced from each other and turnably connecting said marking disks to said body-member so that said marking disks are turned in unison, the edge portions of said marking disks having pairs of complementary marking members which are equidistant from the common axis of rotation of said marking disks, the first marking disk being flexible so that its marking members can be moved towards the marking members of the second marking disk, said rigid plate having a lateral sleeve, a plunger located in said lateral sleeve, the radial distance of said sleeve from said common axis of rotation being substantially equal to the radial distance of each marking member from said common axis of rotation, said plunger being adapted to be actuated by said handle member when said handle member is moved towards said body-member so that said plunger then moves the respective aligned marking members of the first disk towards the complementary marking member of the second disk, said handle member having an insert which abuts the adjacent face of said plunger, spring means being provided to hold the plunger in contact with said insert.

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