

2,284,076

Filed May 13, 1941

2 Sheets-Sheet 1

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May 26, 1942.

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METAL SIGN PRESS

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Fig. 3.

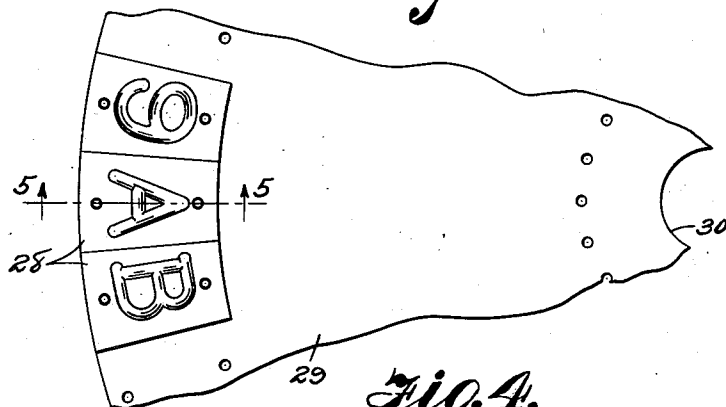


Fig. 4.

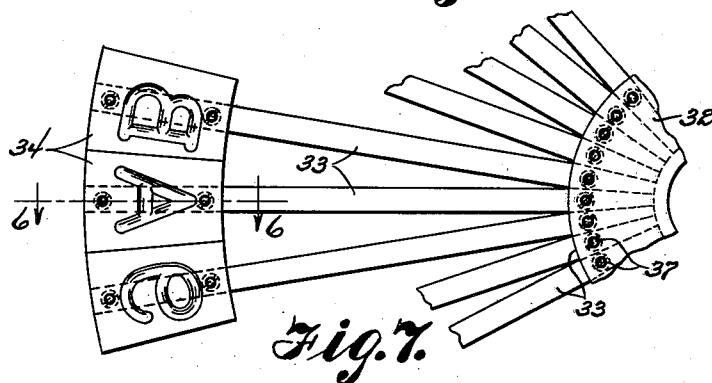


Fig. 7.

Fig. 5.

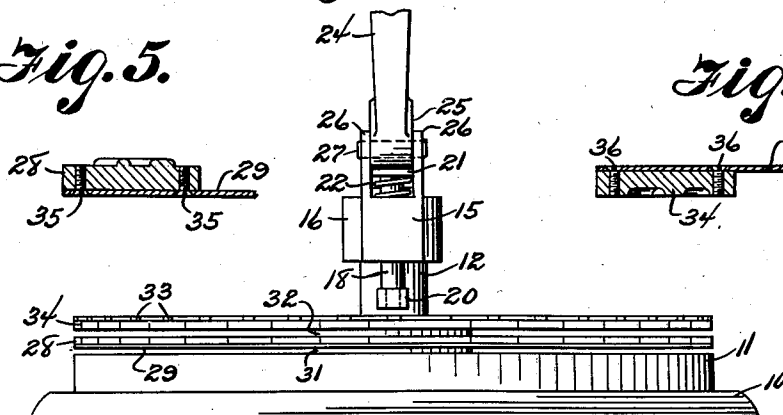
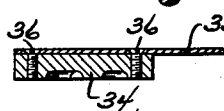


Fig. 6.



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UNITED STATES PATENT OFFICE

2,284,076

METAL SIGN PRESS

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Application May 13, 1941, Serial No. 393,270

1 Claim. (Cl. 101—18)

This invention relates to metal sign presses and has for an object to provide a small compact hand operated press for making sheet metal signs, such as street signs which must be painted approximately once a year, the press being adapted to emboss the letters of the street name so that the letters stand out from the surface of the sign and may be easily painted.

A further object is to provide a sign press of this character which is portable so that it may be used at the location where the sign is to be replaced with a new sign.

A further object is to provide apparatus of this character which will be formed of a few strong, simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view, the invention consists of certain novel details of construction and combinations of parts herein-after fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming a part of this specification:

Figure 1 is a top plan view of a metal sign press constructed in accordance with the invention.

Figure 2 is a longitudinal sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a bottom plan view of the disk which supports the male dies.

Figure 4 is a top plan view of the resilient arms which support the female dies.

Figure 5 is a detail cross sectional view taken on the line 5—5 of Figure 3, showing one of the male dies.

Figure 6 is a cross sectional view taken on the line 6—6 of Figure 4, showing one of the female dies.

Figure 7 is a front elevation of the metal sign press.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, 10 designates a circular plate forming a base. An annular shoulder 11 is formed on the top of the base concentric with the axis of the base and forms an anvil.

A post 12 is provided with a uniformly reduced lower portion 13 which is engaged in an axial portion 14 in the base. An arm 15 is provided at one end with an eye 16 which receives the upper end of the post. A pin 17 is engaged

through the post and through the eye to secure the arm to the post.

The post is provided at its outer end with a push rod 18 which is slidably engaged in an opening 19 formed in the free end of the arm and below the arm is equipped with a presser head 20. The upper end of the push rod is equipped with a button 21 which extends above the arm 15, and a helical spring 22 is sleeved on the push rod and is housed in an opening 23 which opens through the top face of the arm. An operating handle lever 24 is equipped with a cam head 25 which is received between hinge ears 26 formed integral with the top surface of the arm 15. The cam is centrally pivoted between the ears by a pivot pin 27 passed through the cam and through the ears. When the handle lever is rocked downward, the push rod is depressed to lower the presser head 20 into operative engagement with the work, and when the handle lever is rocked upward to released position, the spring 22 withdraws the push rod and presser head upwardly to released position above the work.

The male dies 28 are arranged in an annular series on the top face of a resilient metal disk 29. The disk is provided with an axial opening 30 to receive the reduced portion of the post and rotatably mount the disk on the post. The disk is supported at its center upon a friction washer 31, which is sleeved on the reduced portion of the post and supports the disk with its outer portion out of contact with the annular shoulder 11 forming the anvil of the base, as best shown in Figure 2.

A comparatively thick washer 32 is fixed to the disk and surrounds the reduced portion 13 of the post. The washer carries a plurality of spring arms 33 which extend radially outwardly therefrom. Female dies 34 are secured to the undersides of the outer portions of the spring arms.

By virtue of the washer 32 being fixed to the disk 29, the disk and spring arms are adapted to be turned as a unit on the post as an axis of rotation to present complementary male and female dies 28 and 34 beneath the presser head 20 of the push rod, as best shown in Figure 7.

The male dies 28 are secured to the disk by screws 35, as best shown in Figure 5. The female dies are secured to the spring arms 33 by screws 36, best shown in Figure 6. The spring arms 33 are secured to the thick washer 32 by screws 37, best shown in Figure 2.

The spring arms 33 function to yieldably hold

the female dies out of engagement with the male dies, as best shown in Figure 2.

In operation, the sheet metal sign is inserted between the spaced male and female dies and held in fixed position, in any preferred manner. Then the disk and spring arms are rotated as a unit to dispose desired complementary dies on opposite sides of the sign at the location where a letter is to be embossed. The handle lever 24 is then lowered to rotate the cam 25 and push down the push rod. During this movement of the push rod the presser head 20 presses down the spring arm with the female die and the disk with the male die until the disk engages the anvil 11 whereupon further movement of the lever 24 forces the male die to indent the metal of the sign into the female die, resulting in an embossed letter which projects from the surface of the sign and is easily painted.

From the above description it is thought that the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

A metal sign press comprising, a base having an annular shoulder on its upper side forming an anvil, a post secured to the base at the center of the annular anvil, a resilient disk ro-

tatably mounted on the post supported at its center on the base and disposed at its outer portion out of contact with the anvil, a plurality of male dies secured to the upper surface of the disk above the anvil, a relatively thick washer removably secured to the top surface of the disk and rotatably mounted on the post, spring arms extending radially from the washer and removably secured at the inner ends to the washer, female dies secured to the undersides of the outer portions of the spring arms above the male dies of the disk, the spring arms normally holding the female dies out of engagement with the male dies, the disk and spring arms and the washer being adapted to be turned as a unit, an arm fixed to the top of the post and extending parallel with the base and terminating beyond the spring arms, a lever having an eccentric disk cam pivoted on the outer end of the arm, and a spring retracted push rod slidably mounted in the arm and projecting above and below the arm to be forced by said cam to deform the spring arms and disk against the anvil for embossing a character on a metal sheet which may be interposed between the male and female dies.

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