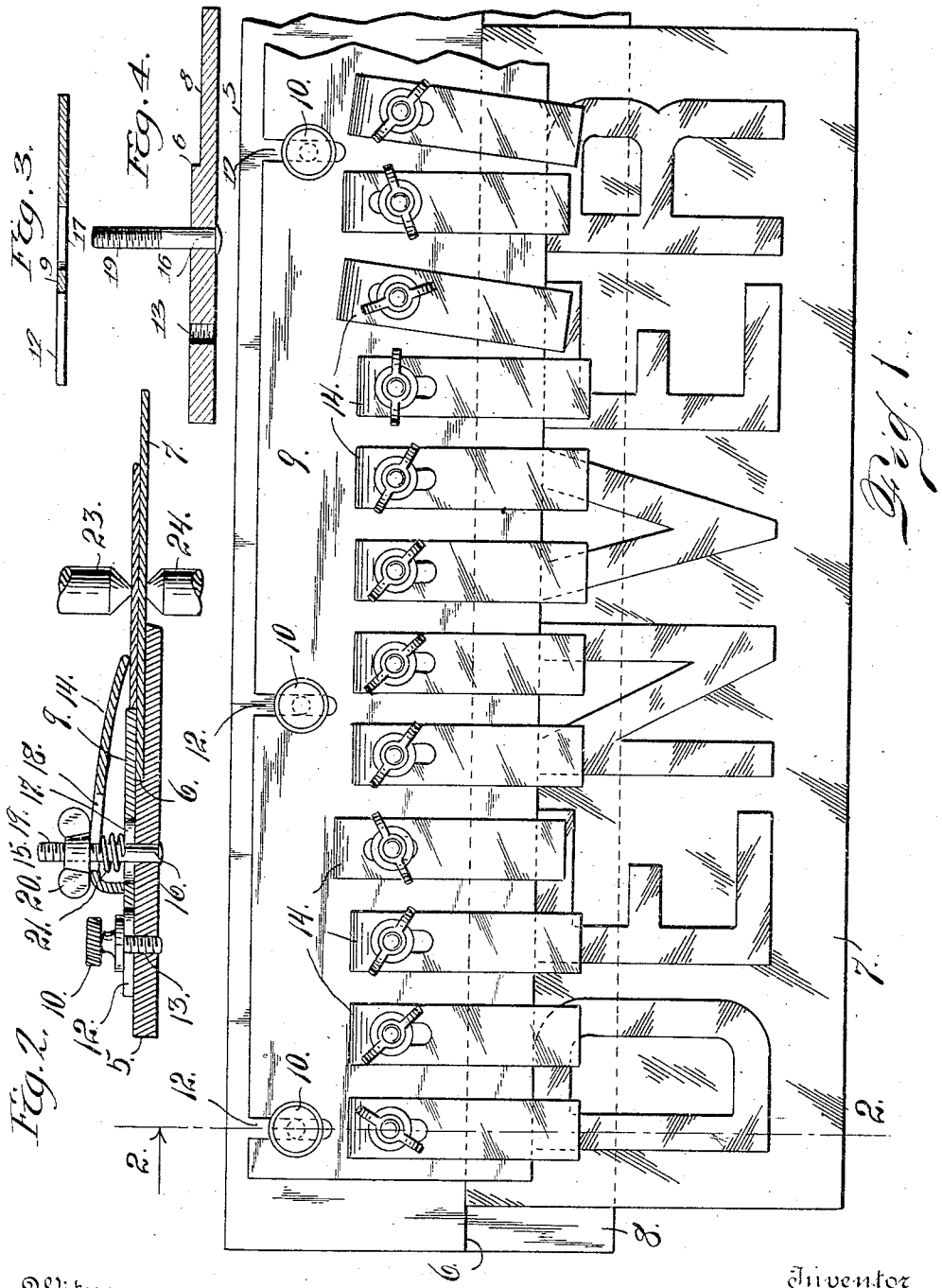
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SIGN MAKING APPARATUS.

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1,251,516. Patented Jan. 1, 1918.



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SIGN-MAKING APPARATUS.

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To all whom it may concern:

Be it known that I, RUDD HARDESTY, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Sign-Making Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in sign making and has reference particularly to the apparatus to be employed. I have also here disclosed certain improvements in the process of making signs and in the article produced; but no claim is here made for either the process or the article as these form the subject matter of another application for patent which I filed March 17, 1916, Serial No. 84,761.

The apparatus employed as involved in my present invention, consists in means for initially adjusting the letters upon the sign plate, and securing them in their proper relative positions during the spot welding operation.

Having briefly outlined my improvement, I will proceed to describe the same in detail, reference being made to the accompanying drawing, in which is illustrated an embodiment thereof. In this drawing,—

Figure 1 is a top plan view of the apparatus employed in placing the letters for the sign upon the sign plate, and holding them in place during the spot welding operation.

Fig. 2 is a section taken on the line 2—2, Fig. 1, the opposing spot welding electrodes being also illustrated.

Fig. 3 is a section taken through the relatively stationary base plate of the sign making apparatus.

Fig. 4 is a sectional view in detail of an adjustable guide plate.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a relatively stationary base plate provided with a ledge or shoulder 6 forming a straight edge for the sign plate 7. This sign plate overlaps the reduced part 8 of the base plate. Adjustably secured to this base plate is an auxiliary plate 9, which is connected with the base plate by means of screws 10 which pass through slots 12 formed in the plate 9 and enter threaded openings 13 formed in the plate 5. A series of clamping devices 14 are secured to the plates 5 and 9 by means of screws 15 whose lower extremities are secured to the plate 5 as shown at 16 and project upwardly through the plate 5 and also through a slot 17 formed in the plate 9. The clamping devices 14 are also slotted as shown at 18 to receive the threaded portions 19 of these screws. These threaded portions project above the clamping devices, the latter being clamped in place by means of wing nuts 20 or other suitable fastening means. In order that these devices may be yieldingly secured, spiral springs 21 surrounding the screw shanks are located between the clamping devices and the plate 9. These clamping devices, while secured to the plates 5 and 9, extend beyond the plate 9 and overlap the sign letters 22 for the purpose of securing the latter during the welding operation.

By reason of the manner in which the clamping devices are secured, they are readily adjustable, whereby they may be moved toward or away from the sign letters or may be moved laterally at will by simply loosening the wing nuts 20, in which event, these devices are free to be moved in any manner whatever. This is important in order to make room for the operation of the electrodes 23 and 24 employed in connection with the spot welding apparatus (not shown).

From the foregoing description, the manner of use of my invention will be readily understood: The base plate 6 it must be assumed, is stationary, being substantially secured against movement in any desirable or convenient manner. The sign plate 7 is then applied to the reduced part 8 of this plate, one edge of the sign plate abutting against the shoulder or offset 6 of the base plate. The auxiliary plate 9 is then put in position and secured to the base plate by

means of the set screws 10 which are passed through the slots 12 of the plate 9 and threaded into openings 13 formed in the base plate. By virtue of this construction the plate 9 is adjustable toward and away from the sign plate, whereby it may be made to overlap the same to any extent desired, the overlapped area being the distance which it is desired that the ends of the sign letters may be located from the adjacent edge of the sign plate. Usually, the opposite ends of these letters will be equally distant from the adjacent sign plate edges. In other words, the sign letters usually will be placed in the central longitudinal area of the plate and so that their extremities will be equally spaced from the opposite longitudinal edges of the sign plate. The sign letters 22 are then placed in position with their upper edges for instance, in engagement with the edge of the overlapping part of the plate 9. The letters are then suitably spaced and secured in place by the employment of the clamping devices 14, whose letter-engaging extremities are adjustable both toward and away from the letters and laterally thereon, as may be desired. By tightening the shank nuts 20 the spring clamping devices will be caused to act yieldingly upon the sign letters, but at the same time, in such a manner as to hold them securely in position until they are fastened by the spot welding process. After the portions of the letters beyond the extremities of the clamping devices and beyond the exposed edge of the reduced part 8 of the base plate have been secured by a proper number of spot welding acts by the employment of the electrodes 23 and 24, the clamping devices may be loosened and the position of the sign plate reversed, whereby the upper extremities of the letters originally partially concealed on one side by the clamping devices and the lower surface of the corresponding portion of the sign plate originally covered by the part 8 of the base plate, are exposed in such a manner that the spot welding electrodes may be brought into engagement therewith, the sign plate and its partially spot welded letters being in the meantime held in place by the employment of the clamping devices 14, which in this event are applied to the opposite or lower extremities of the letters, using this term with reference to the position of the sign when in use.

However, it is not actually necessary in practice to clamp the sign plate and letters except during the fastening of the letters to the plate by employing one or more spot welding acts in connection with each letter. For instance, it would be thoroughly practicable, referring to Fig. 1 of the drawing, to form a row of welded spots one or more on each letter through the center of the sign, after which the sign could be unclamped and held in the hands of the operator during the remainder of the spot welding operation.

The spring 21 employed in connection with each of the clamping devices 14, is under compression when the nut 20 is tightened to hold the device in clamping relation with the letter. But when this nut is loosened, the recoil of the spring 21 will lift the letter-engaging extremity of the device above the sign plate a sufficient distance to allow the letters to be placed in position, after which the clamping devices may be tightened as heretofore explained.

Having thus described my invention, what I claim is,—

1. In sign making apparatus, the combination of a base plate having a ledge adapted to receive one edge of a sign plate and having a reduced part beyond the ledge, which reduced part the lower surface of a part of the sign plate is adapted to engage, an auxiliary plate adjustably secured to the heavier part of the base plate and adapted to overlap the sign plate in opposing relation to the reduced part of the base plate, the overlapping edge of the auxiliary plate being adapted to form a guide for one extremity of each of the sign letters, and clamping devices connected with the base and auxiliary plates and adapted to overlap the sign letters adjacent the extremities which engage the edge of the auxiliary plate.

2. The combination of a base plate having relatively thick and reduced parts, and a ledge or shoulder marking the line between said parts and forming an abutment for one edge of the sign plate, an auxiliary plate having slots formed therein, securing devices passed through these slots and entering the base plate, the auxiliary plate being adapted to overlap the sign plate, the edge of its overlapping portion forming an abutting guide for the sign letters, and clamping devices secured to the base and auxiliary plates and overlapping the sign letters.

3. Sign making apparatus including a base plate having relatively heavy and reduced parts and a ledge marking the line between said parts and forming an abutment for one edge of the sign plate, an auxiliary plate, means for adjustably securing the last named plate to the base plate to overlap the sign plate and with its overlapping edge in abutting relation to the sign letters when in position, and spring clamping devices connected with the base and auxiliary plates in suitable proximity to the sign letters and sign plate.

4. In a sign making apparatus, a base

plate having relatively thick and reduced parts and a ledge marking the line between the said parts and adapted to form an abutment for one edge of a sign plate, an auxiliary plate, means for adjustably securing the last named plate to the base plate to overlap a sign plate and with its overlapping edge in abutting relation to the sign letters when in position, and clamping devices for retaining the sign letters in postion for attaching to said sign plate.

In testimony whereof, I affix my signature in presence of two witnesses.

RUDD HARDESTY

Witnesses:
S. V. BOND,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."