J. PAULDING.

MECHANISM FOR SETTING TYPE IN MAKING STEREOTYPE PLATES.

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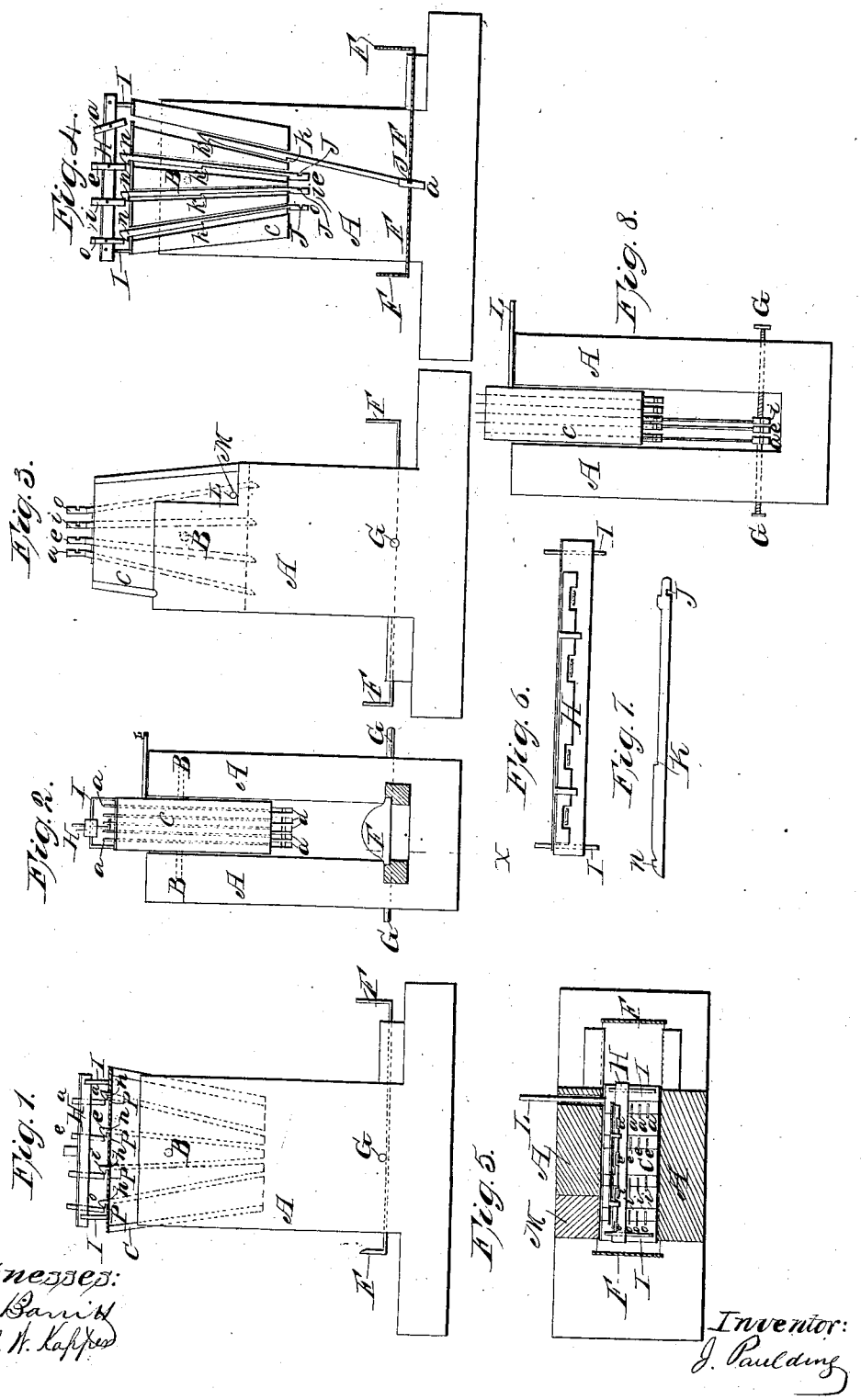

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MECHANISM FOR SETTING TYPE IN MAKING STEREOTYPE-PLATES.

Specification forming part of Letters Patent No. **52,073**, dated January 16, 1866.

To all whom it may concern:

Be it known that I, JOHN PAULDING, of the city, county, and State of New York, have invented certain new and useful Improvements in Mechanism for Setting Type for Making Stereotype-Plates and for other Purposes; and I do hereby declare that the following is a full description of the same.

The object of my invention is to prepare molds for stereotype-plates by the use of a perpetual font of type, so arranged in a type-holder that a line of matter may be set up and impressed upon the clay or other plastic compound, and the type again restored to their original position without removal from the type-holder, and thus not only quicken, but also cheapen, the process of making stereotype-plates; and the nature of my improvements consists, first, in the use of a revolving type-holder; second, in the combination, with the revolving type-holder, of a series of rows of type, attached to the ends of thin strips or rods of steel wire working or sliding in grooves or channels cut in the type-holder so as to allow of their extension below the holder to take the impression in the clay or other plastic compound used; third, in the use of the strip of steel or wire, in combination with the type having notches cut in their edges for adjusting and holding them in place in the stock, and also gaging the depth of their fall when setting up the type; fourth, in the use of a type-setter, in combination with the type-holder for the purpose of setting the type, and as each type is set automatically moving to the next series, that the entire line of matter may be set up without change of the type-setter; fifth, in the use of the gage-notch in the side or edge of the type, in combination with a straight-edge slide for forming the type-letters into a line and holding them in that position till an impression in the clay or other plastic compound has been taken.

To describe my invention more particularly, I will refer to the accompanying drawings, forming a part of the specification, the same letters of references, wherever they occur, referring to like parts.

Figure 1 is a side elevation of the mechanism. Fig. 2 is an end view of the same. Fig. 3 is a right-hand-side view of the machine, showing the type-holder reversed for the purpose of readjusting the type in it. Fig. 4 is a longitudinal cut section of the machine through the line *x x*, Fig. 2, showing the position of one of the rows of type, and held in place by the sliding straight-edge. Fig. 5 is a plan view of the machine. Fig. 6 is a detached plan view of the type-setter. Fig. 7 is a detached view of one of the type as secured to the end of the adjusting rod or wire. Fig. 8 is an end view of the machine, showing a row of letters set up and compressed by means of pins or set-screws passing transversely through the machine on a line with the sliding straight-edges.

Letter A is the frame of the machine, which may be made of wood or any other suitable material. In this frame is adjusted on center pins, B, a type-holder, C, of such form and size as deemed requisite. This type-holder is intended to be divided into as many rows of different type as will conveniently fall into the line by gravitation, each row being composed of the same letter of type, and having a number of such similar type as will be equivalent to the number of type of all sorts used in a line to be printed, the said rows of similar type running parallel to the line to be set, and will contain the alphabet, spaces, and punctuations most commonly used and required to make up a line of matter. In the drawings this is represented by four rows, having a series of five type of the same sort, as a's in one row, e's in the second row, i's in the third row, and o's in the fourth row. These type are combined with an adjusting-rod composed of a thin piece of spring-steel. The object of this is to admit of the ready adjustment of the type in a line by means of the sliding straight-edges F, as shown in Fig. 4, and their lateral adjustment or compression, when in a line, by the compressor pins or screws G, as shown in Fig. 8. In this figure will also be illustrated the operation of setting the line of type-matter up where the series of letters are the vowel letters and the vowels a, i, o, are to be stereotyped.

As shown in Fig. 4, the type-setter H, moving on slides I, secured to the top of the type-holder, is adjusted over the first line of the series of different sorts of type, and the key *a* touched, when the letter a drops and is held by a gage-notch, K, in the adjustment-rod from dropping out of the type-holder. The setter is then moved over, either automatically

or by hand, to the next line of the series of different letters, when the letter i is dropped by the key *i*, and thence to the next line of the series to drop the letter o in the like manner by the key *o*. When the type-matter is thus set up, as it may be said, it is locked or compressed together by the screws G, while they are held in line by the sliding straight-edges engaging in the notch J, cut in the side of the type. While in this position the impression is taken by means of a matrix of clay or other suitable plastic compound. This is done by forming a proper box or bed, with the lines partitioned off to prevent compression, and sliding it underneath the type, and, by means of any common and well-known device, raising it up against the face of the type, which, immediately the impression has been taken, is lowered and moved forward for the next line of matter. When this is done the type are unlocked and the type-holder reversed, as shown in Fig. 3, by taking hold of the handle L and carrying it around till it rests in the notch M, formed by cutting away a portion of the frame of the machine. By this means the type readjust themselves, in consequence of the notch *n*, at the upper end of the adjusting-rod, latching on a detent-plate, P, forming the edge of the rows of type. The type-holder is then readjusted, and by means of the type-setter the new line of type-matter is set up, as before described, and thus progressively till the whole page of matter is finished.

It will be obvious that for special and varied characters of type different fonts of type can be used; also, that capital letters and other peculiar script can be inserted as separate type in place of the type ordinarily used. These modifications, of course, can be readily understood, as also that of making the font large enough to hold a sufficient number of type to make a line for the largest sized page of matter.

In moving the type-setter it is contemplated that an automatic attachment will be used, so that as each key drops a type as the key rights itself again it will carry the setter forward over the next line of type, and thus leave the operator only the task of indicating the letter to be dropped, as hereinbefore described.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States:

1. A revolving type-holder, as hereinbefore described, for the purpose of readjusting the type, as set forth.

2. In combination with the type-holder, a series of rows of adjustable type having a guide-spring rod attached thereto, and arranged with respect to each other substantially as described.

3. The method of adjusting the type in the type-holder by means of one or more stops or catches, *n* and K, on the edge of the guide-spring rod attached thereto, substantially as described.

4. The sliding type-setter H, in combination with the type-holder C, when operating in the manner and for the purposes hereinbefore set forth.

5. A gage-notch, J, formed in the body of the type, in combination with a straight-edge slide, F, when operating for the purpose and in the manner substantially as hereinbefore described.

6. The general combination of all the said several parts of the said machine, as enumerated in the five preceding claims, as a means of impressing the forms of type in a plastic mold for making stereotype-plates, by the single line or part of a line, from a perpetual font of type, substantially as hereinbefore set forth.

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