

(No Model.)

F. C. GRAVES.
METHOD OF MAKING READY.

No. 549,509.

Patented Nov. 12, 1895.

Fig. 1.



Fig. 2.

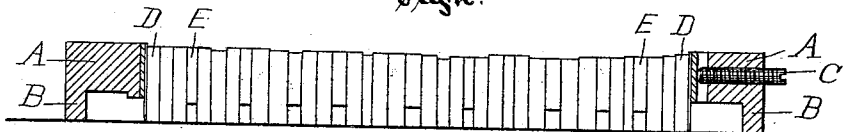
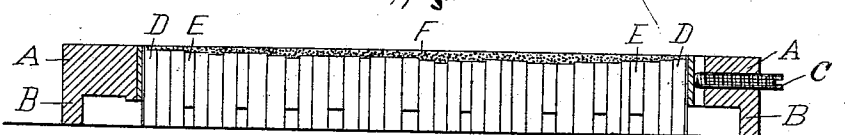


Fig. 3.



Witnesses:

Scott H. Smith.

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METHOD OF MAKING READY.

SPECIFICATION forming part of Letters Patent No. 549,509, dated November 12, 1895.

Application filed April 16, 1895. Serial No. 545,899. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS C. GRAVES, of Hartford, Connecticut, have invented a new and useful Improvement in Methods of Making Ready, of which the following description and claims constitute the specification, and which is illustrated by the accompanying sheet of drawings.

This invention consists in a new method of "making ready" a "form" of set type for a printing-press, and that method includes leveling the faces of the type by pressure or percussion upon their bases and then leveling the base of the form by applying wax or its equivalent to the bases of the type.

Figure 1 of the drawings shows a section of a form of set type the bases of which are on the same plane, while their faces are in different planes, owing to the type being of different lengths, on account of the faces of some of them being more worn than the faces of some others of them. Fig. 2 is a section of the form of Fig. 1 turned upside down and showing the faces of the type in the same plane and their bases in different planes. Fig. 3 is a view of what is shown in Fig. 2, with the addition or application of wax to the base of the form, so as to give that base a uniform plane, notwithstanding the fact that the bases of the type are in different planes. In all the figures the variations of the type from the standard length are much exaggerated for clearness of illustration.

The letter A indicates the "chases," which constitute two of the four sides of the frame, which, with the type inclosed therein, constitute the form.

The letter B indicates the flanges which project upward from the chases to the horizontal plane to be occupied by the faces of the type when the form shall have been made ready.

The letter C indicates one of a series of screws by means of which the type is firmly held within the chases.

The letter D is affixed to the two outer type of each line of type shown in the figures, and the letter E is affixed to the two outer quads, which are interposed between the various groups of type in that line in order to separate the words by spaces. The letter F

indicates the wax backing upon the irregular bases of the type, which is placed there in order to make the base of the form have the proper single horizontal plane.

This method of making ready a form of type for the printing-press is as follows: The type having been set by the compositors and placed in the form, as shown in Fig. 1, the screws C are set up enough to prevent the individual type from slipping lengthwise in the frame by reason of their gravity, but not enough to prevent them from being pressed or driven lengthwise relatively to each other. Thereupon the frame is turned upside down on a plane surface, which is indicated by the long horizontal line in Fig. 2, and a wooden block the face of which may be provided with a sheet of some elastic substance, like vulcanized rubber, is applied to the bases of the type, and then by means of blows or pressure upon the back of the block the type which are too short are driven down to the said plane surface and thus to the level plane which is to be occupied by the printing-surface of the form, as shown in Fig. 2. This operation, while making level the face of the form which was before uneven, makes uneven the base of the form which was before level. Thereupon the base of the form is made level again by the application of the wax F thereto, as shown in Fig. 3, and when that wax has cooled and thus hardened the frame is ready for the printing-press. This process is a substitute for the old method of underlaying and can be performed much more rapidly, besides reducing to a minimum the process of overlaying.

A suitable wax for use in this method of making ready a form of type for the printing-press is made of one part of gum-kauri, one part of French chalk, and three-fourths of one part of stearine; but wax having other component parts or component parts in other proportions and also other plastic compounds and substances may be used for the purpose.

One good way of applying the wax to the base of the form consists in first putting a sheet of paper upon a warm iron plate, and then putting the wax on the paper and rolling it out to a uniform thickness of, say, one thirty-second of an inch, and then peeling the paper and the wax off from the plate and ap-

- plying the whole, with the wax side downward, to the back of the form of Fig. 2, having previously applied oil with a brush or otherwise to the bases of the type, and then pressing down upon the wax by means of a special press or otherwise, so as to fill up therewith to a uniform level all the recesses in the base of the form, which are due to the presence therein of type which are too short.
- After the printing is done the form is placed face downward upon some level surface, and the paper and the wax are removed from the base of the form, and the wax may be preserved for use again.
- I claim as my invention—
1. The method of making ready a form of type for a printing press, which consists in bringing the faces of the type, in the form, to one level plane; and then applying wax, or its equivalent, to the bases of those type, and

thus bringing the base of the form to another level plane; substantially as described.

2. The method of making ready a form of type for a printing press, which consists in bringing the faces of the type, in the form, to one level plane; and in applying a sheet of paper or its equivalent, to a warm metal plate; and in spreading a thin sheet of wax, or its equivalent, upon that paper; and then lifting the paper, thus waxed, from the plate, and applying it, wax side downward, to the back of the form; and then pressing down upon the wax, so as to fill up, to a uniform level, all the recesses in the base of the form, and thus bringing the base of the form to another level plane; all substantially as described.

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Witnesses:

ALBERT H. WALKER,
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