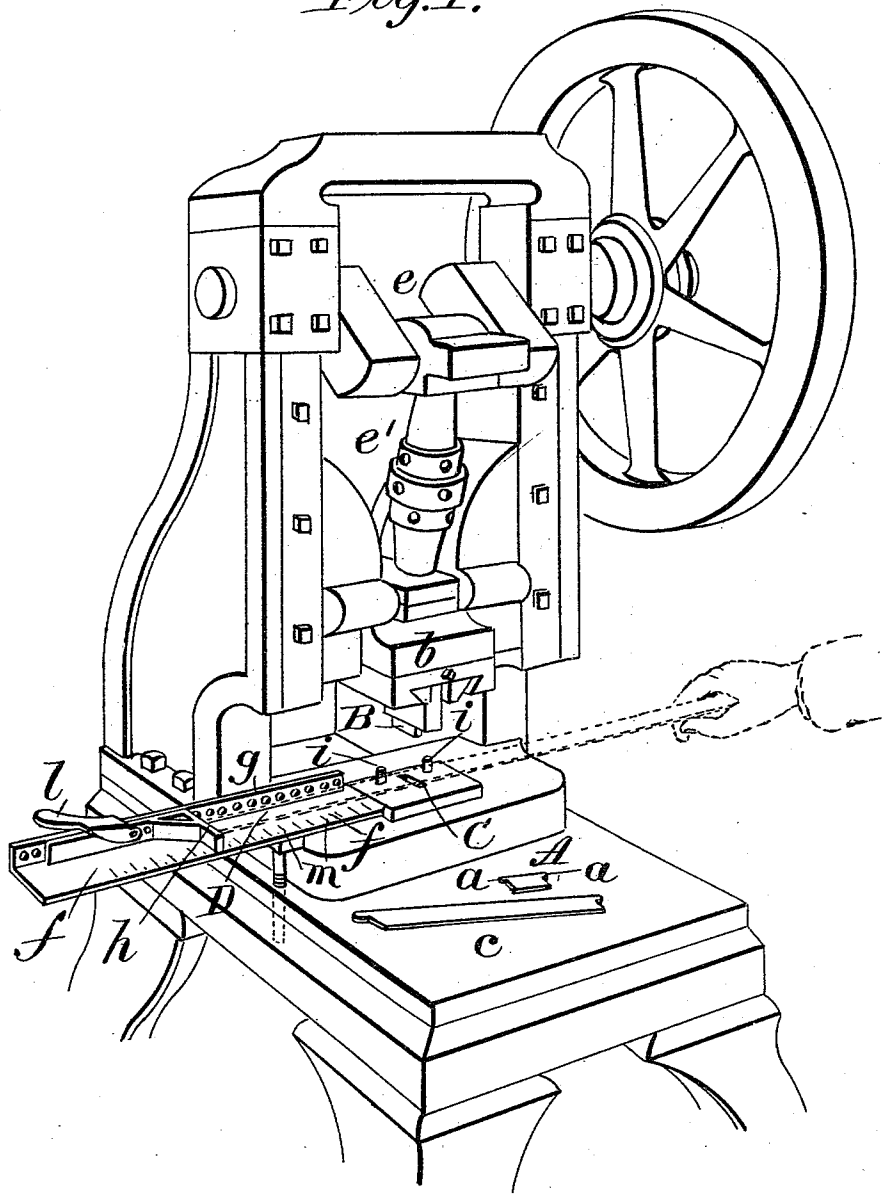
(No Model.) 2 Sheets—Sheet 1.

W. B. FISH.

METHOD OF AND MACHINE FOR MAKING PRINTERS' RULES.

No. 458,531. Patented Aug. 25, 1891.

Fig. 1.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2

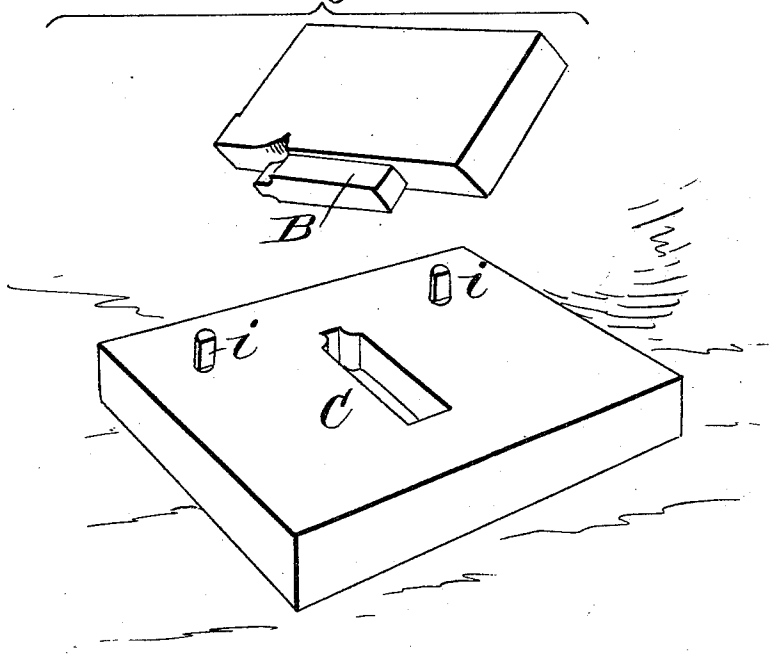
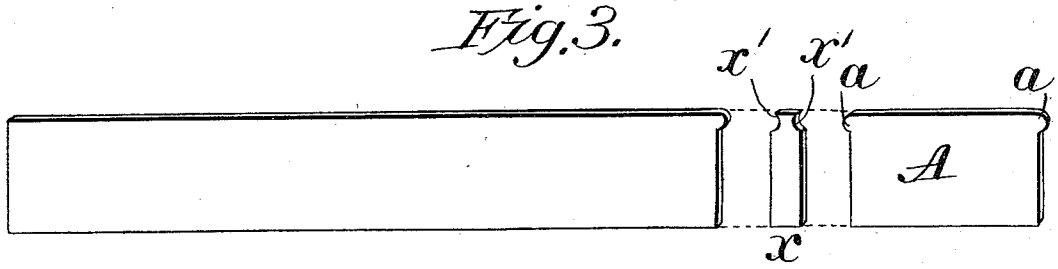


Fig. 3.



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UNITED STATES PATENT OFFICE.

WALLIACE B. FISH, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO O. W. BULLOCK & CO., OF SAME PLACE.

METHOD OF AND MACHINE FOR MAKING PRINTERS' RULES.

SPECIFICATION forming part of Letters Patent No. 458,531, dated August 25, 1891.

Application filed March 30, 1891. Serial No. 387,055. (No model.)

To all whom it may concern:

Be it known that I, WALLIACE B. FISH, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Die Mechanism for and Method of Making Composing and Make-Up Rules, of which the following is a specification.

This invention relates to improvements in mechanism embodying dies for the production of printers' composing and make-up rules, each of which rules is of thin metal of a rectangular form having at its upper edge integral lugs or ears which project beyond the end of the main portion of the said rule.

The invention furthermore consists in the method of producing the said ear-provided rules from flat strips of parallel-edged metal, depending on the employment of mechanism substantially like that constituting one part of this invention.

The invention consists in the mechanism and especial method hereinafter more fully described, and set forth in the claims.

In the drawings, Figure 1 is a perspective view of the machine for making the rules of the kind set forth. Fig. 2 is a perspective view of the punch or male die and the female die employed. Fig. 3 is an illustration in perspective of the blank from which the rules are produced, showing one of the rules as produced and a waste section of the strip.

In the drawings, A, Fig. 3 and also in Fig. 1, represents one of the rules, the same being in the form of a thin flat rectangular plate having at its upper edge and projecting beyond the ends of the main portion thereof the ears or lugs *a a*.

The method of forming the composing and make-up rules of the form substantially as set forth consists in punching out from a parallel-edged flat strip of plate or sheet metal at suitable intervals corresponding with the lengths of the rules desired narrow rectangular sections, such as indicated at *x*, Fig. 3, which at their upper corners have notches *x'*, the portions which are unsevered from the rules and that correspond to the said notches constituting the said ears *a*.

The machine for the production of the rules embodies male and female dies B C, the face of the former being of the form of the sections *x* to be punched out, the opening in the female die corresponding thereto. The male die is carried by a reciprocatory carrier-slide *b*, operated in the manner common in die-presses by crank and connection *e e'*, or otherwise, and the die member or block having the opening is supported on a suitable table or bed *c*.

At one end of and as a continuation of the lower die-block there is a gage and guide D, suitably supported, having the base *f* corresponding to the upper face of said die-block, the rear perpendicular wall *g*, and the transverse knee or stop *h*, which is adjustable longitudinally on the said guide-gage. The die-block is also provided with a pair of studs *i i*, the forward faces of the same being in a line which is coincident with the upper or rear border of the said opening in the die C. The knee of the guide-gage is movable for adjustment, being held in place by the confining lever or device *l*, which is pivotally secured thereon. The base of the guide-gage is formed with a graduated scale (indicated by *m*) to represent the number of em-spaces between the front edge of the knee and the border of the die-opening which is toward said knee.

The use of the mechanism is illustrated with considerable clearness in Fig. 1 and is as follows: The metallic strip of iron, steel, brass, or other metal, as the case may be, which is of a width corresponding to that of the rules desired, but of an indefinite length, is first placed with its end portion over the die-opening, when the punch-die descending forms the extremity of the strip with an ear, like one *a*, at its upper corner. The end thus formed is moved along the gage-guide to the knee thereof, when the plunger-die again descending punches out one of the waste sections *x*, leaving in advance thereof a perfectly-formed ear-provided rule A, and the end of the strip next at the rear with an ear, which end is then moved to the gage-knee, when another waste section *x* is punched out and another rule produced, and so on. On desiring to produce rules having lengths corresponding to a greater or less number of

ems the same may readily be done by sliding the knee to register with the proper mark of graduation on the scale. The knee is provided at its abutment-face with a recess or abated portion *n*, so that the ear *a* of the supply-strip may be run beyond the face of the knee, whereby the measurement indicated by the graduations on the gage may correspond to the length of the rule between the ends of the main portion thereof and exclusive of the additional length constituted by the ears. It is desirable that the waste sections *x* may have a width, say, usually of about a quarter of an inch on rules having widths which are type-high, whereby under the action of the dies a clean and sharp severing of the said sections may be made, avoiding any appreciable deflection of the end portions of the rules from the plane of the side thereof, as might be the case were too great economy attempted by punching out narrower waste sections.

What I claim as my invention is—

1. The method of producing composing and make-up rules which are of the form set forth, which consists in punching out from a parallel-edged flat strip of plate or sheet metal at suitable intervals corresponding with the lengths of the rules intermediate narrow rectangular sections which at their upper corners have notches whereby the portions or ears are left on the rules at their upper corners that correspond to said notches, substantially as described.

2. A machine for producing composing and make-up rules of the form set forth, the same consisting of a male die having a narrow rectangular face with notched corners at one end and a female die of corresponding form, die-operating mechanism, and the gage-guide provided with the adjustable knee, substantially as described.

3. In a machine for producing composing and make-up rules of the form substantially as set forth, the combination, with the male die having a narrow rectangular face with notched corners at one end and a female die of corresponding form and die-operating mechanism, of the guide-studs *i i*, supported with their forward faces in line with one border of the die-opening, and the gage-guide provided with the adjustable knee, substantially as described.

4. In a machine for producing composing and make-up rules from a metal blank or supply strip, the combination, with a male and female die and die-operating mechanism, of the guide-gage provided with an adjustable knee and graduations on the said gage-guide for indicating in em-spaces the distance between the face of the knee and the border of the die-opening, substantially as and for the purpose set forth.

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