No. 770,254. PATENTED SEPT. 20, 1904.

J. S. BANCROFT.

MEASURING MECHANISM FOR PERFORATING MACHINES.

APPLICATION FILED JAN. 30, 1904.

NO MODEL.

Fig. 1.

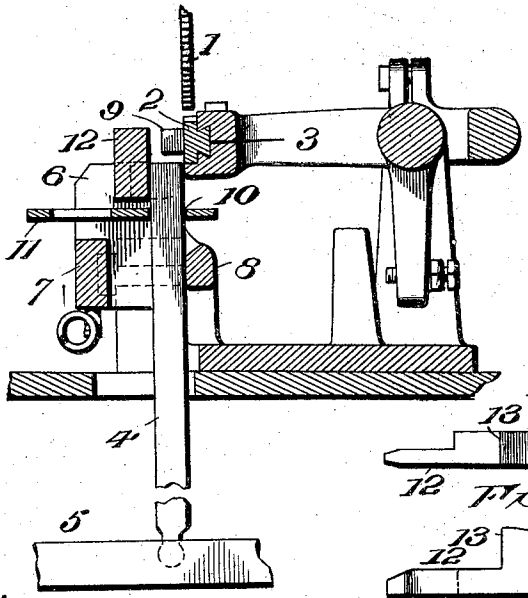


Fig. 5.

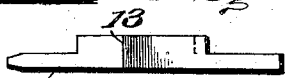


Fig. 6.

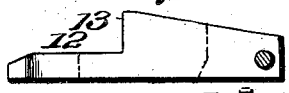


Fig. 2.

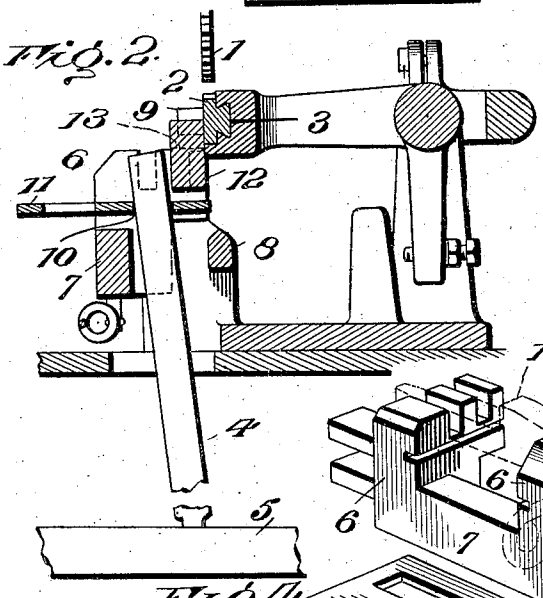


Fig. 7.

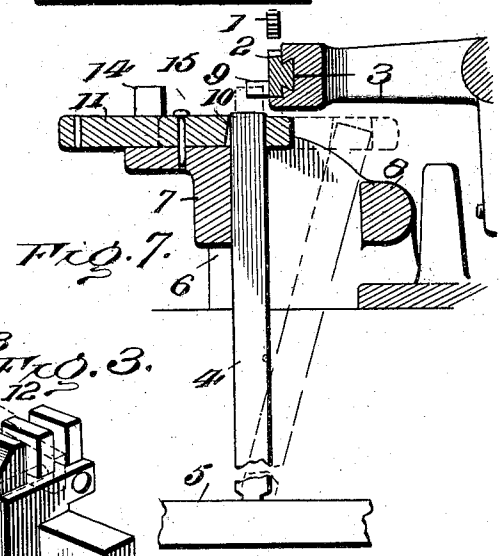


Fig. 3.

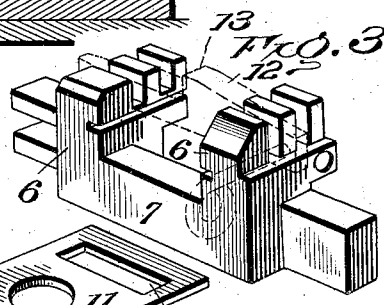


Fig. 4.

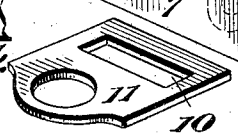
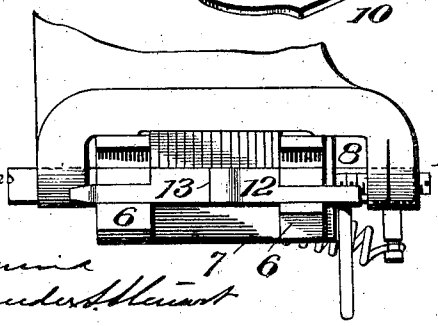


Fig. 8.



Witnesses

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No. 770,254. Patented September 20, 1904.

UNITED STATES PATENT OFFICE.

JOHN SELLERS BANCROFT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO LANSTON MONOTYPE MACHINE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF VIRGINIA.

MEASURING MECHANISM FOR PERFORATING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 770,254, dated September 20, 1904.

Application filed January 30, 1904. Serial No. 191,383. (No model.)

To all whom it may concern:

Be it known that I, JOHN SELLERS BANCROFT, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Measuring Mechanism for Perforating-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures of reference marked thereon.

This invention relates to that class of record-strip perforators represented by Patent No. 654,115, wherein an escapement is employed in connection with a series of admeasuring devices for registering the space value of individual types; and it consists in the construction and arrangement of a supplemental admeasuring device adapted for use in alternation with the serial or differential admeasuring devices and operating to register a uniform space value for each type, so that lines composed of equally-spaced characters simulating ordinary type-writing may be set up and justified, as hereinafter fully described, the novel features being pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical transverse section of a portion of the measuring mechanism with the improvement applied thereto, but shown in inoperative position. Fig. 2 is a similar view showing the alternative gage in operative position. Fig. 3 is a perspective view of the combined stop-bar support and holder for the alternative gage. Fig. 4 is a perspective view of the combined shifter and guide for the stop-bars. Fig. 5 is a top plan view, and Fig. 6 a side elevation, of the gage. Fig. 7 is a transverse vertical section, and Fig. 8 a top plan view, of a modified form of the alternative gage and stop-bar shifter.

Similar numerals designate like parts in the several figures.

The invention is illustrated in connection with the improved form of line-measuring mechanism forming the subject of application Serial No. 179,583, wherein 1 is the motor-driven units-wheel controlling the measuring devices and forming an element of the escapement; 2 is the units-rack; 3, the units-rack carrier, to which motion is given to engage the units-rack with the units-wheel and withdraw the holding-pawl each time a punch is operated, and 4 the stop-bars serially disposed in the line of motion of the units-rack and each connected to one of a series of punch-actuating devices, such as levers 5, so that when a punch of the last-named series is brought into action its space value will be impressed upon the line-measuring mechanism by projecting its stop-bar into the path of the units-rack to admeasure its advance movement. The stop-bars are received between jaws 6 on a bar 7, the latter adjustably attached to the frame, so as to permit adjustment in the direction of motion of the unit-rack when in engagement with the units-wheel, as in the prior machine; but instead of being held to position by the bar 7 and rear guide-bar 8 the interval between said bars is increased sufficiently to permit the series of stop-bars to be swung laterally of the plane of movement of the contact-pieces 9 on the units-rack, so that without disconnecting them from their actuating devices they may be moved into or out of operative relation with the units-rack, and when moved out of operative position their place is taken by a substitute stop-bar interposed at a fixed point in the throw of the units-rack when registering space value.

In the form of embodiment illustrated in Figs. 1 and 2 the series of stop-bars pass through a slot 10 in a plate 11, the latter movable in guides on the jaws 6 and serving as a medium for shifting the stop-bars into and out of operative position without disturbing their adjustments. This plate 11 if provided with suitable retaining devices might serve as the front and rear guides for the stop-bars; but for various reasons it is preferred to utilize the bar 8 as the rear guide when in operative position, as seen in Fig. 1, and a block 12 as the front guide, said block being provided with a shoulder 13 to serve as a stop

for the units-rack when the series of movable stop-bars are shifted into inoperative position, as illustrated in Fig. 2, and the block 12 substituted therefor. For this purpose the jaws 6 are provided with two sets of slots adapted to receive the reduced ends of the gage-block 12, so that when the latter is located in the front set of slots it will be clear of the units-rack and furnish a front guide for the stop-bars, as in Fig. 1, and when the stop-bars are withdrawn from operative position and the block 12 is inserted in the rear set of slots, as in Fig. 2, it will prevent the return of the stop-bars and present its shoulder 13 as a gage for measuring the advance of the units-rack and the measuring devices controlled thereby. Thus by simply shifting the series of stop-bars and transposing the position of the gage-block from one set of retaining devices to another the mechanism can at once be transferred from a differential to a uniform space-register, and vice versa, without disturbing its adjustments or otherwise disconnecting its operating mechanism. The same result can be accomplished, but at some sacrifice in that it requires a slight alteration in the arrangement and proportioning of the parts of existing machines, by mounting the stop-shoulder 13 upon the movable plate or frame 11, by which the lateral displacement of the stop-bars is effected, as represented in Fig. 7. In this case the plate 11 is made somewhat thicker to form an efficient rear guide, the bar 7 serving as the front guide for the stop-bars when in operative position and being provided with a lip or extension 14. Any suitable locking device, such as a pin 15, may be employed for retaining the plate 11 in either of its positions of adjustment. According to this plan the stop-bars when moved from operative to inoperative position are swung beneath the units-rack carrier, as indicated in dotted lines, Fig. 7, where they will be out of the way while the uniform stop-shoulder 13 is in operative position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a measuring mechanism for perforating-machines such as described, the combination with the units-rack and stop-bars, of means for shifting the series of stop-bars into and out of operative relation with the units-rack.

2. In a measuring mechanism such as described, the combination with the units-rack and laterally-movable stop-bars, of a stop movable into position to engage the units-rack.

3. In a measuring mechanism such as described, the combination with the series of stop-bars and their fixed gaging and positioning jaws, of a shifting device guided upon said jaws and engaging the stop-bars, to shift them laterally of their operative position while between said jaws.

4. In a measuring mechanism such as described, the combination with the controlling member of the space-registering devices, of a plurality of admeasuring devices, including differential and constant or uniform elements, and means for shifting each alternately into and out of operative relation with said controlling member.

5. In a measuring mechanism such as described, the combination with the series of stop-bars and the movable gaging-jaws therefor, of the shifting frame guided to reciprocate between said jaws and provided with means for engaging the stop-bars, two sets of retaining devices upon said jaws and a gage-block fitted to both sets of retaining devices and operating when in engagement with one set as a front guide for the stop-bars, and when in engagement with the other set as a substitute for the stop-bars in admeasuring the movements of the registering devices.

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