

(No Model.)

J. K. BITTENBENDER.
COMPOSING STICK.

No. 484,514.

Patented Oct. 18, 1892.

Fig. 1.

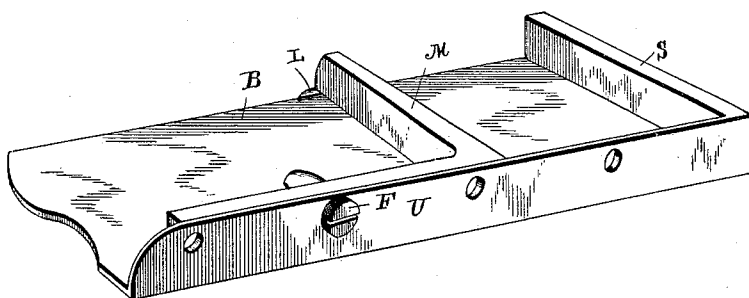


Fig. 2.

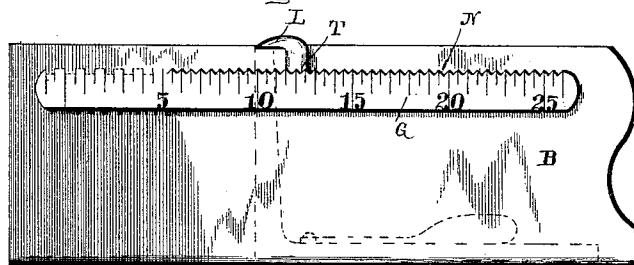


Fig. 3.

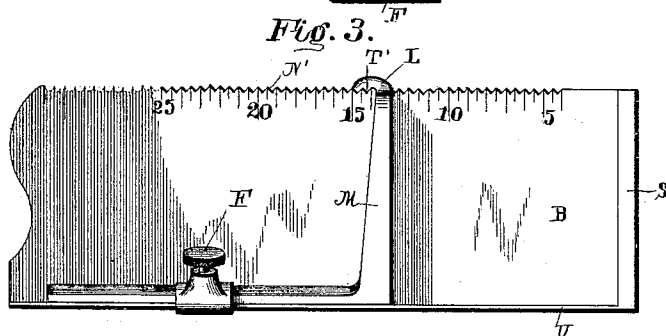
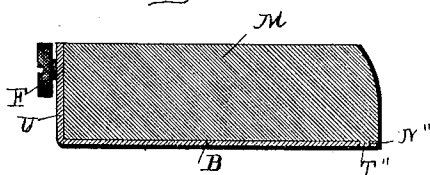


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN K. BITTENBENDER, OF BLOOMSBURG, PENNSYLVANIA.

COMPOSING-STICK.

SPECIFICATION forming part of Letters Patent No. 484,514, dated October 18, 1892.

Application filed October 22, 1891. Serial No. 409,496. (No model.)

To all whom it may concern:

Be it known that I, JOHN K. BITTENBENDER, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented a new and useful Composing-Stick, of which the following is a specification.

This invention relates to the art of printing, and more especially to the sticks used by compositors in setting their type; and the object of the same is to produce an improved composing-stick.

To this end the invention consists in improved means for locking the movable jaw of the stick after it has been adjusted, all as hereinafter more fully described and claimed, and as illustrated on the accompanying sheet of drawings, wherein—

Figure 1 is a perspective view of the upper side of an ordinary screw-stick provided with my improved form of lock in its preferred form. Fig. 2 is a bottom plan view thereof, showing the jaw as held by the friction-clamp ordinarily used on some sticks. Fig. 3 is a plan view of a stick whose jaw is set by a different form of screw, illustrating my invention in a slightly-modified form. Fig. 4 is a cross-section through another stick, showing a second modification.

It is well known by compositors and printers generally that when it becomes necessary to "break" a stick, in order to change its gage, great care must be taken in relocking its movable jaw at the exactly-proper distance from its stationary jaw, either at the new gage or when it is returned to the old gage—that is to say, if the gage is a trifle too wide the type which is set thereto will be in lines a trifle longer than those heretofore set to the same gage and if it is a trifle too narrow the reverse will be the case, the longer lines in either case receiving the pressure of the furniture when the form is locked up and causing the shorter lines to be loose, so that the type therein may drop from the chase or be drawn out of the form by the ink-rollers. Various means have been devised for overcoming this objection and for facilitating the speedy and accurate setting of the stick, among which I may mention the stick whose base is marked upon its face with a scale, preferably of pica ems and ens. All devices,

however, which only indicate the position at which the movable jaw must be set and leave the setting thereof to the eye are faulty, because the eye is not accurate enough to set its inner face exactly at the finest scale-mark, and hence some positive means must be provided for locking this jaw in its adjusted position, as is necessary. It is also well known that the movable jaw of a stick can be sprung by tight spacing in the lines near the upper edge of the base, and when this is done, as by an incompetent amateur or journeyman compositor, it causes the lines previously set to be loose or the general contour of the form in the stick to taper toward its upper end, either of which is highly undesirable. In order to overcome this objection, various means have been devised, among which I may mention that the upper end or "toe" of the jaw has been locked, as by a screw, to the base; but this screw must be removed and reset whenever the gage of the stick is changed, and this construction necessitates providing a number of threaded holes in the base near its upper edge, through which holes fine type or spaces are liable to drop. The present invention contemplates the provision of means which will at once lock the movable jaw in exact position from the stationary jaw measured by pica ems or ens and secure its toe against lateral deflection or springing, and this I accomplish by the construction described below.

Referring to the said drawings, the letter B designates the base, which is turned up, as at U, along its lower edge.

S is the stationary jaw across the right end of the base.

M is the movable jaw, which is usually of L-shape, its shank sliding against the edge U and its foot standing exactly parallel with the stationary jaw S, and F is the fastening device for adjustably connecting said shank and edge, this device being a screw, as shown in Fig. 1, a clamp, as shown in Fig. 2, or any other suitable and well-known fastener which will serve this purpose, the construction of the same having no bearing on the present invention.

Coming now to the present invention, the letter L designates a laterally-extending lip

at the toe of the movable jaw and preferably formed integral therewith and at approximately-right angles thereto, this lip preferably extending over the upper edge of the base and being provided with a downturned end, which slides against the bottom of the base and at its tip with one or more pointed teeth T.

In its preferred form my improved stick is provided on the under side of the base with a transverse metallic strip G, having marked thereon a graduated scale of pica (or other) ems and ens, as seen in Fig. 2, and the upper edge of this strip is provided with notches N, as shown. I preferably make the teeth and the notches of V shape, so that when the jaw M is drawn tightly against the edge U by the fastener F the teeth will engage the notches positively and will cause the jaw to be set exactly at the desired distance from the stationary jaw S. However, these teeth and notches might be rounded or square, as shown in dotted lines in Figs. 2 and 3; but they are preferably never dovetailed, because then they could not be disengaged.

In Fig. 3 I have shown a scale as marked upon the face of the base along its upper edge, and said edge provided with notches N', the teeth T' on the lip being in this case arranged to engage said notches, and this is a construction I sometimes employ. While it does away with the necessity for a supplemental strip on the back of the base and presents a smooth bottom for the stick to rest on when laid down, the notches in the base may be considered by some as undesirable.

In Fig. 4 I have shown another modification, wherein the base is provided with perforations N'', parallel with and near its upper edge, and which take the place of the notches, while the teeth on the jaw are replaced by one or more downwardly-projecting pins, spurs, or studs located where they will engage the said perforations as the jaw is adjusted. However, as many printers consider any construction of stick whatsoever whose base is other than perfectly smooth undesirable I prefer the form first described, wherein the notches are on the bottom or under side of the base.

This improved stick is held in the hand and used in the ordinary and well-known manner, which does not need an explanation here. When it becomes desirable to adjust the gage of the stick, the fastener F, whatever its form or style, is loosened, and the movable jaw is thereby permitted to move upward slightly on the base. This permits the tooth T or T' to rise out of its engaging-notch N or N', after which the jaw can be adjusted to the point desired, and the fastener F again tightened. With the form illustrated in Fig. 4 the fastener when loosened must permit the movable jaw to rise

from or above the face of the base, so that the tooth T'' can be lifted out of the notch N'', after which the jaw is adjusted and locked; but as all forms of fastener do not permit such movement of the jaw this modified form of my invention is not always desirable. The fact that the device locks the toe of the jaw exactly at the point desired, which is indicated by the scale, prevents any guesswork on the part of the printer, and when the fastener is set the adjacent faces of the two jaws will be truly parallel. With the V-shaped teeth and notches shown in Fig. 1, if the jaw be not set exactly right, when the fastener is tightened the jaw will be moved so as to force the teeth into the notches clear down to the bottoms thereof, and hence the beveled faces will automatically adjust the jaw longitudinally of the stick and exactly to its proper position while the tightening of the fastener is taking place.

I do not limit myself to the sizes nor materials of the various parts, as considerable change can be made therein without departing from the spirit of my invention; and I wish to be understood by the words "notches" and "teeth" in the claims as embracing the several forms hereinbefore described or any obvious equivalent thereof.

What is claimed is—

1. A composing-stick comprising a base having an upturned lower edge, a stationary jaw, a movable jaw, and a fastener for the latter, combined with a lip at the toe of said movable jaw, the lip extending over the upper edge of said base and having a tooth at its extremity, and a strip secured across the bottom of said base parallel with and near its upper edge and having notches with which said tooth positively engages when the fastener is tightened, substantially as and for the purpose set forth.

2. A composing-stick comprising a base having an upturned lower edge, a stationary jaw, a movable jaw, and a fastener for the latter, combined with an integral lip at the toe of said movable jaw, the lip extending over the upper edge of said base and having at its extremity pointed teeth with beveled sides, and a metallic strip secured across the bottom of said base parallel with and near said base and having V-shaped notches opening away from said upturned edge and with which the teeth positively engage when said fastener is tightened, substantially as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN K. BITTENBENDER.

Witnesses:

J. G. WELLS,
WILL H. SEARS.