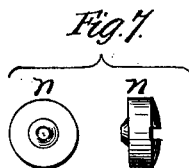
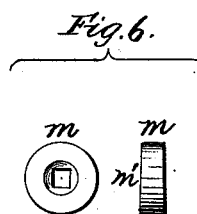
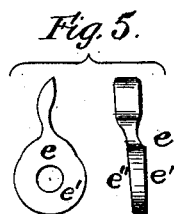
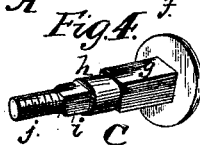
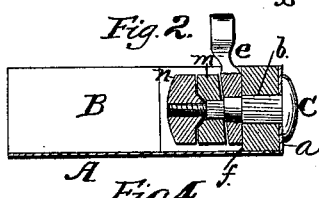
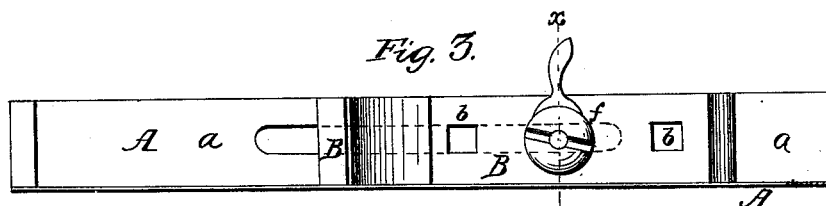
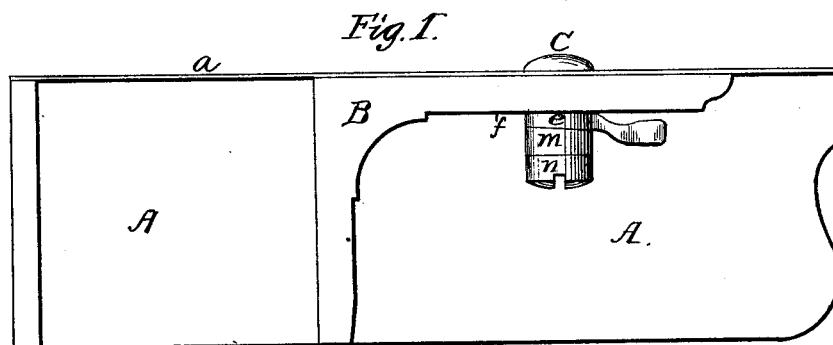


W. H. PRICE.
Printers' Composing-Stick.

No. 218,572.

Patented Aug. 12, 1879.



Attest:
F. B. Brock
J. V. Knight

Inventor:
William A. Price
by L. Hanning
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. PRICE, OF GAINESVILLE, GEORGIA, ASSIGNOR OF ONE-HALF
HIS RIGHT TO PETER HANNAY, OF WASHINGTON, D. C.

IMPROVEMENT IN PRINTERS' COMPOSING-STICKS.

Specification forming part of Letters Patent No. 218,572, dated August 12, 1879; application filed
July 15, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. PRICE, of Gainesville, in the county of Hall and State of Georgia, have invented certain new and useful Improvements in Composing-Sticks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a top-plan view of a composing-stick to which my improvements have been applied. Fig. 2 represents a transverse section of the same, taken through the line *x x* of Fig. 3. Fig. 3 represents a side elevation of the composing-stick. Fig. 4 represents a detail view of the bolt of the fastening device. Fig. 5 represents, respectively, a plan and side elevation of the cam-lever. Fig. 6 represents a plan and side elevation of the silent cam, and Fig. 7 similar views of the check-nut.

The invention relates to a new and improved mode of securing and adjusting the gage to the composing stick; and consists in attaching it to the latter by means of a bolt of novel construction, and of a fastening-nut, a silent cam, and cam-lever, constructed and arranged to operate in the manner to be hereinafter described.

I am aware that composing-sticks have heretofore been made in which cam-levers have been used to fasten and adjust the gage-bracket, but they have been so constructed as to soon get out of order, and in fact become useless from very slight wear.

To enable others skilled in the art to make, construct, and use my improvement, I will now proceed to describe it in detail.

In the accompanying drawings, A represents a composing-stick of ordinary construction, having an end piece and a slotted back, *a*. B represents the adjusting bracket or gage, and is provided with one or more square openings, *b*, the side walls of which coincide, or nearly so, with the sides of the slot in the back *a* of the composing-stick. Through the

slot in the back *a* and any one of these square openings *b* formed in the bracket, according to the width of column or page desired to be set up, is passed the bolt C. This done the cam-lever *e* is mounted or pivoted upon the latter with the plain or vertical surface *e*¹ next the vertical face *f* of the bracket, and the angular or cam-faced surface *e*² outward. The silent cam *m* is then placed on bolt C with its angular or cam-faced surface *m*¹ next the cam-faced surface *e*¹ of the cam-lever *e*, and its plain or vertical side outward. Over the silent cam is then placed the check-nut *n*, which is then screwed up on the threaded end of the bolt C until the inside of the check-nut bears firmly against the outer face of the silent cam, for which purpose the cam-lever *e* is first turned down in the position it is to occupy when the bracket is locked to the stick before adjusting the pressure of the check-nut. This done the composing-stick is ready for use. To this end, however, each of these parts requires a special construction beyond what has already been described to fit them for use.

Bolt C, Fig. 4, is provided with a head flattened on the side next the back *a* of the stick. The stem or tang of the bolt next the head is made square to fit loosely, but snugly, between the sides of the slot in back *a*. The square portion is continued sufficiently far to pass nearly, if not quite, through the square openings *b* in the bracket B, and is marked *g* in Fig. 4. This squared portion prevents the bolt C from turning once it is applied to the stick.

From the point at the end of the squared portion the stem is turned down for a length sufficient to form a pivotal bearing for the cam-lever *e*. This circular portion is marked *h* in Fig. 4. From the outer edge of this bearing the stem is again squared for a length equal to the greatest thickness, or thereabout, of the silent cam *m*, and which is provided with a squared opening of corresponding size to fit, the object of which is to prevent rotary movement in the silent cam when it is placed in position, while it is left free to be moved lengthwise of the bolt as the bracket is being adjusted by the action of the cam-lever *e*. This

squared portion on which the silent cam fits is marked *i* in Fig. 4.

From the outer end of the squared portion *i* of the bolt the remainder of the stem of bolt *C* is provided with a screw-thread, *j*, on which the check-nut fits and screws to adjust the tightness of the parts.

By this construction of the stem of the bolt *C* and the respective corresponding openings in the cam-lever, silent cam, and check-nut, it will be perceived that the turning of the cam-lever exerts no tendency whatever to turn or loosen the check-nut once it is adjusted, and it will further be perceived that, as the cam-faces wear from long use, a slight turn of the check-nut in the proper direction will serve to tighten it up again, and this will continue until the silent cam and cam-lever are nearly, if not quite, worn out.

In Fig. 5 are shown a plan and side elevation of the cam-lever; in Fig. 6, a plan and side elevation of the silent cam, and in Fig. 7 a plan and side elevation of the check-nut.

In the last two figures, as also the sectional view of the composing-stick, a circularly-concave depression is shown as being made in the outer face of the silent cam and a correspondingly convex-shaped projection on the inner face of the check-nut, which is intended to fit in the concavity of the former to form the bearing-surface between the two. The object of this is mainly to avoid friction in adjusting the check-nut, and to prevent lateral movement of the silent cam on its spindle as it is being forced outwardly by the cam-lever against the check-nut. As a rule I prefer to use this construction; but it is not absolutely necessary, as the faces of the two, where they come together, may be made perfectly straight or in the same plane.

The operation is as follows: To adjust the

bracket to any required gage the cam-lever is raised to a position at right angles, or thereabout, to the line of the length of the back of the stick. This withdraws the cam-face of the cam-lever away from the cam-face of the silent cam, thereby relieving the latter from pressure, and consequently loosening the tension of the bolt on the bracket and back of the stick. In this position the bracket is free to be adjusted to any gage required within its range. Once it is adjusted it is secured in place and firmly held by simply turning the cam-lever down in a rearwardly direction, as by that act the cam-faces of the silent cam and cam-lever have again been brought in contact with each other, thereby jamming the former firmly against the check-nut, and thus tightening the tension of the bolt and compressing the bracket firmly against the back of the stick.

In Fig. 3 are three openings, *b*, in the bracket for the passage of the bolt *C*. The object of these is to enable the composing-stick to be adjusted to a greater range of different gages than were one only to be used.

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

In combination with a composing-stick and its movable bracket, the bolt *C*, cam-lever *e*, silent cam *m*, and check-nut *n*, constructed, arranged, and operating substantially as set forth.

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

WM. H. PRICE.

Witnesses:

JAS. A. CARLTON,
JAMES WHITE.