

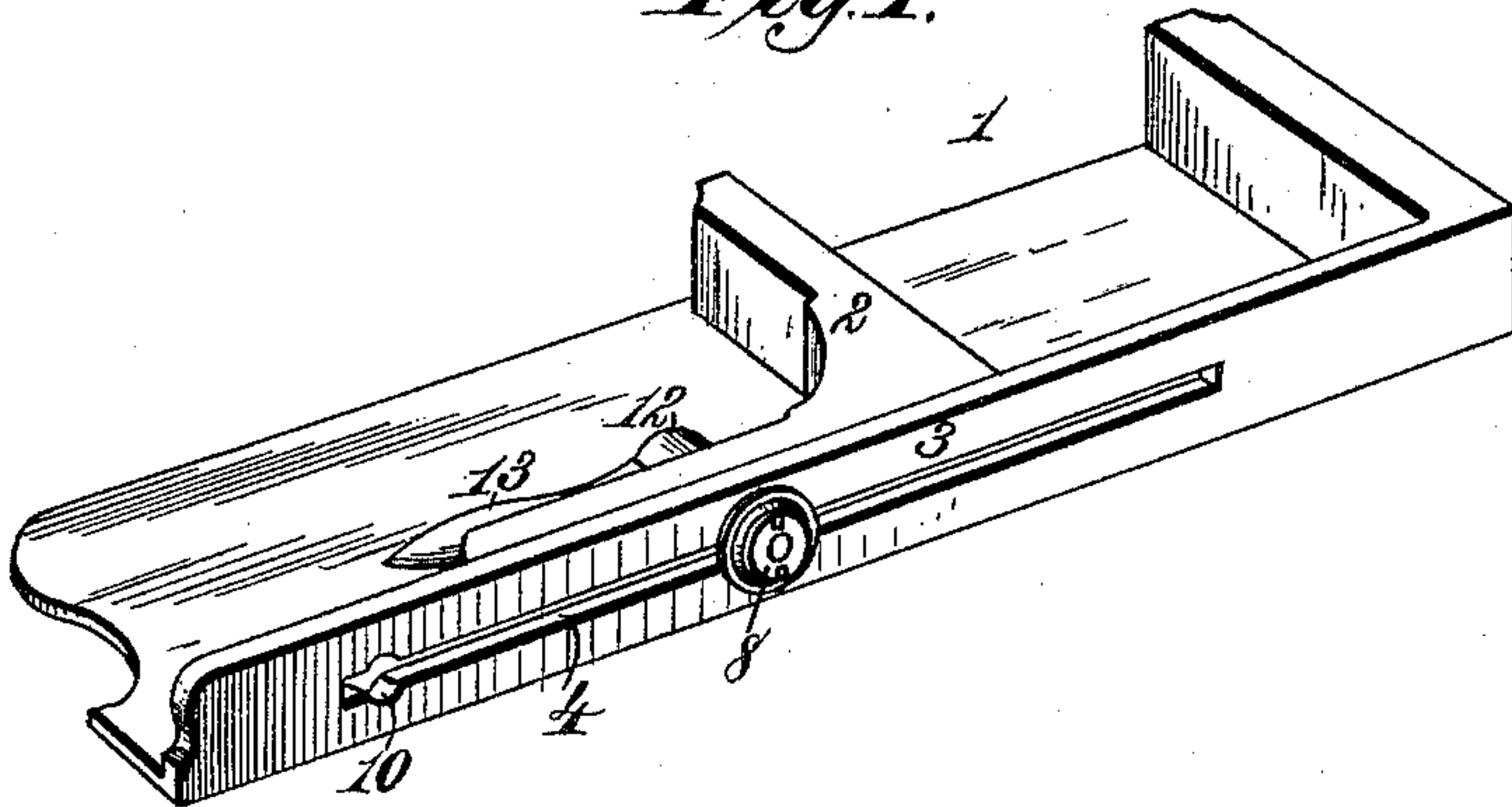
(No Model.)

W. F. COMBS.  
PRINTER'S COMPOSING STICK.

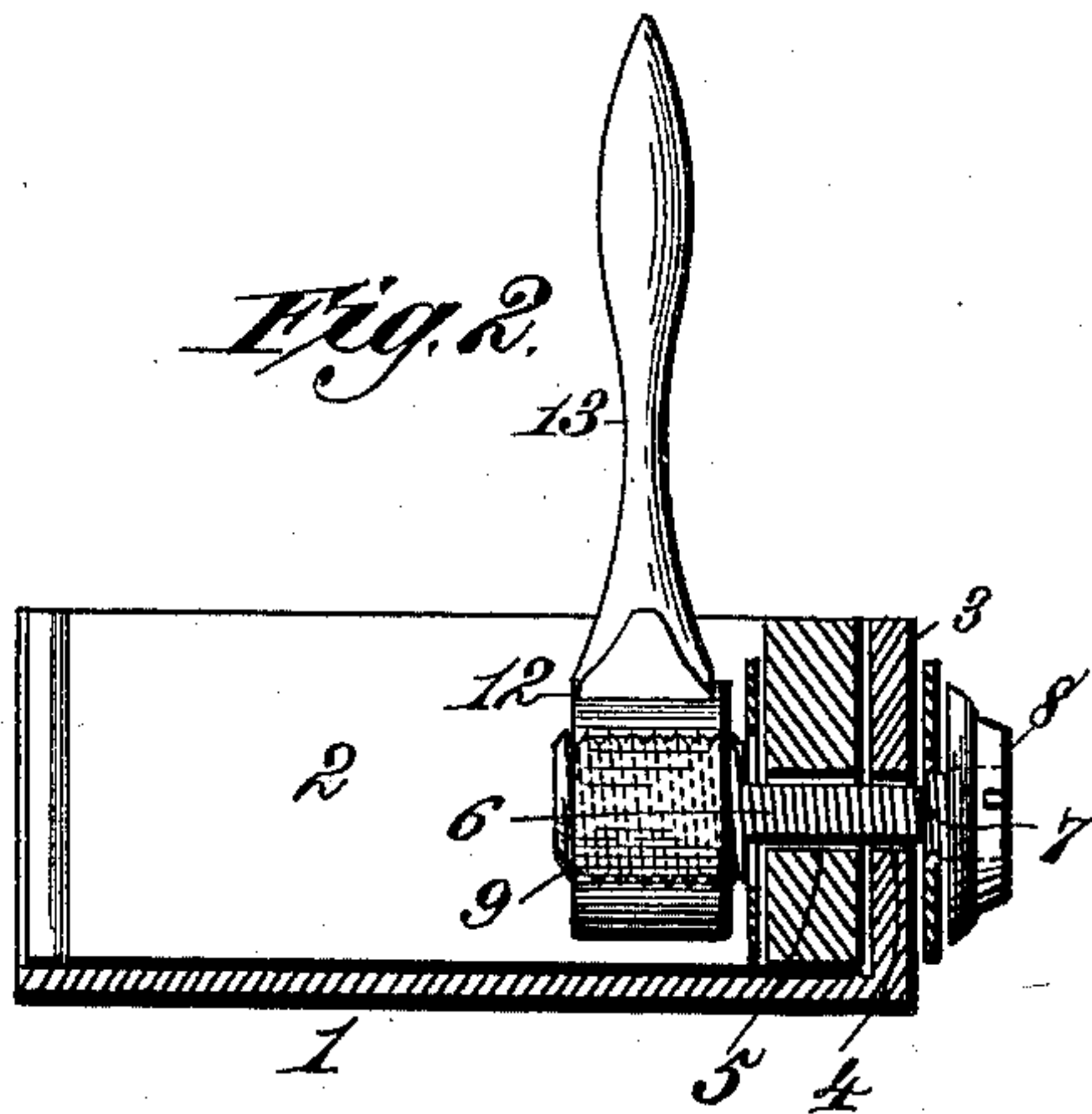
No. 431,440.

Patented July 1, 1890.

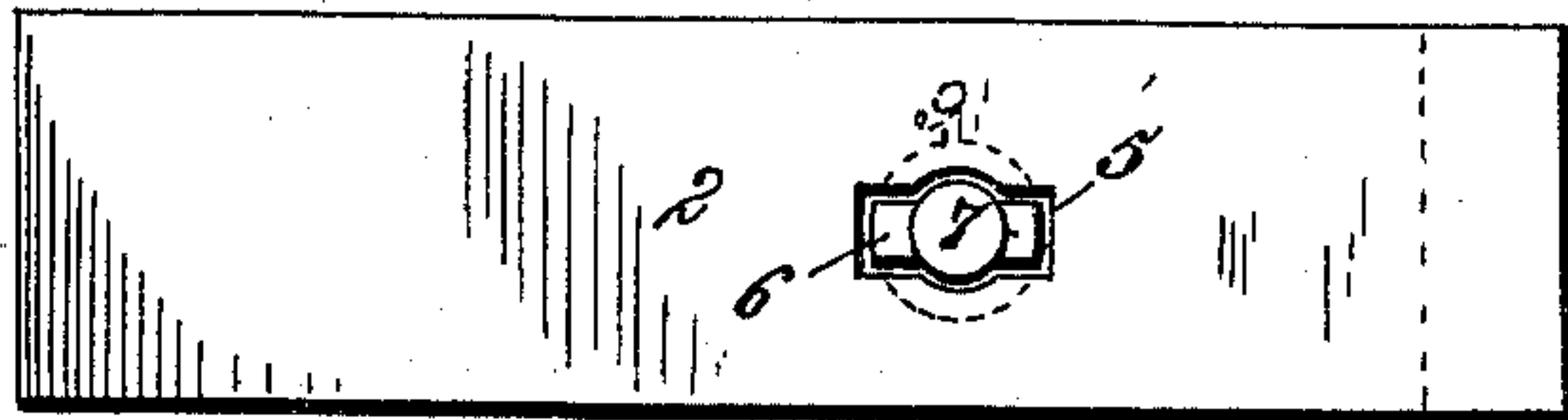
*Fig. 1.*



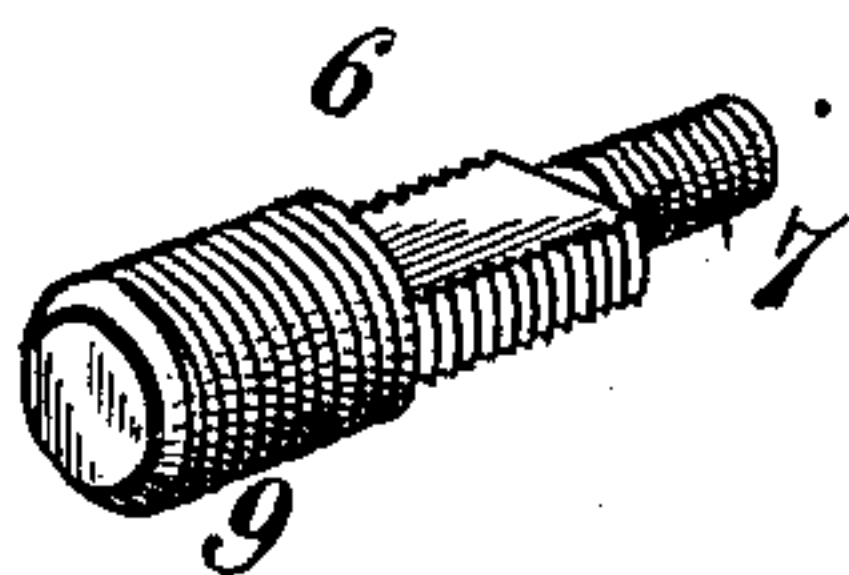
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses,  
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By

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# UNITED STATES PATENT OFFICE.

WILLIAM FLETCHER COMBS, OF MACON, GEORGIA.

## PRINTER'S COMPOSING-STICK.

SPECIFICATION forming part of Letters Patent No. 431,440, dated July 1, 1890.

Application filed January 30, 1890. Serial No. 338,547. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM FLETCHER COMBS, a citizen of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented new and useful Improvements in Printers' Composing-Sticks, of which the following is a specification.

My invention relates to certain novel and useful improvements in the composing-sticks ordinarily used by printers in setting type.

It is the purpose of my invention to provide simple means whereby the stick may be broken and reset to a different measure by a single instantaneous and easy movement and held by a fastening having great strength, which can be loosened and reset in the shortest possible time, and which will hold the knee and back of the stick in true and correct relations one to another.

It is my further purpose to provide a fastening for the adjustable knee of a printer's stick which may be released and reset by the single and comparatively limited movement of a lever-nut arranged within convenient reach of the thumb of the printer or composer, the construction being such that all wear and lost motion is readily and easily taken up by a simple adjustment of an independent thumb-nut from time to time.

To accomplish these purposes my invention involves the features of construction, the combination or arrangement of devices, and the principles of operation hereinafter described, and set forth in the claim, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of a printer's composing-stick embodying my invention. Fig. 2 is a transverse central section of Fig. 1, taken through the axis of the stud-bolt. Fig. 3 is an elevation of the knee, showing the stud-bolt in place, but the nuts removed. Fig. 4 is a detail perspective of the stud-bolt, its nuts being removed.

In the said drawings, the reference-numeral 1 denotes a composing-stick of substantially the ordinary form and provided with a movable knee or bracket 2, which is adjustable upon the back 3 of the stick in either direction. It is of the highest importance that this knee be capable of an easy and instantaneous adjustment, and that it be firmly

locked and readily unlocked after each adjustment in the desired position without an extensive movement of the locking device 55 and without the exertion of material force upon the part of the operator.

In the back 3 of the stick I form a central or substantially central longitudinal slot 4, extending throughout the greater part of the length of said back. In the knee 2, which consists of a right-angled bracket having one member sliding upon the back 3, is formed a mortise 5, which is arranged in alignment with the slot 4. Adjustable within the slot 65 is a stud-bolt 6, having a flattened shank running or moving in said slot and preventing the stud-bolt from turning upon its axis. Upon one end of this stud-bolt is formed an enlargement 7, which is threaded exteriorly 70 and lies outside of the back 3 of the stick, where it receives a screw-collar or thumb-nut 8, turned thereon and lying close to the outer face of the back, but not obstructing the free adjustment of the bolt in the slot. Upon the 75 other end of the stud-bolt 6 is a second enlargement 9 of greater diameter than the first, the construction being such that when the knee is in place and the bolt inserted, which is effected by means of an enlargement 10 in 80 or near the end of the slot, the enlarged projection 9 will project beyond the inner face of the knee. The exterior of this enlarged head is screw-threaded in a direction contrary to that of the thread of the other and smaller 85 head, and it receives and engages a female screw-thread formed in one end of a lever-nut 12, the handle or lever portion 13 of which is suitably fashioned to be operated by the thumb or finger of a compositor. The swing- 90 ing movement of the handle or lever portion 13 causes the nut 12 to traverse the enlarged head 9 to or from the adjustable knee, and the arrangement shown is such that when the handle or lever portion is swung down beside the knee, as shown in Fig. 1, the nut 95 moves toward and binds against the knee, thereby locking or clamping the latter in a fixed position, while a reverse movement of the handle or lever portion causes the nut to 100 recede on the enlarged head to release the knee as represented in Fig. 2.

I have exhibited the edges of the flattened part of the stud-bolt as threaded; but this is



insignificant. And I have shown the enlarged head as provided with a single continuous male thread; but I do not confine myself to a single thread, as this thread can be varied  
5 without changing the character of my invention.

For book and job offices, where composing-sticks must be so frequently broken to suit different measures or lengths of line, this in-  
10 vention provides simple and easily-operated means for effecting a universal adjustment, adapted to every variety of requirement, firmly locking and preserving the accurate re-  
lations of the parts, and providing a most con-  
15 venient device for instantly breaking and re-setting a stick to any desired measurement.

What I claim is—

The combination, with a printer's composing-stick having its back provided with a longitudinal slot and its knee or bracket adjust- 20  
able beside the slotted back, of a stud-bolt on the knee, which extends through and is confined in place to move along the slot, and is provided with an enlarged screw-threaded head, and a lever-nut having a female thread 25  
engaging and traversing the enlarged screw-threaded head to lock and release the knee, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM FLETCHER COMBS.

Witnesses:

JNO. E. O'CONNELL,

W. B. BIRCH.