

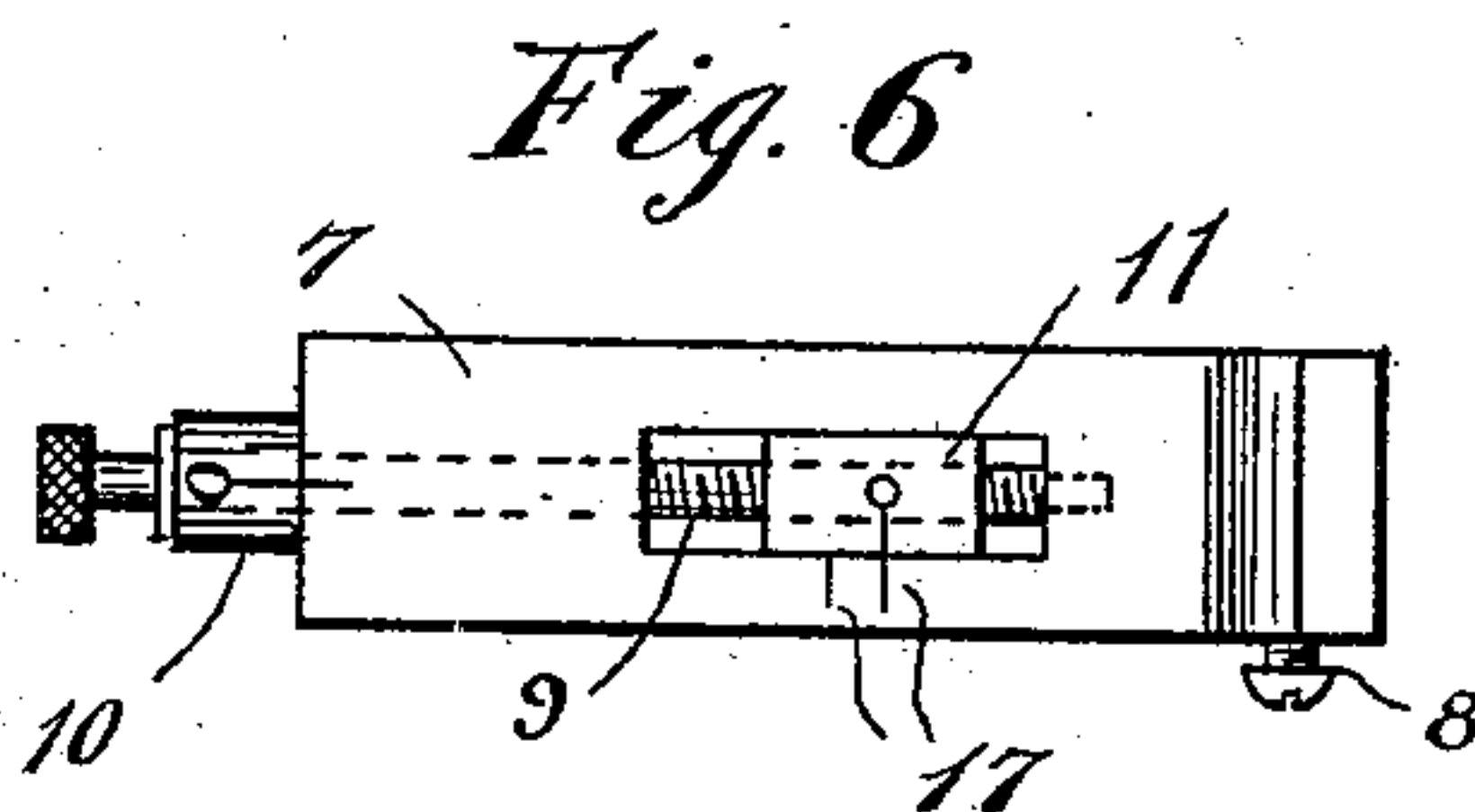
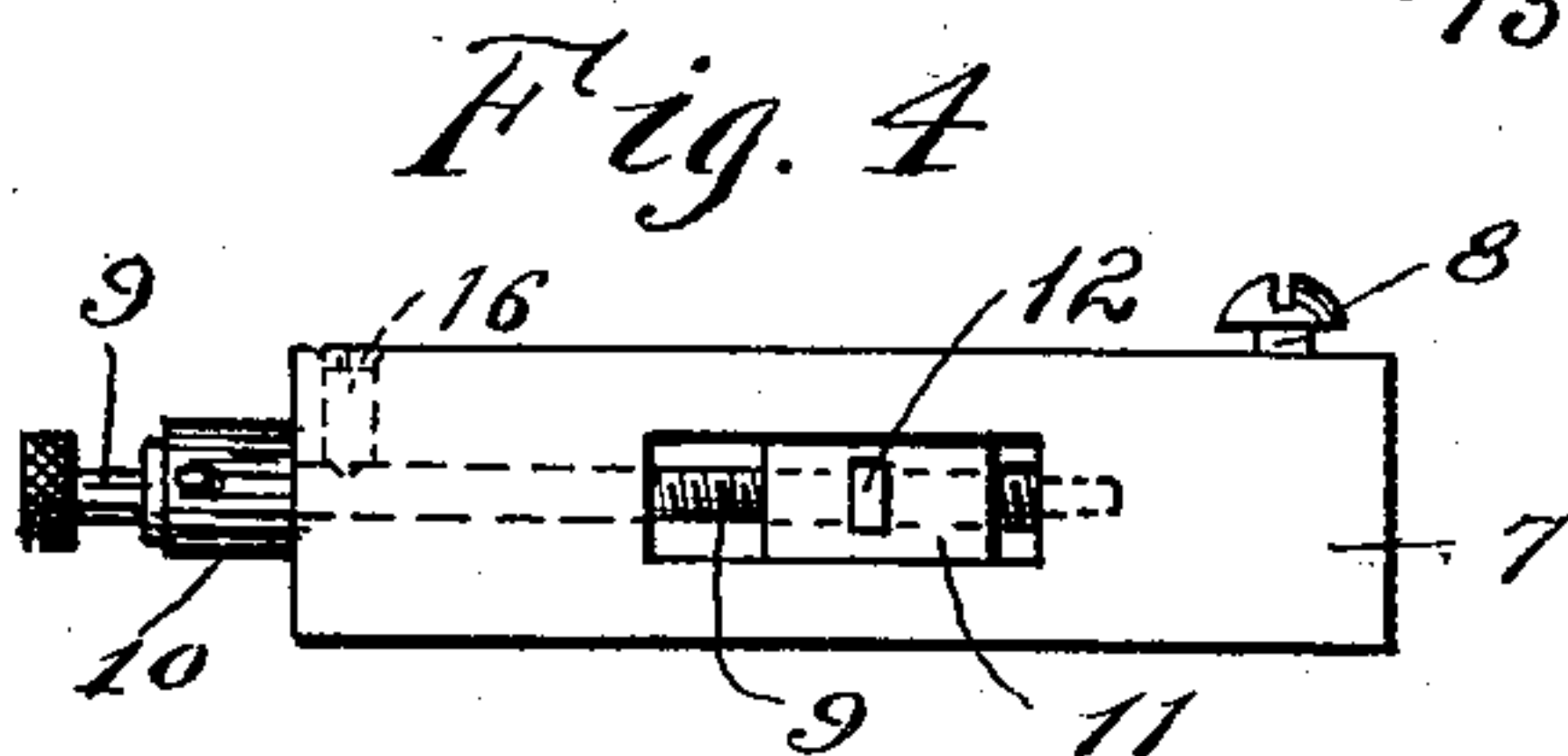
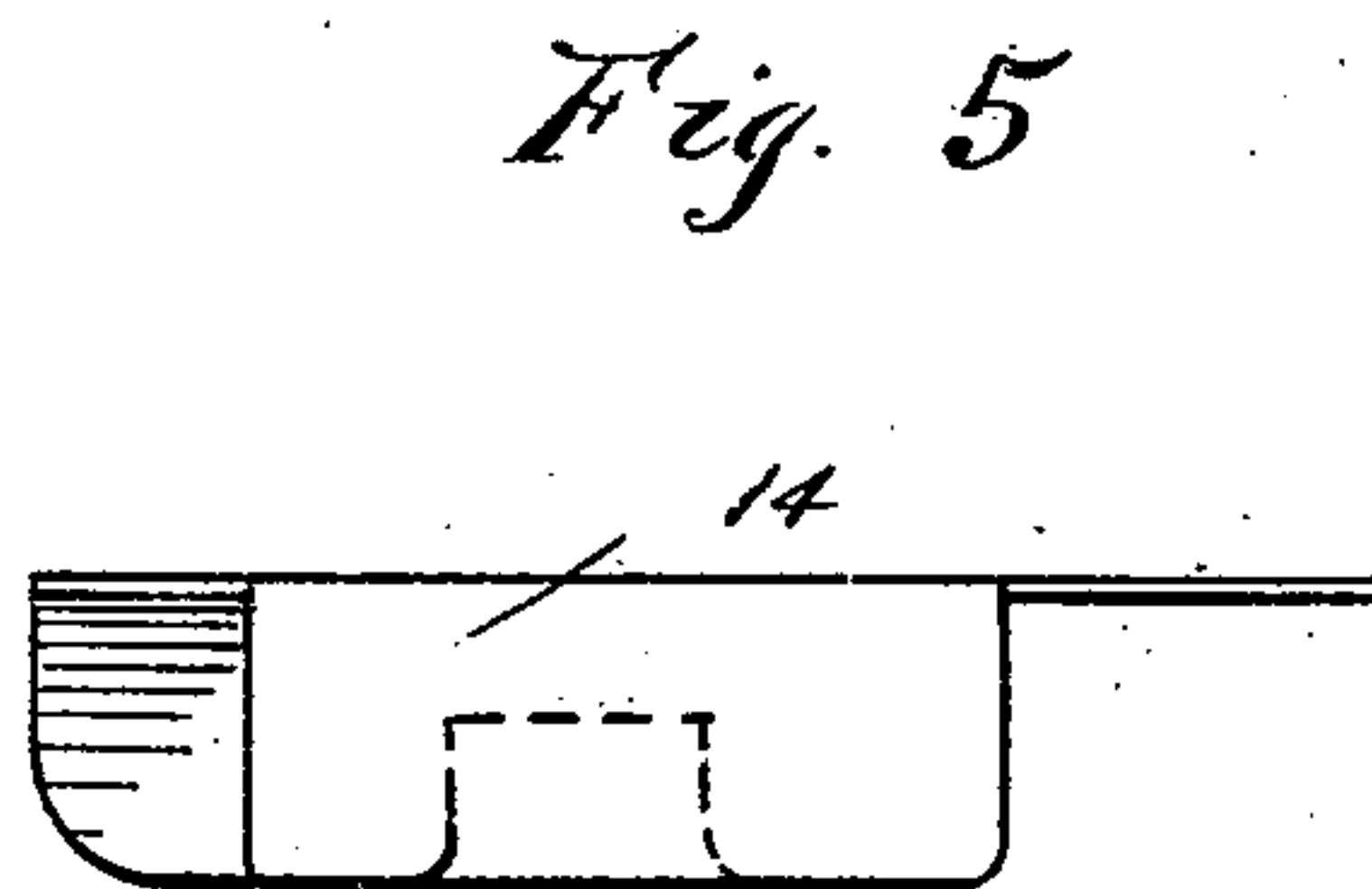
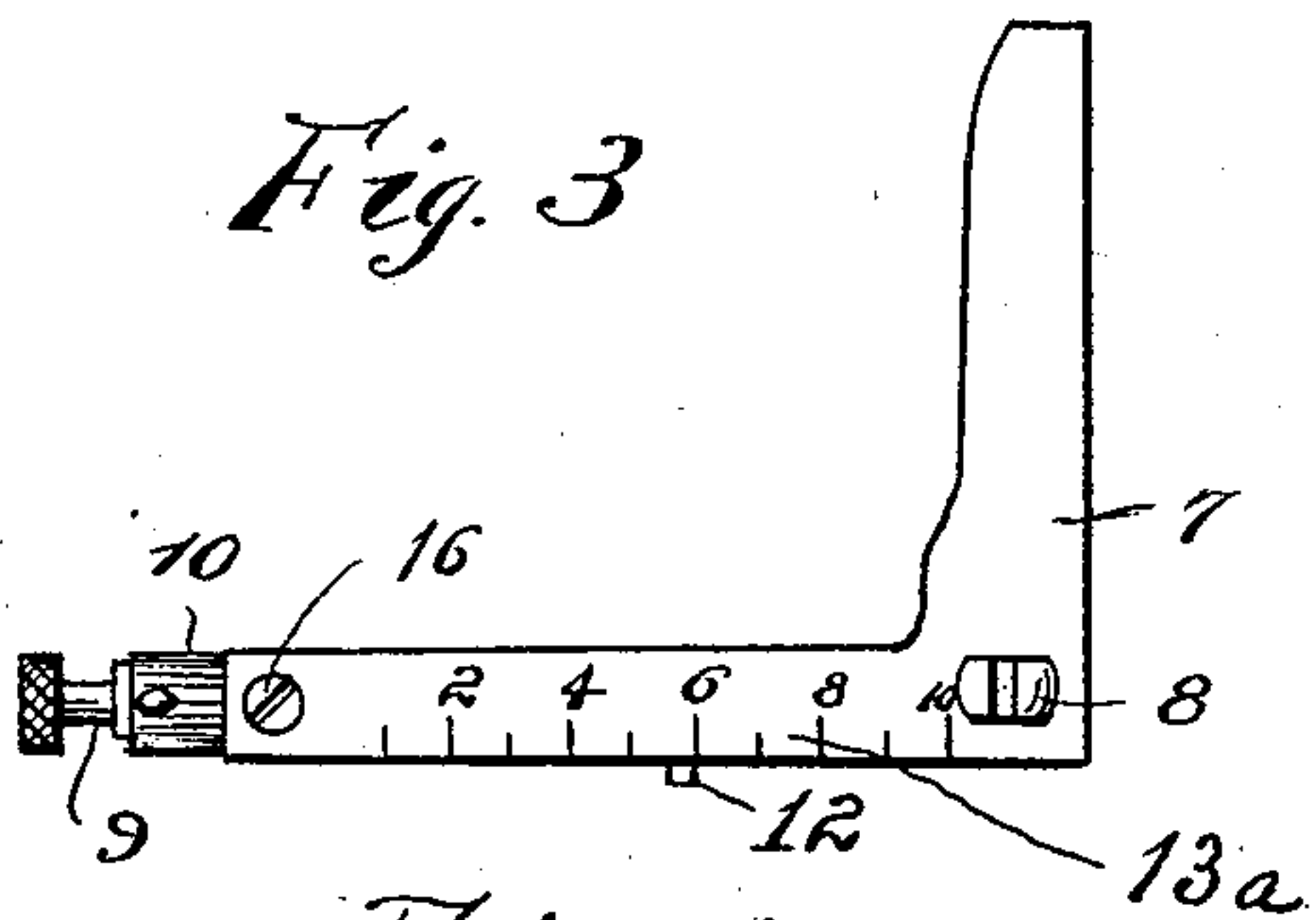
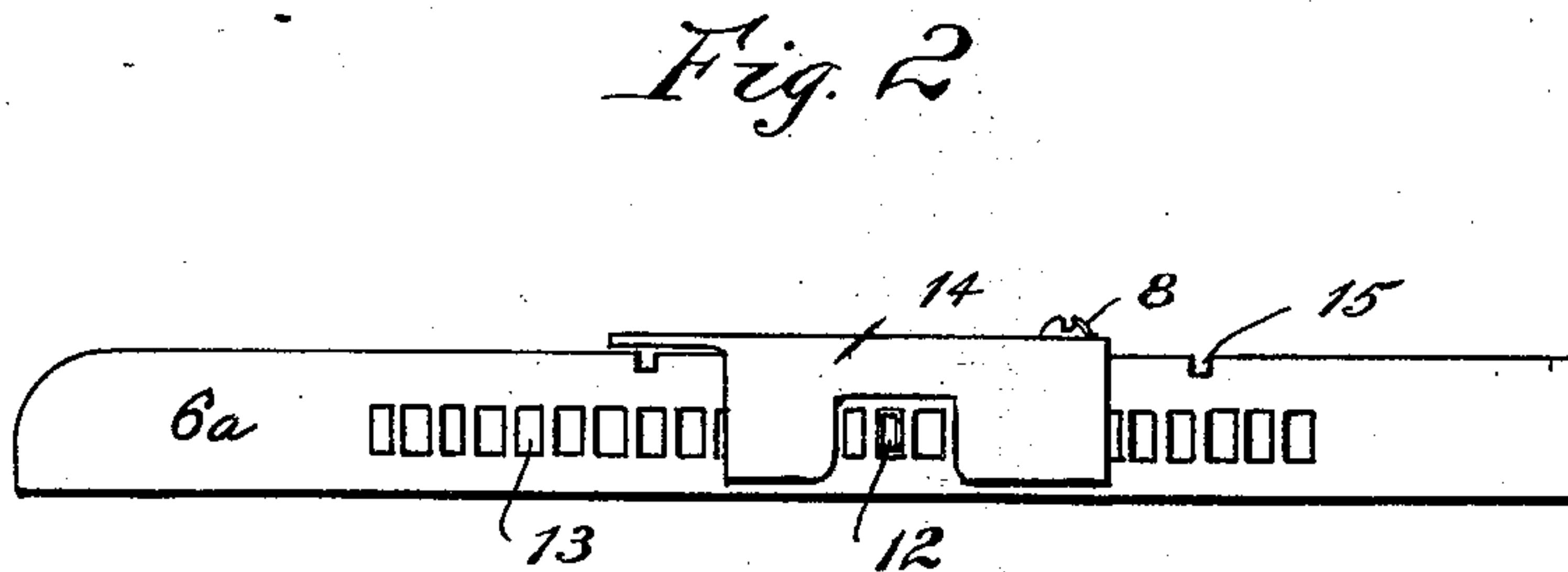
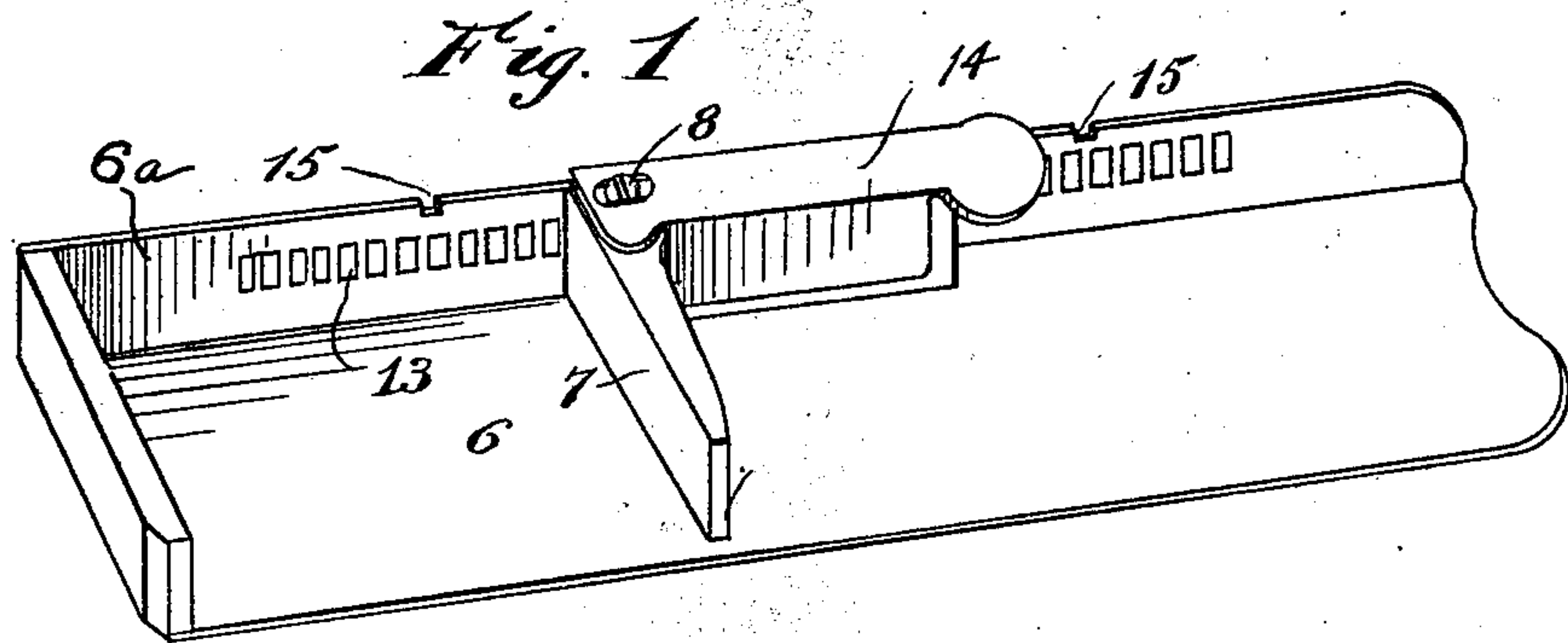
No. 685,142.

Patented Oct. 22, 1901.

O. F. HOLMGREN.
COMPOSING STICK.

(Application filed Apr. 19, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

OSCAR F. HOLMGREN, OF CHICAGO, ILLINOIS.

COMPOSING-STICK.

SPECIFICATION forming part of Letters Patent No. 685,142, dated October 22, 1901.

Application filed April 19, 1901. Serial No. 56,611. (No model.)

To all whom it may concern:

Be it known that I, OSCAR F. HOLMGREN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Composing-Sticks; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 the figures of reference marked thereon, which form a part of this specification.

15 This invention relates to improvements in composing-sticks in which the knee is removable and adjustable; and it is designed to provide a means to readily and correctly set the knee according to the length of the line desired.

A further object is to provide a stick with scales indicating in ems of various sizes of type the length of the line.

25 A further object is to provide a fine and exact adjustment for the knee, whereby any error or variation of the stick, particularly that due to wear of the parts, may be corrected.

30 A further object is to provide a stick with a scale not apt to become obliterated by use. Existing sticks have the objection that by use the parts become worn and the space of the stick becomes of improper or varying width, whereby the rules and type do not fit, permitting narrow type to drop off the ends of the line; also, when parts of a form are set in different sticks they will not justify and cannot be securely locked in the chase. Hence such sticks, containing no means to take up the wear, soon become worthless.

40 With such objects and to correct such defects my invention consists in the parts and arrangement hereinafter specified, and illustrated in the drawings, in which—

45 Figure 1 is a perspective view of a stick. Fig. 2 is a back view thereof. Fig. 3 is a front view of the knee; Fig. 4, a bottom view thereof, and Fig. 5 is a top view of the clip. Fig. 6 is a top view of the knee.

50 The bottom of the stick is indicated at 6, and the back thereof at 6^a. The knee 7 is provided near its corner or bend with a headed pin 8, adapted to engage a detachable clip 14.

The back 6^a of the stick is provided with perforations 13, which constitute a scale of type-measure, and the longitudinal branch of the knee has on its face a scale 13^a, corresponding in gradation to the scale of the perforations 13. A micrometer adjustment is formed for the knee by means of micrometer-screw 9, scale 10, and block 11, which block slides in a recess formed in the longitudinal branch of the knee and has a downwardly-projecting stud 12, adapted to enter and fit the perforations 13 in the back of the stick. A set-screw 16 serves to bind the micrometer-screw at the desired adjustment.

Notches 15 in the back of the stick indicate tens of ems in the stick when registered with the graduation "10" on the scale 13^a of the knee and by relation with the scale afford a means of setting the stick at the length of line desired. Thus to set the stick at ten ems the knee is put in the stick with its graduation "10" at the first notch. To set it at fourteen ems, the knee is placed with its mark "4" at the second notch, &c.

80 The scales of the stick correspond to ems of a certain size of type—*e. g.*, pica—but it may be used for type of different size by means of the micrometer adjustment referred to. Nonpareil may be set in a stick scaled to pica by doubling the scales, which would thus indicate any even measure in nonpareil, the scale of the perforation being pica. An uneven measure in nonpareil can be secured by moving the block 11 the space of a half-pica, conveniently indicated by the scale 17. The extent of adjustment of the stud 12 is made to equal at least a unit of the scale of perforations 13, whereby the knee is capable of every possible degree of adjustment to indefinite parts of a unit of the scale and the stick adapted to be used for all kinds of type.

95 The headed pin 8 is located near the working face of the knee and forms a catch for the clip 14, whereby the grasp of the clip is brought as near as possible to the working face of the knee, holding the same more firmly than if the clip were at a greater distance. When the clip is in position, it covers the adjusting devices in the knee and protects the same from dirt and unintentional disarrangement. It also covers the scale on the knee and prevents obliteration of the

same. In sticks heretofore made having the scale marked on the bottom thereof the scale soon becomes filled with dirt or obliterated by the wear of the type or the compositor's hand.

5 When the knee is clamped to the back of the stick, the stud 12 projects into the perforations 13, and movement of the knee is thereby prevented. To change the location of the knee, the clip is disengaged and the knee lifted
10 and moved to the desired location.

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

1. In a composing-stick, a series of perforations forming a scale in the back thereof,
15 and a knee having a projecting stud adapted to enter the perforations, said stud having adjustment, longitudinally of the stick, to indefinite parts of a unit of the scale.

20 2. In a composing-stick, a series of perforations forming a scale in the back thereof, a knee having a stud adapted to enter the perforations, means to adjust the stud longitudinally of the stick to indefinite parts of a unit
25 of the scale, and a clip to bind the knee to the back.

3. In a composing-stick, in combination, a body the back of which has a series of perforations forming a scale, a movable knee having a stud adapted to enter the perforations,
30 and a scale on the knee related to the scale of perforations, said stud having adjustment, longitudinally of the stick, to indefinite parts

of a unit of the scale, whereby the adjustment of the knee is indicated. 35

4. In a composing-stick, in combination, a body the back of which has a series of perforations and a knee having an adjustable stud adapted to enter the perforations, and a micrometer-screw to adjust the stud. 40

5. In a composing-stick, in combination, a body the back of which has a series of perforations, a knee having a stud adapted to engage the perforations, and a screw adapted to move the stud longitudinally relative to the
45 knee.

6. In a composing-stick, in combination, a body the back of which has a series of perforations, and a knee whose longitudinal branch has a sliding block carrying a stud adapted
50 to engage the perforations, and means to adjustably move the block, and a scale to indicate the extent of movement of the block.

7. In a composing-stick, in combination, a body the back of which has a series of perforations, a knee having a sliding block, a stud projecting from the block and adapted to engage the perforations, a screw to relatively
55 adjust the knee and block, and a scale indicating the adjustment. 60

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

OSCAR F. HOLMGREN.

Witnesses:

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E. M. STALEY.