

(No Model.)

W. B. FISH.
COMPOSING STICK.

No. 441,475.

Patented Nov. 25, 1890.

Fig. 1.

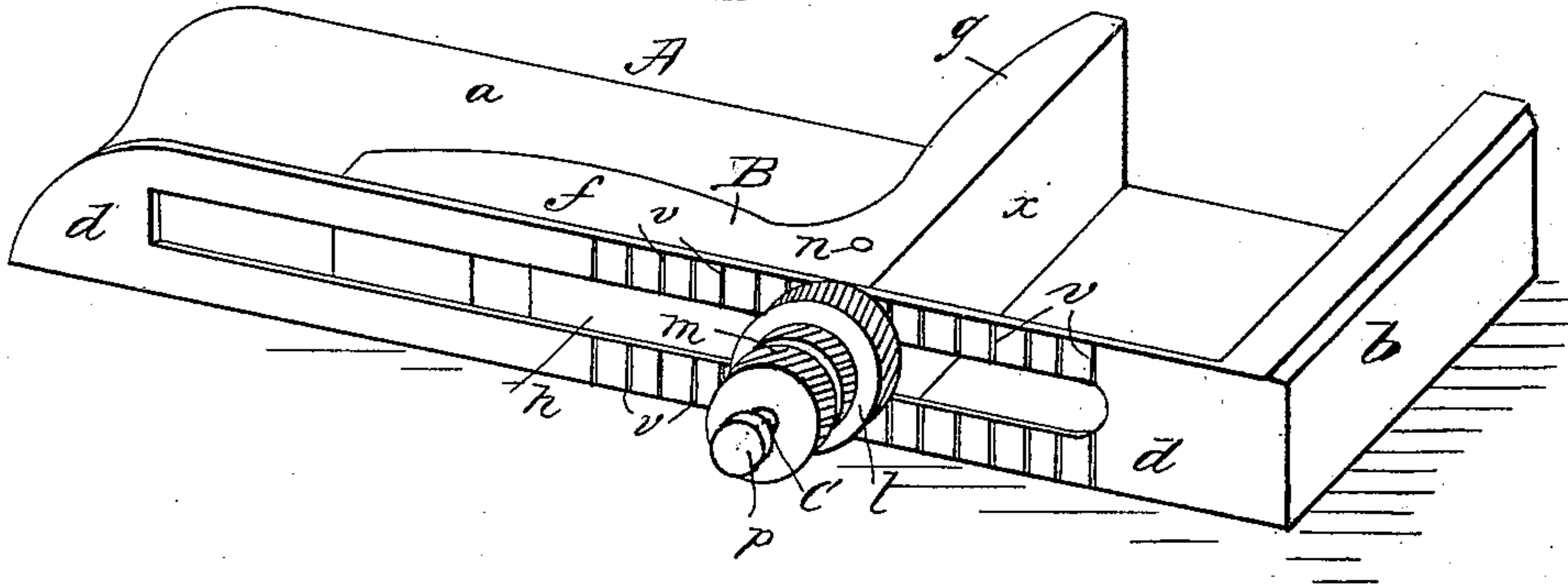


Fig. 2.

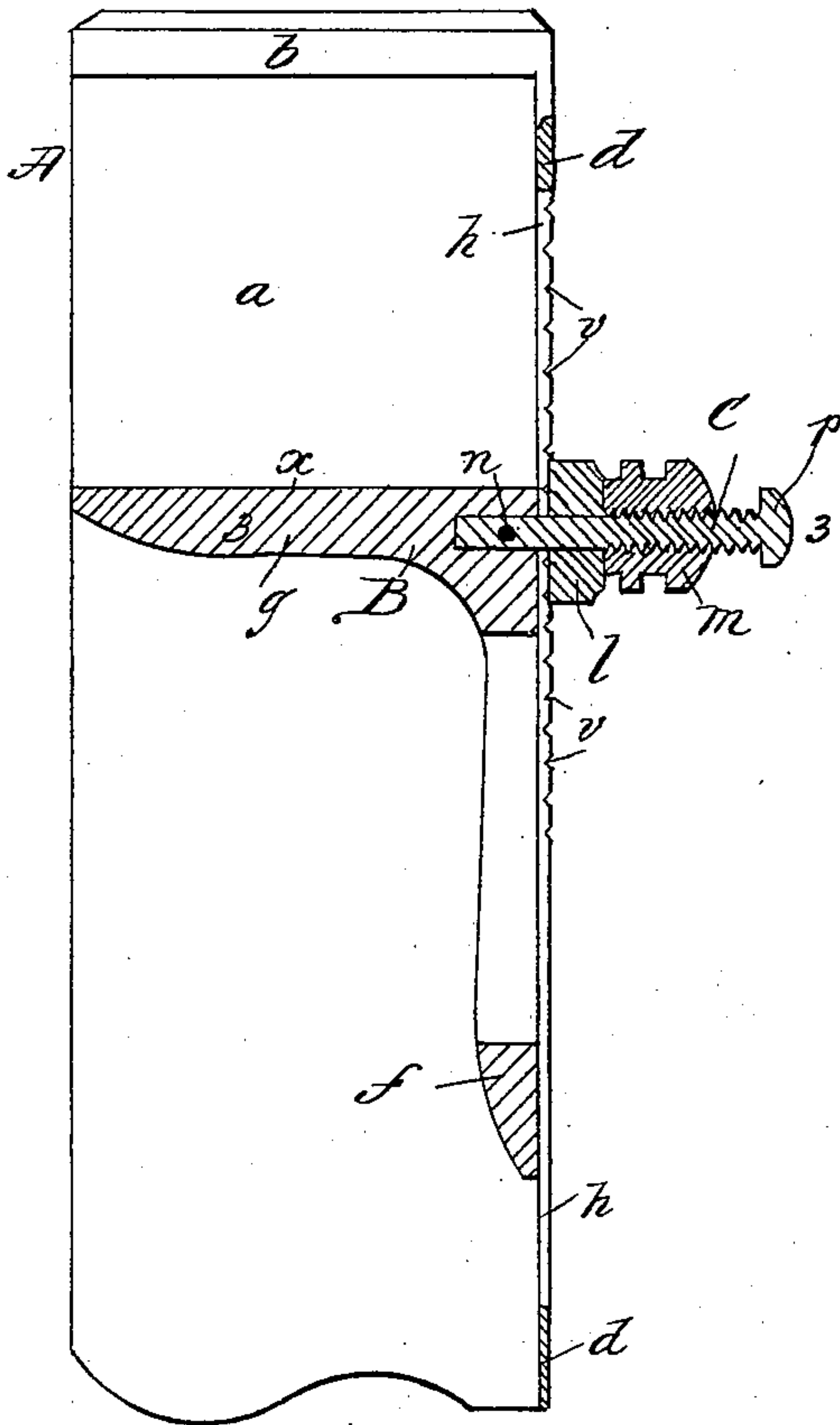


Fig. 3.

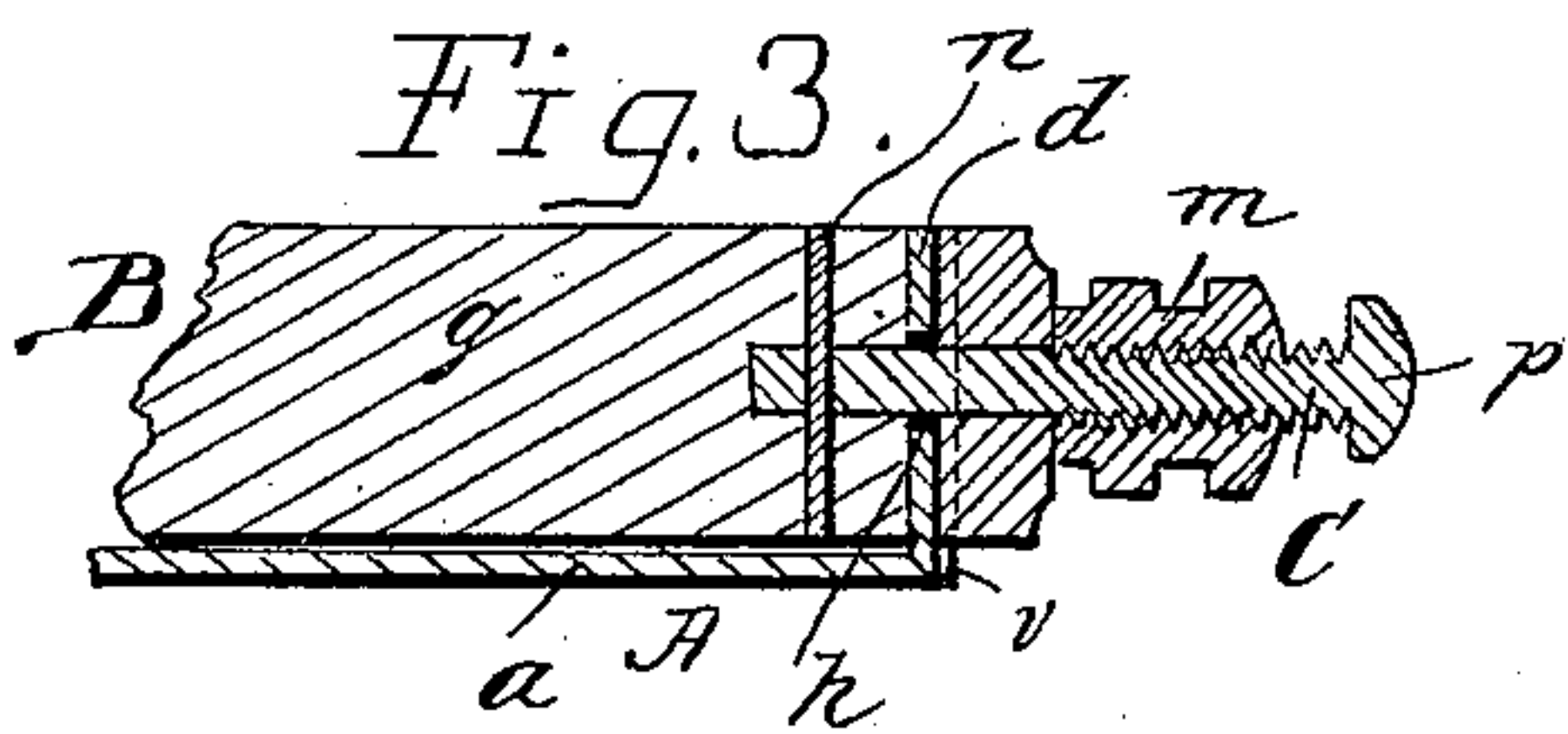


Fig. 4.

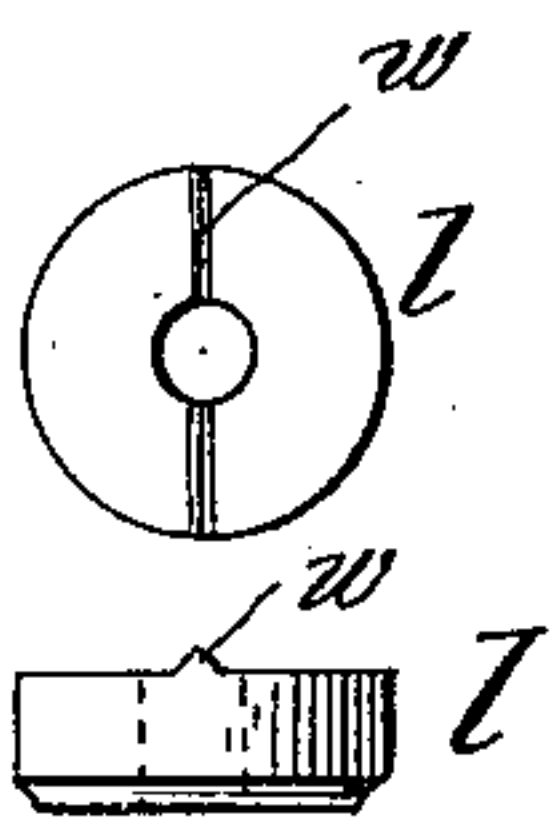
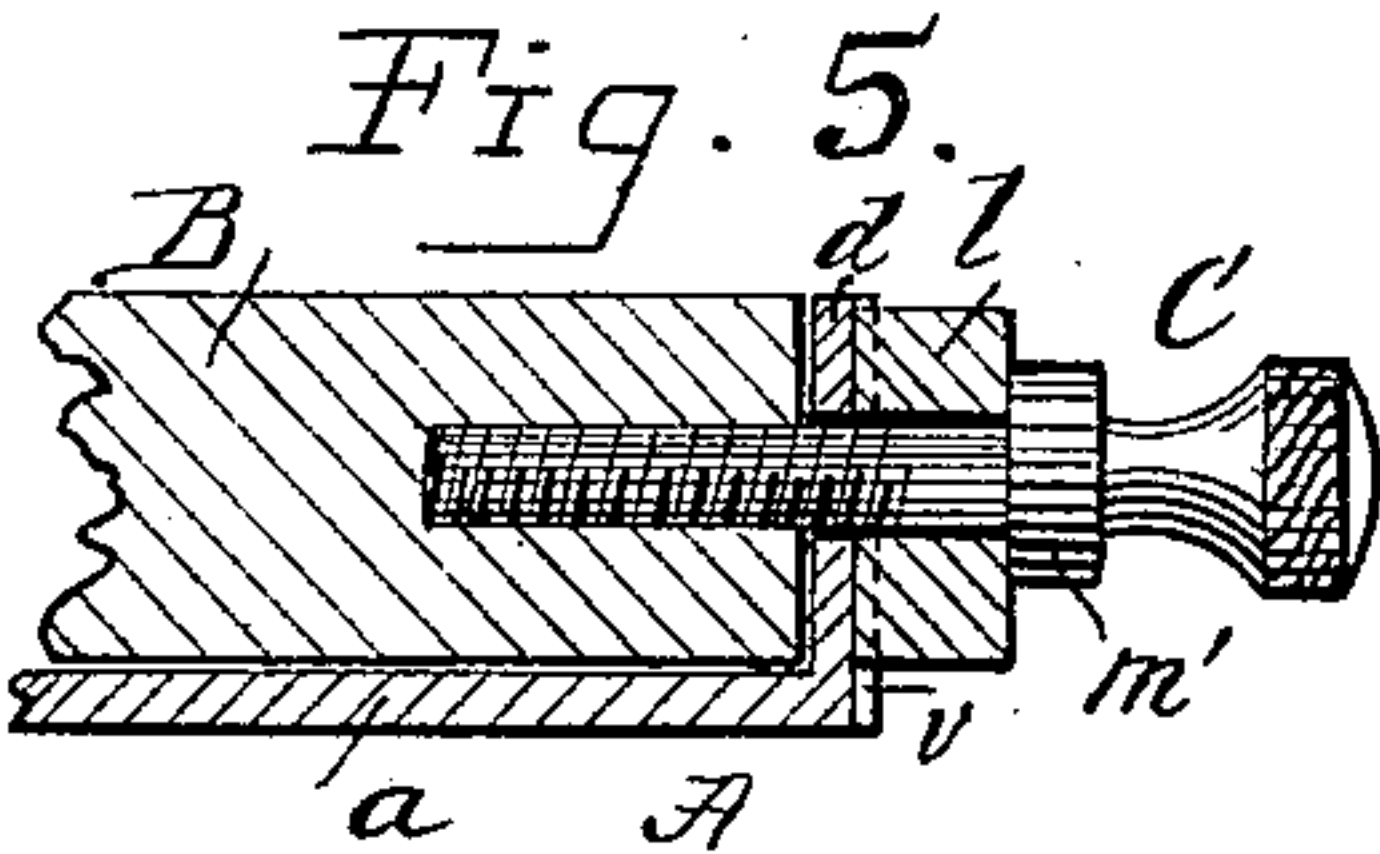


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

WALLIACE B. FISH, OF SPRINGFIELD, MASSACHUSETTS.

COMPOSING-STICK.

SPECIFICATION forming part of Letters Patent No. 441,475, dated November 25, 1890.

Application filed June 9, 1890. Serial No. 354,692. (No model.)

To all whom it may concern:

Be it known that I, WALLIACE B. FISH, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Printers' Composing-Sticks, of which the following is a specification.

This invention relates to improvements in printers' composing-sticks, the object of the invention being to improve the construction of devices of the class named, whereby the movable knee-piece may be more readily adjusted and confined in adjustment upon the supporting-frame than heretofore; and the invention consists in the construction and combination of parts, all substantially as will hereinafter more fully appear, and be set forth in the claim.

Reference is to be had to the accompanying drawings, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the composing-stick. Fig. 2 is a plan view thereof, with, however, some parts shown in horizontal section. Fig. 3 is a partial transverse section taken on the line 3 3, Fig. 2. Fig. 4 illustrates in detail a part to be hereinafter particularly mentioned. Fig. 5 is a view of a slightly-modified construction to be hereinafter mentioned.

A represents the frame of the composing-stick, which comprises the base *a*, the transverse head-piece *b*, and the longitudinal back *d*, as common in this class of contrivances.

B represents the knee-piece, comprising the longitudinal member *f* and the transverse member *g*, said knee-piece being of the general form common in composing-sticks.

The back *d* of the frame is provided with the longitudinal slot *h*, as clearly shown in Figs. 1 and 2.

C represents a spindle, suitably screw-threaded as to a portion of its length, which passes through the said slot *h* and with a suitable engagement into the knee-piece, there being upon said spindle a sleeve *l*, which bears against the outer face of the back *d*, and is at will confined thereagainst and under suitable pressure by a part or projection on or of said spindle when said part is due to the action of the screw-threads in the manipulation of the device brought against the sleeve. As

particularly shown in the views Figs. 1 to 3, inclusive, the spindle C has its outer extremity screw-threaded, receiving thereon the nut *m*, which in this instance constitutes the element for crowding the sleeve *l*, which is also placed upon the spindle inside of the nut, and the inner extremity of the spindle is passed through said slot *h* and transversely into the knee-piece, being held therein against rotation by the pin *n* or otherwise. The spindle C at its outer end is preferably provided with a head *p* to prevent the nut from being turned off of the spindle and becoming lost. The outer face of the frame-back *d* is provided with a series of grooves *v v*, which are preferably arranged at "em" spaces, and the sleeve *l* is correspondingly provided with a rib *w* to fit said spaces, although obviously, in lieu of a series of grooves *v* on the back, the back may be provided with a similarly-arranged series of ribs, the groove being within the inner face of the sleeve *l*. It will readily be understood that on loosening the nut *m* the sleeve may be released from its bind and engagement with the outer face of the back, and the knee-piece may be slid longitudinally in either direction, so as to present its working-face *x* at a distance from the inner face of the head *b* corresponding to as many "ems" as is the width of the matter to be set up, and it will be readily understood that the provision of the spaced grooves *v* for the engagement therewith of the sleeve-rib *w* enables a most ready and accurate adjustment of the knee-piece.

It will manifestly be no departure from the present invention to substitute in lieu of a spindle which is fixed to the knee-piece, as shown in Figs. 2 and 3, and having a nut thereon engaging an outer screw-threaded portion to operate, as described, upon the sleeve, a spindle C, by its inner portion screw-engaging the knee-piece and movable inwardly and outwardly relative thereto and having a fixed shoulder *m'* to act in the place of the nut *m* to bear upon the said sleeve *l*, this latter construction being indicated by the drawings, Fig. 5.

In composing-sticks where the series of em-spaced grooves *v* might be omitted the sleeve *l* might also be omitted, and the confinement of the knee-piece could then be secured by

the nut *m* being turned to a bearing against the outer face of the back *d* when a non-rotatable spindle is used, as in Fig. 2, or when the spindle is constructed as in Fig. 5 the enlargement or shoulder *m'* may bear directly against the said back *d*; but as the provision of the determining grooves and of the engaging element or sleeve *l* is deemed a matter of great desirability it will be generally considered necessary, or at least far preferable, to have a sleeve to engage the grooves which is free and loose upon the spindle.

What I claim as my invention is—

In a composing-stick, the combination, with the frame having in its back the longitudinal slot and provided with the suitably-spaced

grooves and the knee-piece, of a spindle passed transversely through said slot and having an engagement with said knee-piece, a sleeve freely encircling and supported on said spindle next to the frame-back and having on its side next to said grooved back a groove-engaging rib, and means, substantially as described, for forcing said sleeve in the direction of the axis of said spindle and firmly against and by its rib into engagement with a groove in said back, for the purpose set forth.

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Witnesses:

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