

O. F. GROVER.  
 Printers' Composing Stick.

No. 204,432.

Patented June 4, 1878.

FIG. 1.

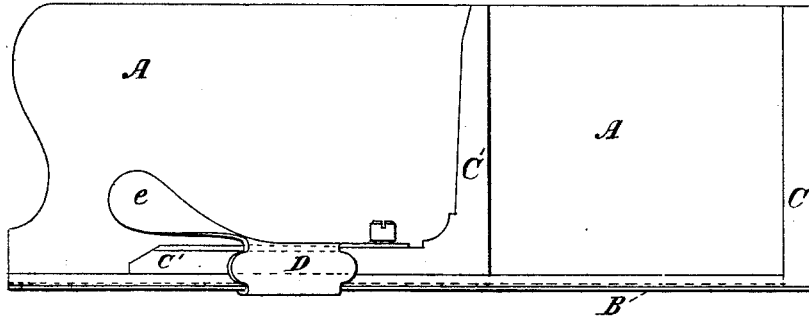


FIG. 2.

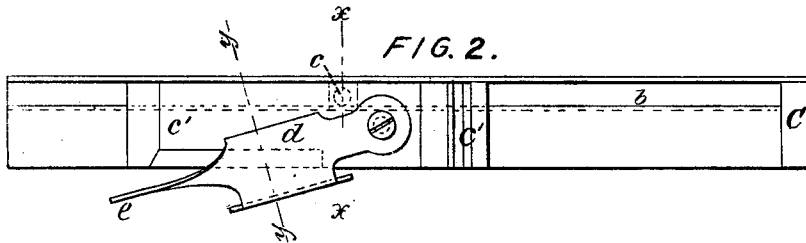


FIG. 3.

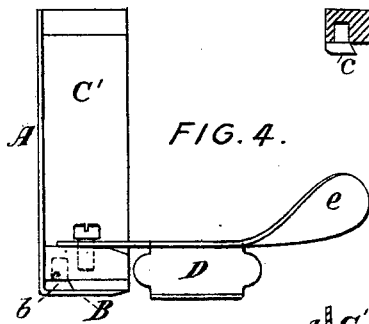
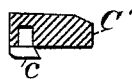


FIG. 4.

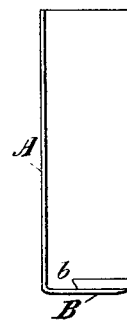


FIG. 5.

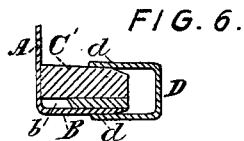


FIG. 6.

WITNESSES.

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 INVENTOR.

# UNITED STATES PATENT OFFICE.

OLIVER F. GROVER, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM QUAIL, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN PRINTERS' COMPOSING-STICKS.

Specification forming part of Letters Patent No. 204,432, dated June 4, 1878; application filed April 25, 1878.

*To all whom it may concern:*

Be it known that I, OLIVER F. GROVER, of Middletown, Middlesex county, Connecticut, have invented, made, and applied to use Improvements in Printers' Composing-Sticks, of which the following is a specification, reference being had to the accompanying drawing, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a front view of my improved composing-stick. Fig. 2 is a top view of the forward portion of the same; Fig. 3, a section of the knee, showing the stud in the same, through the line *xx* of Fig. 2; Fig. 4, an end view of the knee and clamping device; Fig. 5, a view of a section of the shell, showing the groove in same; Fig. 6, a section of Fig. 2 at the line *yy*.

In the drawing like parts of the invention are pointed out by the same letters of reference.

The nature of the present invention consists in certain improvements, as more fully hereinafter set forth, in the construction of printers' composing-sticks, the object of the invention being to provide for the holding of the portion of the stick known as the "knee," when adjusted, firmly in position, so that all danger of the same from slipping or moving is obviated.

To enable those skilled in the arts to make and use my invention, I will describe the construction and operation of the same.

A shows the shell of my composing-stick, provided with the back B and end piece C.

The back B is provided, at or near its lower portion, with a longitudinal groove, *b*, extending its full length, and intended to receive the stud *c*, placed upon the forward side of the knee C' near its base.

C' shows the knee of the composing-stick, composed of a horizontal section of metal, one end of which is bent or swaged up at right angles to it.

Both the horizontal and vertical portions of the knee are made of a height corresponding to that of the back B.

The knee is provided with the stud *c*, placed

upon its forward side near the base, and intended to snugly fit the groove *b* in the back B.

D shows the clamp intended to retain the knee C' in the desired position.

The rear portion of the clamp is swiveled to the back of the longitudinal portion of the knee, and the metal of its upper portion is turned over and down and forms a lip, *d*, so that after the knee has been adjusted in position the lip *d* will extend over and can be depressed so as to embrace or extend over the longitudinal portion or back of the shell A.

A finger-rest, *e*, for facilitating the depression or elevation of the clamp D, is formed by continuing and properly shaping the clamp D in process of manufacture.

Such being the construction, the operation is as follows: The stud *c*, attached to the knee C', fills the groove *b* in the back of the shell A, serving to guide the knee C' as it is moved within the shell A for its adjustment, and assisting the clamping device D to hold the knee C' firmly in position when adjusted to the desired position. The clamping-device when depressed will have its lipped portion thrown over the back of the shell, and, bearing upon the same, will, in conjunction with the stud and groove, hold the knee in the desired position, and prevent any slipping, jostling, or movement of the knee while the stick is in use.

Having now set forth my invention, what I claim as new is—

In a printer's composing-stick, the combination of the following elements: a shell A, provided with a back, B, and end piece C, the back B provided with a longitudinal groove, *b*, to receive a stud, *c*, upon the forward end of the knee C', and a clamp, D, swiveled to the back of the knee C', and provided with a lip, *d*, and finger-rest *e*, constructed and operating substantially as and for the purposes set forth.

OLIVER F. GROVER.

In presence of—

E. W. M. N. STARR,

H. W. B. STARR.