CHARLES E. TROWBRIDGE.

Improvement in Tools for Grooving the Rings of Spinning-Frames.

No. 127,121. Patented May 21, 1872.

Fig. 1.

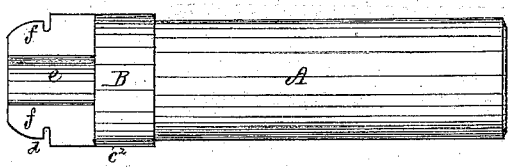


Fig. 2.

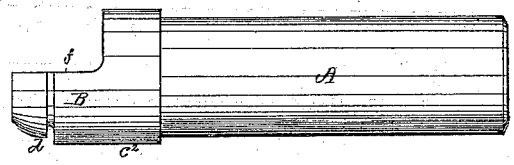


Fig. 3.

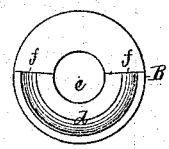


Fig. 4.

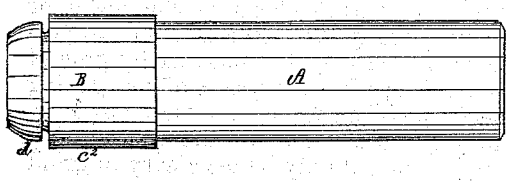


Fig. 5.

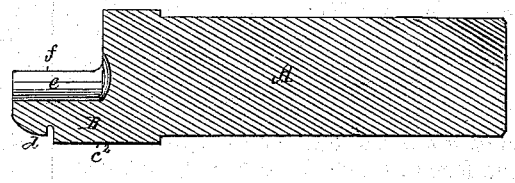


Fig. 6.

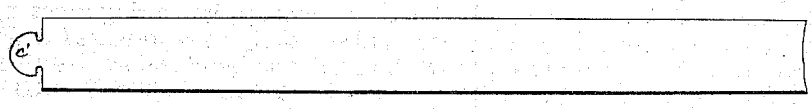


Fig. 7.

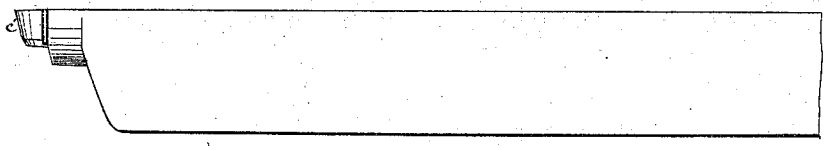
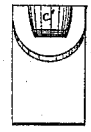


Fig. 8.

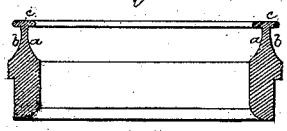


Witnesses.

S. N. Piper.

L. N. Miller

Fig. 9.



Charles E. Trowbridge

by his attorney.

R. H. Eddy

UNITED STATES PATENT OFFICE.

CHARLES E. TROWBRIDGE, OF WHITINSVILLE, MASSACHUSETTS.

IMPROVEMENT IN TOOLS FOR GROOVING THE RINGS OF SPINNING-FRAMES.

Specification forming part of Letters Patent No. 127,121, dated May 21, 1872.

To all persons to whom these presents may come:

Be it known that I, CHARLES E. TROWBRIDGE, of Whitinsville, of the county of Worcester, of the State of Massachusetts, have invented a new and useful Tool for Grooving the Rings of Spinning-Frames; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 a side elevation, Fig. 3 a front end view, Fig. 4 a bottom view, and Fig. 5 a longitudinal section of it. Fig. 6 is a top view, Fig. 7 a side elevation, and Fig. 8 a front end view of the tool in ordinary use before my invention. Fig. 9 is a section of a spinning-frame ring, showing how it is grooved by the tool, the grooves being represented at *a a b b*, and for the purpose of aiding in the formation of the race *c* upon which the traveler is to run.

In order to groove the ring the tool is used like a turning-lathe tool, and while the ring may be fixed to a lathe-arbor or chuck and be in revolution. The grooving part c' of the tool, shown in Figs. 6, 7, and 8, by being, of necessity, tapering, as shown, soon, by being sharpened from time to time, becomes too small or reduced out of proper shape to form the grooves of the necessary size and depth. With my improved tool the grooves are all formed of one uniform size, however much such tool may be worn by the process of sharpening it. Any section of the cutting-head of my new tool taken in a plane at right angles with its axis will present a circular segment in whole or in part.

As represented in the drawing, the cutting-head B of the tool is extended from a cylindrical shank, A, and consists of a semi-cylinder, c^2, terminating in a molding, *d*, which has, in section, the counter-shape of the groove to be cut. The cutting-head is channeled or chambered axially, as shown at *e*, for the purpose of enabling it to be more easily ground down or reduced in the process of sharpening it. Such chambering of the tool, however, may be dispensed with. As the tool may become dulled it will only be necessary to grind down the surfaces *f f*.

I claim—

The new spinning-frame ring grooving-tool, made substantially as represented in Figs. 1, 2, 3, 4, and 5, and hereinbefore described.

CHARLES E. TROWBRIDGE.

Witnesses:
R. H. EDDY,
J. R. SNOW.