

J. B. CLARK.

Apparatus for Heating Bolt Blanks.

No. 116,158.

Patented June 20, 1871.

Fig. 1.

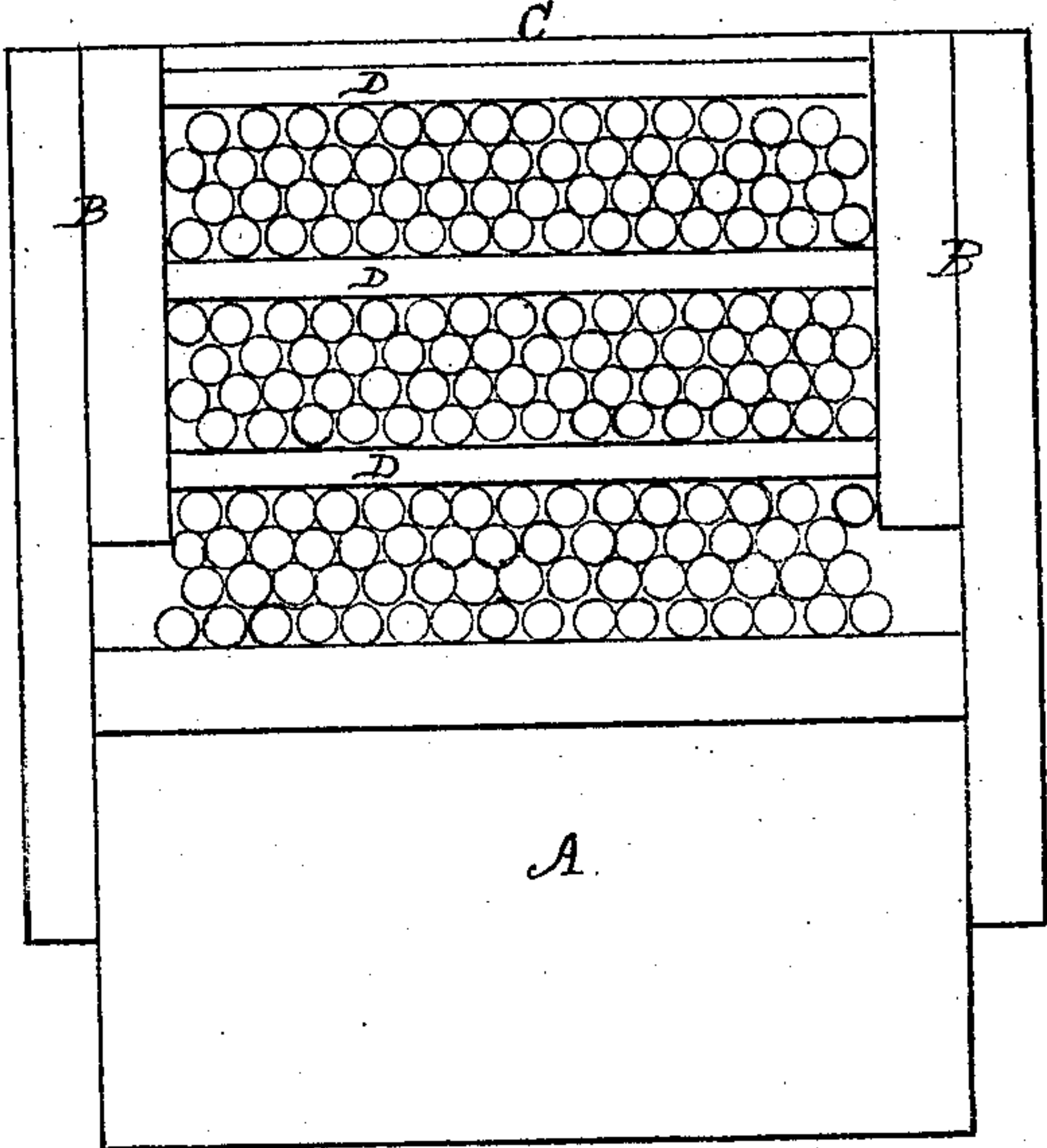


Fig. 2.

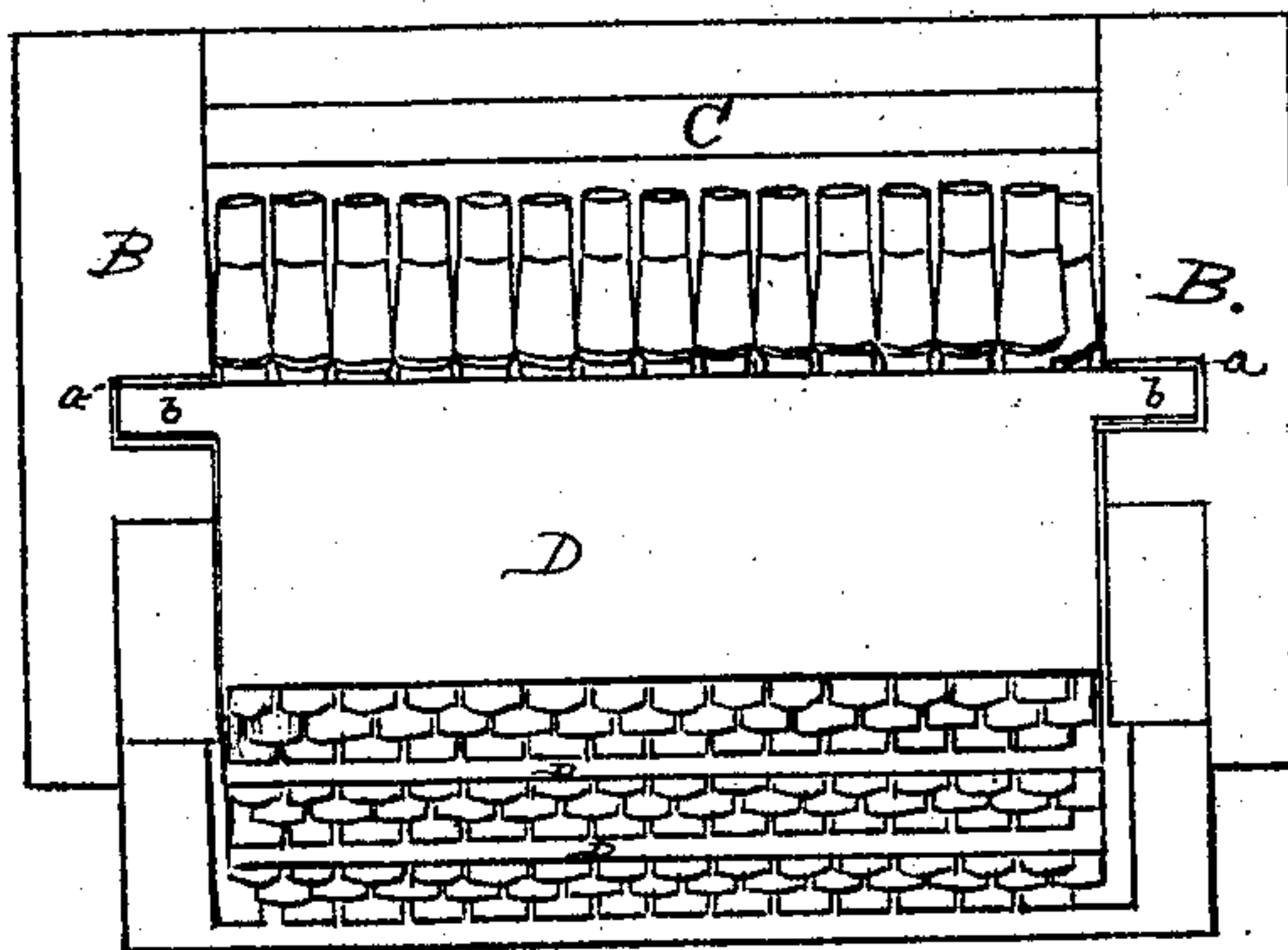


Fig. 3.

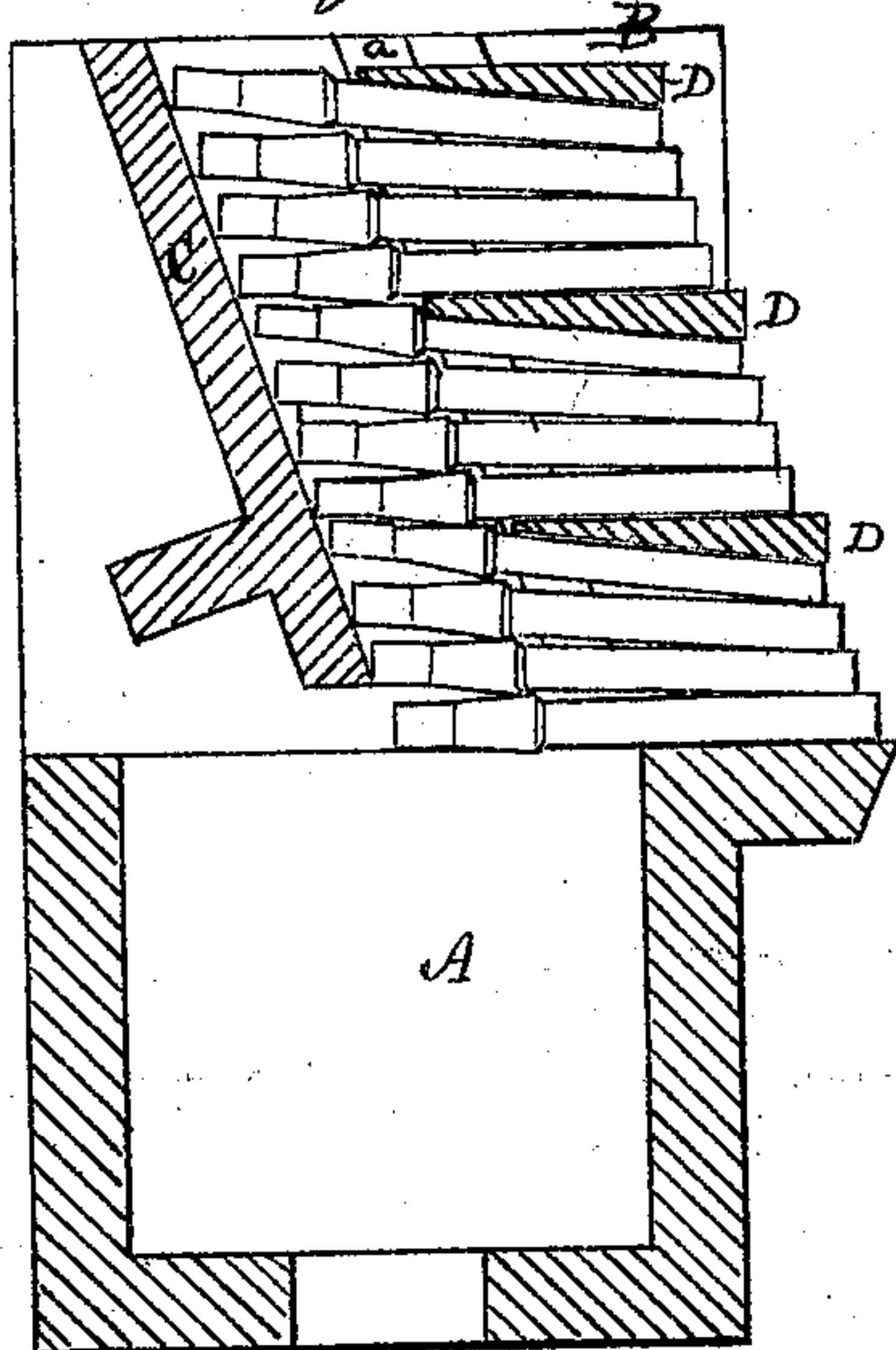
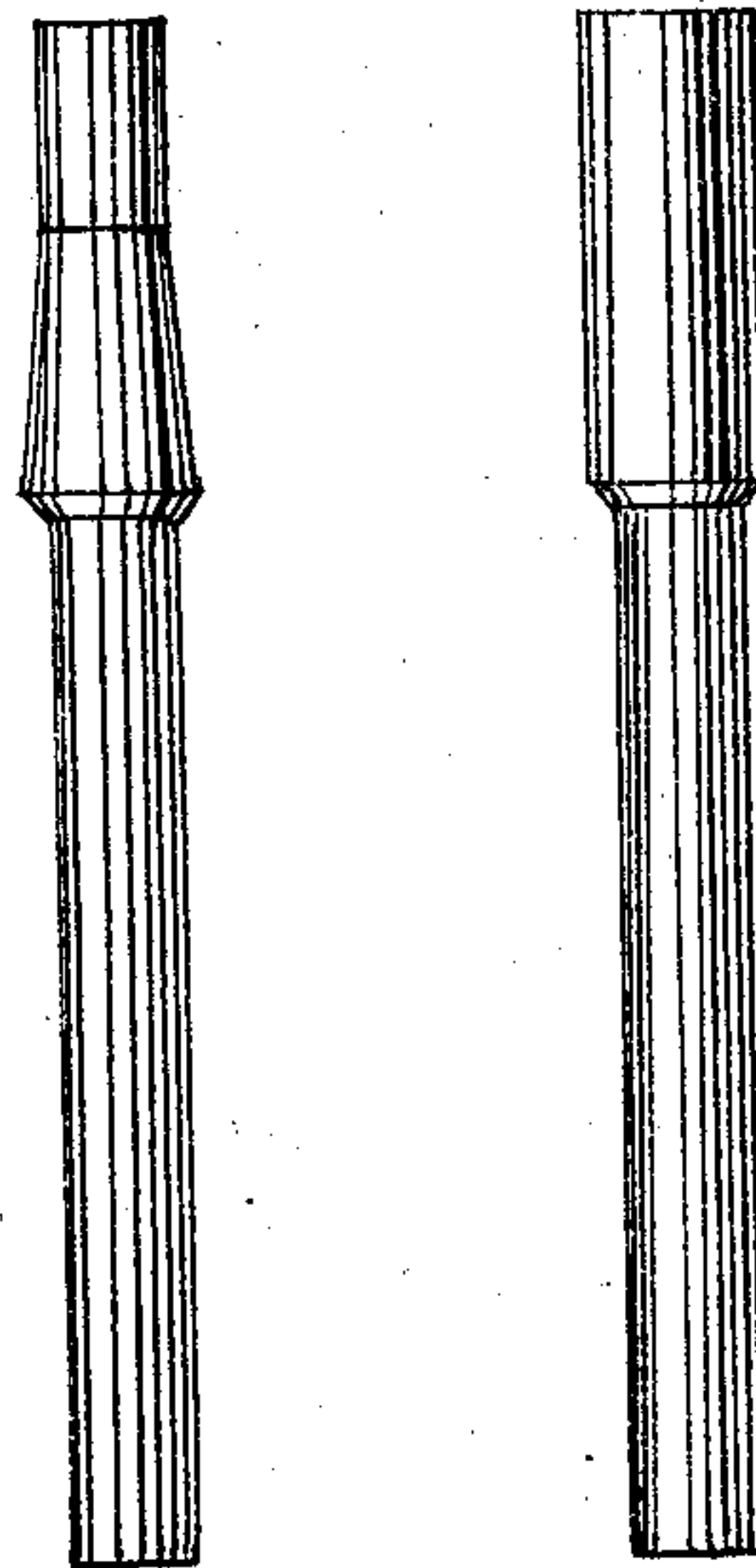


Fig. 4.



Witnesses,  
C. A. Shepard,  
S. Shepard

Inventor,  
James B. Clark,  
By James Shepard Atty

# UNITED STATES PATENT OFFICE.

JAMES B. CLARK, OF PLANTSVILLE, CONNECTICUT.

## IMPROVEMENT IN APPARATUS FOR HEATING BOLT-BLANKS.

Specification forming part of Letters Patent No. 116,158, dated June 20, 1871; antedated June 15, 1871.

*To all whom it may concern:*

Be it known that I, JAMES B. CLARK, of Plantsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Device for Stacking Bolt-Blanks, of which the following is a specification:

My invention consists in the construction of the apparatus hereinafter described.

In the accompanying drawing, Figure 1 is a front elevation of a fire-box and a stack of bolt-blanks arranged with my improvements. Fig. 2 is a top view of the same; Fig. 3, a vertical section of the same on line *x x*, Fig. 2; and Fig. 4, a side elevation of two styles of bolt-blanks.

A designates the fire-box, which of itself is substantially the same as generally used by bolt-makers for heating bolt-blanks in the process of their manufacture. The fire-box A is provided with side boards B B, extending upward from each side of said fire-box. Between the side boards B B is the back C, which is set on an incline, as shown in Fig. 3. Upon the inside of each of the side boards B B is a groove, *a*, which is upon the same angle as the back C. D D D designate slats or levelers, each end of which is provided with a tenon or projection, *b*, which is fitted to slide through the grooves *a a*.

The bolt-blanks are placed over the fire-box A, with their large end over the fire in said fire-box, and thus stacked, one tier over another, until the small end of the blanks become somewhat sagged, when one of the slats D is placed upon the stack, with the tenons *b b* resting in the grooves *a a*, when said slat will form a nearly-level foundation for another tier of blanks. As the stack is made higher, and the blanks again become sagged, another slat D is placed on the stack, and so on until the side boards B B are filled. The blanks,

when sufficiently hot to be operated upon in the process of converting them into bolts, are removed by drawing out those from the bottom tier, when the remaining blanks and slats will immediately follow downward.

The grooves *a a* are left open at their front for a distance, immediately above the fire-box A, equal to the vertical thickness of the tenons *b b*, whereby the slats D, which, by removing the several tiers of blanks from under them, successively approach the fire-box A, may be pulled out from under the stack by drawing them forward, after which the slats may again be placed upon the stack.

Bolt-blanks are stacked upon the fire-box for convenience and economy of time and fuel in heating. Without the employment of the slats D a stack of blanks would soon sag so as to stand upon their ends; but with the use of slats and side boards the blanks can be stacked to an indefinite height. These slats also tend to prevent the small part of the blanks from being heated so as to scale and make them rough. By placing the back C on an incline and stacking the blanks against it the shoulders on the blanks of each tier are a little in front of the shoulders on the tier immediately above it, and therefore the shoulders of the blanks in the lower tier are not liable to catch upon and misplace the blanks in the tier above it as they are drawn forward to be removed.

Although I consider it preferable to use the grooves *a a* and tenons *b b*, the remaining or other parts of the device may be successfully operated without them.

I claim as my invention—

The apparatus herein described, consisting of the fire-box A, side boards B B, back C, and slats D D.

Witnesses: JAMES B. CLARK.

HEBER S. IVES,  
JAMES SHEPARD.