

W. H. THOMAS.
MACHINE FOR GRINDING CLAY.

No. 66,536.

Patented July 9 1867.

Fig: 1.

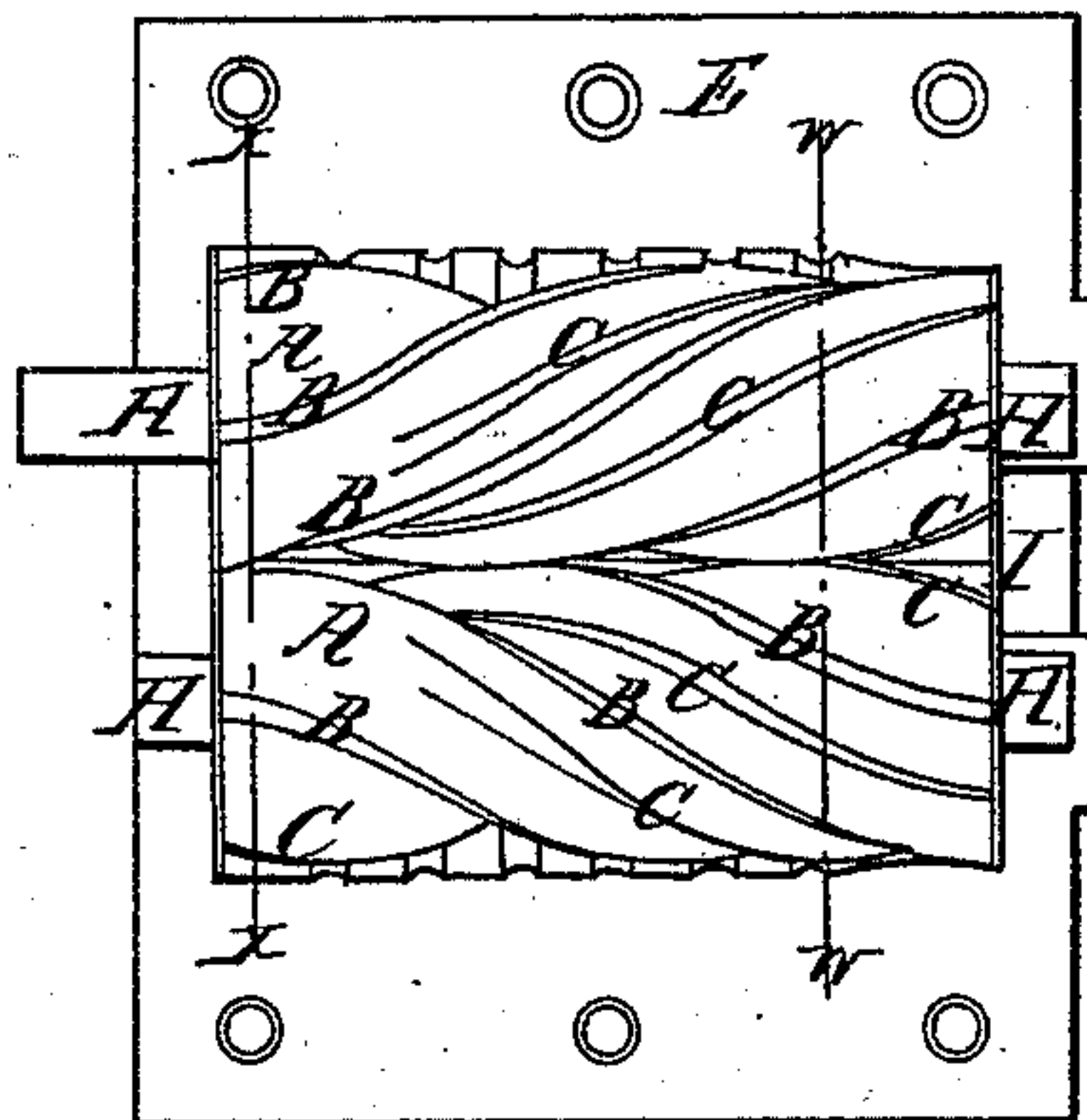


Fig: 2.

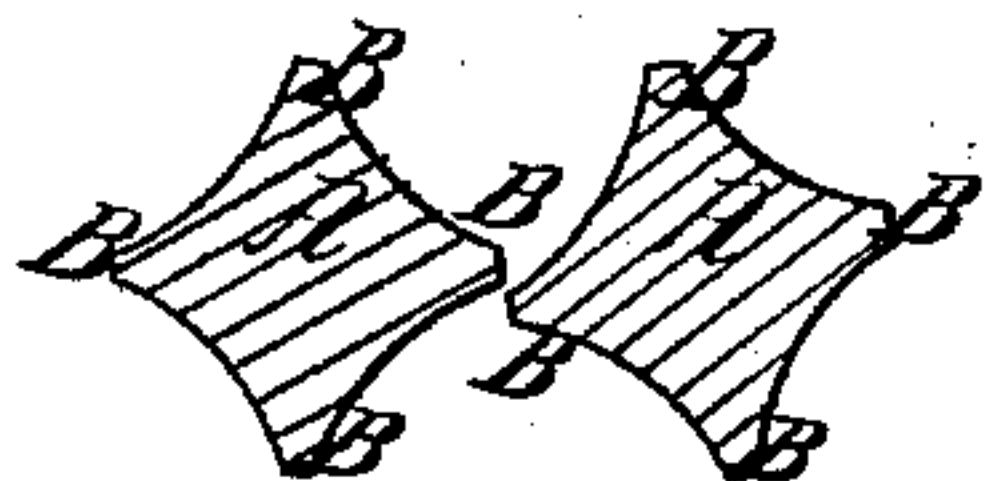


Fig: 3.

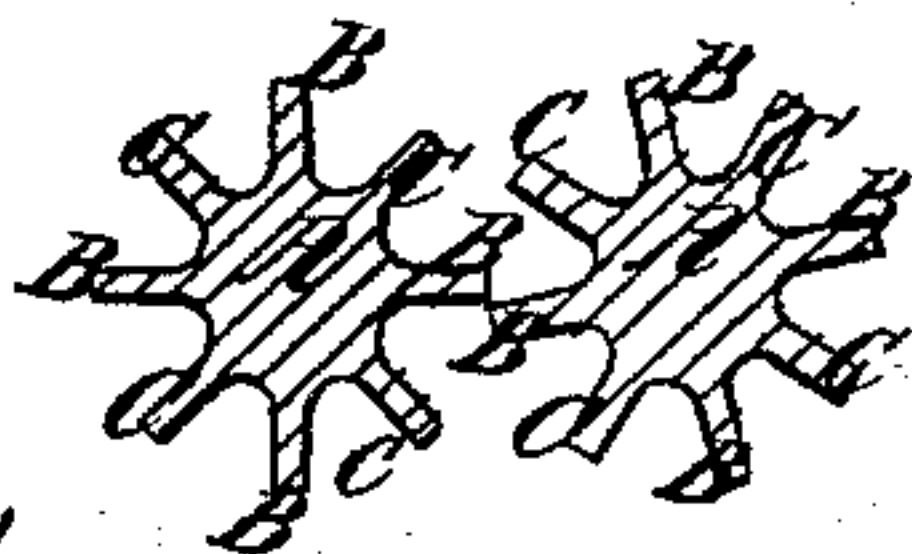
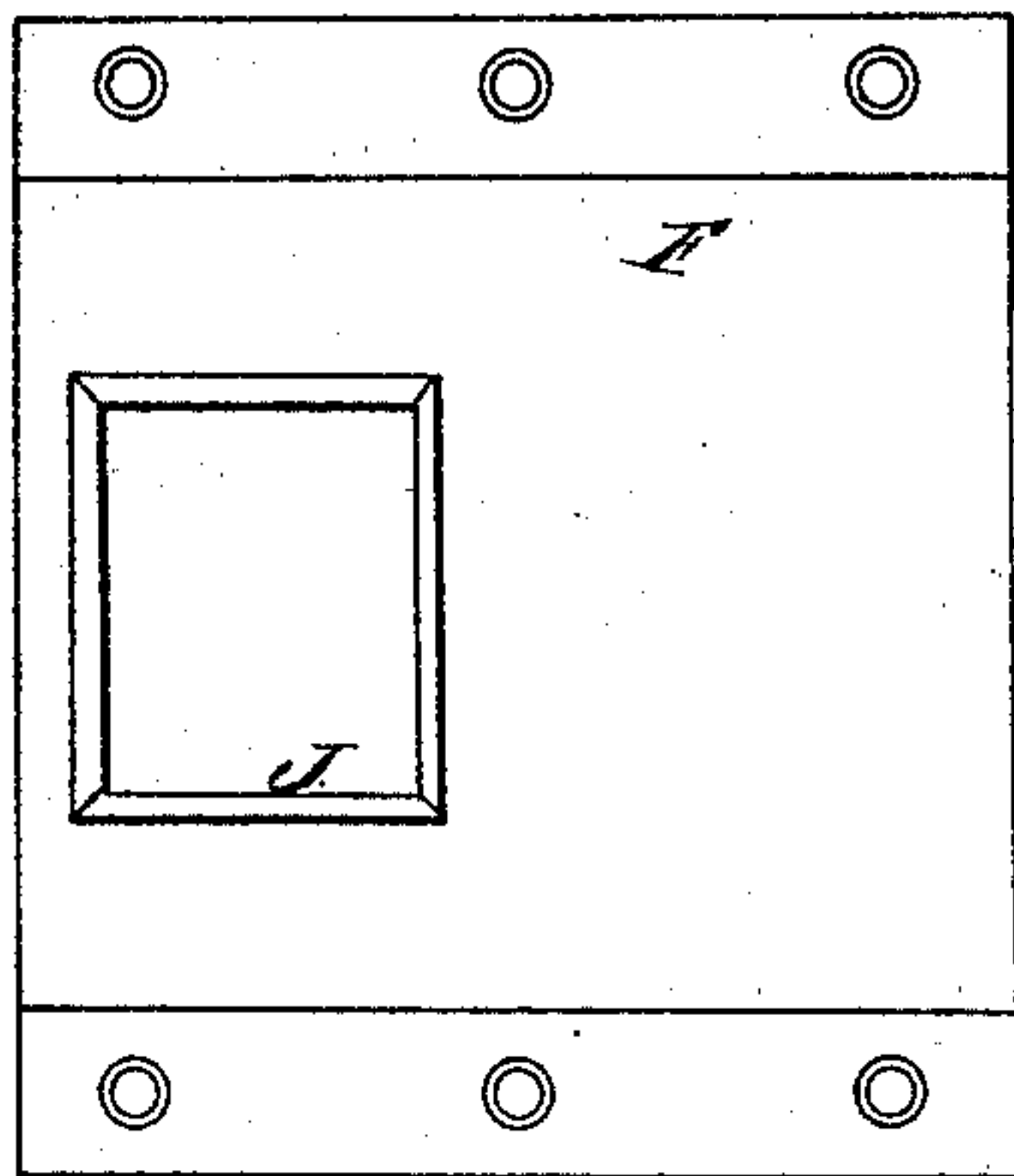


Fig: 4.



Witnesses:
G. L. Chapin.
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WILLIAM H. THOMAS, OF CHICAGO, ILLINOIS.

Letters Patent No. 66,536, dated July 9, 1867.

IMPROVED MACHINE FOR GRINDING CLAY.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM H. THOMAS, of Chicago, in the county of Cook, and State of Illinois, have invented an improved Machine for Grinding Clay; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing and letters marked thereon making a part of this description, in which—

Figure 1 is a plan view of my machine, with the top of the grinding-box removed.

Figure 2 a transverse section of the grinding apparatus taken through line *x x*, fig. 1.

Figure 3 a transverse section of the same taken through line *W W*, fig. 1.

Figure 4 a view of the grinding-box, showing the hopper through which the clay passes into the grinding apparatus.

The nature of my invention consists in the use of two screw-rollers, having a series of threads, one-half of which extend the entire length of the rollers, and the other half of the threads extend only about two-thirds of the length of the roller toward the mouth of the hopper, and are placed alternately between those first mentioned. The object of constructing the rollers in this manner is for the purpose of causing the clay to pass through between the rollers readily, and for breaking large lumps of clay at the bottom of the hopper, then causing the clay, so broken, to pass between a second series of screw-crushers, placed so near together as to prevent the possibility of the clay being discharged from the tail of the machine without being thoroughly ground. And further, in making the depressions between the screw-threads at the tail of the machine of greater depth than at the end of the rollers where the clay enters, by which means the clay is made to pass freely through the grinding apparatus. The method of making brick at the present time consists, in part, of taking clay from the bank and pulverizing the same fine enough to enter brick-moulds without the use of water, and as my grinding apparatus is especially designed for this purpose, I expect to prepare clay for brick and other purposes in a better manner than heretofore done and at less expense, for the rollers are arranged, not only to crush large lumps, but to grind them fine enough for brick or pottery.

In order to give a correct understanding of my invention I have marked corresponding parts with similar letters, and will now give a detailed description.

A A represent two screw-rollers arranged to operate in a grinding-box, *E*, made of cast iron or similar material, the top, *F*, being removed to give a clear view of said rollers *A*, which have screws *B* extending their length, and screws *C* extending to a point about two-thirds of their length, as seen at fig. 1. A section of the rollers directly under the hopper is shown at fig. 2, and a section near the tail of the machine is shown at fig. 3. These rollers are made of cast iron, and made to revolve in box *E* by any common means most desirable, and also so that the projections *B C* will overlap each other far enough to cause the rollers to revolve alike and mix the clay. An opening, *I*, shown at fig. 1, is used for discharging the ground clay in the usual manner.

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

The screw-rollers *A A*, having screw-threads *B* running their entire length, and alternate screw-threads *C*, extending to a point near the feed-hopper *J*, the depressions between the screws at the tail *I* of the rollers being made deeper than at the feed end, substantially as and for the purpose set forth.

WM. H. THOMAS.

Witnesses:

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A. HAYWARD.