W. H. SMITH.

MACHINE FOR TEMPERING CLAY.

No. 193,794. Patented July 31, 1877.

Fig. 1.

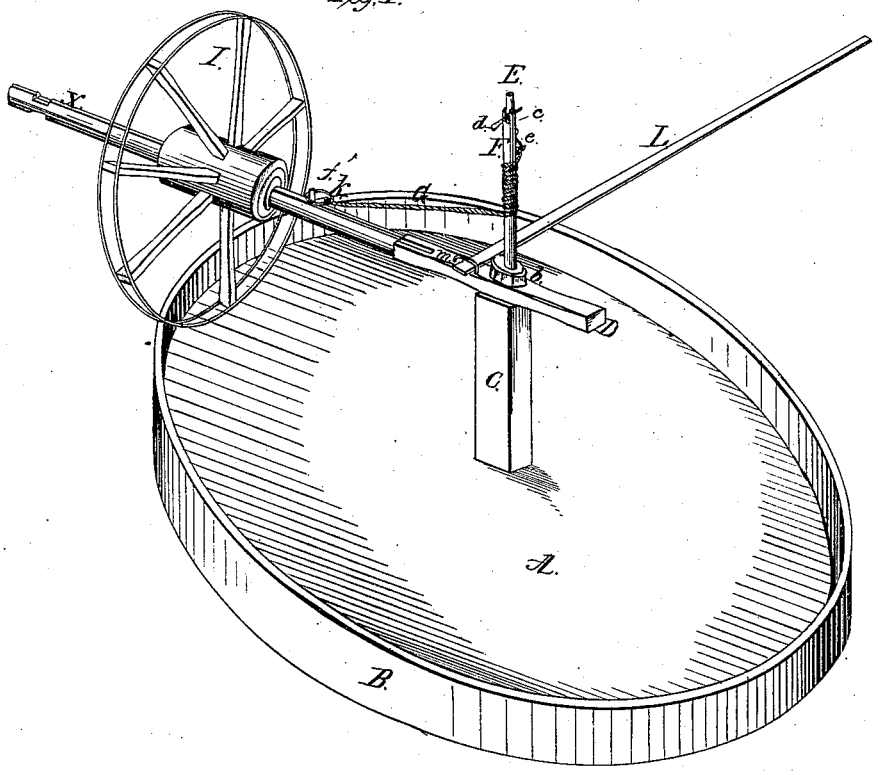
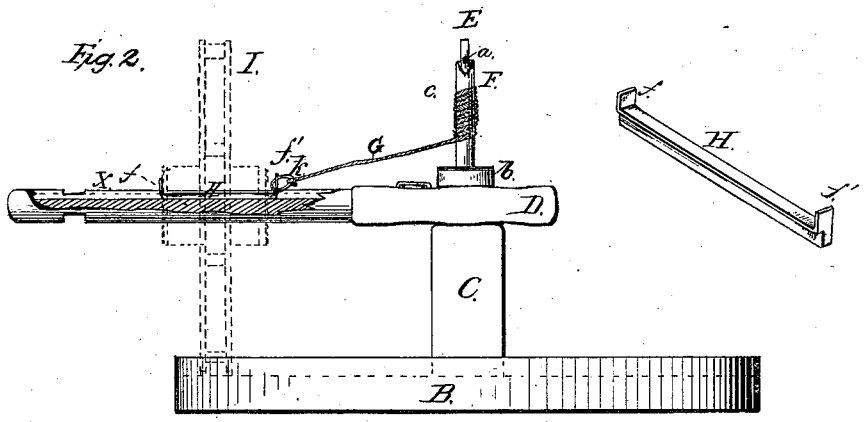


Fig. 2.



WITNESSES;

Walter J. Fowler.

Franklin Wright

INVENTOR;

William H. Smith

by F. G. Cassin

his attorney

UNITED STATES PATENT OFFICE.

WILLIAM H. SMITH, OF BRISTOL, TENN., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO WILLIAM MULLENIX, OF SAME PLACE, AND DAVID SULLENS.

IMPROVEMENT IN MACHINES FOR TEMPERING CLAY.

Specification forming part of Letters Patent No. **193,794**, dated July 31, 1877; application filed June 18, 1877.

To all whom it may concern:

Be it known that I, W. H. SMITH, of Bristol, in the county of Sullivan, State of Tennessee, have invented certain new and useful Improvements in Machines for Tempering Clay for Brick-Making; and I do hereby declare that the following is a full, clear, and exact description thereof, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to certain improvements in a machine for tempering clay for making brick; and consists in a device by which the tempering-wheel is made to travel to and from the center without stopping or changing the motive power, all of which is more particularly pointed out hereinafter.

Figure 1 is a perspective view of the machine complete and ready for use. Fig. 2 is a side elevation of the same.

A is a circular clay or mortar bed, about twenty-eight feet in diameter, with a raised rim, B, about eight inches deep. The whole may be made of inch boards, the bottom boards radiating from the center to the circumference.

C is an upright or post, about eight inches in diameter, and about two and a half feet in height, firmly set in the center of the clay-bed A. To this upright the beam D is pivoted, and on it centers. Rising from the upright is a metal shaft, E, about two feet long and an inch to an inch and a half in diameter. Near the top of this shaft is a key or pin hole, *a*. This shaft is the axis or pivot upon which beam D revolves. A loose iron washer is placed between the beam D and upright, to prevent the wear of the latter.

F is an iron sleeve, with a slot, *c*, at the top, and sufficiently large to slip loosely onto shaft E. It is provided with an eye or lug, *e*, to which a rope or chain is or may be attached, and rests on washer *b*, placed between the sleeve and beam D. It is, in fact, the windlass on which the chain or rope G is wound while the tempering-wheel is being drawn toward the center.

D is the beam or axle-shaft that carries, and on which the tempering-wheel I revolves. It is rounded nearly its entire length, and is long enough to reach from the center-post to sufficiently beyond the circumference to admit of hitching horses to it. Along the upper edge of the beam is a deep groove, *x*, cut from near the center pivot to the end, in which a traveler or carriage is loosely fitted, and made to complete the cylindrical form of the beam.

H is a metal carriage or traveler, furnished with two semi washers or lugs, *f f'*, oval on the top, between the lugs, and made sufficently long for the hub of the tempering-wheel to set loosely between the lugs. The lower portion of this carriage is made to fit and move in groove *x*, and is well to be trapezoidal in form. When carriage H is in its place in groove *x*, it completes, with the beam, the axle on which the tempering-wheel I revolves, while at the same time it furnishes the carriage upon which it is carried to or from the center.

I is a tempering-wheel. Any form now in use can be used.

G is a rope or chain, attached at one end to the ear on sleeve F, the other end terminating in a large ring, K, that is, when used, slipped over carriage-lug *f'*, and is used for drawing the tempering-wheel toward the center.

When the parts are constructed as indicated, and the beam pivoted in place, carriage H is put into the axle-hole in the hub of the tempering-wheel, the hub resting between the lugs; when the wheel is slipped onto the beam D, the carriage entering into the groove *x*, the ring *k* on chain or rope G hooked onto lug *f'*, a key, *d*, put through slot *c* into key-hole *a*, a horse "hooked" to the beam and hitched to guiding stick L, that is slipped into a loop, *m*, on the beam D, and the machine started. As the sleeve F is keyed fast, the cord or chain G is necessarily wound upon it, gradually drawing the tempering-wheel toward the center. When the tempering-wheel has reached a point where the operator desires to start it out again, he unkeys sleeve F, which then slips loosely on the shaft, and permits the tempering-wheel to work toward

the circumference of the mortar-bed, and so on until the work is completed.

Having now described my device, so that those skilled in the art to which it belongs can manufacture and use it, what I deem to be novel, and ask to be protected by Letters Patent, is—

1. Slotted sleeve F, key *d*, key-hole *a* in shaft E, in combination with washer *b*, upright post C, mortar-bed A, beam D, tempering-wheel I, rope or chain G, carriage H, substantially as shown, and for the purpose pointed out.

2. The two-eared carriage H, in combination with the groove *x*, beam D, tempering-wheel I, draw chain or rope G, sleeve F, lug *e*, shaft E, post C, and mortar-bed A, substantially as shown, and for the purpose set forth.

In testimony that I claim the foregoing invention I have hereunto set my hand this 2d day of August, 1876.

WM. H. SMITH.

Witnesses:
M. L. BLACKLEY,
G. CATE.