G. S. Tiffany,
Tile Machine.

No. 25,687. Patented Oct. 4, 1859.

Fig: 1.

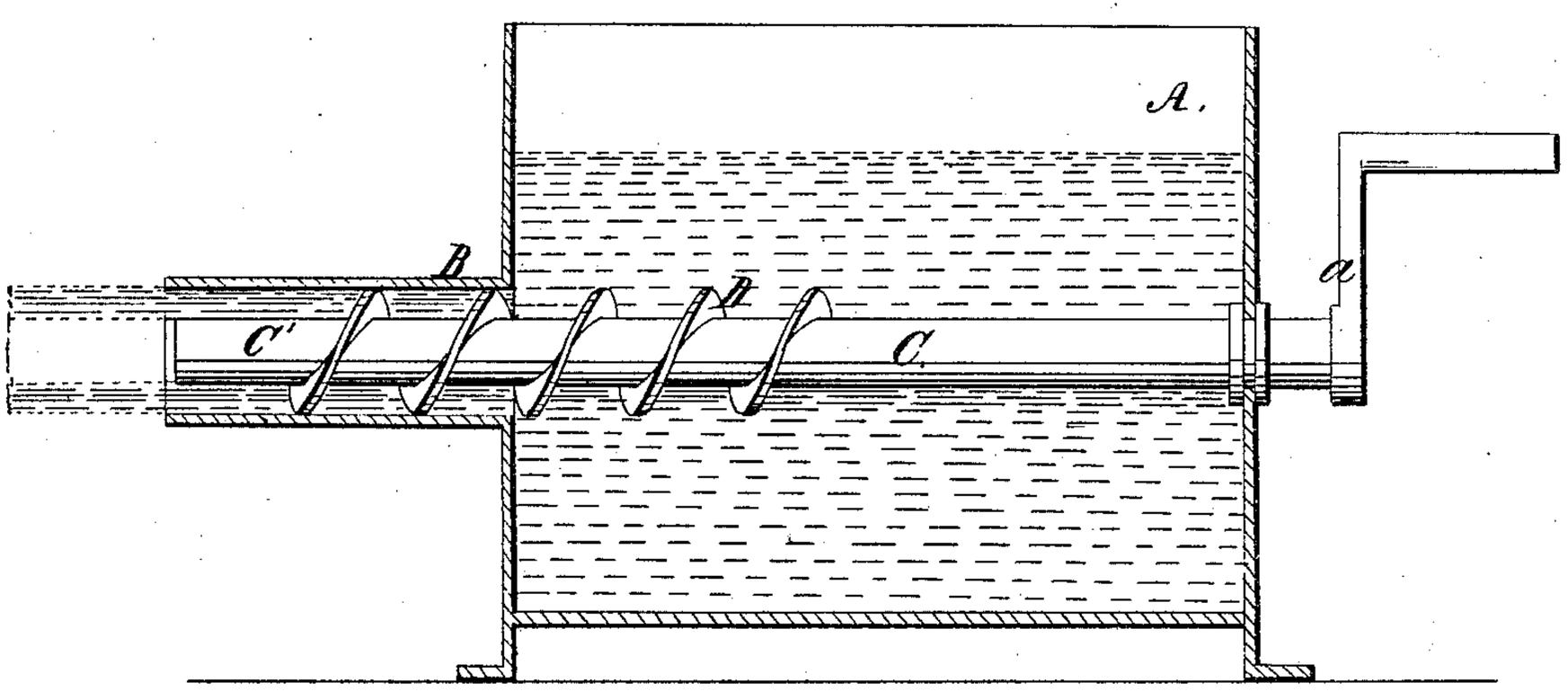
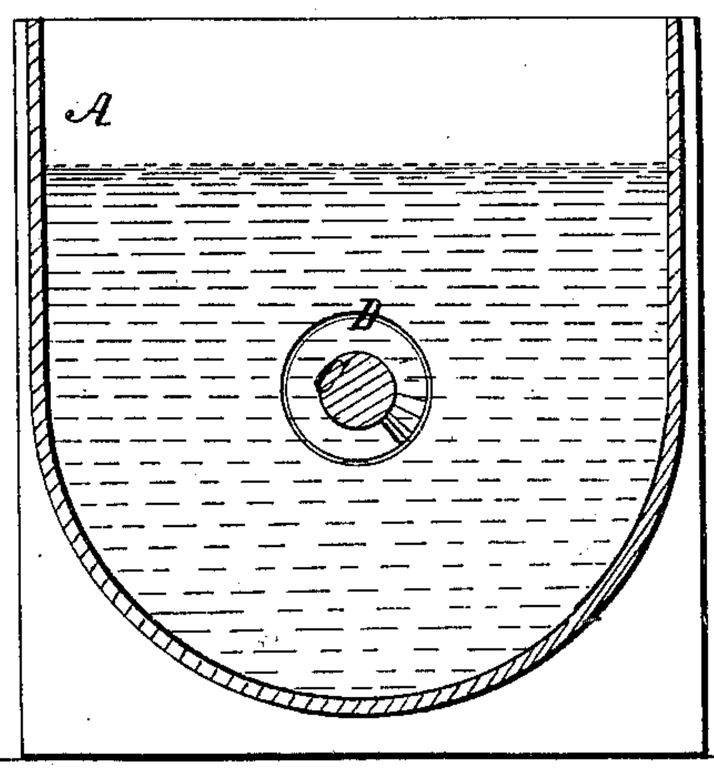


Fig: 2



Witnesses

S. L. G. Ward

R. B. Robbins

Inventor:

George S. Tiffany

UNITED STATES PATENT OFFICE.

GEO. S. TIFFANY, OF PALMYRA, MICHIGAN.

TILE-MACHINE.

Specification of Letters Patent No. 25,687, dated October 4, 1859.

To all whom it may concern:

Be it known that I, GEORGE S. TIFFANY, of Palmyra, in the county of Lenawee and State of Michigan, have invented a new and Improved Machine for making Cylindrical Tiles for Drains and Other Purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical and central section of my invention. Fig. 2, is a transverse vertical and central section of the same.

Similar letters of reference denote like parts in both of the two figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a box or hopper which may have parallel sides and ends, and a concave bottom as shown clearly in Fig. 2. This box or hopper may be of any suitable size and be formed of either wood or metal. To one end of the box or hopper A, is attached a tube B, which communicates with the interior of the box or hopper, and its internal diameter is equal to the desired external diameter of the tiles to be made.

Within the box or hopper A, a shaft C, is placed longitudinally, one end of this shaft extends through the end of the box or hopper A, and has either a driving pulley or a crank *a*, attached to it. The opposite end of the shaft C, is fitted in the tube B, and it has a spiral flanch D, on it, which flanch just fits snugly within the tube B, as shown clearly in Fig. 1. The screw flanch D does not extend the whole length of the tube B, but about half way through it and the flanch extends some distance on the shaft within the box or hopper A. The diameter of the shaft C, is equal to the internal diameter of the tiles, and the portion of the shaft within the tube which is uncovered by the flanch, forms a core C′, which gives tubular form to the tile, the clay being forced along upon said core by the flanch D.

The operation is as follows:—The clay properly tempered is placed within the box or hopper A, and the shaft C is rotated from right to left, and the screw flanch D forces the clay through the tube B; the portion of the shaft C, within the tube B, as before stated forming a "core" for the tube; the tiles are therefore ejected from the tube B, in hollow cylindrical form and may be cut (by any proper means) of any length as they issue from the tube. The core C′, forms a part of the shaft C, and by the revolution of the core the interior of the pipe or tile is smoothed and packed; the core revolving simultaneously with the advance of the tile. The core therefore acts so as to give a spiral pressure upon the interior of the tile. The core, being in one piece with the screw-shaft, offers no obstruction to the clay, but by its revolution serves to pack and smooth the interior of the tile, expel the air-bubbles, &c. The screw flanch D, gradually forces the clay through the tube B, and therefore expels all the air from the clay so that the tiles will issue from the tube in compact form and not be liable to crack in burning as is the case when air is locked up within them by a sudden and powerful pressure. The device may be constructed at a very reasonable expense; and there are no parts liable to get out of order by use.

I would remark that a box or hopper may be provided with a plurality of screw shafts, all working simultaneously by suitable gearing.

I do not claim the invention of a screw working within a tube, for the formation of tiles. But

Having described my invention, I claim and desire to secure by Letters-Patent,

The extension of the flanged feeding shaft C so as to form a revolving core C′ operating substantially as herein shown and described.

GEORGE S. TIFFANY.

Witnesses:
I. L. G. WARD,
R. B. ROBBINS.