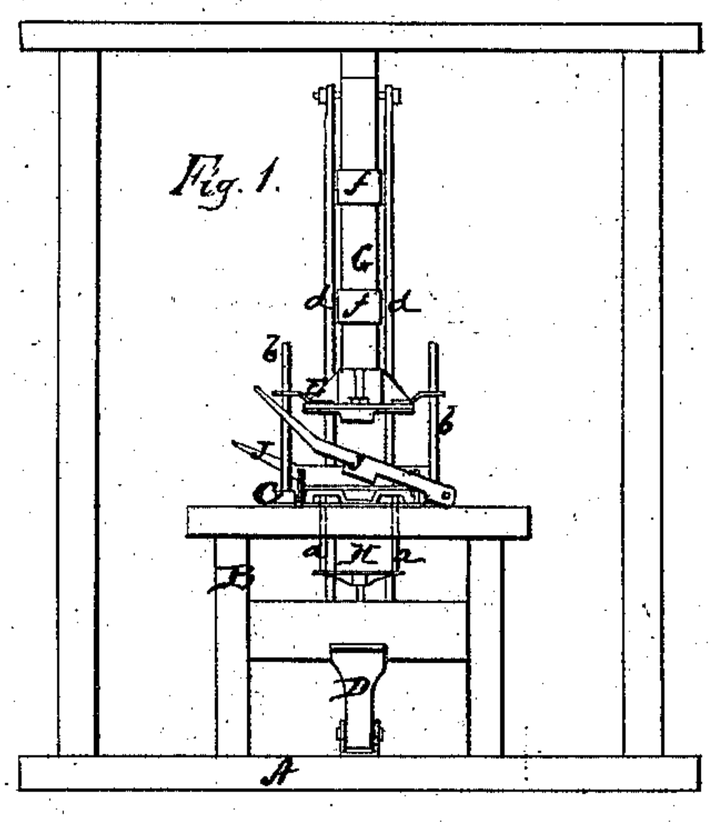
# J. B. Hughes,

## Tile Machine.

No. 106,062. Patented Aug. 2. 1870.

Fig. 1.



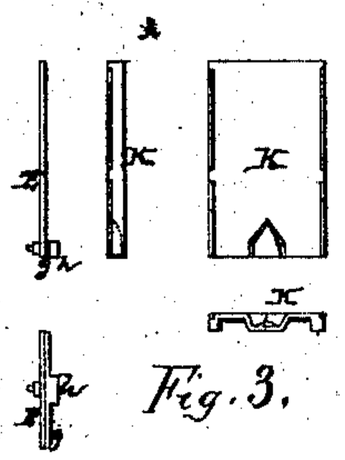




Fig. 3.

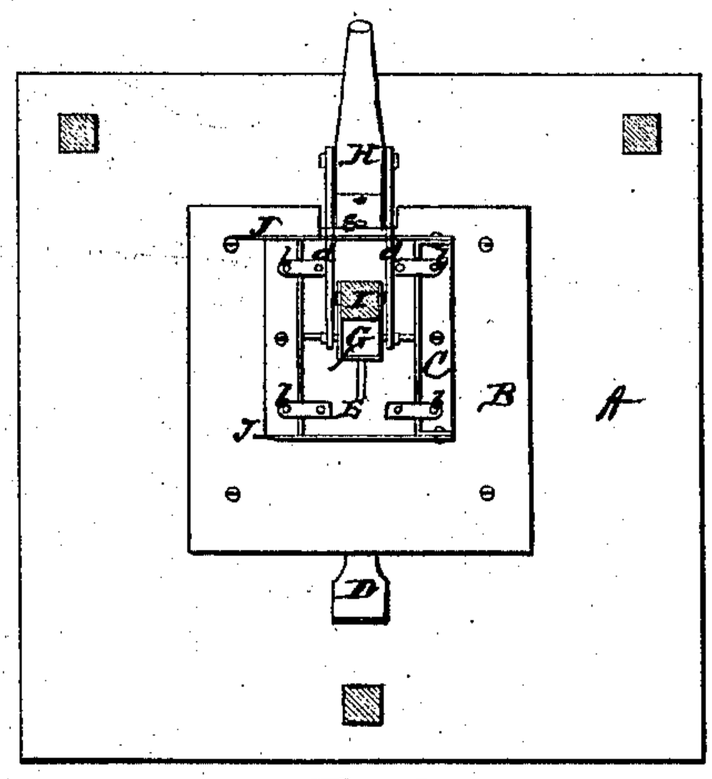



Fig. 2.

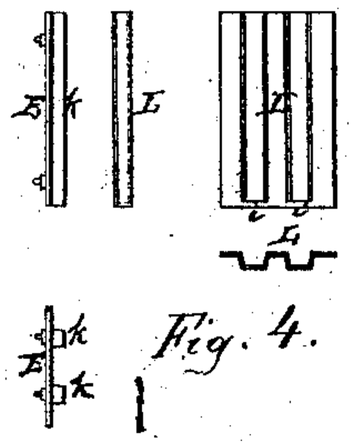



Fig. 4.

Witnesses:

Chas Jacobs.

J. C. White.

Inventor:

John B. Hughes.

Per

T. H. Alexander

Atty.

# United States Patent Office.

JOHN B. HUGHES, OF TERRE HAUTE, INDIANA.

*Letters Patent No.* 106,062, *dated August* 2, 1870.

## IMPROVED TILE-MACHINE.

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, JOHN B. HUGHES, of Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Machines for Making Tile; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a tile-machine, and in the method of manufacturing the tile roofing patented by G. Cook, November 12, 1867.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation; and

Figure 2 is a horizontal section of my machine.

Figures 3 and 4 are views of the dies used for manufacturing the tile-roofing above mentioned.

A represents the floor of the work-shop, upon which is fastened a table, B, supporting the apparatus for forming the tile.

This apparatus consists of a cast-iron box, C, bolted to the table, open on the top and both ends, for the reception of the dies.

Under the table is a foot-lever, D, supporting four rods, *a a*, which pass through the table, and the cast-iron box, for the purpose of raising the die above the level of the box, to remove the tile after pressing.

To the box C are also fastened four rods, *b b*, which serve as guides for the plunger, E, to the face of which are bolted the different plates and blocks necessary to form the lower side of the tile.

In the center of the plunger is cast a square socket for the reception of the upright beam, G, at the extreme upper end of which is inserted a bolt, which also passes through the ends of the two rods *d d*. These rods connect with the lever H, which has its fulcrum at *e*, on the end of the table.

The upright G is guided further by passing through loops, *f f*, on the post I, which is fastened and suitably braced to the ceiling of the shop.

At each end of the box C is pivoted a knife, J, for cutting off the clay at the ends of the dies.

K and L are the dies used for pressing the tiling, said dies being placed in the box C. When the die K is used, the plunger E is provided, on the under side, at one end, with a plate or bar, *g*, and block *h*, fastened to the same by a bolt and nut.

When the die L is used, the bar *g*, with its block, is removed, and the two cross-bars *k k* are attached on the under side of the plunger. The grooves in the die L, in which the cap is pressed, are closed at *i*, the bars *k k*, on the plunger, being shortened at that end, so as to allow a layer of clay to close the cap on one end.

It must be understood that I lay no claim to the peculiar shape of the tile-roofing, only to the manner in which the same is manufactured, which is as follows: The dies being inserted, the bottom one is covered with a sheet of tin, having exactly the shape, and of which there must be a number, to carry the tile off. This sheet of tin is covered with a strip of muslin; then the clay is introduced, and another strip of muslin placed on top of the clay. When the the plunger is now brought down, forming the tile, and then withdrawn, no clay will adhere to the mold, but remain in its place whole and complete.

Although this method of introducing muslin on both sides of the clay is particularly designed for Cook's Patent Tile Roofing, it may, with advantage, be used in the manufacture of any kind of tiling.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the table B, box C, foot-lever D, and rods *a a*, substantially as and for the purposes herein set forth.

2. The arrangement of the rods *b b*, plunger E, beam G, rods *d d*, and lever H, substantially as and for the purposes herein set forth.

3. In combination with the box C, plunger E, and the dies K L, the cutters J J, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

JOHN B. HUGHES.

Witnesses:

ANDREW GRIMES,

WM. A. ARMSTRONG.