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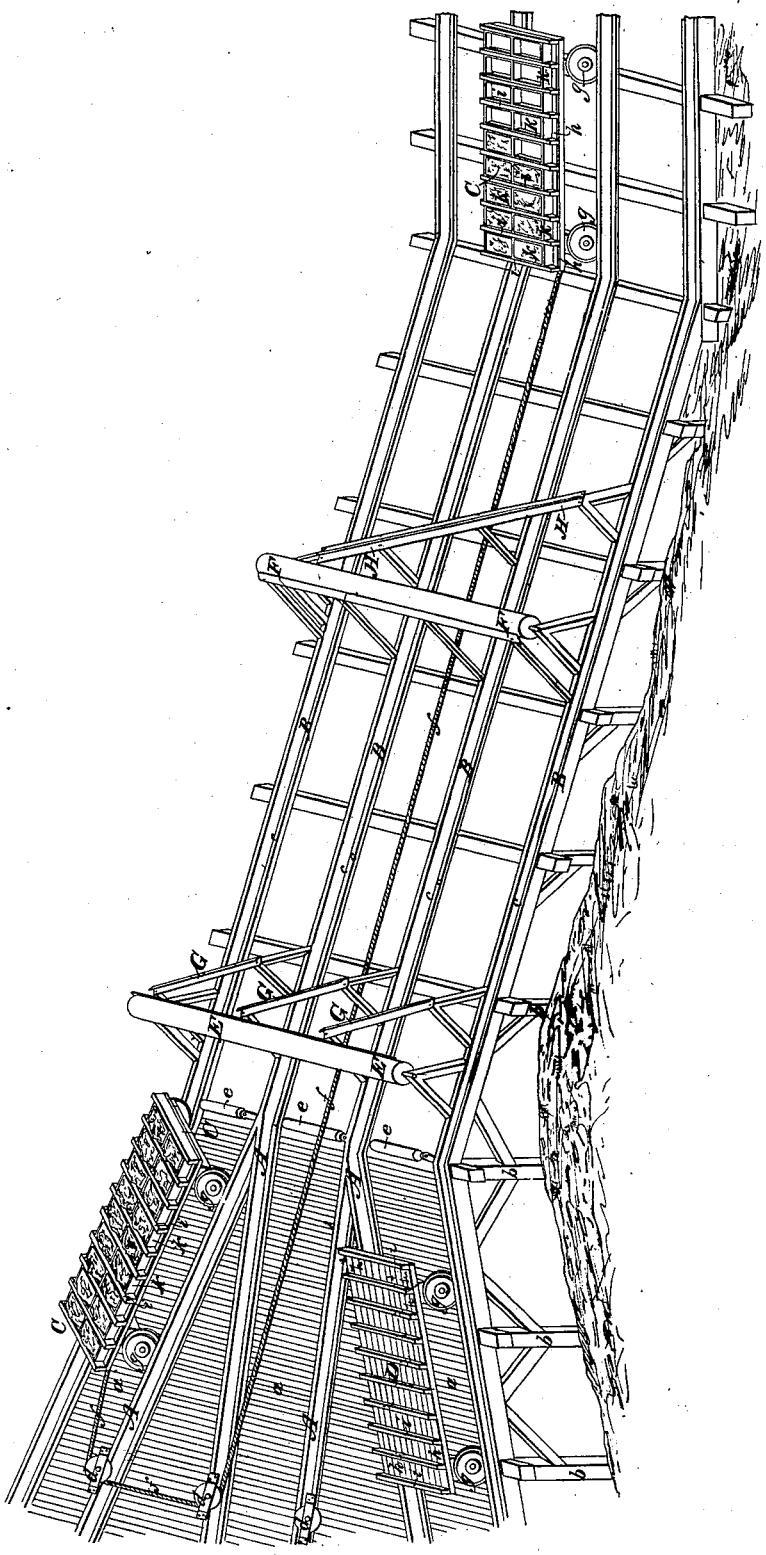
S. LOWERY.

MAKING BRICKS.



UNITED STATES PATENT OFFICE.

SAMUEL LOWERY, OF PHILADELPHIA, PENNSYLVANIA.

MAKING BRICKS.

Specification of Letters Patent No. 4,457, dated April 18, 1846.

To all whom it may concern:

Be it known that I, SAMUEL LOWERY, of Philadelphia, Pennsylvania, have invented a new and Improved Mode of Making Brick; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in making bricks on railroad cars, peculiarly constructed for that purpose, in passing, or descending an inlined plane, at which time, the clay on the cars being pressed, formed, and made perfect in bricks in such a way, that, when the cars arrive at the foot of the inclined plane, the perfect ready made bricks, may be removed from the cars, and the operation renewed.

To enable others skilled in the art to make and to use my invention, I will proceed to describe its construction and operation.

I construct my brick making apparatus in the following manner, and referred to in the accompanying drawings.

There is Figure 1, (A) a short distance of a level railroad of three tracks, marked (*a*, *a*, *a*,). (*b*, *b*, *b*,) are posts to support the sills of said railroad, which are elevated to a proper height from the ground. (B) An inclined plane of some length, and a descent of about ten feet in fifty. (*c*, *c*, *c*, *c*, &c.,) Are six rails, or three tracks, constructed and braced, in the common way. (*d*, *d*, *d*,) Are three pulleys, on the level railroad (A) about the length of one car, from the place where the level and inclined road meets. (*e*, *e*, *e*,) Three horizontal rollers on the very junction of the level road and inclined plane, one at each center of the tracks, to prevent the ropes (*f*, *f*,) from being injured by friction. (C, C,) two cars, made to fit and to run on said rails (*c*, *c*, *c*,); these two cars being the working cars and the third one (D′,) being the reserve car in case of accident. (*g*, *g*, *g*, *g*, &c.,) The wheels of said cars. (*h*, *h*, *h*, *h*,) The platforms and frames of the body of the cars, strongly connected. (*i*, *i*, *i*, *i*, &c.,) Cleats or cross pieces fastened on the platforms at a proper distance one from the other, so as to admit between them the free entrance of the brick-molds, (*k k*) the said cleats being exactly as high as the molds. (*k*, *k*, *k*, *k*, &c.) showing some molds between the cleats on the platform, the molds themselves being arranged for one or more bricks in one frame.

(E) Represents a heavy roller of 12 or more inches diameter near the summit of the inclined plane, the length of said roller extending clear cross the incline plane of all three tracks, and in a right angle, with the rails. This roller (E) is so arranged as to be about one half of an inch above the upper edge of the molds, when the car passes under the roller (E). (F) Another roller some distance down the inclined plane, perfectly similar to the above described, with the exception that this roller (F) presses, close upon the molds, and the roller revolves upon the upper edges of the brick-molds, and cleats. (G, G, G,) Three scrapers made of iron, plow shaped, fixed in an oblique position of about 45 degrees, with the line of the rails, these scrapers being so fixed that a space of one-half an inch is left between the under edge of the scrapers and the upper jaws of the molds, when passing under them. (H) The finishing or polishing knife, situated below and in a short distance from the lower roller (F) reaching clear across the three tracks of the inclined plane, and fixed in an angle of 45 degrees with the line of the rails. This finishing knife has its lower face flat and smooth, the upper back part is bent up, or has a projection of one half of an inch,— this knife is so fixed that the lower face passes exactly over the upper parts of the brick-molds, when the car passes under it.

Now the operation. The clay being prepared near the level part (or upper part) of the railroad (A). The cars (C, C,) being connected by the rope (*f*, *f*,) which rope is carried over the pulleys, (*d*, *d*,) and arranged so, that when the one car is at the level track (A,) the other being then at the lower extremity of the inclined plane (B). The third car (D′) being left unconnected as a reserve car, as before mentioned. The molds on the platform of the car and upon the level railroad (A,) being heaped, and filled with prepared clay—the car is then pushed by hand to the inclined plane, where, it will descend by its own gravity, and, in passing under the first roller (E) the clay is forced and pressed into the molds,—in passing farther down, under the scraper (G) the surplus of the clay above the mold is cut off, and by the sloping position of the scrapers, the surplus clay so cut off is thrown through the open framework of the inclined plane to the ground. The car, in passing still farther, meeting the

second roller (F), where, the clay so projecting above the molds, is exposed to another pressure more powerful, (the roller touching the molds themselves)—leaving this roller (F) the molds pass under the finishing knife (H,) which finishes the process,—and the car at the stopping place, at the lower extremity of the inclined plane, may be unloaded,—the finished bricks with the molds removed, and other empty molds replaced—for another operation.

The empty car, which was at the commencement of the operation at the foot of the inclined plane, will be at the top of the level road (A) when the load car with the bricks lands at the foot of the slope,—the two cars being connected by the rope (*f*, *f*,) and through the pulleys (*d*, *d*,) will of course, when the loaded car descends, pull up hill the empty one. The empty car is then loaded, and pushed down the inclined plane as before, whereby the operation is continued uninterrupted.

What I claim as my invention, and desire to secure by Letters Patent, is,

1. The mode of making bricks in descending an inclined plane as heretofore described; and in combination therewith I claim the rollers to press the clay into the molds in the manner as described herein by one or more rollers.

2. Also in combination with the above I claim the scrapers and finishing or polishing knife for the purpose and use as mentioned above in this mode of making bricks.

SAMUEL LOWERY.

Witnesses:
JOHN FAY,
WM. FISCHER.