

L. Dodge.
Making Stone

N^o 109,397.

Patented Nov. 22, 1870.

Fig. 1.

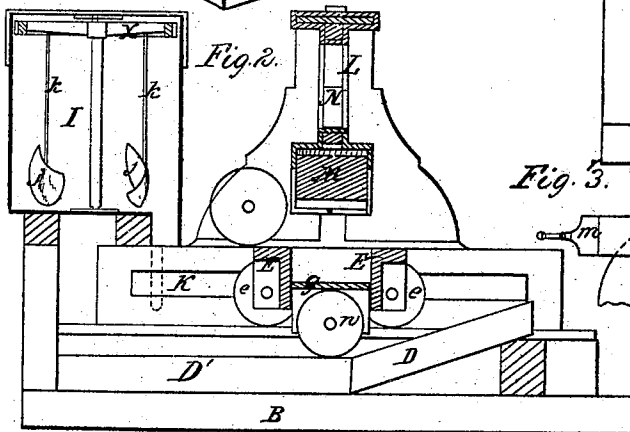
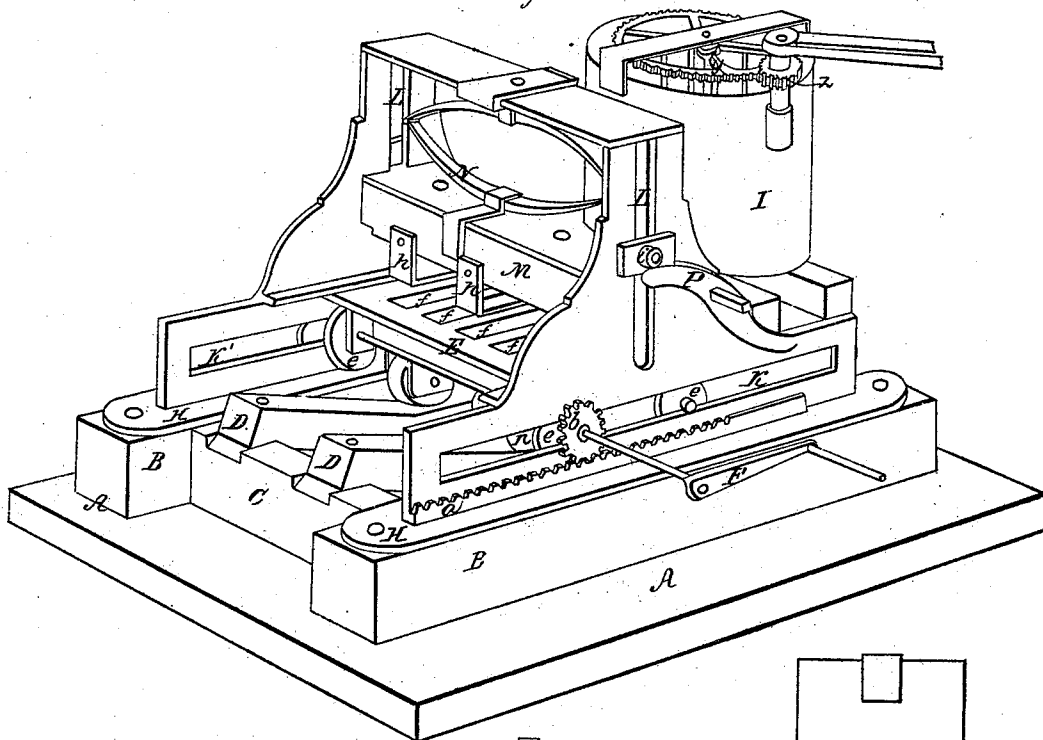
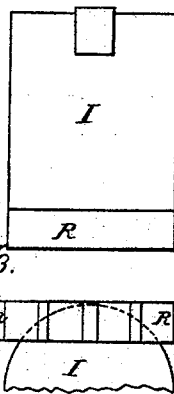


Fig. 3.



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LEWIS DODGE, OF CHICAGO, ILLINOIS.

Letters Patent No. 109,397, dated November 22, 1870.

IMPROVEMENT IN PRESSES FOR THE MANUFACTURE OF ARTIFICIAL STONE.

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

Be it known that I, LEWIS DODGE, of the city of Chicago, county of Cook and State of Illinois, have invented certain new and useful Improvements in Artificial Stone Presses; and I hereby certify that the following is a full and correct description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon.

Figure 1 is a perspective-view of press.

Figure 2 is a sectional view cut longitudinally.

Figure 3 is a view of mixing-barrel, with portion of bottom shown.

I construct my press with platform A A, on which are sills B B and C C.

Upon sills B B I bolt bed-plates, H H, which form the bases of the sides of the press.

In each side are two slots, L and K.

In slot L the ends of the dead-weight M run, and in slot K the ends of the axles of the mold-carriage run.

On the outside of the frame, resting on the bed-plates, are cogged rails, a a.

Cogged wheels, b b, play in rails a a and give motion to mold-carriage.

Resting on platform and cross-sill C are bed-rails D D, with a portion horizontal and a portion inclined.

In mold-carriage E are molds f f f f, and beneath the mold-carriage, resting on rollers n n, which run on bed-rails D D, as seen in fig. 2, are followers.

When the mold-carriage is on that portion of bed-rails marked D' in fig. 2, the followers are dropped down and form the bottom of the molds, and rise up as the carriage is run forward.

As the rollers n n raise that portion of the bed-rails marked D, in fig. 2, the followers are raised up in the molds and push up the stone or brick until they rise to a level with top of mold-carriage.

To the dead-weight M are attached plungers, h h, which are made to fit molds f f f f very tightly.

Attached to top of dead-weight and top plate of frame is a spring, N, which gives power to the dead-weight in falling, and adds to the force of the blow upon the material in the molds.

I do not confine myself to any particular kind of spring, but use any kind, or apply the reciprocative power of the common steam-piston.

My carriage E runs on rollers e e e e, which rests on the inner portion of the bed-plates H H, and is moved forward or backward by means of the cogged rail and wheel a and b.

On the outside of the sides of the frame are beveled arms or tappets, P, which raise the dead-weight thus.

By means of a crank I turn the tappets, which meet the friction-rollers i i, attached to the ends of the dead-weight, which extend through slots L L and

thus lift it, and when the tappets have passed far enough for the rollers i i to pass off the dead-weight drops with great force, driving the plungers h h h h into the molds f f f f, upon the material for stone or brick.

At the rear end of my press I place my mixing-barrel I, as shown in figs. 1 and 2.

In this mixing-barrel are shovels or blades similar in shape to the blades of a screw to a propeller.

These blades j j are on pendent rods, k k, attached to cross-arms, x.

Above the cross-arms x is a cogged wheel, y, with a smaller one, z, which, combined, gives motion to the blades j j.

At the bottom of mixing-barrel is a basin, R, the bottom of which has at one side tubes attached, which carry the material from the mixing-barrel to the molds.

The slide r opens and closes the mouths of the tubes.

To operate my press I run the mold-carriage back to the mixing-barrel, fill the molds by drawing slide r, then run it forward until the molds are directly beneath the plungers, on dead-weight, then raise the dead-weight and drop it until the material is sufficiently pressed, when I run the carriage forward until the rollers n n, ascending the inclined plane, raises the followers g g g g, fig. 2, and push the stone up out of the molds.

Having thus fully described my press and the mode of operating it,

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

1. The combination of mold-carriage E, traveling upon level bed-rails H H, propelled by cogged wheel b, on shaft running in slots K K, playing into cogged rail a, with the followers g g g g, provided with rollers n n, and traveling on inclined planes D D, and the upper plungers h h h h upon the dead weight M, operated by tappets P P, and springs N, when said parts are constructed, arranged and operated as and for the purpose herein described and set forth.

2. The mixing-barrel I, with blades j j, on pendent arms k k, attached to cross-arms x, operated by cogged wheels y and z, and basin R, with tubes and slide r, when said parts are constructed, arranged, and operated as and for the purpose herein described and set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

LEWIS DODGE.

Witnesses:

L. A. GILBERT,
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