B. B. BUNNELL & G. T. B. HOSLEY.

Molding-Machine.

No. 167,299. Patented Aug. 31, 1875.

fig. 1

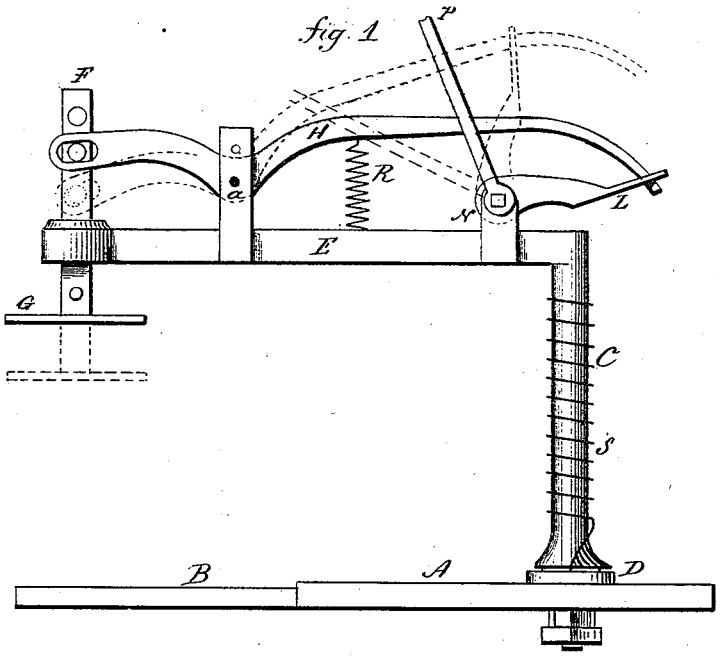
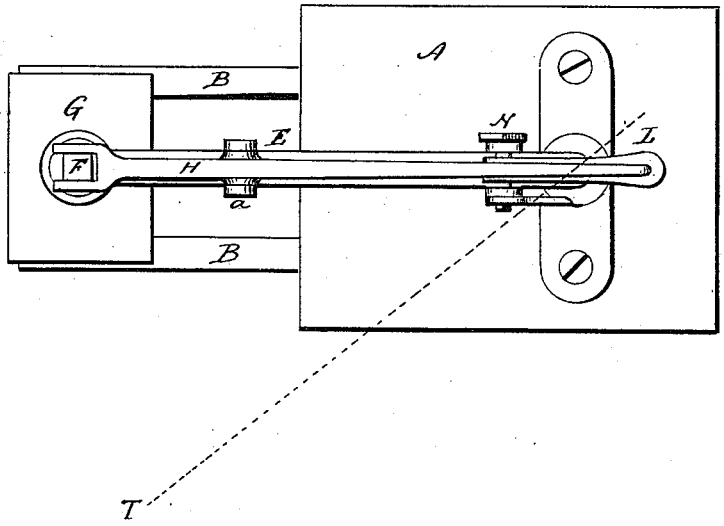


fig. 2.



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UNITED STATES PATENT OFFICE.

BENJAMIN B. BUNNELL AND GEORGE T. B. HOSLEY, OF BRANFORD, CONN.

IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. **167,299**, dated August 31, 1875; application filed May 4, 1875.

CASE B.

To all whom it may concern:

Be it known that we, BENJAMIN B. BUNNELL and GEORGE T. B. HOSLEY, of Branford, in the county of New Haven and State of Connecticut, have invented a new Molding-Machine; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, side view; Fig. 2, top or plan view.

This invention relates to an improvement in machines for pressing the sand in molds for casting, the object being to substitute mechanical pressure for the common method of tamping; and the invention consists in a swinging arm, supporting the platen in a vertical guide, combined with a system of levers, for applying pressure to the said platen, as more fully hereinafter described.

A is a section of the common bench used in foundries for light molding, and from which arms B project, for the support of the flask, also in the usual manner. Upon the bench A an upright post, C, is arranged in a suitable bearing, D, so that the post may be easily turned to the right or left. From this post an arm, E, extends forward, and supports a vertical slide, F, which causes at its lower end the platen G, loosely jointed to the said slide, or so as to have a universal movement, to be self-adjusting upon varying surfaces. H is a lever, hung upon a fulcrum, *a*, one arm attached to the slide F, the other extending back over the arm E. The raising of the rear end of the lever will force down the platen, as denoted in broken lines. To thus actuate the lever H a cam, L, is arranged, preferably, so that the arm H will pass through a mortise in the cam, but may only bear upon the under side, if desired. This cam is hung upon a shaft, N, on which is a lever, P, so that by depressing the said lever P, as denoted in broken lines, Fig. 1, the cam I will force up the rear end of the lever H and bear down the platen, returning the lever P. A spring, R, will cause the descent of the lever H, and the corresponding raising of the platen.

The molding is performed in the usual manner, and the flask, with the requisite quantity of sand therein, lies upon the arms B, beneath the platen G. The platen is then brought down, as before described, to bring the requisite pressure upon the sand for the proper formation of the mold. The platen, jointed to the slide, will yield to slight irregularities in the quantity of sand in different parts of the flask, so that the same pressure is insured at all points. After the pressure has been thus applied and removed, the arm, with the platen, may be turned to one side, as denoted by the line T in Fig. 2, and leave the position free for the molder to continue his work; and when a second flask has been prepared, as before, the platen is drawn forward to the proper position, and operated as before.

As a convenience, a spring, S, is applied to the post, the tendency of which is to turn the arm and the platen back to the state of rest on line T, so that so soon as the apparatus is free the spring will turn it back out of the way.

We claim—

1. The combination of the arm E, the slide F, carrying the platen G, the lever H, cam L, and its lever P, substantially as described.

2. The combination of the post C, the arm E, platen G, and lever H, all substantially as set forth.

3. The combination of the arm E and the mechanism thereon, the pivoted post C, supporting said arm and mechanism, and the spring S, for automatically turning the apparatus, substantially as described.

4. The combination of the arm E, lever H, cam L and its lever P, and the slide F, with the platen G hung to the said slide by a loose or universal joint, substantially as set forth.

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