

(No Model.)

L. GIRDLER.

DEVICE FOR MOLDING CEMENT INTO FORMS TO BE TESTED.

No. 423,756.

Patented Mar. 18, 1890

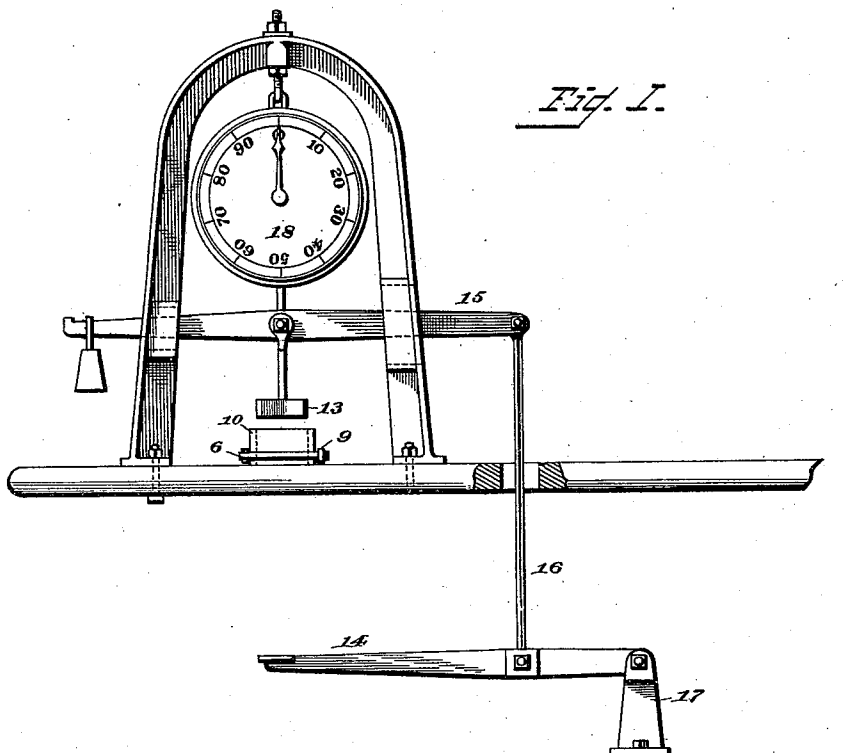


Fig. I.

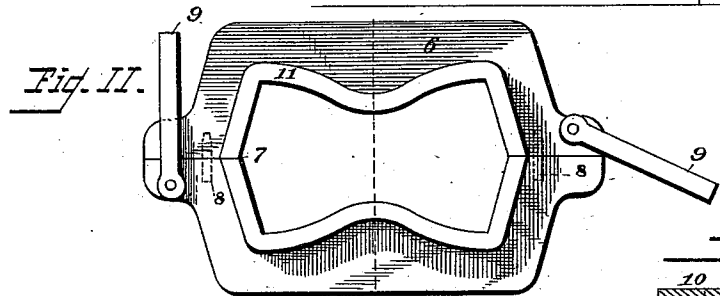


Fig. II.

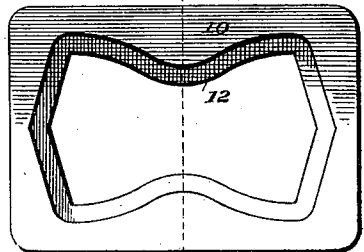


Fig. III.

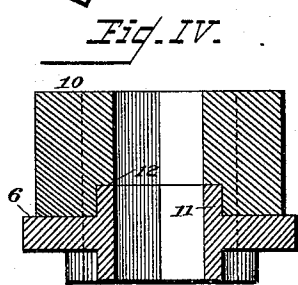


Fig. IV.

Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS GIRDLER, OF SELLERSBURG, INDIANA.

DEVICE FOR MOLDING CEMENT INTO FORMS TO BE TESTED.

SPECIFICATION forming part of Letters Patent No. 423,756, dated March 18, 1890.

Application filed October 21, 1889. Serial No. 327,654. (No model.)

To all whom it may concern:

Be it known that I, LEWIS GIRDLER, a citizen of the United States, residing at Sellersburg, in the county of Clarke and State of Indiana, have invented certain new and useful Improvements in Devices for Molding Cement into Forms to be Tested; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to molding hydraulic cement into forms to be tested as to the strength of the cement.

Heretofore it has been the common practice to fill a mold with cement mortar and press it in by hand, and sometimes hammers are used to make the mortar compact. This is a slow method and the results are very uneven, so that it is difficult to get a fair test of the cement, and when it is understood that tests are frequently made as often as every second barrel the importance of a more reliable and speedy method will be appreciated.

The object of this invention is, first, to provide means whereby the test-molds may be rapidly filled with cement and uniformly pressed, and, second, means for indicating the amount of pressure, so that it shall appear to the eye of the operator and control his action.

To this end my invention consists in a funnel to lead to the mold, a follower fitted to slide in the funnel, means for mechanically forcing the follower to so slide, and means for indicating the amount of pressure brought to bear on the follower, the details of which are hereinafter more particularly described, and the features of novelty pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure I is a view of the whole device in front elevation. Fig. II is a view looking down upon top of a mold one-half working size. Fig. III is an under side view of a funnel to fit upon the mold, and Fig. IV shows a central vertical section through the mold and funnel in position for service.

6 represents a common mold, separable on the line 7. The two parts are kept in exact registry with each other by dowels 8, and may be quickly and rigidly secured by swinging clamp-yokes 9.

10 represents a leader, which I call a "funnel." Its interior contour corresponds exactly with the interior contour of the mold, with which it may be brought to register by any usual means—such, for example, as the upward-projecting rim 11 of the mold fitted to enter a corresponding annular recess 12 in the under side of the funnel 10. 13 represents a follower or piston fitted to slide freely within the funnel. This follower is connected with the treadle 14 by means of a lever 15 and rod 16. The treadle is pivoted to some permanent fixture—such as the post 17—and the lever 15 communicates with a spring-balance 18, provided with the usual graduated dial and pointer for indicating the amount of strain brought to bear on it.

In operation the mold and funnel are to be placed together, as shown in Fig. IV, and then placed on the table beneath the follower 13. Now a measured quantity of cement mortar, which has been proven by experiment to be more than enough to fill the mold, is put down into the mold through the funnel, and the follower 13 is brought to bear thereon by treadle-pressure, and when the prescribed pressure is indicated on the dial the treadle must be released, allowing the follower to rise out of the funnel. Now the mold and funnel may be removed from beneath the follower, and the mold may be separated from the funnel and the surplus cement be sheared from the mold. It is evident that this operation may be repeated any number of times with exactly the same result, thus insuring a fair and unvarying test for the cement and saving a great deal of wasted time and consequent vexation, which was common to the old irregular methods.

The use of my funnel in connection with the mold would of itself be a great advantage by insuring a head of mortar on top of the full mold, and there are various ways by which the mortar could be equalized. It is also evident that the follower and treadle attachment has an advantage independently of the pressure-indicator.

Having thus fully described my invention, what I believe to be new, and desire to secure by Letters Patent, is the following:

The combination of a cement-mold, a funnel removably fitted thereon, a follower fitted to slide freely within the funnel, a treadle con-

nected with the follower, and a pressure-indicator connected with the said follower, substantially as shown and described, whereby, first, pressure may be brought to bear on the
5 contents of the mold and funnel, and, second, the pressure may be indicated to the eye of the operator, as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS GIRDLER.

Witnesses:

WM. E. HYATT,
JOHN M. NICKLES.