(No Model.)

H. S. EARLE.

APPARATUS FOR FILLING CORE BOXES.

No. 303,386. Patented Aug. 12, 1884.

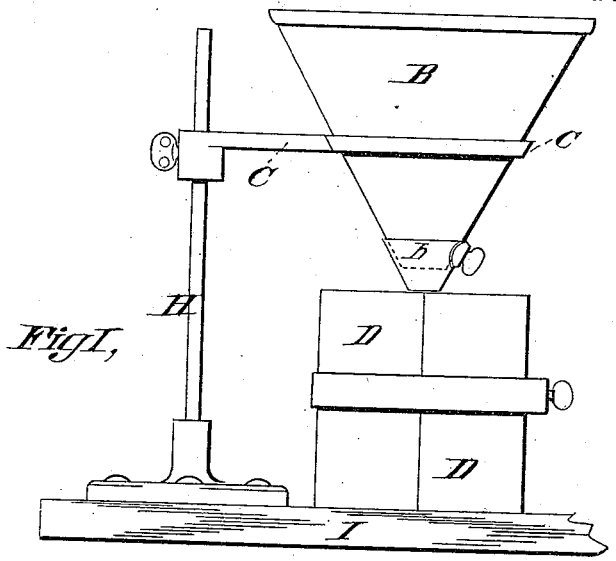

Fig I,

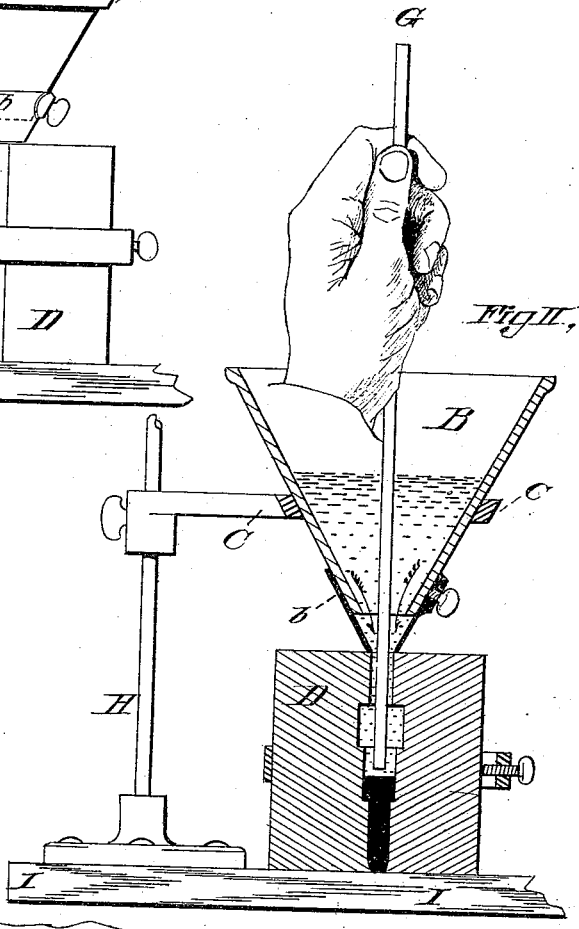

Fig II,

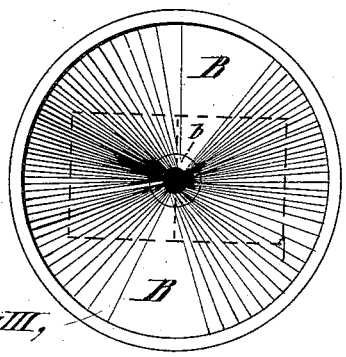

Fig III,

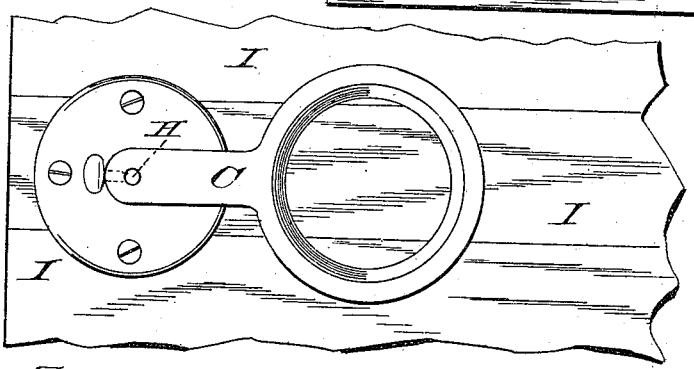

Fig IV,

Witnesses,
Lewis Tyler
Timothy H. Brown

Inventor;
H. S. Earle,
by R. F. Hyde
Atty.

UNITED STATES PATENT OFFICE.

HORATIO S. EARLE, OF CHICOPEE FALLS, MASSACHUSETTS.

APPARATUS FOR FILLING CORE-BOXES.

SPECIFICATION forming part of Letters Patent No. 303,386, dated August 12, 1884.

Application filed December 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, HORATIO S. EARLE, a citizen of the United States, residing at Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented a new and useful Improved Apparatus for Filling Core-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Heretofore core-boxes have usually been filled from the sand heaped upon the core-box around the mouth of its hole, and pushed in the hole by one hand, while rammed by the other holding the tamping-rod, or else alternately fed and tamped by one hand; but in this method both hands are employed continuously, or the process is retarded by the use of only one at a time. The top of the box will not hold enough at one time to make the core, so that time has to be taken in supplying sand to the top of the box; and as the box becomes filled the process becomes slower from the necessarily-shortened stroke of the tamping-rod within the box.

The object of my invention is to enable one hand to simultaneously perform the operations of feeding the sand and tamping it, to build up the core, so that one hand can relieve the other when fatigued, and the operation go on without delay, to provide material enough in position from the beginning to complete the core, and to provide for a uniform length of stroke being given to the tamping-rod from the beginning to the completion of the core.

To this end my invention consists in arranging above the core-box a funnel-shaped receptacle for the sand; to have its open smaller end in close proximity to the opening in the core-box, and have said open end of the approximate diameter of the mouth of the core-opening; and in providing a tamping-rod long enough to extend from the bottom of the core-box to form a handle above the funnel.

In operating the tamping-rod its motion feeds the sand from above its bottom end to below it, and if the sand is mixed with an unusual amount of adhesive substance the rod may be lifted out of the box to take down with its flat end the required amount of filling material, no care being required in lengthening the stroke of the rod, as it is guided by the sides of the funnel.

To carry my invention into effect, I have constructed a device as shown in the accompanying drawings, in which—

Figure I is an elevation; Fig. II, a partial sectional elevation; Fig. III, a plan view of a part, and Fig. IV also a partial plan view.

I is the bench, upon which the boxes are placed to be filled.

H is a standard bolted to the bench.

C is an arm adjustable to different heights upon the standard. The arm C is provided with a ring-socket, as more particularly shown in Fig. IV, into which sets the funnel-shaped receptacle B. The receptacle B is preferably made heavy enough to retain its place without other fastening in the socket, so that it may be easily removed to be filled with sand; though, if desired, it may be of thin sheet metal and be bolted or otherwise fastened to the arm C.

To obviate the necessity of having many funnels with different-sized apertures, I use a number of auxiliary ends, *b*, with openings of different diameters, any one of which can be secured upon the outside of the main funnel by a clamp-screw, as shown, to form an aperture to the receptacle B, to conform to the opening in the core-box to be filled.

In Fig. II a vertical section of the receptacle B and core-box D is shown, exhibiting the sand being fed to the core partially formed.

In practice I have found that by my improved process three core-boxes can be filled in the time taken to fill one by the ordinary way.

Now, having described my invention, what I claim is—

1. The combination of a core-box, a funnel-shaped receptacle held above said box by mechanism substantially as described, said receptacle having a removable end piece having an aperture which conforms in size to the aperture in the core-box, and a tamping-rod passing through said aperture, all adapted

for co-operation in the manner and for the purpose set forth.

2. The combination, with the funnel-shaped receptacle and the core-box, arranged relatively to each other, substantially as described, of a removable end piece for said funnel-shaped receptacle, said end piece having an aperture corresponding in size with the aperture in the core-box, and clamping mechanism, whereby the end piece is retained in position on the funnel, all substantially as set forth.

HORATIO S. EARLE.

Witnesses:
R. F. HYDE,
PENN TYLER.