No. 751,775. PATENTED FEB. 9, 1904.

S. E. BARNES.

CORE BOX.

APPLICATION FILED OCT. 21, 1903.

NO MODEL.

Fig. 1.

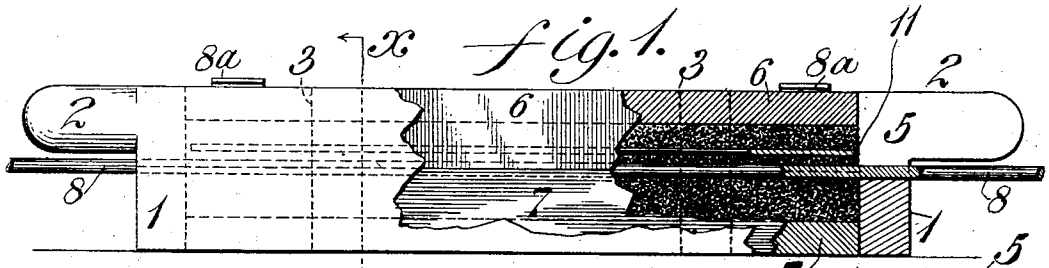


Fig. 2.

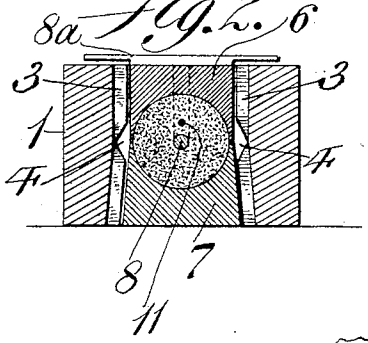


Fig. 3.

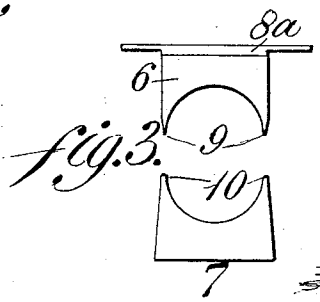


Fig. 4.

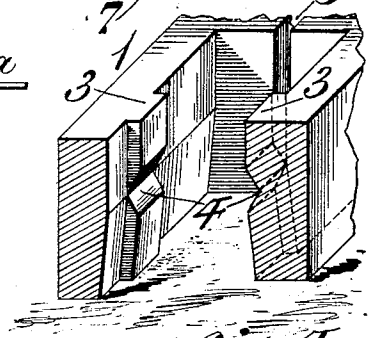


Fig. 5.

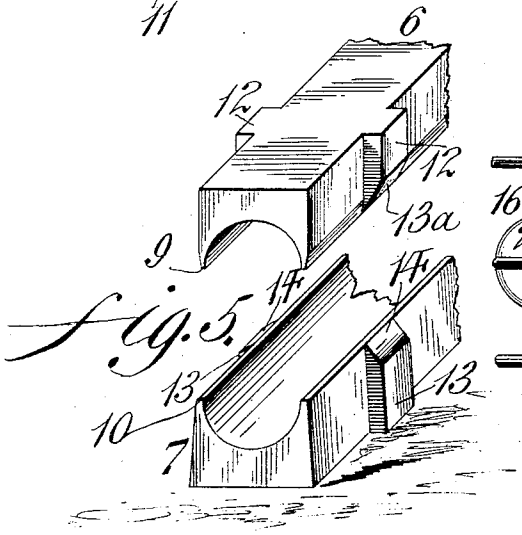


Fig. 6.

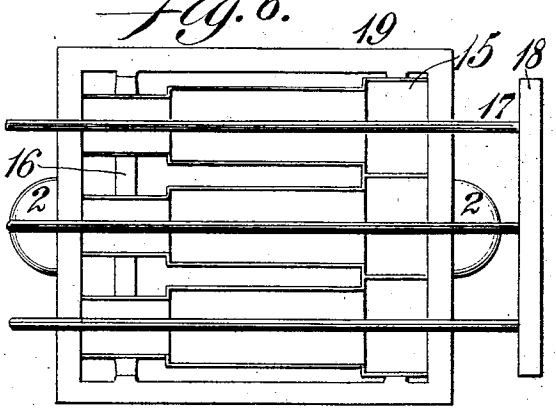
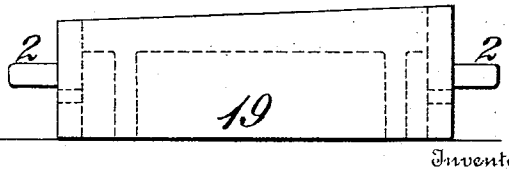


Fig. 7.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 751,775. Patented February 9, 1904.

UNITED STATES PATENT OFFICE.

SAMUEL E. BARNES, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO J. W. PAXSON CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CORE-BOX.

SPECIFICATION forming part of Letters Patent No. 751,775, dated February 9, 1904.

Application filed October 21, 1903. Serial No. 177,851. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. BARNES, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Core-Boxes, of which the following is a specification.

My invention relates to core-boxes; and it consists of a two-part core-box supported in a frame, which also supports a vent-rod.

It further consists of means for supporting a number of such boxes and rods side by side.

It further consists of novel means for measuring the quantity of sand required for each portion of the core.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents a side view of my device in elevation, partial fracture, and vertical section. Fig. 2 represents a section through the line $x x$, Fig. 1. Fig. 3 represents an end elevation of the parts of the core-box. Fig. 4 represents in perspective a portion of the frame. Fig. 5 represents a modified form of core-box. Figs. 6 and 7 represent, respectively, a plan and a side elevation of a modified form of my device.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to Figs. 1 to 4 of the drawings, 1 designates a rectangular frame provided with handles 2, having on its inner sides guide-spots 3, having transverse grooves 4, and having its ends slotted at 5.

6 and 7 designate the upper and lower halves of a longitudinally-divided core-box, the adjacent faces of which may be semicylindric or of other desired form, according to the shape of the core required.

It will be noted that the sides of the lower portion 7 and of the lower portion of the sides of the frame 1 flare downwardly.

In operation the lower box portion 7 is laid on a bench and the frame 1 placed over it, the guide-spots 3 serving to center the box in the frame and to leave on both sides thereof a free space. A quantity of sand is then strewn in the frame 1, a vent-rod 8 dropped into the slots 5; and the frame filled with sand. The upper portion 6 of the box is then forced down into the frame 1, being guided by the spots 3 to its place over the portion 7. It will be noted that the parts 6 and 7 have edges 9 and 10 to separate the sand. The top of the part 6, which may come substantially level with the top of the frame 1, may then be rapped and the vent-rod 8 withdrawn longitudinally. The frame 1 and part 6 are then raised, leaving the core resting on the part 7 and ready to be rolled onto a plate. To raise the upper part 6 of the box with the frame 1, I may provide it with transverse bars 8^a, extending laterally over the top of the frame. If desired, a stiffening wire or rod 11 may be employed, as shown in Fig. 1. This is dropped into the sand before the frame 1 is entirely filled.

It is obvious that where the core is too large to be properly rapped by hand a molding or "squeezing" machine may be used.

By grooving the guide-spots 3 at 4, as shown, the upper box part 6 drops evenly down into place and any grinding of the sand between it and the frame is prevented.

In the modified box, (shown in Fig. 5 of the drawings,) guide-spots 12 13 are placed on the side of the box parts 6 and 7 instead of within the frame. The beveled portions 13^a 14 serve the same function as that of the groove 4, above described.

In Figs. 6 and 7 I have shown a plurality of cores as made in a single box. I have also shown these as of varying cross-sectional area, in this case of a diameter decreasing toward one end. The box part 15 here shown is for convenience made in skeleton form and united by a cross-bar 16. I have also shown the vent-rods 17 united at one end by a transverse bar 18. As the height of the frame 19 of my device above the lower box part 7 measures the volume of sand introduced, I have here shown the end of the frame as raised to provide for the greater quantity of sand required for the

larger end of the core at the right of the drawings.

Although I prefer slotting the ends of the frame to receive the vent-rod 8, it is obvious that I may merely drill holes therethrough, as shown in dotted lines, Fig. 7.

It is evident that various changes may be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A core-making device comprising a core-box consisting of upper and lower portions and an inclosing frame adapted to support said portions in their relative position, the end of said frame being apertured to permit the passage of a vent-rod therethrough.

2. A core-making device comprising a core-box consisting of upper and lower portions and an inclosing frame adapted to support said portions in their relative position, the end of said frame being slotted to support a vent-rod within said box and to permit its lateral withdrawal therefrom.

3. A core-making device comprising a core-box consisting of upper and lower portions, an inclosing frame adapted to support said portions in their relative position and means for raising said frame and said upper portion together.

4. A core-making device comprising a core-box consisting of upper and lower portions, an inclosing frame adapted to support said portions in their relative position and means on said upper portion whereby it may be raised with said frame.

5. A core-making device comprising a core-box consisting of upper and lower portions, an inclosing frame adapted to support said portions in their relative position and transverse bars projecting laterally from said upper portion over said frame whereby said portion may be raised with said frame.

6. A core-making device comprising a horizontally-divided core-box, an inclosing frame spaced away from the sides of said boxes and guide-spots on one of said parts.

7. A core-making device comprising a horizontally-divided core-box, an inclosing frame and guide-spots on one of said parts, said guide-spots providing a transverse groove adjacent the juncture of said box.

8. A core-making device comprising a core-box adapted to contain a plurality of cores consisting of upper and lower portions and an inclosing frame adapted to support said portions in their relative position, said frame having a plurality of apertures in each of its ends and a plurality of vent-rods secured to a common transverse bar and adapted to enter said apertures.

9. A core-making device comprising a core-box consisting of upper and lower portions, of varying cross-sectional area and an inclosing frame of correspondingly-varying area adapted to support said portions in their relative position.

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