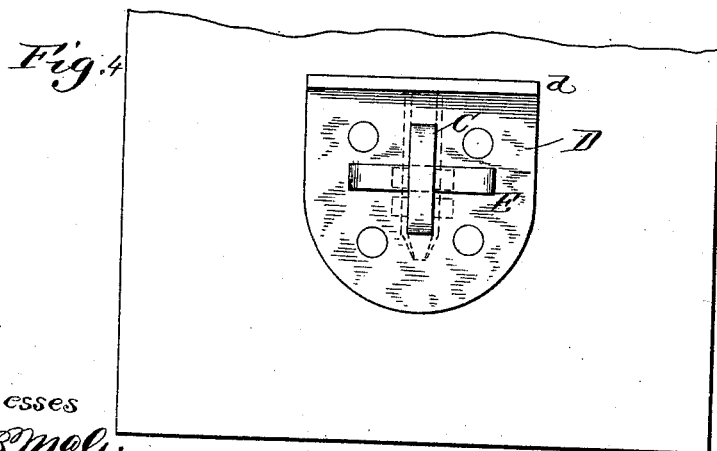
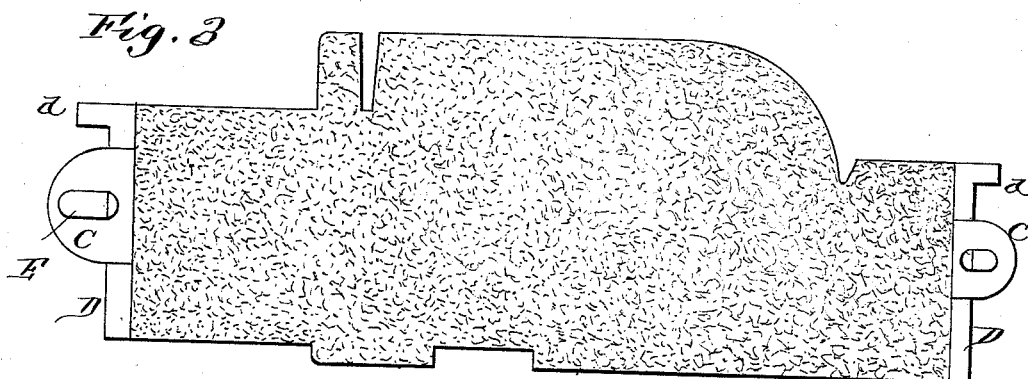
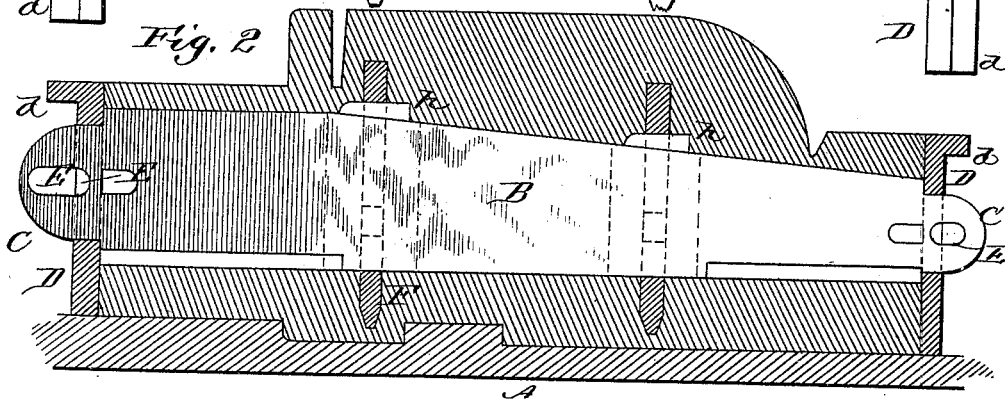
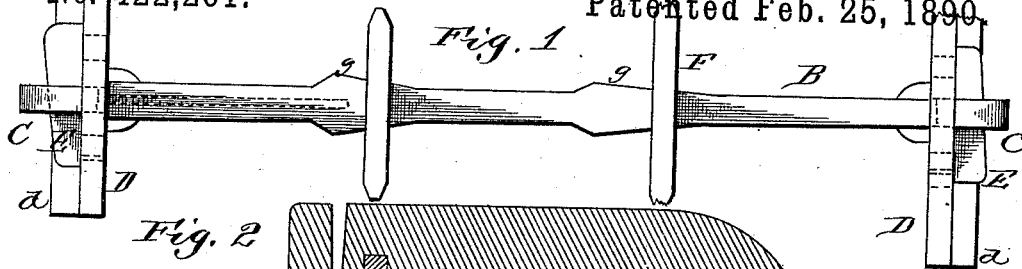


(No Model.)

W. B. STERRIT.  
DEVICE FOR FORMING GREEN SAND CORES FOR RAILROAD  
JOURNAL BOXES.

No. 422,261.

Patented Feb. 25, 1890.



Witnesses

J. B. McGinnis  
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Inventor.

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Attys

# UNITED STATES PATENT OFFICE.

WILLIAM B. STERRIT, OF PITTSBURG, PENNSYLVANIA.

DEVICE FOR FORMING GREEN-SAND CORES FOR RAILROAD JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 422,261, dated February 25, 1890.

Application filed October 25, 1889. Serial No. 328,117. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. STERRIT, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Forming Green-Sand Cores for Railroad Journal-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to the method and means of making green-sand cores for railroad journal-boxes, and has for its object the provision of novel expedients to be used in forming the green-sand core whereby a great saving in labor and material is effected and the usual drying, blackening, handling, and pasting incident to the use of dry sand are obviated.

My invention consists in the novel construction of an arbor or stem adapted to be inserted in the core-box for the purpose of forming a base, body, or support for the reception of the green sand constituting the core of a journal-box, the said arbor or stem being provided with end pieces having strips for lifting the core out of the box and setting it in the mold, and being also provided with detachable ribs or bars to retain the sand in proper position upon the arbor or stem, all as hereinafter more particularly described and specifically claimed.

Figure 1 is a plan view of my improved core-bar with its appendages. Fig. 2 is a vertical longitudinal section of the core-box and core, showing the core-bar in position. Fig. 3 is a side view of the core built or formed upon the core-bar. Fig. 4 is an end view of the core-bar and part of a mold.

In the drawings, A designates the core-box, in which is to be formed the green-sand core for a railroad journal-box. The said core-box is constructed of the usual or any suitable pattern.

B designates the core-arbor, to which my invention particularly relates, and which consists of a long bar or beam made of iron or other suitable material and having tapering

sides and one or both of its edges inclined, so as to give the arbor a characteristic wedge shape, which will facilitate its removal from the core when the casting is finished.

Upon each end of the bar or arbor B is formed a flat tongue C to receive a plate D, mortised for the passage of said tongue and formed with a flange *d*, by which the bar and the core are lifted from the core-box and placed in the mold. These plates are secured in position upon the bar by means of wedge-shaped keys E or other suitable fastenings which will allow the plate to be detached.

F F designate plates mortised for the passage of the bar B, upon which they are placed and held in position by wedges or keys *h h*, said plates forming ribs which lie within the core-box and constitute ledges or shelves upon and around which the green sand is packed and by which the core is firmly sustained upon the bar B while it is being inserted in the mold and during the operation of casting. The bar B is re-enforced or enlarged laterally at points *g g*, so as to form tapering or wedge-shaped shoulders, which, when the plates F F are pressed lengthwise of the bar and toward its larger end, will wedge or tighten said plates in place.

In forming a core by the aid of the devices embodying my invention the core-bar B, with its appendages, is inserted within the core-box in the position shown in Fig. 1 and the green sand packed within the box and around the bar and its attached ribs. The core is then lifted from the core-box by means of its end pieces and placed in the mold either edgewise or flat, as may be most convenient in casting. The casting is then made, after which one or both end pieces of the core-bar are removed and the bar itself driven out of the sand lengthwise, the detachable ribs being loosened in the act of driving the bar, so that they offer no resistance to its movement. When the bar is thus removed, the sand is knocked down and removed from the mold, so that it may be used over and over again.

As shown in Fig. 1 of the drawings, the core-box has contracted ends and the journal-box will be of similar shape. It is for this reason that I employ detachable ribs upon

the core-bar, as permanent ribs could not be withdrawn from the casting.

By the use of the devices described one skilled in the art of molding or core-making  
5 can save fifty per cent. in labor over the old way of making these cores and also keep the coarse sharp sand out of the molding-sand that the castings are made in, as according to  
10 my invention both core and mold are made out of the same quality of sand, thereby effecting a still further saving in the manufacture of journal-boxes.

Having described my invention, I claim—

1. The combination, with the tapered core-  
15 bar B, of the slotted plates F F, fitting on the

tapered portions of the core-bar, and wedge-shaped keys *h h*, substantially as described.

2. The tapered core-bar B, formed with the tapering enlargements *g g*, in combination with the detachable slotted plates F F, fitting  
20 on the tapered portions of the core-bar, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of October, 1889.

WILLIAM B. STERRIT.

Witnesses:

HENRY F. WEAVER,  
EDWARD A. HESS.