No. 677,157. Patented June 25, 1901.

J. C. HOSHOR.

GRAVITY BUCKET FOR CONVEYERS.

(Application filed Oct. 11, 1900.)

(No Model.)

Fig. 2.

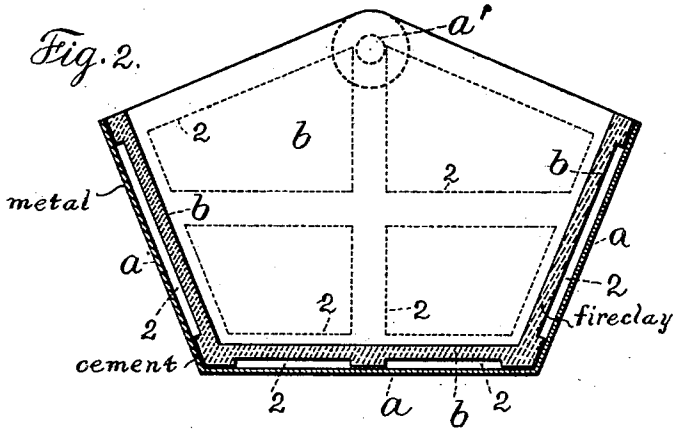
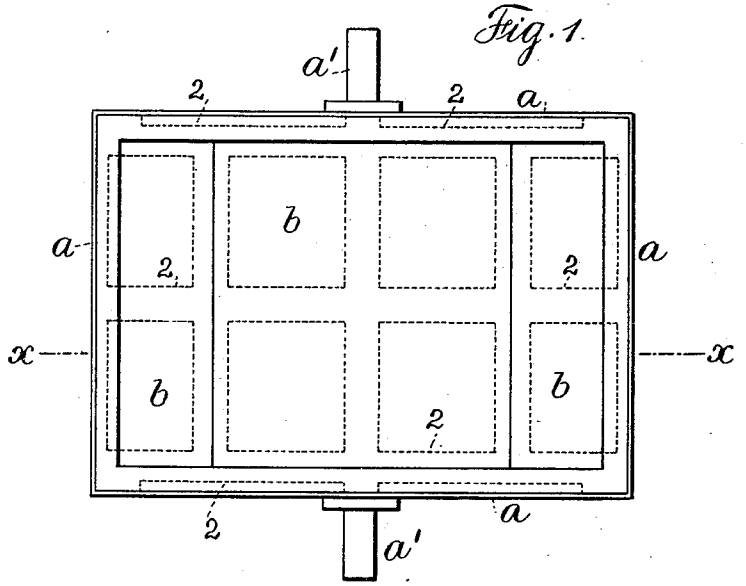


Fig. 1.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH C. HOSHOR, OF PATERSON, NEW JERSEY, ASSIGNOR TO HIMSELF AND THOMAS E. PLATT, OF SAME PLACE.

GRAVITY-BUCKET FOR CONVEYERS.

SPECIFICATION forming part of Letters Patent No. 677,157, dated June 25, 1901.

Application filed October 11, 1900. Serial No. 32,680. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. HOSHOR, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented an Improvement in Gravity-Buckets for Conveyers, of which the following is a specification.

Gravity-buckets for conveyers for transporting molten metal have heretofore been employed, and in some instances these buckets have been of cast metal with recesses to receive the molten metal, and in other instances a shell of metal has been lined with fire-bricks laid up in suitable cement. The former buckets required a preparatory treatment and were exceedingly heavy. With the latter buckets the extreme heat was liable to warp the metal shell and to open seams in the laid-up bricks and injure the binding-cement, &c.; and the object of my invention is to obviate these difficulties.

I provide a metal-shell gravity-bucket with a lining that is integral throughout, formed of one piece of refractory material, such as fire-clay, to fit within the metal shell, and in the under surface coming next to the metal shell I provide a number of recesses forming dead-air spaces between the metal shell and the lining when the lining is in place. This lining is preferably evenly supported in and connected to the shell by suitable cement.

In the drawings, Figure 1 is a plan view representing a gravity-bucket made according to my invention, and Fig. 2 is a vertical longitudinal section of the same at the line x x, Fig. 1.

The metal shell a of the gravity-bucket may be of any desired material and suitable proportions, and the same is provided with trunnions a', by which the bucket is suspended from the endless chain of a conveyer. The refractory material or fire-clay lining b completely fills the inside of the shell a and is provided on the under surface with recesses 2, which may be of any desired size and spacing on the under surface of the lining. These recesses 2 form dead-air spaces between the lining b, of suitable refractory material, such as fire-clay, and the surface of the metal shell a. The under surface of the lining around the recesses is in the form of ribs, and an intervening layer of suitable cement is placed between the metal shell a and the projecting under surfaces of the said lining, so as to evenly support the lining upon the shell and to connect the lining to the shell, so that all of the said surfaces or ribs shall bear positively upon the metal lining.

I prefer to make the refractory material or fire-clay lining integral throughout, or, in other words, formed entire of one piece of material molded to shape, because such form is without seam or joint liable to be effected by the molten metal and uneven expansion thereby or after contraction. The dead-air spaces which extend over the greater part of the surface of the lining adjacent to the shell serve to prevent excessive heat passing through the lining to the shell, so that the shell is not liable to become overheated or to warp or buckle because of the molten material carried by the bucket.

I have shown in the drawings a definite arrangement of the recesses 2, but do not limit myself thereto, because said recesses may be made in any form or spaced in any manner desired.

I claim as my invention—

1. As a new article of manufacture, a gravity-bucket comprising a metal shell and a refractory-material lining of one piece and integral throughout and extending over the entire inner surface of the bucket and provided with a series of recesses in the under surface of the lining forming dead-air spaces between the lining and the shell, substantially as set forth.

2. As a new article of manufacture, a gravity-bucket, comprising a metal shell and a fire-clay lining of one piece and integral throughout and extending over the entire inner surface of the bucket and provided with a series of recesses in the under surface of the lining forming dead-air spaces between the lining and the shell, and an intervening layer of suitable cement between the projected under surfaces of the lining and the metal shell, substantially as set forth.

Signed by me this 5th day of October, 1900.

JOSEPH C. HOSHOR.

Witnesses:
GEO. T. PINCKNEY,
BERTHA M. ALLEN.