

S. CROLL.

Improvement in Composition for Journal Bearings.

No. 124,485.

Patented March 12, 1872.

Fig. 1.

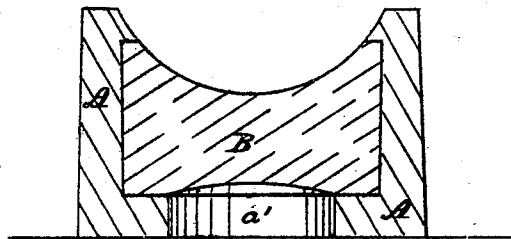
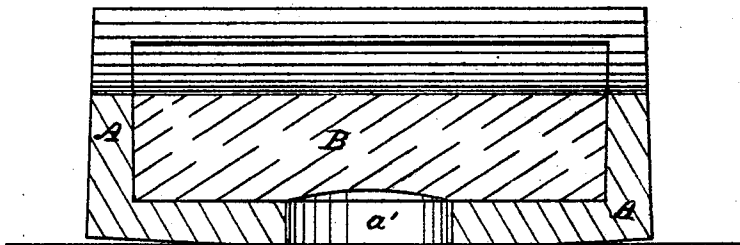


Fig. 2.



WITNESSES:

Wm. Morrison.
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INVENTOR:

Sylvester Croll.

Received May 28th 1872.

124,485

UNITED STATES PATENT OFFICE.

SYLVESTER CROLL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS OF HIS RIGHT TO REUBEN T. BARRETT AND EDWARD T. PLUSH, OF SAME PLACE.

IMPROVEMENT IN COMPOSITIONS FOR JOURNAL-BEARINGS.

Specification forming part of Letters Patent No. 124,485, dated March 12, 1872.

Specification describing a certain Composition for Journal-Bearings, invented by SYLVESTER CROLL, of the city of Philadelphia in the State of Pennsylvania, to be used instead of the metals or alloys thereof heretofore generally used for the purpose, especially in the journal-boxes of railway cars.

The nature of my invention consists in mixing and fusing together sand or siliceous, soda, bicarbonate of soda, arsenious acid, bone-dust, oxide of lead, clay, and oxide of manganese, substantially in the manner hereinafter specified, and compressing the mass, while in a highly-heated and fused condition, within the journal-box, previously heated and fitted with a removable former, which will give to the face of the intended bearing the curve required for the journal.

Figure 1 represents a vertical transverse section of a journal-box with the composition bearing therein; and Fig. 2 represents a vertical longitudinal section through the center of the same, A being the metal box; *a'*, a hole through the bottom of the same; and B, the composition bearing as cast therein.

Take one hundred pounds of clean sand or siliceous, twenty pounds of sal-soda, twenty pounds of bicarbonate of soda, ten pounds of arsenious acid, thirty pounds of bone-dust, thirty pounds of oxide of lead, fifty pounds of clay, and eight ounces of oxide of manganese; mix them all thoroughly together, and fuse in the same manner practiced in the production of porcelain.

Now, having the metal box A, which is to receive the bearing B, previously prepared,

with a hole, *a'*, of about the diameter of an inch and a quarter, more or less, through the middle of its bottom, and the said box firmly held down upon the removable former, and the whole moderately heated, pour the hot semi-fluid mass which is to form the bearing B through the hole *a'* until the box and hole are full and immediately apply pressure upon the plastic contents of the box by means of any suitable plunger-rod or piston applied in the hole, and press with sufficient force to cause the said plastic contents of the box to penetrate and fill up all the cavities or recesses within the box before the hot mass or composition has become set. After the bearing thus produced has become hard by cooling, the plunger or piston and the former may be detached, and the box, with its contained bearing, set aside in an annealing-oven to become gradually cold for use.

I have had these journal-bearing boxes in almost constant use in some of our city railway horse-cars during the last six months, and they do not show the slightest evidence of wearing away of either the bearings or the journals, and consequently they give entire satisfaction to the managers of the roads.

I claim as my invention—

Journal-bearings, composed of the materials hereinbefore set forth, substantially in the proportions specified.

SYLVESTER CROLL.

Witnesses:

BENJ. MORISON,
WM. H. MORISON.