

C. B. Colter,

Composition for Molds.

No 36,943.

Patented Nov. 18, 1862.

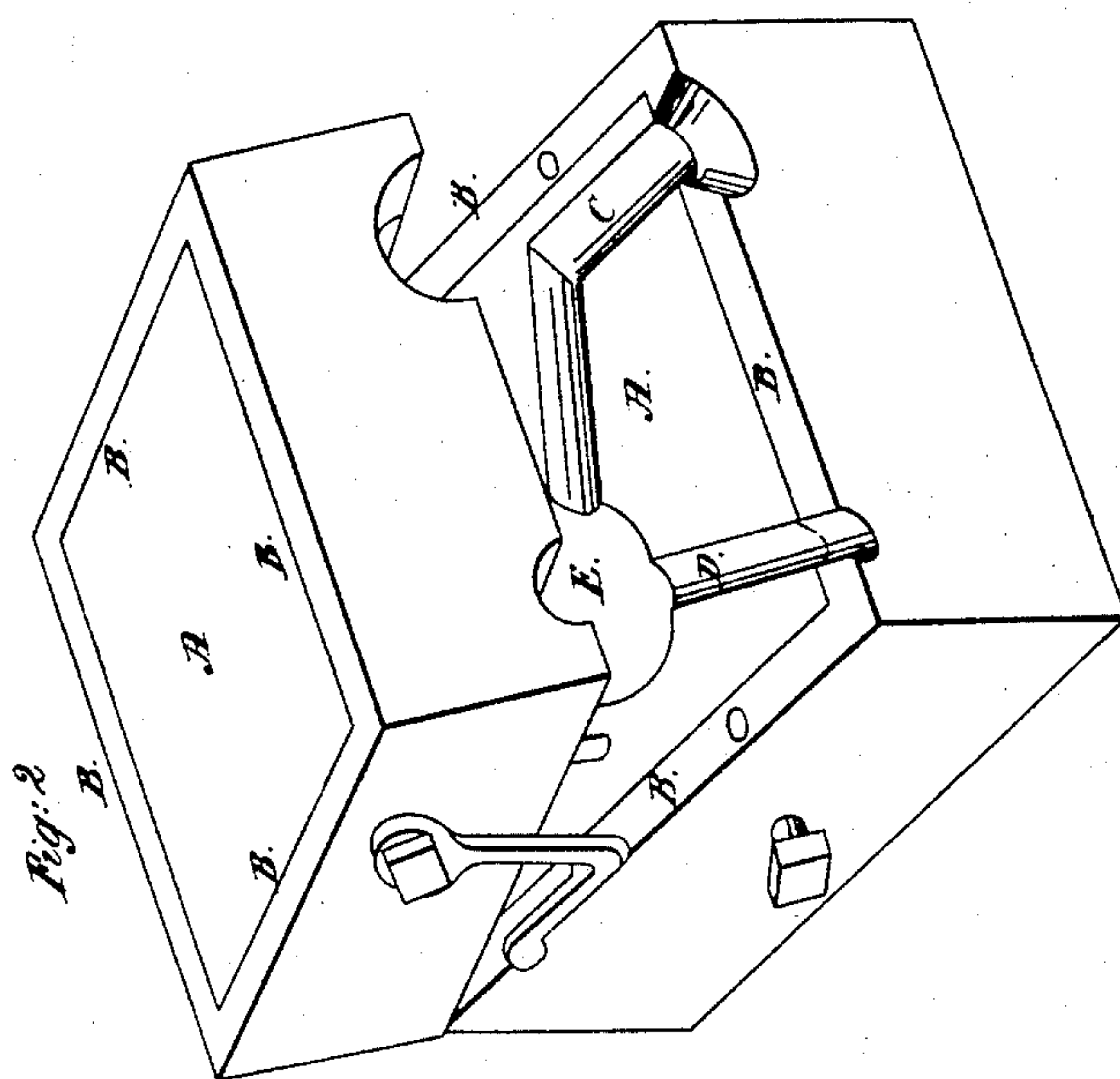
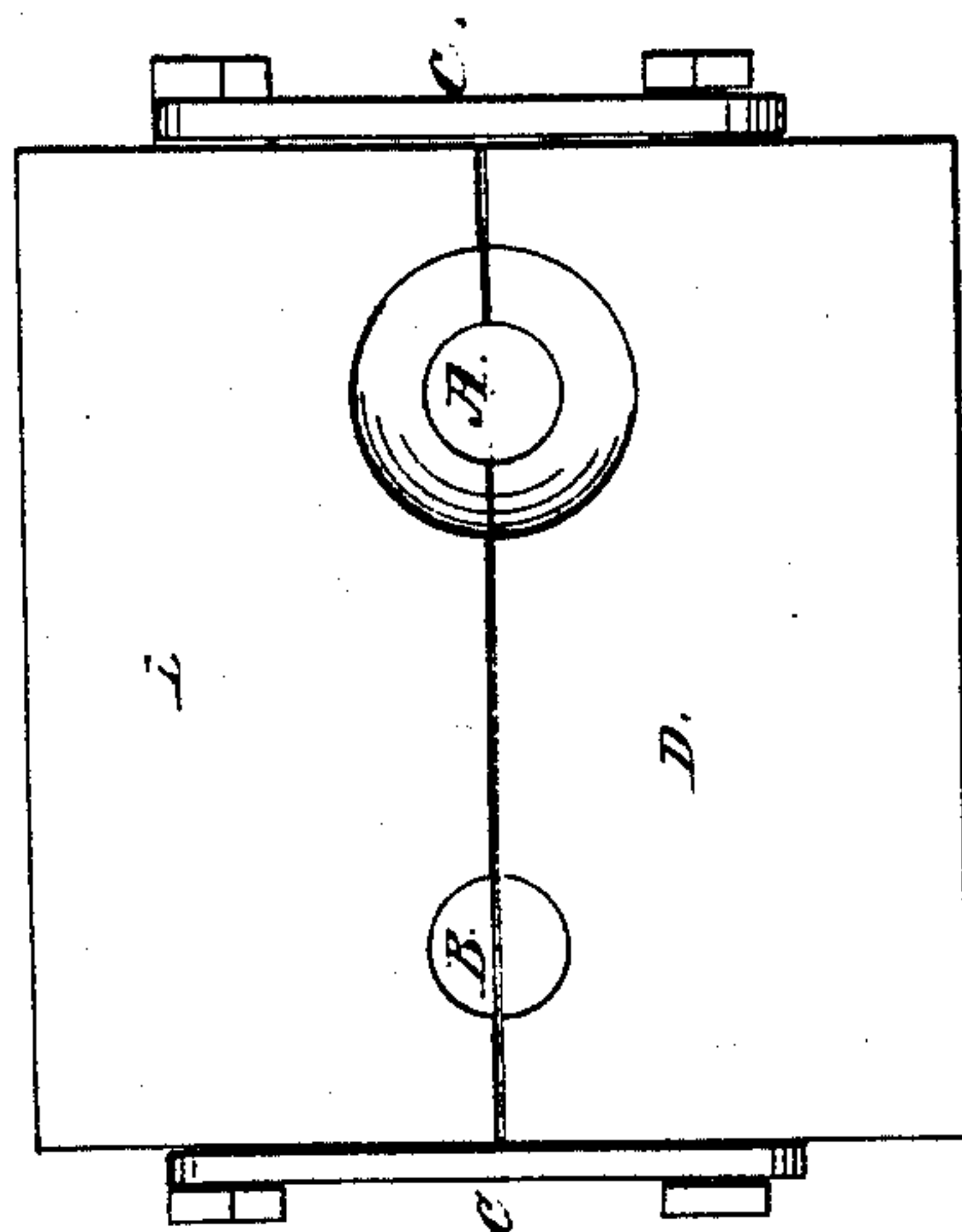


Fig. 1.



Witnesses:

G. H. Phillips  
A. C. Kunkley

Inventor:

C. B. Colter

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# UNITED STATES PATENT OFFICE.

C. B. COTTER, OF MILFORD, PENNSYLVANIA.

## IMPROVEMENT IN MOLDS FOR CASTING METALS.

Specification forming part of Letters Patent No. **36,943**, dated November 18, 1862.

*To all whom it may concern:*

Be it known that I, C. B. COTTER, of Milford, in the county of Pike, in the State of Pennsylvania, have invented a new and improved material for forming molds for casting all kinds of metals, and for lining stoves, cupolas, and such other places requiring a substance capable of resisting great heat; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in providing a material which, when formed into molds, will be durable, allowing the same mold to be used several times over, and at the same time producing a very smooth casting—much smoother than can possibly be obtained from a sand mold.

To enable others skilled in the art to which my invention pertains to make and use my invention, I will proceed to describe the materials employed and the process I adopt in incorporating and using the same.

I take hickory or other hard wood ashes, sift and grind the same to the fineness of flour. I then take any given quantity of water and dissolve in it as much of what is commonly known as "concentrated lye" (such as is ordinarily sold at stores) as the water is capable of dissolving, and with this solution I dampen the prepared ashes, and mix or grind the same to the consistency of putty prepared for use. In some cases I add about one-fourth part of hydraulic or plastic cement to the ashes; but

this is not really necessary, nor do I make any claim to the use of that material, except in combination with the ashes. Having thus prepared the composition, I place one-half of the pattern upon a smooth surface within one-half of the flask, and fill from the back, pressing closely as I fill. When the two parts of the pattern have been molded, I place the two filled parts of the flask together, the pattern remaining in, and submit the same to a moderate degree of heat for about twenty-four hours. I then separate the mold, take out the pattern, and submit the rejoined parts of the mold to a heat increasing gradually to a degree nearly sufficient to melt the iron flask. The mold is then ready for use. The pattern must be in two parts, and each half of the mold filled and pressed separately.

If desirable, the mold thus formed may subsequently be broken up and redissolved in water, and will answer as well as before for forming a new mold.

What I claim is—

The composition, substantially as above described, whether the same be of ashes and lye alone, or the same in combination with the hydraulic or plastic cement, as and for the purposes set forth.

C. B. COTTER.

Witnesses:

J. B. ALLEN,  
JOHN CARPENTER.