# H. B. Osgood,

## Casting Hardware.

No. 8,658. Patented Jan. 13, 1852.

Fig: 1.

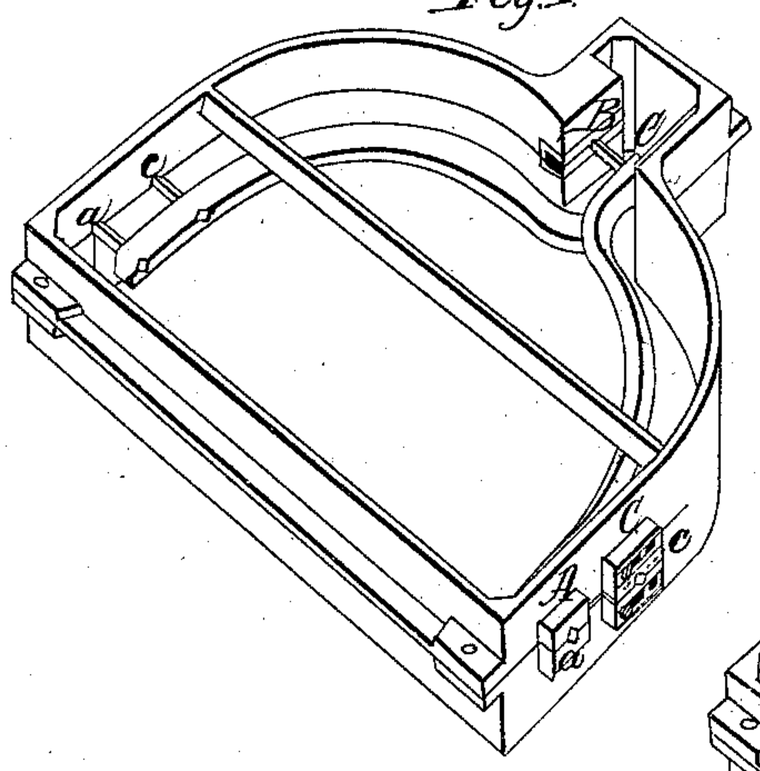



Fig: 4.

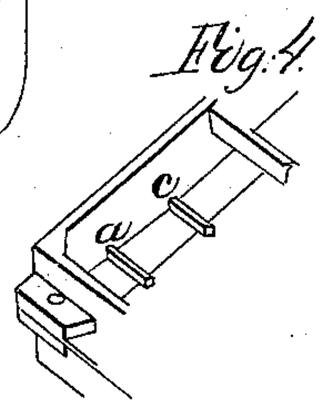



Fig: 2.

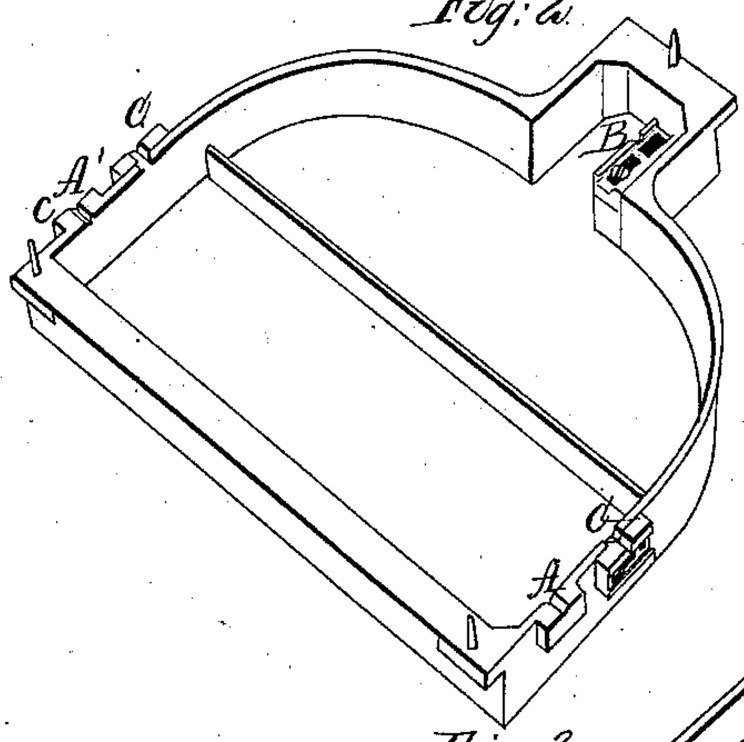
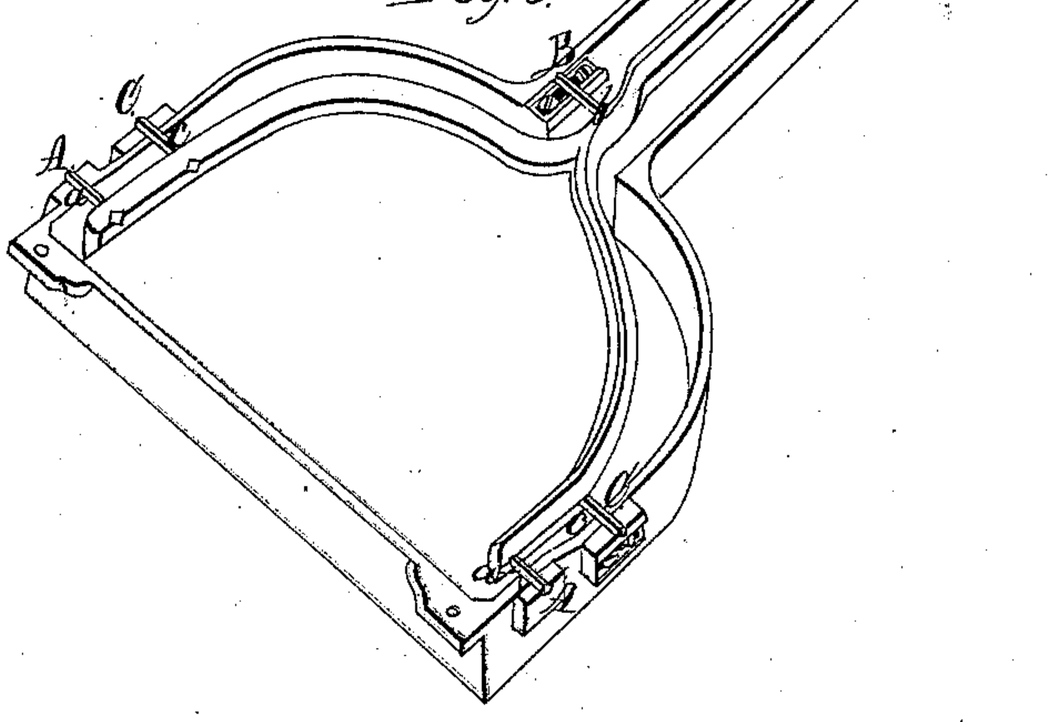



Fig: 3.




N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

HORATIO B. OSGOOD, OF THOMPSONVILLE, CONNECTICUT.

## IMPROVEMENT IN APPARATUS FOR ATTACHING PIECES OF METAL TO EACH OTHER BY CASTING.

Specification forming part of Letters Patent No. **8,658**, dated January 13, 1852.

*To all whom it may concern:*

Be it known that I, HORATIO B. OSGOOD, of Thompsonville, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Flasks for Casting Levers for Platform-Scales, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, which make a part of this specification, in which—

Figure 1 is a perspective view of the flask for casting the short part of the combined levers, showing the article as cast in the flask when the sand has been removed. Fig. 2 is a perspective view of the cope of the same, showing the upper part of the spaces in which the steel pivots or bearings rest and are secured before pouring the fused metal into the mold. Fig. 3 is a perspective view of the lower part of the flask for casting the long part of the combined levers, showing the article as cast in the flask, and showing the position in which the steel pivots or bearings rest and are secured when the fused metal is poured in. Fig. 4 is a perspective view of a section of Fig. 1, showing the steel pivots or bearings as held in the jaws previous to pouring in the fused metal.

My improvement consists in making the jaws movable, so that they may be adjusted to their proper positions or changed for different-shaped steel when required, and so as to allow the levers to shrink without any risk of straining the castings. I make the flasks of cast-iron or any other suitable material of the size required for any particular size of scales, and of suitable shapes, as seen in Figs. 1 and 2, making each flask of two parts, as seen in Fig. 1, (or more parts when necessary,) with stationary or permanent jaws on each part near the back end, as seen at A, Fig. 1, and A and A′, Figs. 2 and 3, to hold one pair of the pivots or bearings, *a a*, and movable jaws to hold the other pivots or bearings, *b*, *c c*, and *d*, as seen at B, C, and D. These movable jaws are secured to the permanent parts of the flask by means of steady-pins and binding-screws, as seen at B, C, and D, or in any other convenient way, so that they may be secured perfectly tight while molding, and after which the screws may be loosened, so that the shrinking of the metal will move them sufficiently to prevent straining the casting as it cools. The spaces in these jaws must be so made that the steel pivots or bearings will fit accurately into them, so that they will be held by them in the exact position in which they will be needed for use as scale levers, beams, &c., so that the castings may be taken from the flask, the pivots or bearings tempered, and immediately put up for use.

The jaws C C may be so fitted that the steel pivots or bearings may rest wholly in the movable jaws and not touch the permanent parts of the flask, which will probably be found to be the best arrangement in most cases; and the jaws C and A may be changed so that the permanent jaws may be at C, which in some cases would be the best. Any kind of scale levers or beams may be cast in this manner by making the flask of the proper shape and size, as well as other analogous articles.

The advantages of my improvement consist in having the jaws movable, so that they may be readily set or adjusted to the exact point required, and yet be susceptible of being moved by the shrinking of the metal while cooling, and thereby prevent any injury or derangement of the part of the casting by the strain which would otherwise be occasioned by the shrinking of the metal of the casting; and in having thick metal jaws attached to the flasks, so that the steel pivots or bearings resting in them will not be heated sufficiently to injure the steel or prevent its receiving a good temper afterward.

I am aware that movable jaws have been used to hold both ends of the core or a shaft or rod passing through a cylinder, &c., so that the bearing may be placed in or out of the center of the cylinder or other article when necessary, as for cam-rollers, &c. I therefore do not claim them as such as my invention; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The use of movable jaws attached to the permanent parts of the flask for the purpose of holding the steel pivots or bearings of levers and beams of platform-scales and other analogous articles firmly in the exact position

required for use while the fused iron or other metal is being poured into the mold, so as to fix them securely in the lever, &c., and so that the movable jaws will readily yield to the shrinkage of the metal while cooling and prevent any injury from straining any of the parts, when the whole is constructed, arranged, and fitted to operate substantially as herein described.

HORATIO B. OSGOOD.

Witnesses:
FRANKLIN BOLLES,
R. FITZGERALD.