A. HARCUM.

MANUFACTURE OF GLASS-MELTING POTS.

No. 180,229. Patented July 25, 1876.

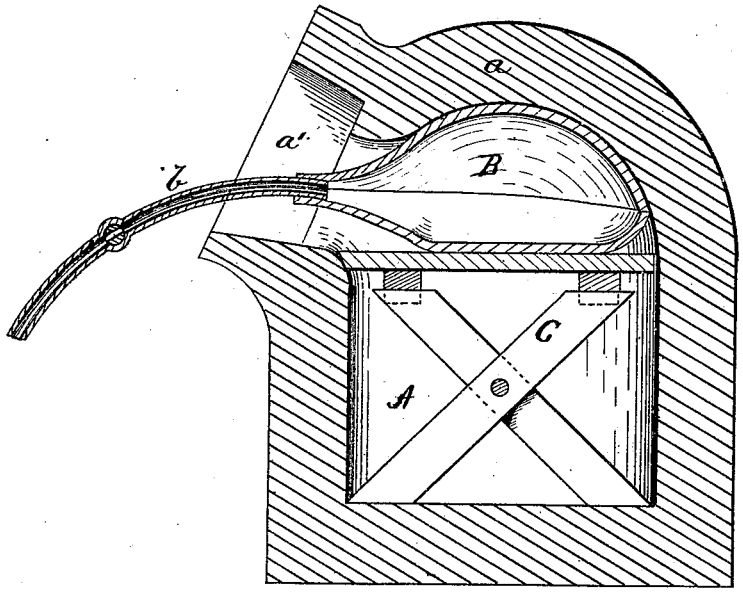

Fig. 1.

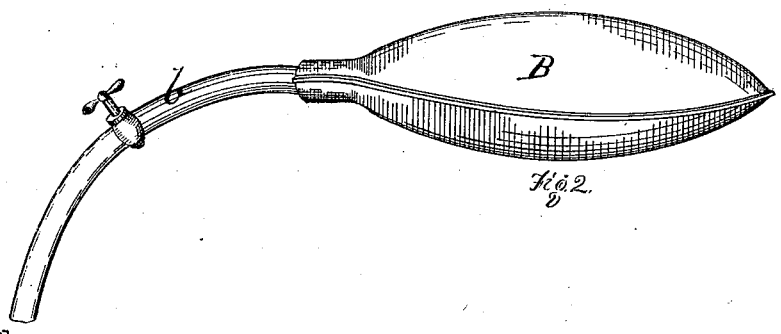

Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

ANDREW HARCUM, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND PETER KUNZLER, OF SAME PLACE.

IMPROVEMENT IN THE MANUFACTURE OF GLASS-MELTING POTS.

Specification forming part of Letters Patent No. **180,229**, dated July 25, 1876; application filed June 22, 1876.

To all whom it may concern:

Be it known that I, ANDREW HARCUM, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Glass-Melting Pots; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical section of a glass-pot and device for crowning the same, illustrating my invention. Fig. 2 is a view of the crowning device.

Like letters refer to like parts wherever they occur.

My invention relates to the manner of and devices for arching in or crowning glass-melting pots, and consists in forming the arch or crown upon a collapsible scaffold or support which can be withdrawn through the mouth of the pot after the clay has set.

Heretofore in the manufacture of glass-melting pots which are hooded, or covered in—such as pots employed in the manufacture of flint-glass and for similar glass—it has been customary to build the crown in successive layers or sections with intermissions to permit the clay to set or dry, the same as in building the body of the pot. Such a method of covering in the pot occupies from four to five days.

The building of the body of the pot in layers or successive portions, each of which is permitted to set before the next is added, is to a certain extent a necessary procedure on account of the tendency of a vertical wall to sag or crush down and to compact unequally under the weight of the superimposed wet clay when the wall is built continuously; but, when the crown is reached, the delay may be avoided, as the wet clay of the crown occupies a horizontal position, and therefore cannot become unequally compacted by its own weight, as in the case of a vertical wall.

The object of my invention is to facilitate the covering in of the pot, to avoid the delay and loss of time specified, and to produce better and more regular pots.

I will now proceed to describe my invention so that others skilled in the art to which it appertains may apply the same.

In the drawing, A indicates a glass-melting pot, having the hood or crown *a* and mouth *a'*. B is my improved arch or crown scaffold, which may be an air-tight sack or bag preferably of rubber or rubber-coated cloth, and provided with a tube, *b*, for expanding the bag when in use. The tube *b* may be closed by a plug, or provided with a stop-cock, as preferred. C is a support or stool made in one or in sections, as preferred, but, however constructed, it must be capable of being withdrawn through the mouth *a'* of the pot. It is usually of a height equal to the walls of the pot. In constructing a pot with such devices, I first build the body of the pot in the usual manner. I then place stool C within the pot, and, after having blown up sack B, I place it in position upon support C, after which the crown of the pot is built on continuously and without delay. The parts B and C are left in position until it is judged the clay of the crown is sufficiently set or dry to support its own weight, when the air may be permitted to escape from the bag gradually, and the strength of the crown tested. If it is found the crown is not sufficiently stiff, the bag may be blown up again and left in position for a time longer. When the crown is sufficiently dry, the air may be allowed to escape from the bag or core, and the collapsed core as well as the stool may then be withdrawn through the mouth of the pot.

I have shown, and in all cases prefer, a rubber sack or collapsible core, because it can be readily replaced and expanded when a proper test shows the crown of the pot is not sufficiently dry, and because it is easily made and readily adapted to various shapes of crowns; but I do not wish to be understood as limiting myself thereto, for it is evident an arch could be made of slats keyed together so as to be detachable and removable through the mouth of the pot.

The advantages of my invention are, saving in time and labor, and the facility and regularity with which the crown may be formed.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The method herein described for forming the crown of glass-melting pots, the same consisting in forming the crown upon a collapsible arch-piece arranged within the pot, and removable through the mouth of the pot, substantially as specified.

2. The collapsible core or arch-piece for forming the crown of glass-melting pots, substantially as specified.

In testimony whereof I, the said ANDREW HARCUM, have hereunto set my hand.

ANDREW HARCUM.

Witnesses:
F. W. RITTER, Jr.,
JAMES I. KAY.