C. L. KNECHT.

MANUFACTURE OF GLASSWARE.

No. 191,534. Patented June 5, 1877.

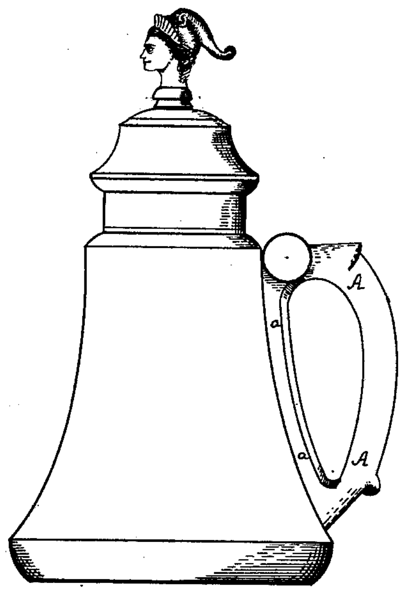

Fig. 1.

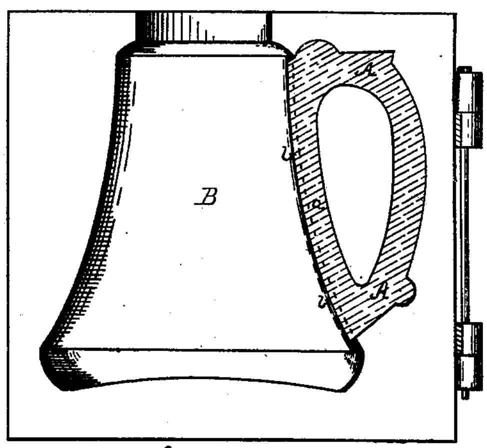

Fig. 2.

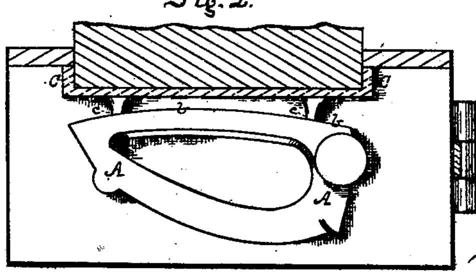

Fig. 3.

Witnesses

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CHARLES L. KNECHT, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN THE MANUFACTURE OF GLASSWARE.

Specification forming part of Letters Patent No. **191,534**, dated June 5, 1877; application filed February 12, 1877.

To all whom it may concern:

Be it known that I, CHARLES L. KNECHT, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Glassware; 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 side view of a molasses-jug, illustrating my invention. Fig. 2 is a sectional view of a mold, illustrating the manner of carrying out my invention; and Fig. 3 is a view, partly in section, showing the manner of pressing the handles.

Like letters of reference indicate like parts in each.

My invention relates to the manufacture of that class of glassware in which a handle is united to a blown body, such as lamps, pitchers, decanters, &c.; and it consists in combining, with the article of blown glassware, a pressed handle having a strengthening device, whereby, in the operation of joining the handle to the blown body, the uneven shrinkage between the handle and body is partially compensated by said strengthening device, which is connected to the body along its entire length, and acts as a brace to the ends of the handle.

Heretofore, in the manufacture of articles of this class, a lamp and handle have been made by successive operations in the same mold, as by first dropping liquid glass or a piece of hot glass into the handle-recess—in the latter instance cutting off the piece, so that an upper projecting end may be left and bent down by hand to some extent into the lamp-matrix—and then blowing the lamp in its matrix, so as to perfect the handle and unite the two. A pressed foot or base and handle have also been united to a blown lamp in such manner that the handle serves also to connect the foot with the lamp-body. But in the first-mentioned instance it has been found by practical experience that the right amount of glass cannot always be dropped into the handle recess or matrix, or turned into the mold, so as to make the handle regular; and it is therefore now the more common way to unite the handle to the lamp by the "sticking" process, which requires great skill, and is otherwise objectionable. According to this method a pressed handle with a continuous brace—that is, a brace connecting its two ends, as hereinafter more fully described—has never been produced. In the second-mentioned instance the handle must be pressed with the base or foot, and is only applicable to a few articles, such as lamps.

By my improvement the article and handle are so firmly united that they cannot be broken apart, the body of the article being fractured first. The handle is uniform and regular, the union between the two being very neat; and, on account of the connection between the two the entire length of the bar, they are not affected by the uneven expansion and contraction.

My improved handle and brace are also applicable to all blown articles, from large decanters down to molasses-pitchers.

To enable others skilled in the art to make and use my invention, I will describe it more fully.

My invention is illustrated as applied to a sirup-pitcher. The handle A is pressed in a suitable mold, the strengthening bar or brace *a* uniting the two ends of the handle. The external surface or edge *b* of the brace *a* should conform in shape to that of the article to which it is to be attached, so that when the article is blown thereon it will unite therewith the whole length of the brace. In Fig. 3 is illustrated a method by which the handle may be pressed. After pressing the cup C is broken from the handle A at the points *c c* by a slight blow, and, while still at a welding-heat, the handle is placed in the mold B, in such position that the edge *b* shall extend to or slightly beyond the line of the article to be blown, as shown in Fig. 2. The article is blown in the usual manner, the glass uniting with the handle A all along the edge *b* of the bar or brace *a*, and extending up around the sides of the brace. The mold B is an ordinary hinged mold, either two or three part, as desired.

Among the advantages of my improvement are that the handle is strong and firmly secured to the article. The strengthening de-

vice overcomes any tendency to breakage on account of the uneven shrinkage between the body and the handle. The handle is regular and uniform, and the articles can be manufactured cheaply, only unskilled labor being required.

The handle can also be applied to all blown articles, from decanters to molasses-pitchers and the like. In some cases it may also be desirable to extend the brace *a* below the handle.

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

In combination with the article of blown glassware, the pressed handle A, having a continuous strengthening device, *a*, whereby, in the operation of joining the handle to the blown body, the uneven shrinkage between the handle and body is partially compensated by said strengthening device, which is united to the body along its entire length, and acts as a brace to the ends of the handle.

In testimony whereof I, the said CHARLES L. KNECHT, have hereunto set my hand.

CHARLES L. KNECHT.

Witnesses:
R. J. MCCLURE,
JAMES I. KAY.