

J. J. QUERTINMONT.
 PROCESS AND APPARATUS FOR MAKING WIRE GLASS.
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936,665.

Patented Oct. 12, 1909.

Fig. 1.

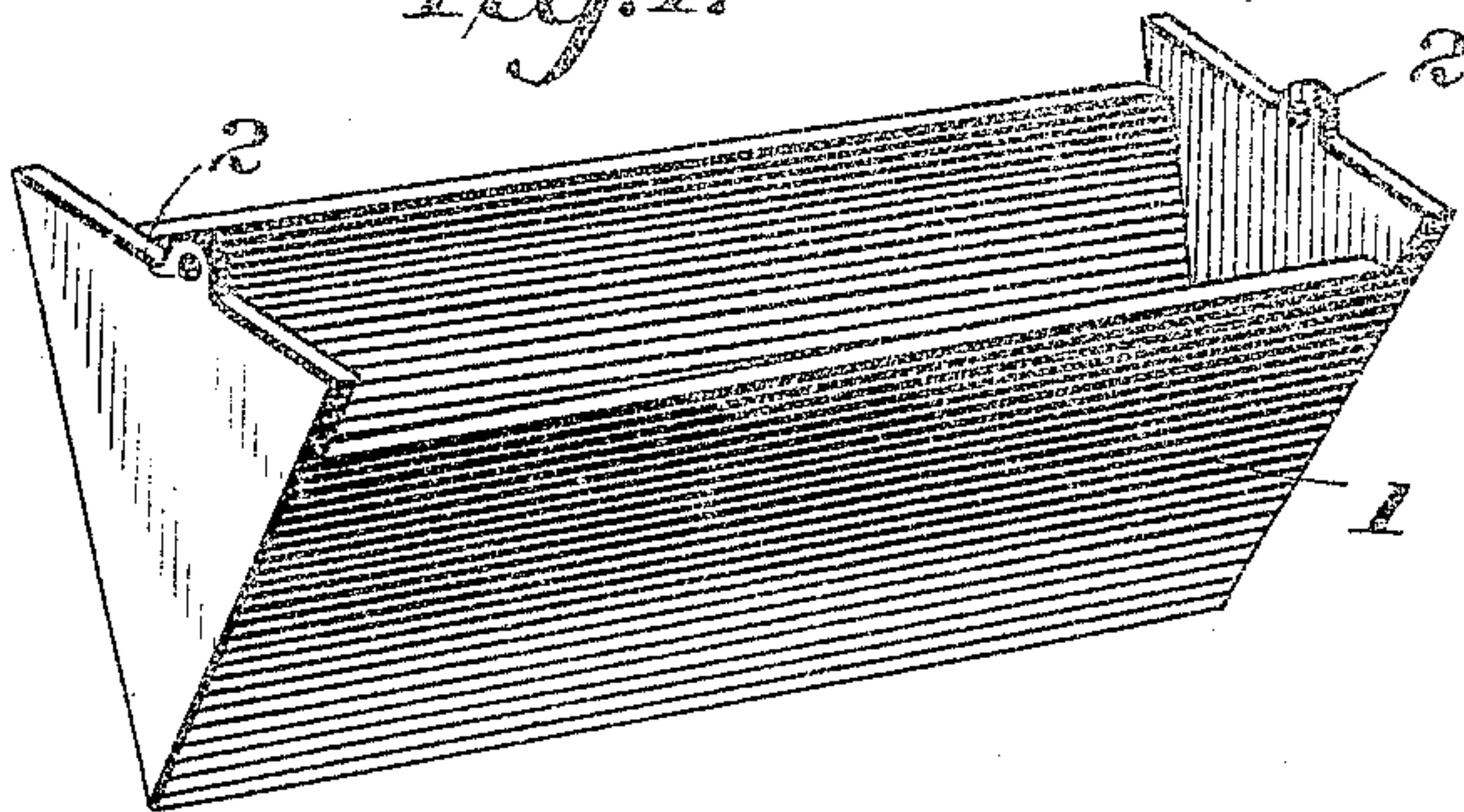


Fig. 2.

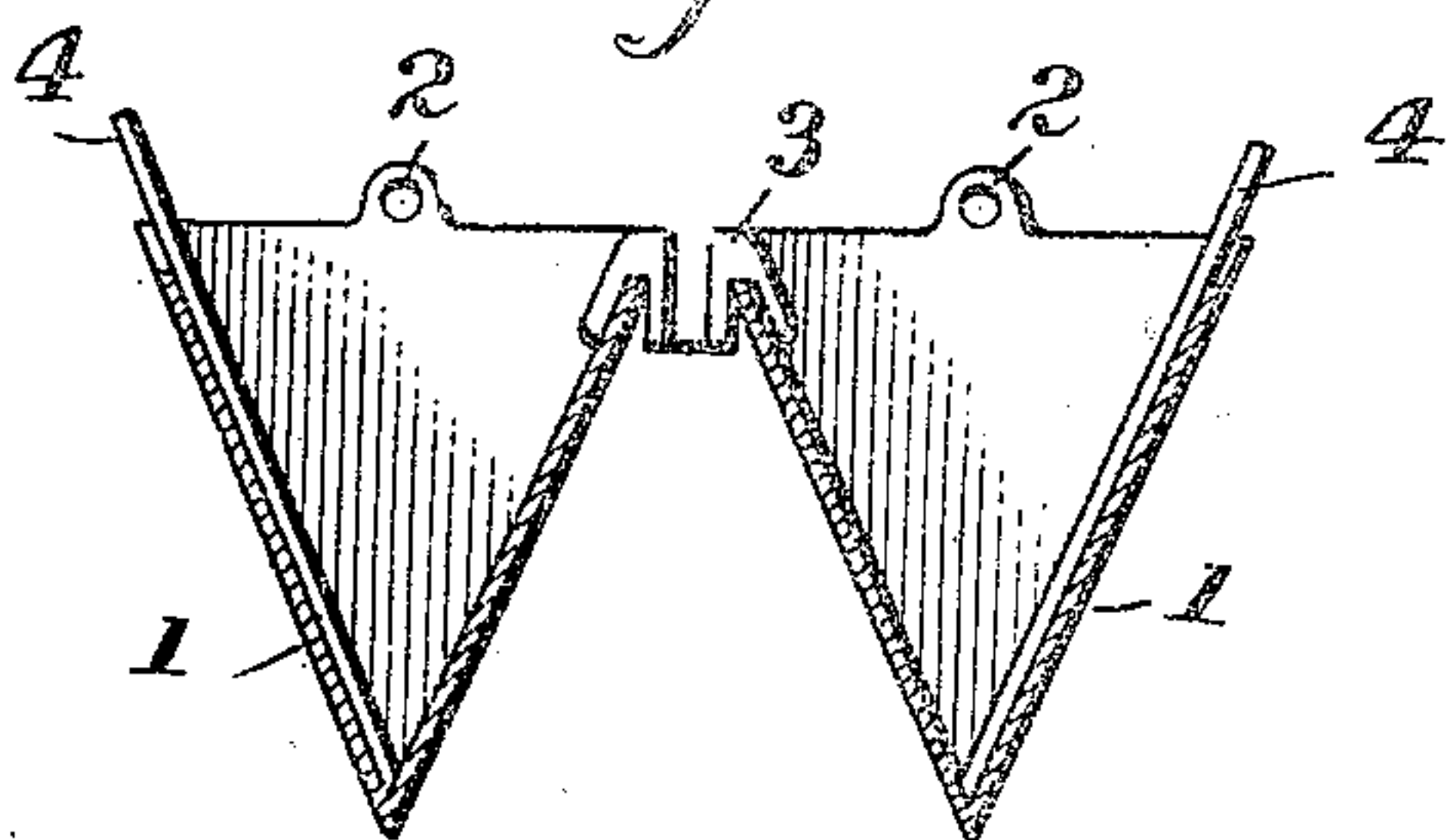


Fig. 3.

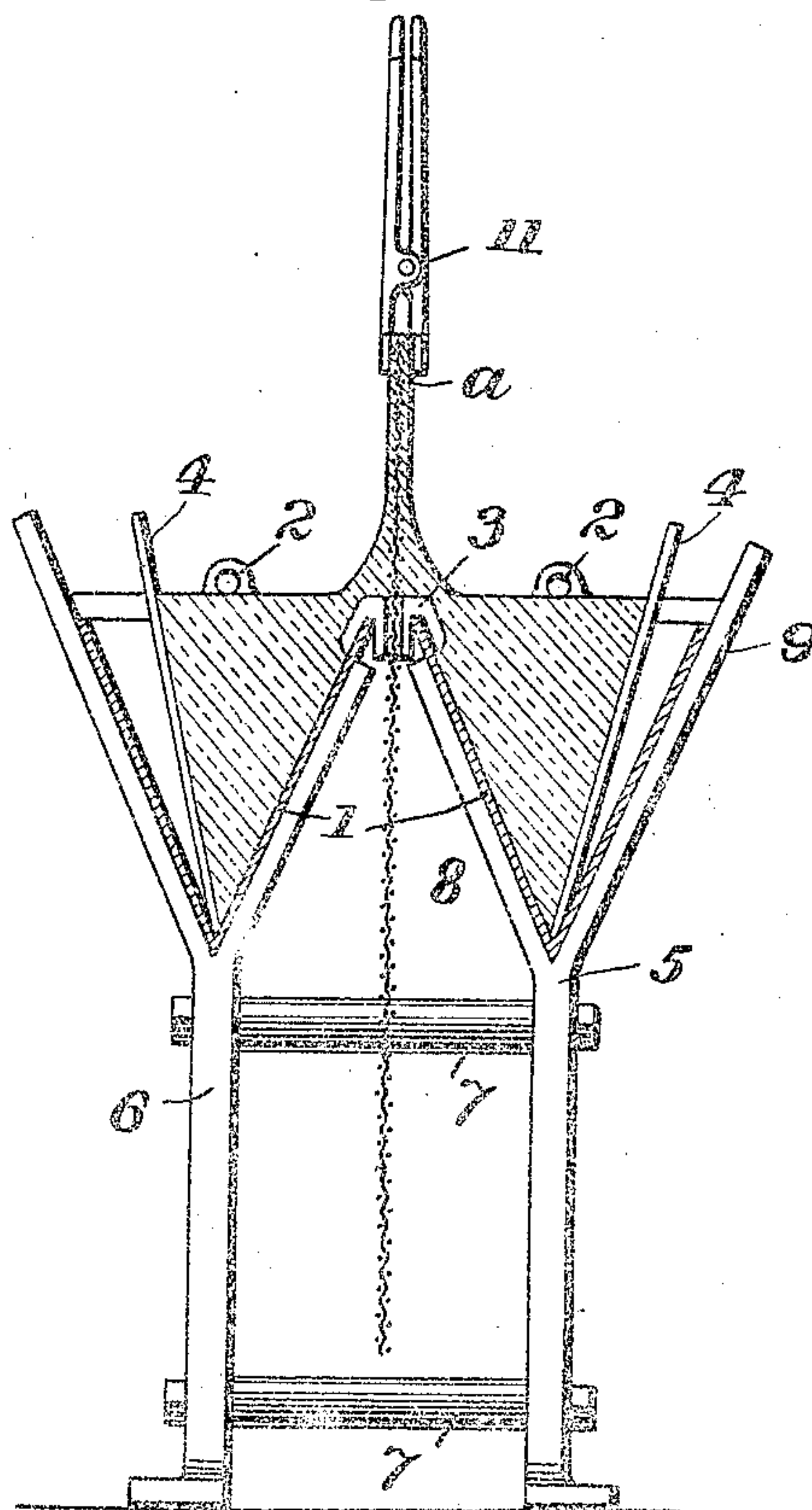
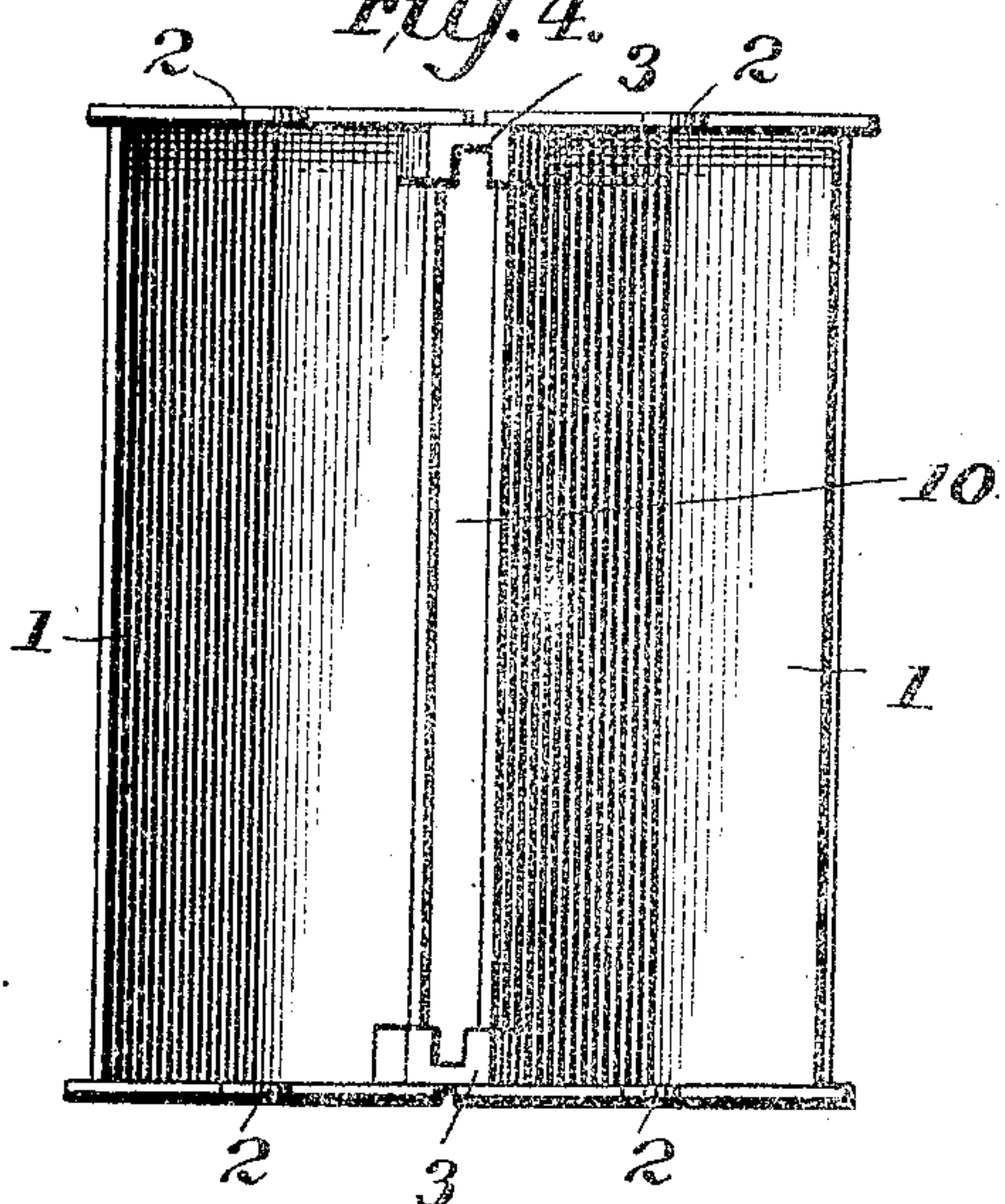


Fig. 4.



Witnesses

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PROCESS AND APPARATUS FOR MAKING WIRE-GLASS.

936,665.

Specification of Letters Patent.

Patented Oct. 12, 1909.

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To all whom it may concern:

Be it known that I, JULES J. QUERTINMONT, a citizen of the United States, residing at Point Marion, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Processes and Apparatus for Making Wire-Glass, of which the following is a specification.

My invention relates to the manufacture of glass, and has to do particularly with the production of plates or sheets of glass which are reinforced by a wire mesh or the like embedded therein, this article being commonly known as "wire glass."

The invention consists first, in an improved method to facilitate the production of such glass, and, second, in a novel form of apparatus which is especially adapted for carrying out said method.

The features of invention will be more fully understood from the following detailed description taken in connection with the accompanying drawings.

Referring to the drawings, wherein like reference characters are used to designate the same parts in each of the several views: Figure 1 is a perspective view of a trough-ladle employed; Fig. 2 is a transverse vertical section through a pair of such ladles juxtaposed as in use, with certain coöperating parts; Fig. 3 is a like transverse vertical section but showing the ladles held in their supporting frame and illustrating the device in operation; and Fig. 4 is a plan view of the ladles disposed as in Fig. 2.

1 is an elongated trough-like ladle preferably of V-shape in cross section and having suitable means for engaging and manipulating the same as eyes 2 whereby it may be swung on trunnions for filling the same with molten glass. In carrying out my novel process a pair of these ladles are filled with molten glass and placed in juxtaposed position in a suitable supporting frame as shown in Fig. 3. Adjacent the ends of the juxtaposed ladles are placed guides 3, 3 to hold the wire mesh in its proper path, these guides being arranged to engage the sides and ends of the ladles as shown. In each ladle is disposed a follower plate or vane 4, which follower fulcrums about the bottom of the ladle and preferably extends somewhat above the top thereof as shown. These followers extend the full

length of the ladles and fit the ends thereof quite closely.

The supporting frame is or may be composed of two Y members 5, 6 secured in proper relative position by tie bolts 7. The upper ends 8 and 9 of said Y members are adapted to receive and fit the ladles 1 and hold them a short distance apart so as to leave a slot 10 between them. The inner ends 8 of said members are short enough so as to not interfere with said slot 10. The molten glass in said ladles having reached the proper degree of fluidity, an end of wire mesh is passed up through slot 10, being guided endwise by guides 3, 3. The projecting end of said mesh is grasped by and gradually drawn upward by suitable tongs 11, and the followers 4, 4 are simultaneously moved inward toward each other. As will be readily seen, and by reference to Fig. 3, a layer of molten glass will be projected over the adjacent side of each ladle upon the advancing wire mesh and such layers will adhere to the wire mesh and cohere together, thus forming a compact homogeneous sheet or plate of wire glass.

The advantages and economies resulting from the above described process are obvious, and it will be seen that I am enabled to make plates of glass of any ordinary size with great facility.

It will be apparent that the guides 3, 3 may be moved toward each other, away from the ends of the ladles and secured in place to guide smaller sizes of wire mesh sheets.

I am aware that the form of apparatus disclosed may be widely varied without departing from the broad characteristics of my invention, and I do not desire to be limited therein nor in the details of the process, except in accordance with the following claims.

It will be seen from the foregoing description of process and apparatus that I may make ordinary sheet or plate glass by simply omitting to pass the wire mesh through the slot 10 by closing up said slot 10 and causing the tongs 11 to grasp the upper edge of the glass as it is pushed up or flows on top of the meeting edges of the two ladles 1, 1, when the molten glass is forced out of the ladles by the follower plates 4, 4, as before explained. It will also be seen by this process and apparatus I am able to make sheet,

plate or wire glass which has both of its sides highly polished and of great luster, for the reason that no tool or any part of the apparatus touches the surfaces of the glass any time during its manufacture.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is as follows:—

1. The process of making reinforced glass, which comprises passing a reinforcing element alongside molten masses and positively piling up the molten masses at the plane of formation whereby layers from said mass are simultaneously forced toward and freely on both sides of said reinforcing element.

2. The process of making reinforced glass which comprises passing a reinforcing element between masses of molten glass, and positively piling up the molten glass at the plane of formation whereby layers of glass are simultaneously forced toward and freely thereupon from opposite sides of said reinforcing element.

3. The process of making wire glass which comprises passing a wire mesh between separate masses of molten glass, and positively piling up the molten glass at the plane of formation whereby layers of glass from each mass are simultaneously forced toward and freely upon opposite sides of said wire mesh.

4. The process of making wire glass which comprises passing a wire reinforce between separate masses of molten glass, manipulating said masses so as to positively pile up the molten glass at the plane of formation whereby a layer of glass from each is simultaneously forced toward and freely upon opposite sides of said reinforce, and drawing the sheet so produced to the desired thickness.

5. The process of making wire glass which comprises passing a wire mesh alongside a mass of molten glass, manipulating said mass so as to positively pile up the molten glass at the plane of formation whereby a layer therefrom is freely formed upon said reinforce, and regulating the speed of the wire mesh to produce the desired thickness.

6. An apparatus for making wire glass comprising a holding trough, means for

guiding a reinforce member adjacent thereto, and means for positively piling up the molten glass from said trough at the plane of formation and freely against said reinforce member.

7. An apparatus for making wire glass comprising two troughs, means for holding them adjacent to each other, means for guiding a reinforce member between said troughs and means for positively piling up the molten glass from each trough at the plane of formation and freely toward the central line between said troughs.

8. An apparatus for making wire glass comprising two troughs, means for holding them in juxtaposition to each other with their adjacent sides parallel, means for guiding a reinforce member between said troughs and means for positively piling up the molten glass simultaneously from said troughs at the plane of formation and freely over adjacent sides of said troughs.

9. An apparatus for making wire glass comprising a pair of V-shaped troughs, means for holding said troughs with their adjacent sides parallel and with a slot therebetween, means for guiding a wire mesh in said slot, and means for forcing molten glass from said troughs over said adjacent sides thereof.

10. An apparatus for making wire glass comprising a V-shaped trough, a follower blade adapted to rest at the apex of the trough and pivot therein, and means for guiding a wire mesh adjacent a side of said trough to receive molten glass displaced from said trough.

11. An apparatus for making wire glass comprising two V-shaped troughs, follower-blades in each adapted to pivot therein and to swing toward each other, means for holding said troughs with their adjacent sides parallel and with a slot therebetween, and means for guiding a wire mesh in said slot.

In testimony whereof I affix my signature in presence of two witnesses.

JULES J. QUERTINMONT.

Witnesses:

W. T. DEVLIN,
FLOUSE DULIERE.