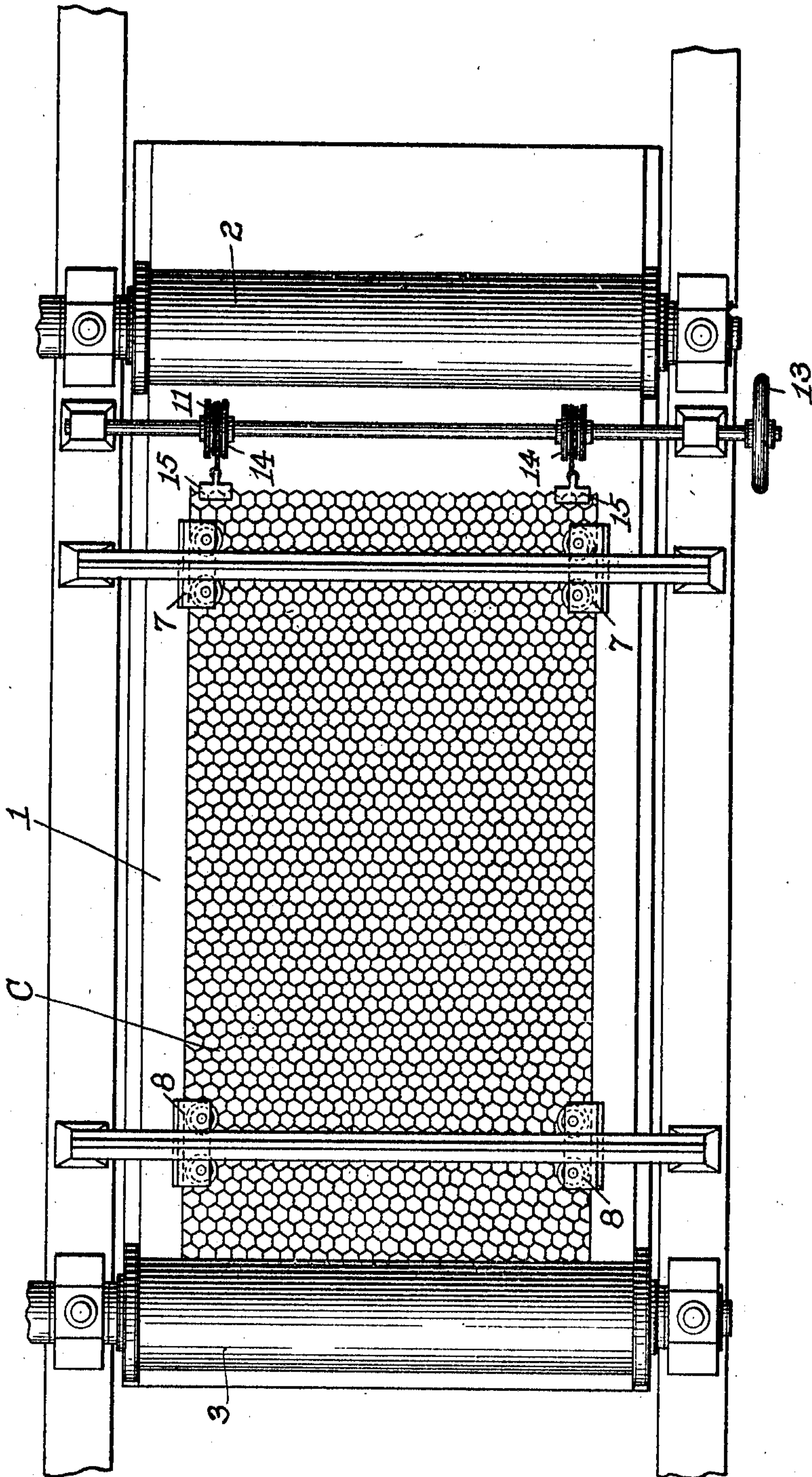


945,317.

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Nickles Franz
by Christy and Christy
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N. FRANZEN.
MACHINE FOR MAKING WIRE GLASS.
APPLICATION FILED FEB. 18, 1909.

945,317.

Patented Jan. 4, 1910.
2 SHEETS—SHEET 2.

FIG. 2.

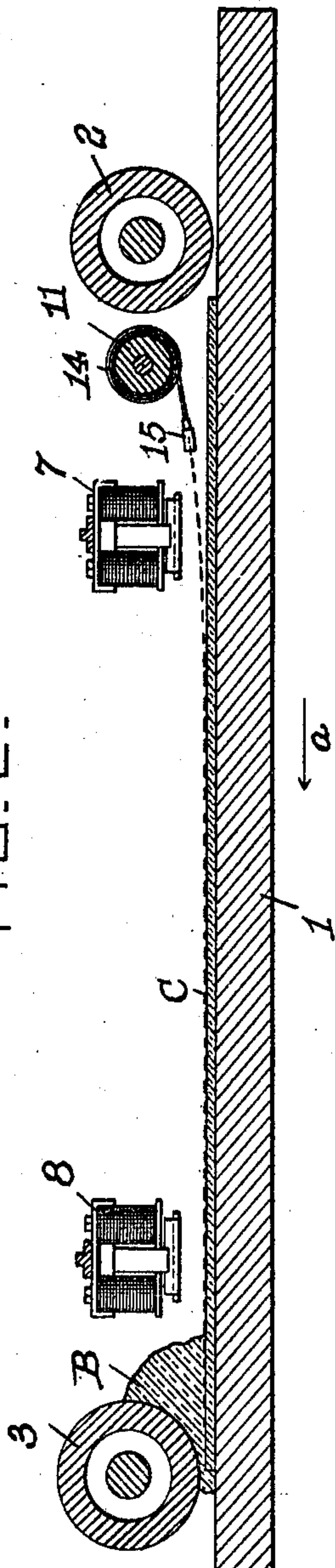
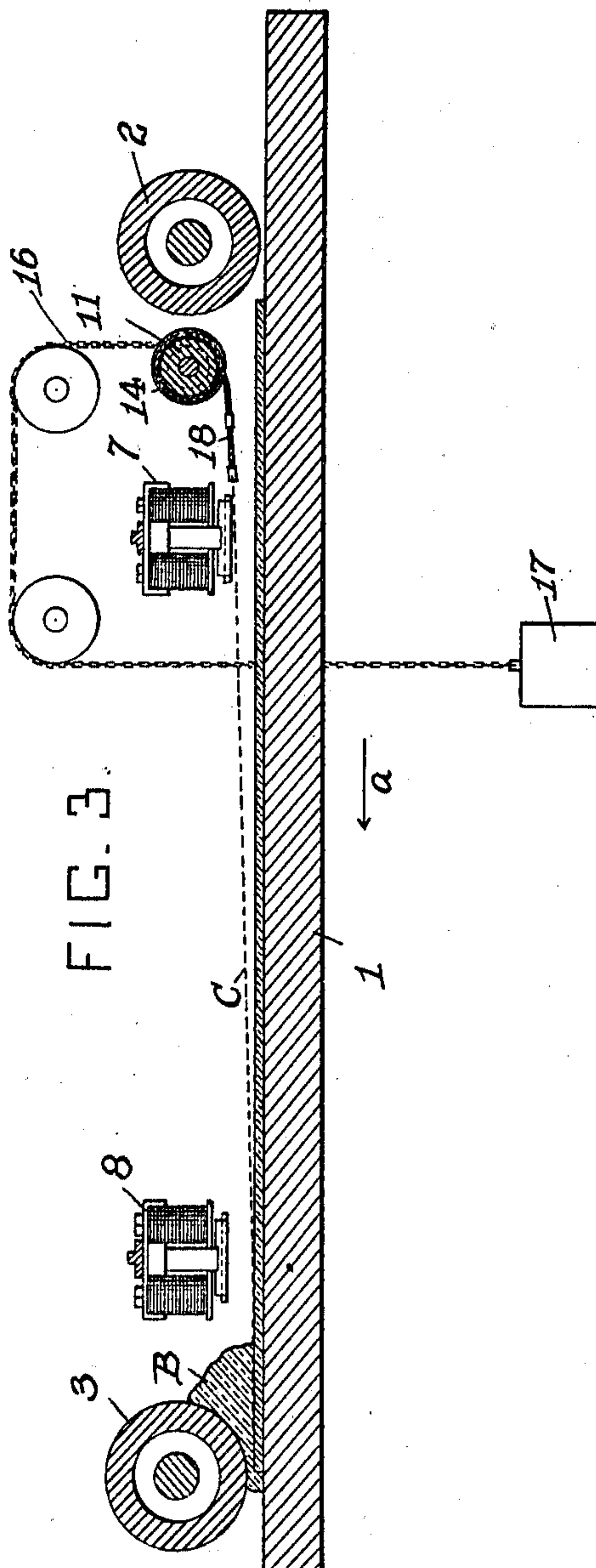


FIG. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

NICKLAS FRANZEN, OF WALTON, PENNSYLVANIA.

MACHINE FOR MAKING WIRE-GLASS.

945,317.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed February 18, 1909. Serial No. 478,601.

To all whom it may concern:

Be it known that I, NICKLAS FRANZEN, residing at Walton, in the county of Westmoreland and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Machines for Making Wire-Glass, of which improvements the following is a specification.

My invention relates to improvements in machines for making wire glass.

The objects of my invention are economy and facility in producing wire glass by the so-called sandwich method.

In the accompanying drawings forming a part of this specification, Figure 1 is a plan view of a machine embodying my present invention, and Figs. 2 and 3 are views in longitudinal section of this machine, differing from one another in a certain detail, which will be described herein.

The machine in its general features is substantially the same as described in my application filed September 17th, 1908, Serial No. 453,472. The specific feature which distinguishes this machine and characterizes my invention consists in the omission of the cross bars which are shown and described in that earlier application, and in the substitution for them of another means for handling the wire while it is in course of being entrained with the glass.

The machine consists essentially of a casting table 1, and two rolls, 2 and 3, arranged to spread superposed layers of glass upon the surface of the casting table. To this end the pair of rolls are relatively movable with respect to the casting table, and as shown in the drawings the casting table has motion of translation beneath the rolls, which are rigidly mounted in suitable housings. As in the other case the rolls are spaced one from the other at such distance that the initial layer of glass is spread from end to end in its entirety before the second roll begins to spread a second batch of glass upon the initial layer. As in the other case, means are employed for sustaining the web of wire netting in extended horizontal position above the path of movement of the casting table until the casting table shall come to proper position beneath the web of wire, bearing upon its surface the initial layer of glass; the means shown are electromagnets, 7 and 8, for I prefer to employ that particular type for holding and releasing means.

My present invention lies in employing a device to engage the rear end of the wire and by which the position of the wire upon the surface of the initial layer may be controlled as the spreading of the second layer progresses.

The mechanism which I preferably employ consists essentially of a reel 11, mounted to rotate in horizontal position above the surface of the casting table and preferably arranged adjacent to and forward of the initial glass-spreading roll 2. This reel 11 is provided with a web or warp of pliable material which may be wound upon it, and unwound from it as reel 11 rotates, and to the free end of this web or warp the rear end of the web or wire may be secured. With such a construction, it will be understood that as the spreading of the second layer of glass progresses, and as the wire web is gradually carried forward toward roll 3, and buried in the glass, the wrap of pliable material upon the reel will be unwound.

The reel and the wrap of pliable material upon it may vary in form and character. For example, in Figs. 1 and 2, instead of a continuous web of material upon a continuous drum extending across the width of the machine, two lines are employed, wound upon separate spools, and these lines terminate in clamps 15 engaging the wire. Again, in Fig. 3, a web of pliable material wound on reel 11 is shown attached to the wire by a section of combustible material, 18, and in this case the wire will be automatically released as the hot glass passes beyond its rear end, by the burning away of section 18. This material upon reel 11 may if desired be merely a continuation of the web of wire itself.

In a general way the machine operates as described in my earlier application already referred to. The initial layer is spread complete as a layer of clear glass upon the table beneath roll 2. When spread, the wire is released and falls prone upon the surface of the initial layer from end to end. The second pour is then made and the sheet completed by the spreading of the second batch of glass beneath roll 3. As the formation of the second layer progresses the wire is apt to rise in waves from the surface of the initial layer and unless provision is made for eliminating such waves and causing the wire to lie smooth, it is liable to become displaced

in the finished sheet. To overcome this the reel 11 with its wrap attached to the rear edge of the wire is employed. As the spreading of the second layer progresses, the reel 11 turning to permit the wire to feed forward, by placing a check upon the free turning of reel 11 the wire may be drawn backward and waves in it removed that it may lie smooth and pass smoothly beneath the advancing wave of hot glass. The free turning of the reel 11 to effect this end may be accomplished in various ways. For example, in Fig. 1, the hand wheel 13 affords suitable means. In Fig. 3 the reel is counterweighted, and this source of tension may be brought into play as the operation progresses. If as shown in Fig. 3 the tension of the counterweight is exerted from the first the wire will be held in proximity to but with a small clearance from the surface of the initial layer until it enters beneath the batch of glass B. If the wire and wrap on reel 11 be connected by combustible material, the wire will free itself, when the sheet is finished for the hot glass will burn away the combustible connection. If clamps are employed they are preferably so constructed that a small increase in tension will draw the wire free; and in such case, the holding of the hand wheel at the end of the operation will release the wire.

I claim as my invention:

1. In a machine for making wire glass the combination of a pair of rolls separated from one another at a distance as great as the length of the sheet of wire glass to be formed, a horizontally extending casting

table with which said rolls cooperate to spread superposed layers of glass, means for sustaining a web of wire in substantially horizontal position between said rolls and above the plane of said table, and for releasing said web of wire at the desired point in the operation of the machine, and a tension device adapted to engage the rear end of the web of wire while a body of glass is being spread to layer form upon such web of wire, substantially as described.

2. In a machine for making wire glass, the combination of a pair of rolls separated from one another by a space as great as the length of the sheet of wire glass to be formed, a casting table with which said rolls cooperate to spread superposed layers of glass, a reel arranged between said rolls and provided with a flexible wrap, said flexible wrap adapted to engage a web of wire, substantially as described.

3. In a machine for making wire glass, the combination of a pair of rolls separated from one another by a space as great as the length of the sheet of wire glass to be formed, a casting table with which said rolls cooperate to spread superposed layers of glass, and a reel arranged between said rolls and provided with a flexible wrap, said reel provided with a hand wheel, substantially as described.

In testimony whereof, I have hereunto set my hand.

NICKLAS FRANZEN.

Witnesses:

CHARLES BARNETT,
FRANCIS J. TOMASSON.