

No. 881,791.

A. GESSNER.

PATENTED MAR. 10, 1908.

APPARATUS FOR MANUFACTURING WIRE GLASS.

APPLICATION FILED JAN. 22, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

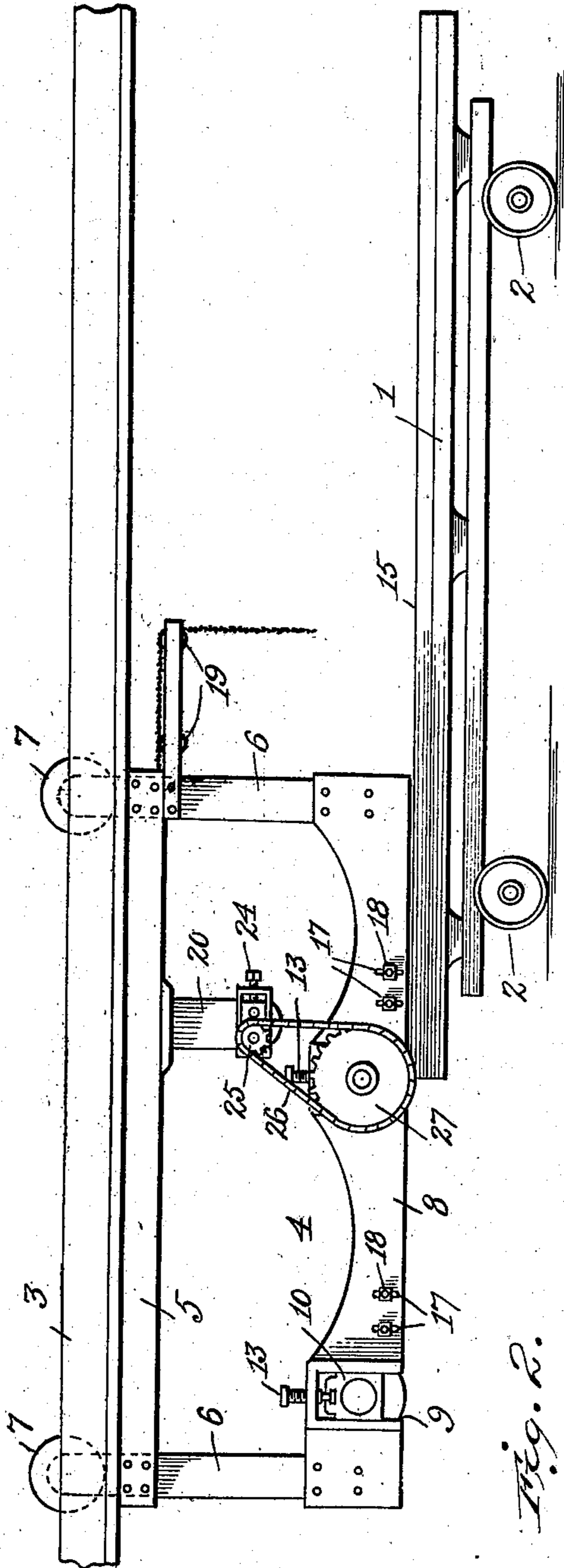
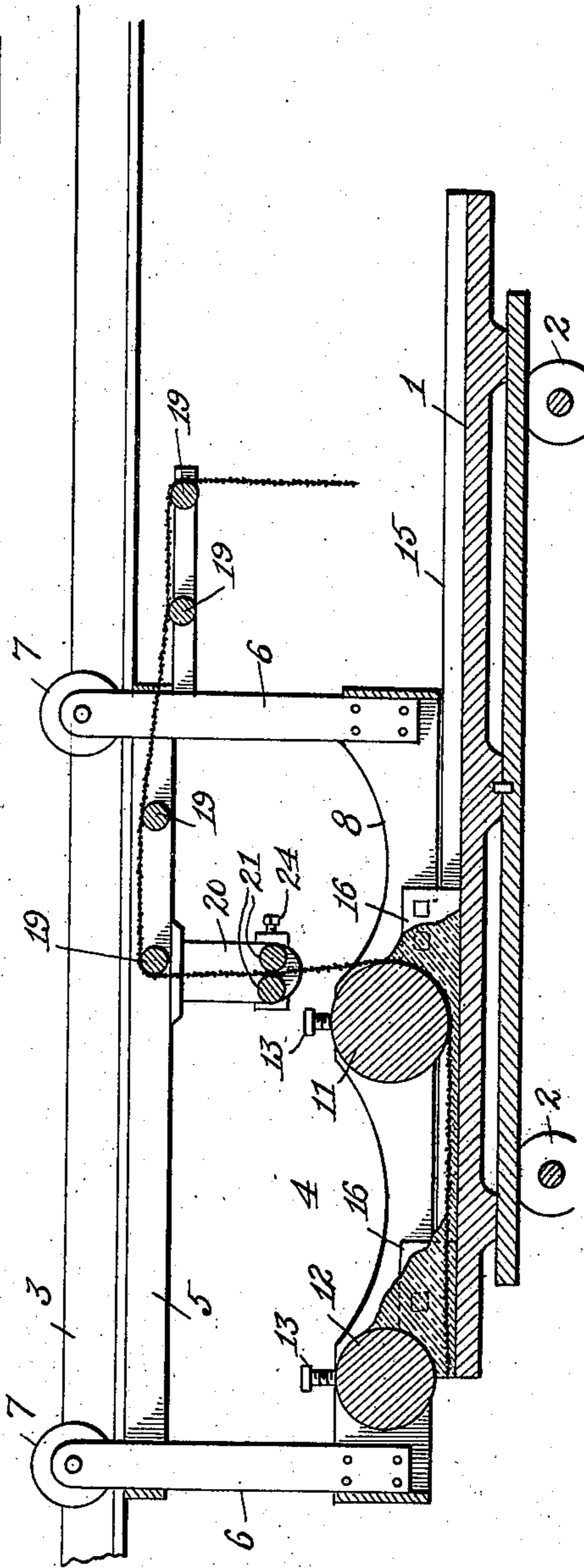


Fig. 2.



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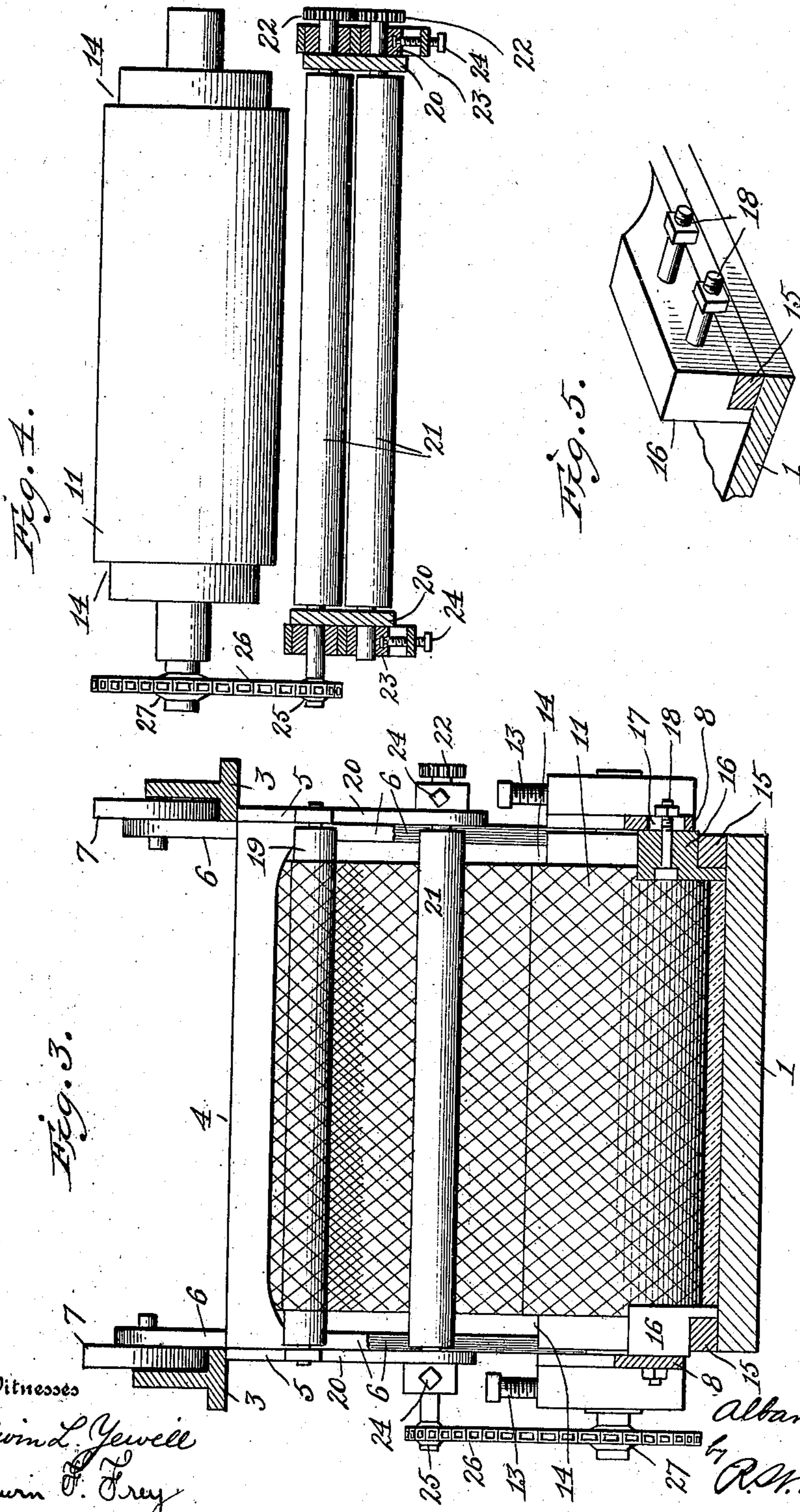
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# UNITED STATES PATENT OFFICE.

ALBAN GESSNER, OF SERGEANT, PENNSYLVANIA.

## APPARATUS FOR MANUFACTURING WIRE-GLASS.

No. 881,791.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed January 22, 1907. Serial No. 353,478.

*To all whom it may concern:*

Be it known that I, ALBAN GESSNER, a citizen of the United States of America, residing at Sergeant, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Manufacturing Wire-Glass, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the manufacture of plate or sheet glass and has special reference to the manufacture of glass sheets having a trellis or wire netting embedded therein.

One object of the invention is to avoid stretching or distorting of the trellis at the same time keeping it smooth while it is being embedded in the glass.

Other objects of the invention are the improvement of the construction and operation of the apparatus for rolling the sheets, all of which will be hereinafter first fully described and then particularly pointed out in the appended claims.

In the accompanying drawings, which fully illustrate the invention, Figure 1 is a side elevation showing the rolling apparatus in its initial position. Fig. 2 is a longitudinal vertical section with the parts in the position assumed after the rolling of the glass has started. Fig. 3 is an end elevation. Fig. 4 is a detail view of the trellis-guiding and smoothing rollers, and Fig. 5 is a detail view of the plows or guards.

In carrying out my invention, I employ a rolling table, 1, which is preferably of the size desired for the finished sheet or plate and may be stationary although I have illustrated it as mounted on rollers, 2, in order that it may be utilized to carry the rolled sheet to the annealing oven or other point. Above the rolling table, I provide a stationary track, 3, from which the carriage, 4, depends. This carriage consists of longitudinal beams, 5, and hangers, 6, secured to and depending from the same at the ends thereof, the upper extremities of the hangers being projected above the beams to furnish bearings for the rollers, 7, which run upon the track 3 as shown. Side plates, 8, are carried by the lower ends of the hangers and these side plates are constructed with the recesses or notches, 9, in which are mounted journal boxes, 10, carrying the trunnions or journals of the rollers, 11, 12. These jour-

nal boxes are swiveled on the lower ends of screws, 13, mounted in the upper walls of the notches 9 and projecting above the side plates whereby the boxes may be adjusted to bring the rollers to the exact height necessary to produce a sheet of the desired thickness. The forward roller, 11, is provided with annular grooves, 14, near or at its ends the depth of which is about one-half the height of the rails, 15, upon which the rollers run, thus permitting the roller to pass between the rails and roll or press the glass batch. These rails, it will be readily understood, are the usual removable rails and are of the height necessary to give the sheet the desired thickness, the rear roller, 12, having no annular grooves but running on the top sides of the rails and pressing the surface of the glass even therewith. Just in advance of each roller are plows or guards, 16, which are not left free to be merely pushed along by the roller but are secured to and carried by the side plates and in order to adjust these plows, guards or guns, to the height of the rails 15, I construct the side plates with vertical slots, 17, which are engaged by set screws, 18, carried by the guns whereby the guns may be quickly secured at the exact height desired as will be readily understood.

The trellis or wire netting, in the practice of my invention, is not wound upon a drum, but is cut into lengths corresponding to the length to be given the finished sheet or plate and is supported loosely above the rolling table on a series of small rollers, 19, arranged transversely in the upper part of the carriage at the front end of the same. Immediately in front of the roller 11, hangers, 20, are secured to and depend from the longitudinal beams of the carriage and in the lower extremities of these hangers I mount the guiding and smoothing rollers, 21, between which the trellis or netting passes to the glass. These rollers are geared together at one end by means of pinions, 22, and one of the rollers is mounted in slidable boxes, 23, on the hangers adjusted by set screws, 24, to provide means for varying the distance between the rollers as required. In order that these rollers may be positively rotated, a sprocket, 25, is fixed on the end of one of them and this sprocket is connected through a chain, 26, with a driving sprocket, 27, on the end of the front roller, 11.

In the operation of the invention, the carriage is moved out beyond the edge of the

table, as shown in Fig. 1, and a batch or part of a batch of glass is poured on the table at the end of the same. The end of the trellis is then brought to the front roller and the carriage is moved over the table. Just before the second pressing roller reaches the table, a second batch or part of a batch of glass is poured in front of the said roller upon the pressed glass over which the first roller has traveled and the carriage is then moved entirely across the table. As the carriage proceeds, the front roller will spread the glass in a sheet of one-half the thickness of the finished article and embed the trellis in the surface thereof while the second roller spreads the remaining portion of the glass over the trellis and finishes the sheet. The trellis is not drawn into the glass in opposition to a tension thereon and consequently it is not distorted nor stretched but passes into the glass with its width undiminished so as to extend entirely across the finished sheet. The guiding rollers between which the trellis passes just in advance of the front pressing roller, serve to remove all wrinkles from the trellis so that it will lie at a uniform distance from the face of the sheet throughout and as these rollers are positively rotated from the front pressing roller they will not put any strain on the trellis. The pressing rollers are not geared together but are left free to rotate

as the consistency of the glass may require. By starting the carriage beyond the edge of the table and bringing the end of the trellis to the edge of the table, I am enabled to roll a sheet of the full length of the table and avoid the usual loss which occurs at the ends of the table.

Having thus described my invention, what I claim and desire to secure by Letters-Patent is:—

1. The combination of a table, track rails above the table, a carriage mounted to travel on the track rails, pressing rolls in the lower portion of the carriage arranged to travel over the table, and a series of rollers in the upper portion of the carriage constituting a movable surface trellis-sheet support.

2. The combination of a table, side rails thereon, a carriage mounted to travel over the table, pressing rolls in said carriage arranged to engage said side rails, and plows secured to the sides of the carriage in advance of the pressing rolls and shaped to engage and be guided by the side rails.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ALBAN GESSNER.

Witnesses:

W. A. FAUL,

JAS. LENNARTZ.