

(No Model.)

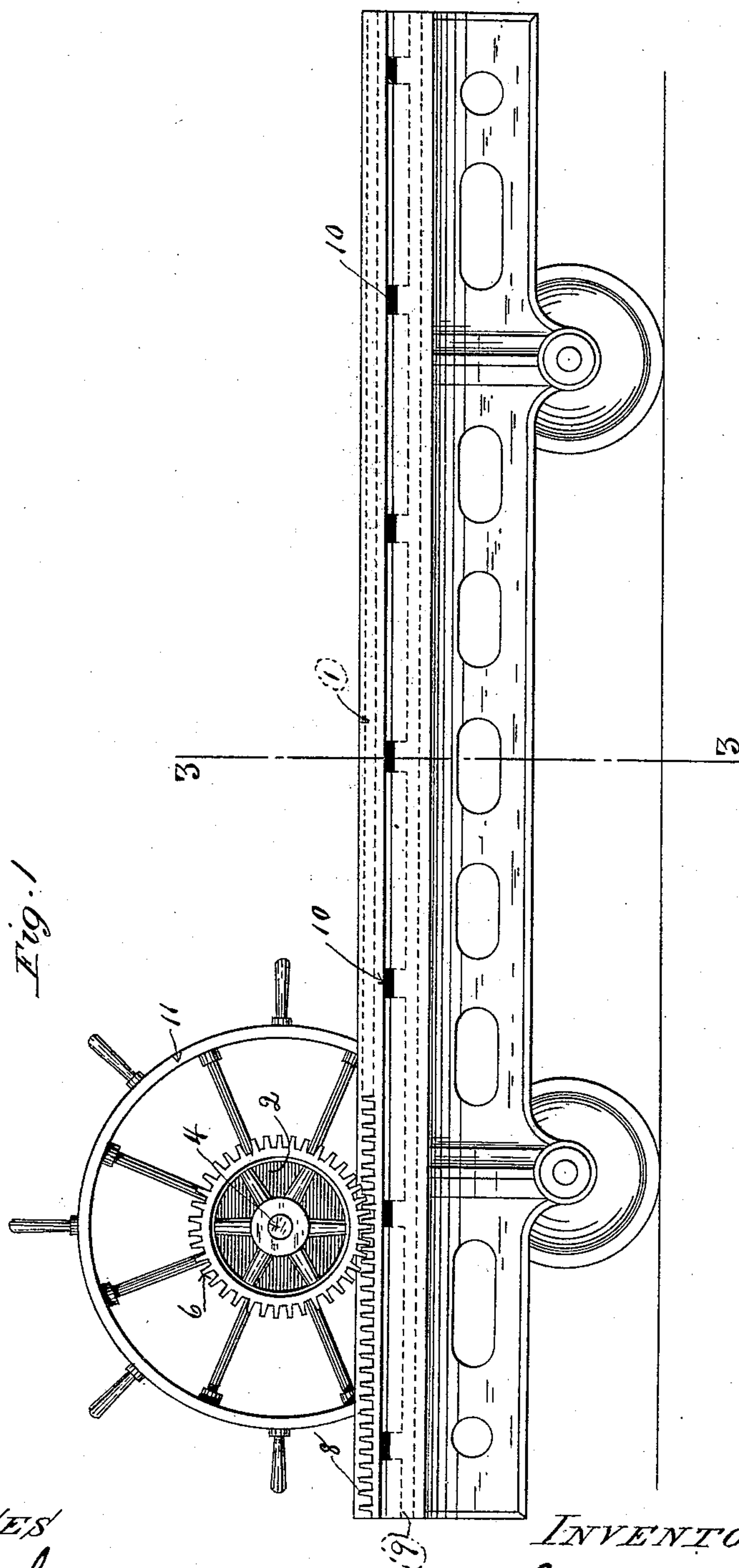
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E. WALSH, Jr.

APPARATUS FOR ROLLING PLATE GLASS.

No. 487,803.

Patented Dec. 13, 1892.



WITNESSES
A. Ramel
W. W. Byrne

INVENTOR
Edward Walz, Jr.
Paul Bakewell,
his attorney

(No Model.)

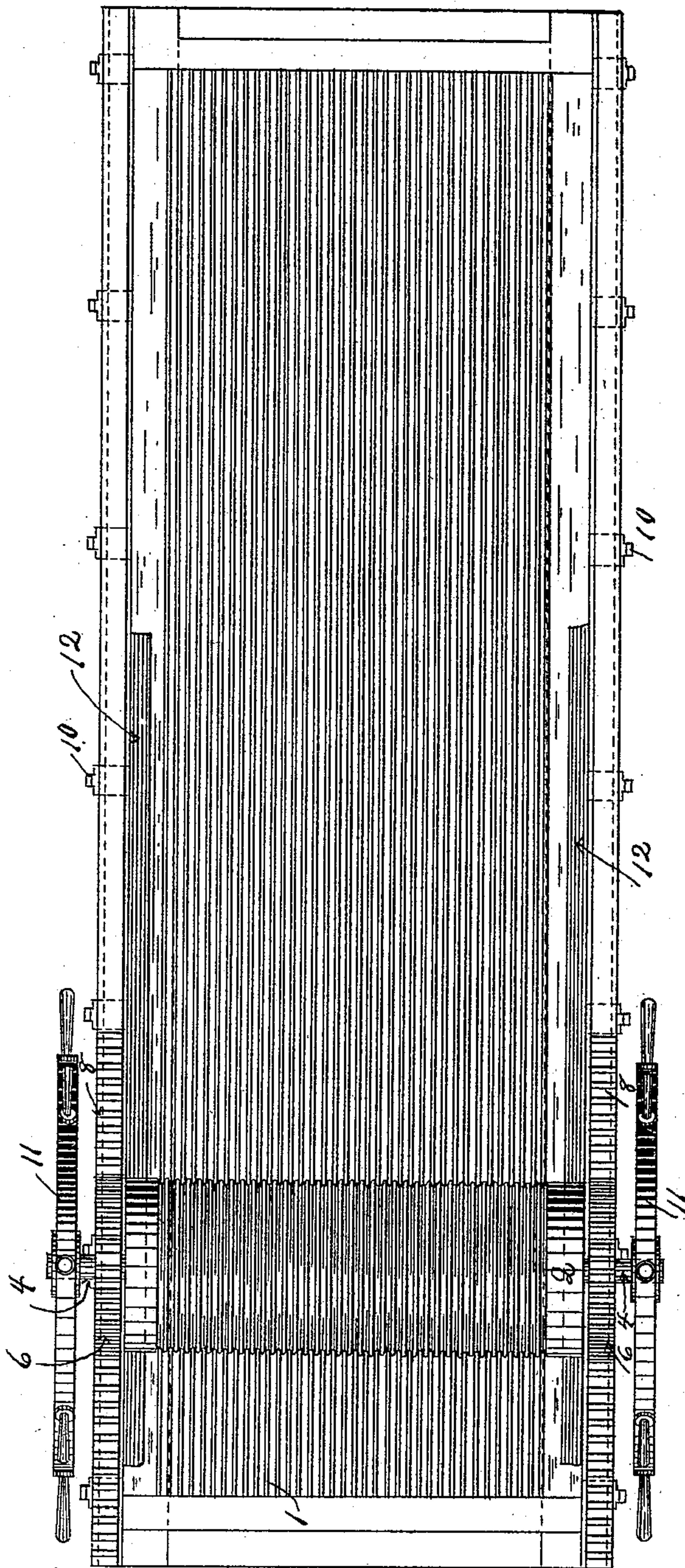
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Fig. 2.



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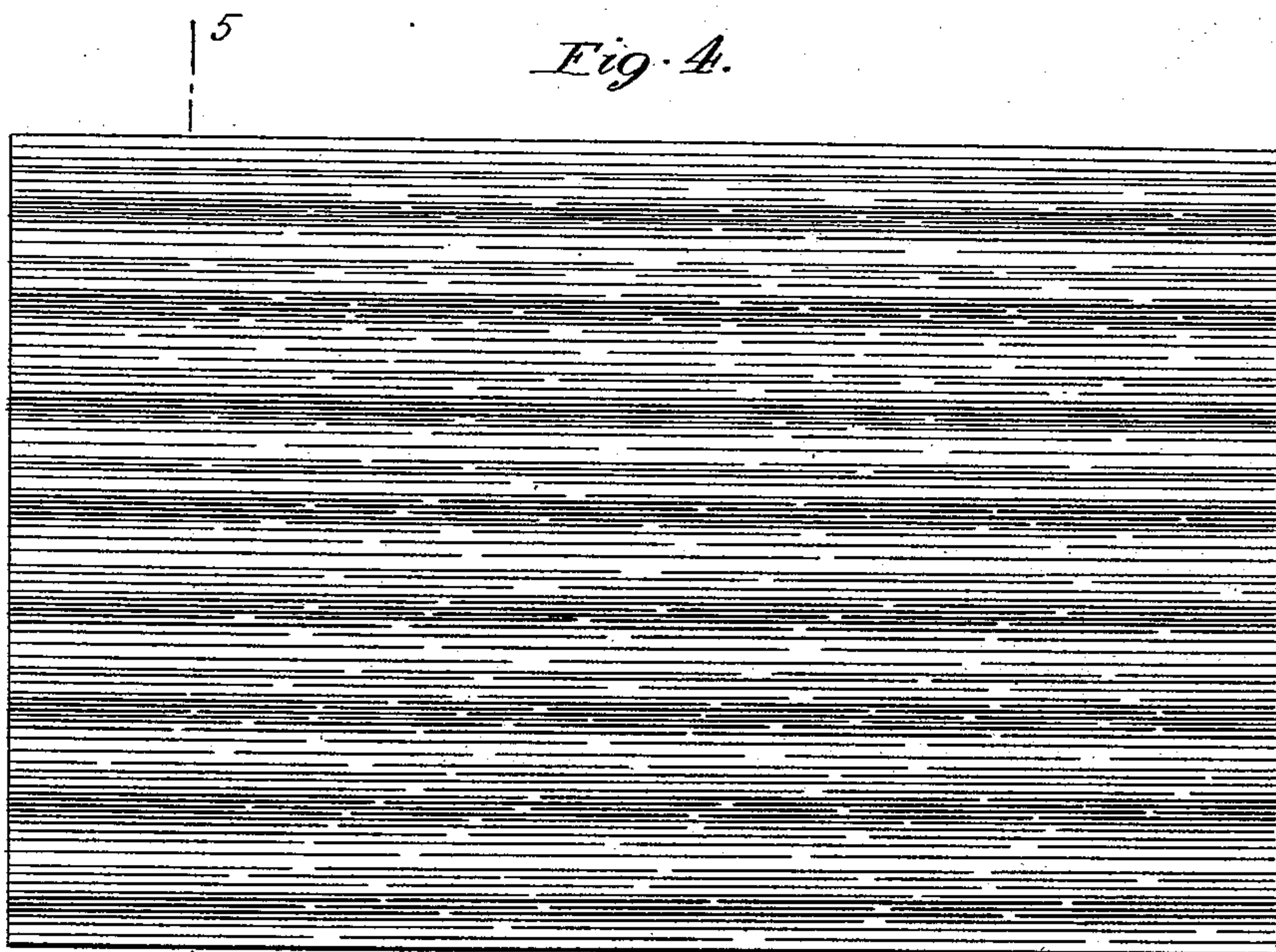
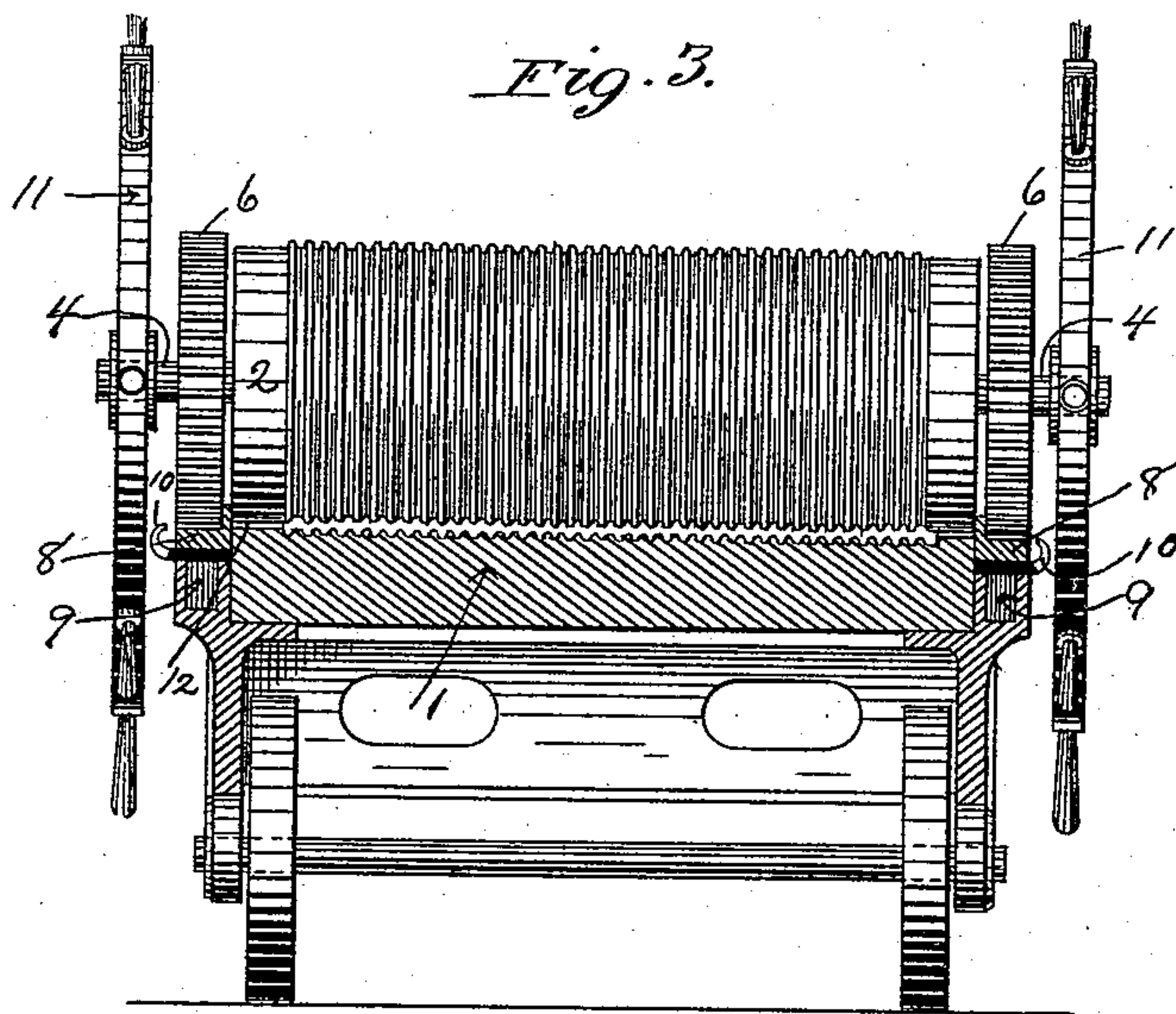
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UNITED STATES PATENT OFFICE.

EDWARD WALSH, JR., OF ST. LOUIS, MISSOURI.

APPARATUS FOR ROLLING PLATE-GLASS.

SPECIFICATION forming part of Letters Patent No. 487,803, dated December 13, 1892.

Application filed January 4, 1892. Serial No. 416,970. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WALSH, Jr., a citizen of the United States, residing in the city of St. Louis and State of Missouri, have
5 invented certain new and useful Improvements in Apparatus for Rolling Plate-Glass, of which the following is a full, clear, and exact description.

My invention relates to the construction of
10 apparatus for producing transversely-corrugated plate-glass, or that wherein the glass being of uniform thickness throughout the longitudinal depressions or channels of one face correspond with the longitudinal ribs or
15 elevations on the opposite face, and has for its object to obtain uniform density of the glass throughout and prevent the distortions on the sheet or plate, so as to insure a proper annealing and subsequent elasticity and du-
20 rability of the plate.

To this end my invention, generally stated, consists in the combination, with a bed having uninterrupted longitudinal work-channels and rack-channels parallel therewith, of
25 a roller having ribs or corrugations corresponding with the bed-channel, pinions on the roller-shaft of substantially-equal diameter with the roller, and adjustable racks arranged in the rack-channels of the bed, all
30 substantially as will hereinafter more fully appear.

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

35 In the accompanying drawings, in which like letters of reference denote like parts in the several views, Figure 1 is a side elevation of a glass-rolling machine in which the roller travels along the length of the bed-
40 plate of the machine. Fig. 2 is a plan view of the same, showing the bed-plate having continuous uninterrupted parallel channels or corrugated longitudinally and the roller circumferentially. Fig. 3 is an end elevation
45 of a transverse vertical section taken on the line 3 3 in Fig. 1. Figs. 4 and 5 are respectively a plan view of a sheet of corrugated glass and a cross-section of the same, taken on the line 5 5 in Fig. 4.

50 1, Figs. 1, 2, and 3, is the table or bed-plate of the rolling-machine, over which is mounted

the roller 2, provided with a spindle 4, on which is fixed at the ends of the roller 2 the spur-wheels 6, of substantially-equal diameter with the roller, so as to prevent the drag-
55 ging of the roller 2 on the face of the glass. The spur-wheels 6 gear into the racks 8, (see Fig. 1,) which are fitted into channels 9 parallel with the working channels of the bed, (see Fig. 3,) formed at each side of the table
60 1, and are capable of vertical adjustment therein by the removable adjusting-keys 10.

11 11 are hand-wheels rigidly secured on the ends of the spindle 4 for operating the roller 2, and 12 12 are bars placed along the sides
65 of the table 1 between the latter and the roller 2, by which the thickness of the sheets of glass is gaged or determined.

As shown in Figs. 1 and 3, I form the bed-plate or table 1 with continuous parallel
70 work channels or corrugations, which extend lengthwise to the same, and the roller 2 with similar corrugations circumferentially, and so place the roller longitudinally that the depressions in the corrugations thereon corre-
75 spond with the elevated parts in the corrugations on the bed-plate, as shown in Fig. 3. In this manner a sheet of glass 13, with similar corrugations on each side of practically a uniform thickness, is produced similar to that
80 shown in Fig. 5.

Among the advantages of my apparatus for producing corrugated rolled plate are the following: First, the gage or thickness of the
85 plate can be adjusted and maintained uniform throughout, and, second, the registering of the male and female operative surfaces is insured, all of which results in the production of a corrugated plate-glass which can be
90 effectively annealed and will possess superior elasticity and strength, which adapts it for skylights, vault-lights, and like places of great exposure with frequent shocks and blows or unusual strains.

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

In apparatus for forming corrugated plate-glass, the combination, with a bed having continuous or uninterrupted longitudinal
100 work-channels and rack-channels parallel therewith, of a roller having ribs or corruga-

tions which correspond with the bed-channels, pinions on the roller-shaft of substantially-equal diameter with the roller, and vertically-adjustable racks arranged in the rack-
5 channel of the bed, substantially as and for the purposes specified.

In testimony whereof I have affixed my sig-

nature, in presence of two witnesses, this 22d day of December, 1891.

EDWARD WALSH, JR.

Witnesses:

JOS. W. CROOKES,

A. RAMEL.