

No. 777,809.

PATENTED DEC. 20, 1904.

D. C. RIPLEY.  
GLASS SHAPING APPARATUS.

APPLICATION FILED JAN. 15, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

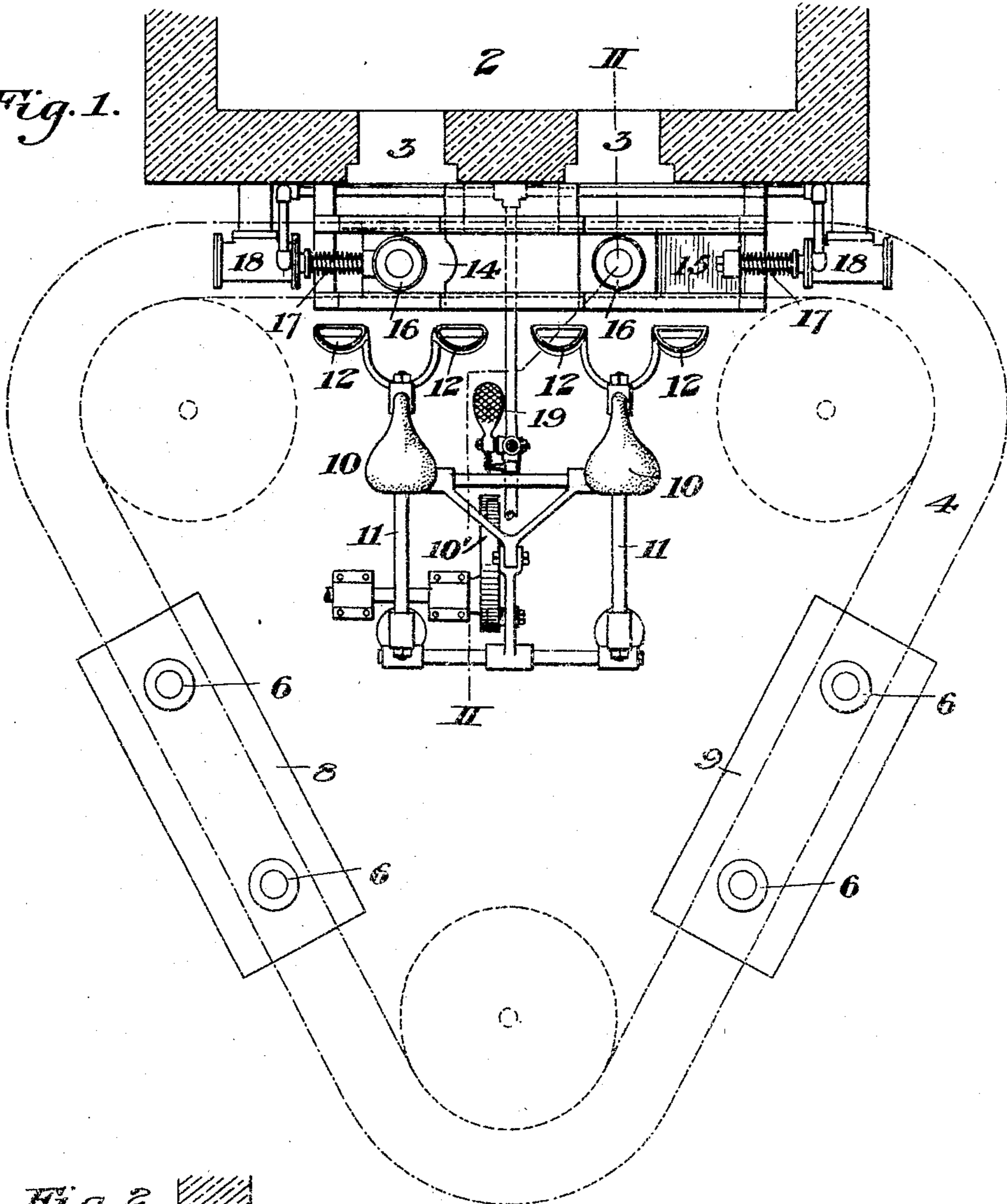
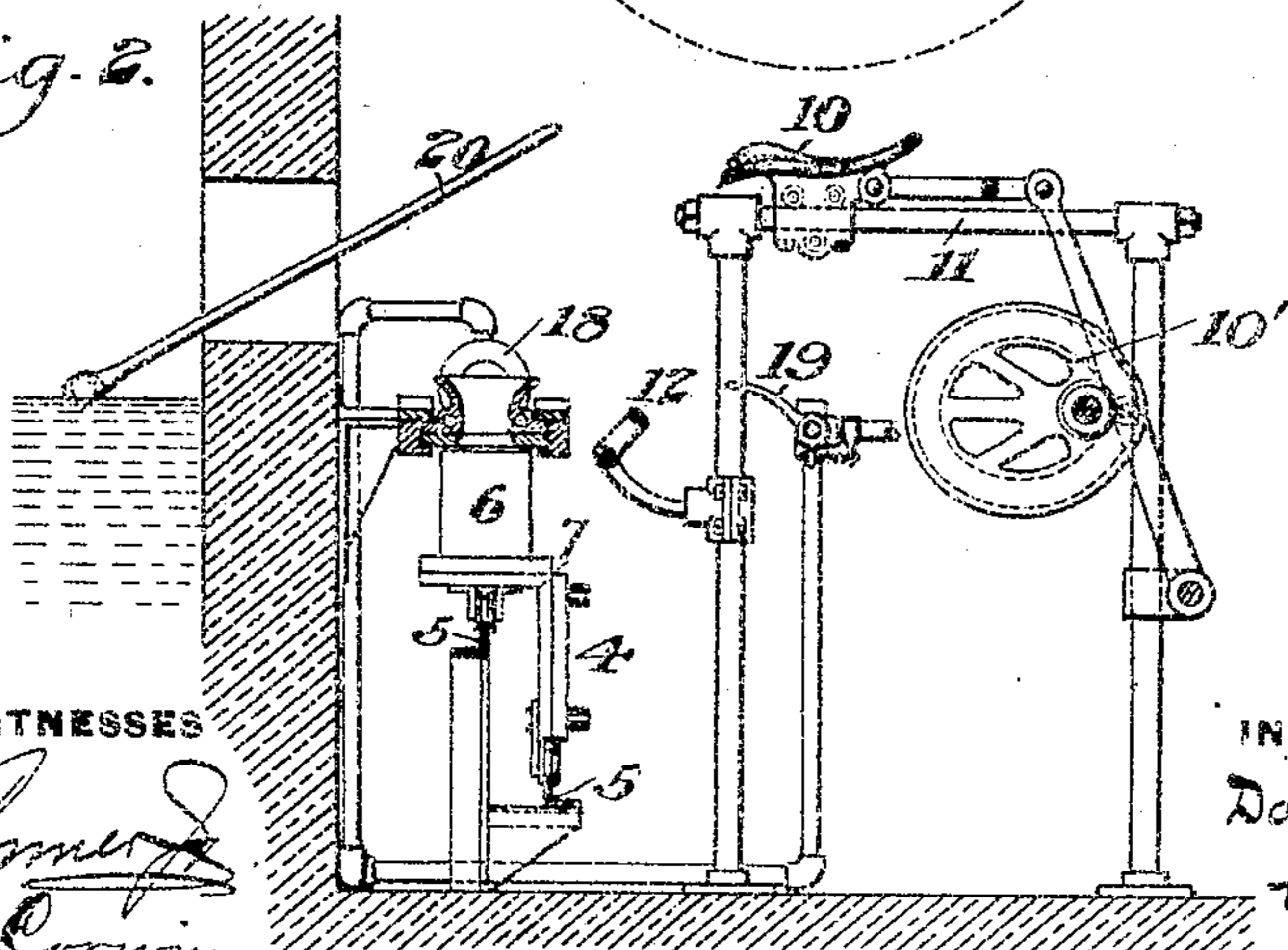


Fig. 2.



WITNESSES

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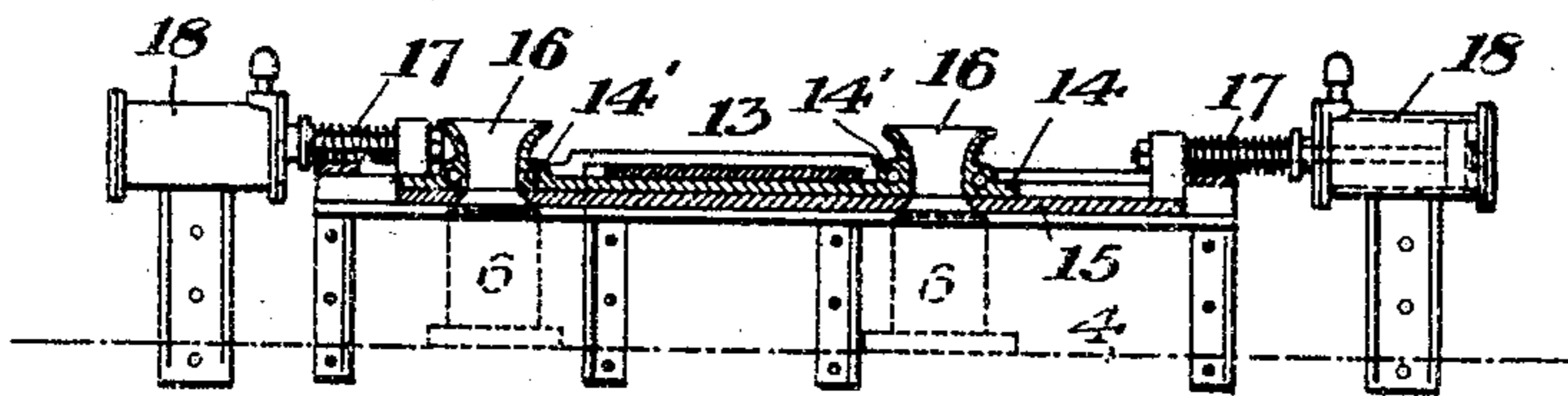
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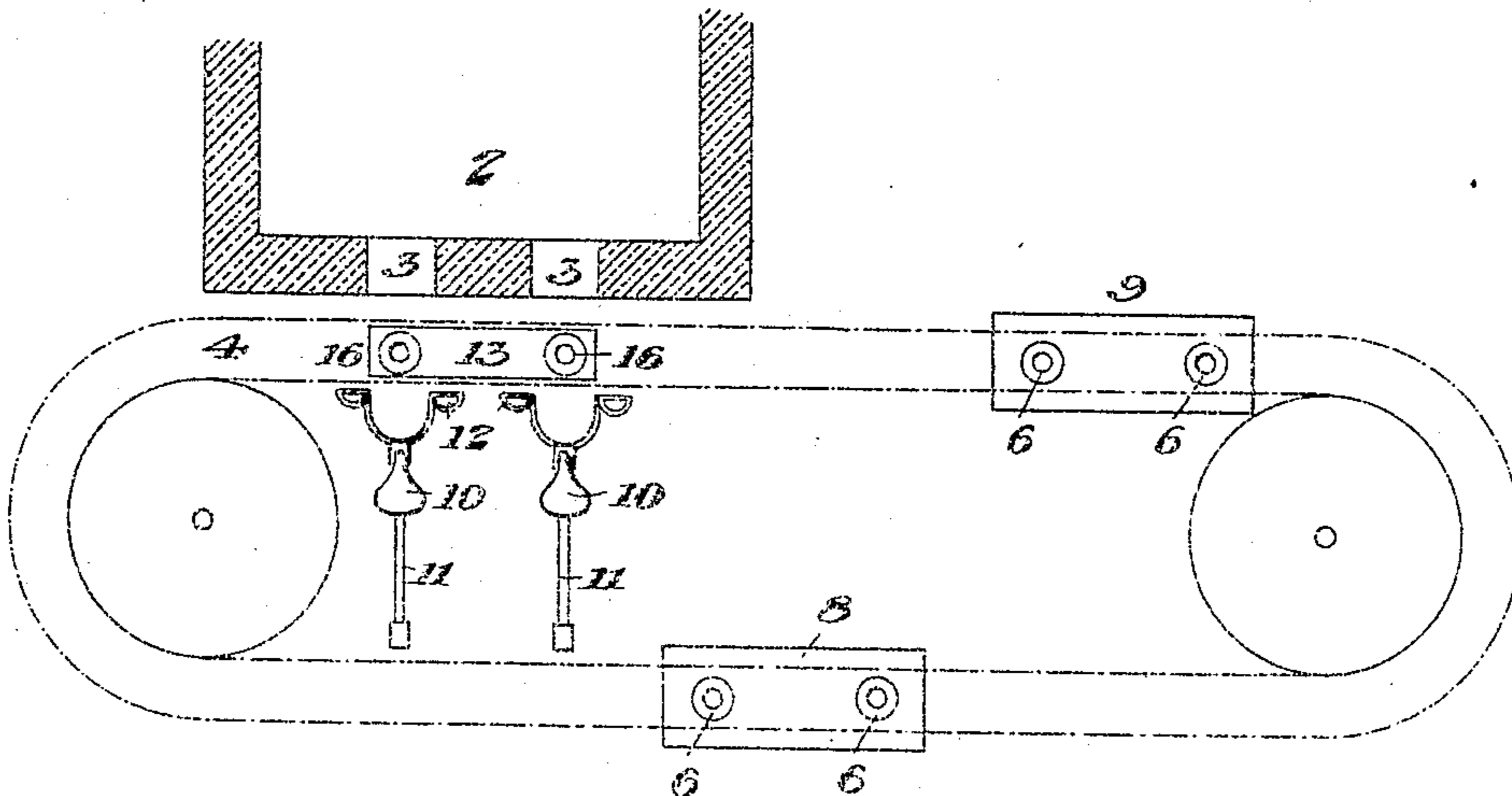
NO MODEL.

2 SHEETS—SHEET 2.

*Fig. 3.*



*Fig. 4.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

DANIEL C. RIPLEY, OF PITTSBURG, PENNSYLVANIA.

## GLASS-SHAPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 777,809, dated December 20, 1904.

Application filed January 15, 1904. Serial No. 189,084.

*To all whom it may concern:*

Be it known that I, DANIEL C. RIPLEY, of Pittsburgh, Allegheny county, Pennsylvania, have invented a new and useful Glass-Shaping Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows in plan view apparatus for the practice of my invention, the glass-melting furnace being shown in horizontal section. Fig. 2 is a vertical section on the line II II of Fig. 1. Fig. 3 is a detail view, and Fig. 4 is a modification.

In the manufacture of pressed glass articles as now commonly practiced a considerable time is lost by reason of the necessity which exists for the gathering-boy after he has gathered a sufficient quantity of glass to turn around and deposit it in the mold, and the time thus lost limits the number of articles which can be produced.

The purpose of my invention is to expedite the manufacture, so that in a given time the gathering-boy can gather a much greater number of articles than has heretofore been possible. It makes it unnecessary for the gathering-boy to turn to deposit the gathered glass in a mold and provides means by which the motions which he must make are simply a back-and-forth motion of introducing his punty into the furnace and withdrawing it therefrom.

The apparatus comprises a moving support upon which the gathering-boy is stationed and which he can move to and from the gathering-opening of the furnace, together with a carrier for the molds, a cut-off under which the molds travel, and means for operating the cut-off.

In the drawings, 2 represents a glass-furnace having the usual gathering-holes 3 3 of suitable number.

4 is a carrier preferably made up of endless chains carrying the molds which are supported on wheels or other suitable means on a track 5 5, the molds 6 being supported on the carrier by standards 7. The track extends along the furnace to the gathering-holes, and thence to a pressing-station 8, where the molds

pass under a suitable press, and thence to a discharge-station 9, where the pressed articles are removed. After leaving the discharge-station 9 the molds are carried again to the front of the furnace.

Opposite each gathering-hole is a seat 10, on which the gathering-boy sits. This seat is slidingly mounted upon supports 11 11, which extend at right angles to the furnace, and in front of it there are preferably foot-rests or stirrups 12, in which the workman places his feet. The seats are connected with cams 10' or other suitable motive mechanism, by which they are moved back and forth at regular intervals to and from the gathering-opening of the furnace and these cams are preferably so timed as to harmonize with the motion of the carrier, which brings the molds to and removes them from the gathering-station.

In front of the seat 10 is a cut-off 13, under which the molds travel. A desirable construction of this cut-off (shown in Fig. 3) consists of two oppositely-moving blades 14 15, having openings adapted to register with each other, the upper blade 14 being water-cooled by passages 14' and having hopper-shaped mouthpieces 16 at the gathering-station above each gathering-hole. After the glass has passed through the registering openings in the blades 14 15 these blades are moved in opposite directions, so as to shear off the gathered glass and to cause it to drop into the molds. These blades are preferably moved by springs 17, the blades being retracted by an air-cylinder or other suitable motor 18 and being provided with a trigger or lever 19, which holds them in retracted position. The lever 19 extends in proximity to the seat of the gathering-boy, so that by touching it with his feet or his hand the blades are released, and moving quickly together in opposite directions cut off the glass. The construction shown in the drawings enables a single blade to cut off the glass at each of the molds by a single operation. This can be done because the gathering-boys act in unison; but it will be understood that there may be a separate cut-off device for each mold, if desired.

The operation is as follows: The gathering-

boys are stationed upon the seats in front of the gathering-holes, and after a group of molds has passed the seats carrying the gathering-boys are moved by the mechanism 10' toward the gathering-holes, and they then introduce the punties thereinto and collect the gatherings of glass thereon. As the next group of molds comes opposite to the gathering-station and under the cut-off devices the seats are retracted by the mechanism 10', so that the gathering-boys are turned back and the punties withdrawn from the furnace, and then without need of turning the gathering-boys drop the glass into the molds through the hopper-shaped openings 16 in front of them. The trigger above described is then touched, whereupon the blades move in opposite directions and shear off the glass. The group of molds then moves to the pressing-station, the blades are retracted automatically by the motor, the gathering-boys are advanced and collect new gatherings of glass, and the operation proceeds as above described. The only body motions which the boys need make are the back and forth motions on the traveling seats, so that the gathering and depositing of the glass in the molds are conducted with great rapidity, and a shop of workmen can produce a much greater output than heretofore.

By moving the seats of the gathering-boys mechanically toward and from the furnace at regular intervals the making of the glass articles proceeds at a determined rate and delays arising from inattention or slowness of the operators are avoided. Within the scope of my invention, however, the mechanism 10' may be dispensed with and the gathering-boys may themselves move the seats to and from the gathering-holes.

I claim—

1. Apparatus for shaping glass comprising a furnace, a gathering-station, a carrier adapted to carry molds to the gathering-station and to a pressing-station, and a support adapted to be moved back and forth toward the fur-

nace at the gathering-station; substantially as described.

2. Apparatus for shaping glass comprising a furnace, a gathering-station, a carrier adapted to carry molds to the gathering-station, an operator's support adapted to be moved back and forth toward the furnace at the gathering-station, and means for moving the support at regular intervals; substantially as described.

3. Apparatus for shaping glass, comprising a furnace, a gathering-station, a carrier adapted to carry molds to the gathering-station and to a pressing-station, a sliding support adapted to be moved back and forth toward the furnace at the gathering-station, a cut-off under which the molds travel at the gathering-station, and means for operating the cut-off; substantially as described.

4. Apparatus for shaping glass, comprising a furnace, a gathering-station, a carrier adapted to carry molds to the gathering-station and to a pressing-station, a sliding support adapted to be moved back and forth toward the furnace at the gathering-station, a cut-off under which the molds travel at the gathering-station, and means for operating the cut-off, said cut-off comprising knives, an actuating-spring and a retracting-motor; substantially as described.

5. Apparatus for shaping glass comprising a furnace, a gathering-station, and an operator's support mounted to move back and forth toward and from the furnace; substantially as described.

6. Apparatus for shaping glass comprising a furnace, a gathering-station, and an operator's support mounted to move back and forth toward and from the furnace, and means for moving it; substantially as described.

In testimony whereof I have hereunto set my hand January 12, 1904.

DANIEL C. RIPLEY.

Witnesses:

THOMAS W. BAKWELL,  
GEO. B. BLEMING.