

No. 670,282.

Patented Mar. 19, 1901.

W. L. KANN.

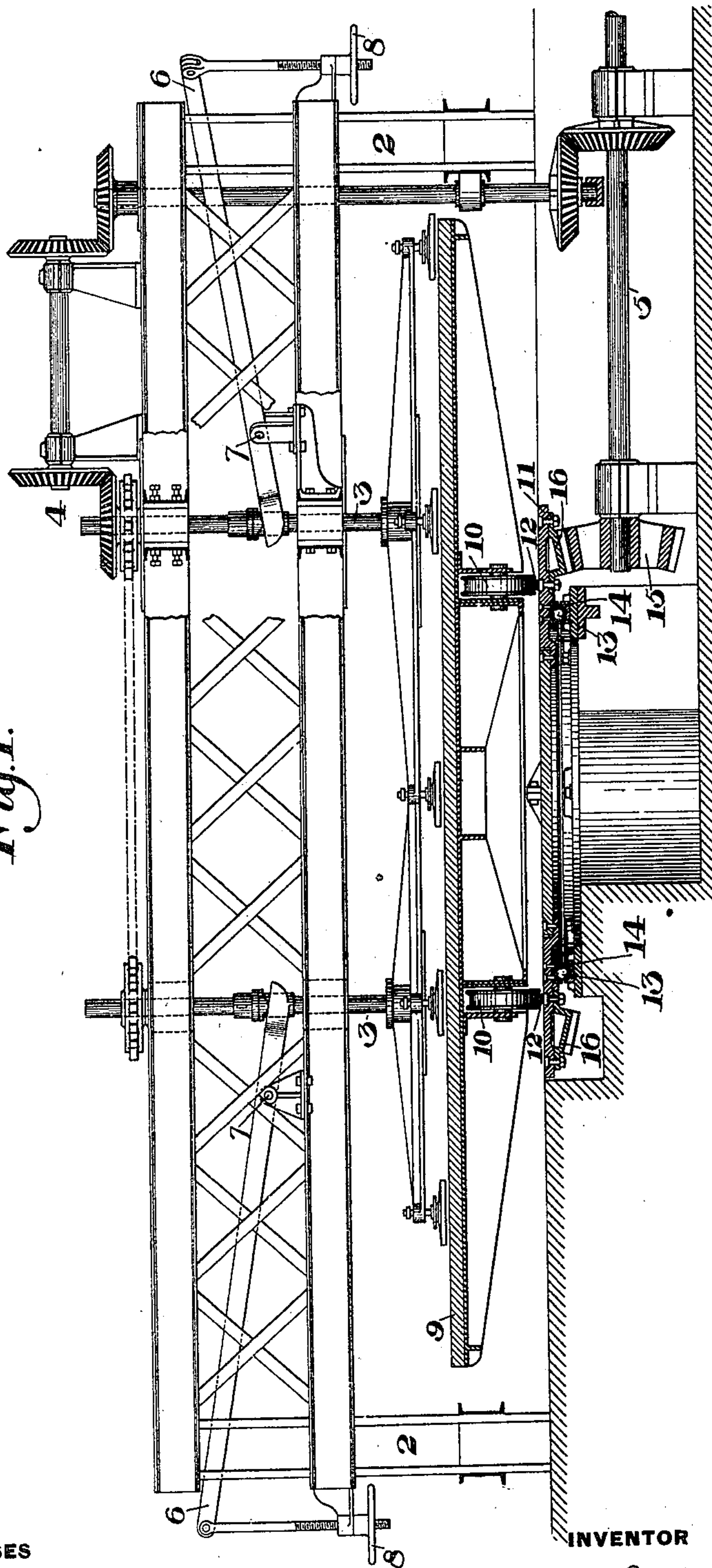
GLASS GRINDING AND POLISHING MACHINE.

(Application filed Jan. 21, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

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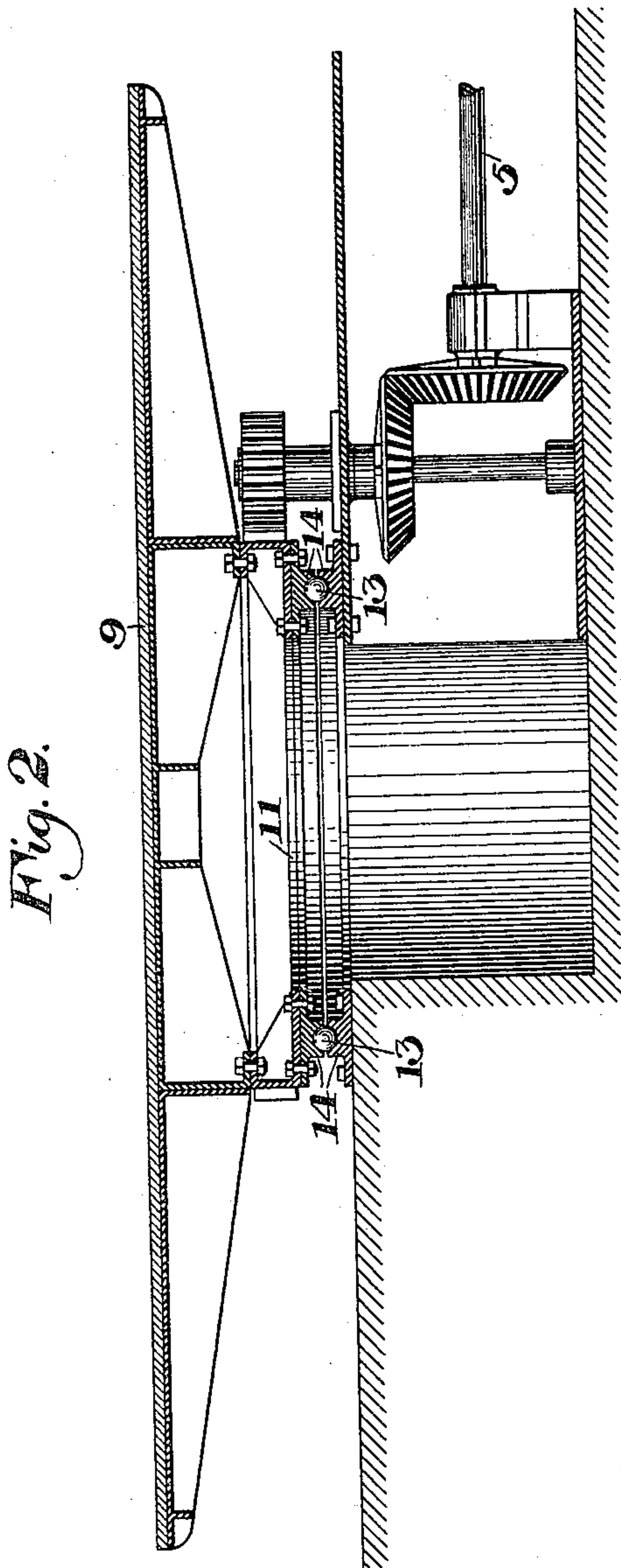
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# UNITED STATES PATENT OFFICE.

WILLIAM L. KANN, OF ALLEGHENY, PENNSYLVANIA.

## GLASS GRINDING AND POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,282, dated March 19, 1901.

Application filed January 21, 1899. Serial No. 703,004. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM L. KANN, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Glass Grinding and Polishing Machines, 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 elevation, partly in vertical central section, a glass-polishing table constructed in accordance with my invention. Fig. 2 is a similar view showing a modified construction.

Heretofore in glass grinding and polishing machines it has been common for the purpose of rotating the table or deck on which the glass is fixed to employ a vertical spindle operated by suitable driving mechanism and to mount the deck upon wheels, enabling it, after the glass has been ground on the grinding-machine, to be carried to the polishing-machine into position over the spindle and then lowered into operative connection therewith, so that it may be rotated under the buffers of the polishing-machine. Such construction has been a source of trouble, among other reasons because of the difficulty in preserving the bearings of the spindle and keeping the driving-gear in repair, and a large excavation with elaborate masonry foundations is required under the machine. The raising and lowering of the deck from and upon this table also necessitates the use of hydraulic, electric, or other mechanism more or less complicated in construction and difficult to keep in order.

It is the object of my invention to avoid these and other evils which are familiar to those skilled in the art, and this I accomplish by mechanism which is simple and durable and is easy to construct by reason of the ready accessibility of the gearing and easy to keep in repair.

My invention consists in employing instead of the rotary spindle a rotary platform supported on bearings at some distance from the center of motion and provided with a track-section or otherwise adapted to receive the wheels on which the glass-supporting deck is mounted. The deck when the glass is mount-

ed thereon can be moved on its wheels to said platform, and the grinding-blocks or polishing-buffers, as the case may be, may be lowered upon the glass, thus rendering it unnecessary to move the deck vertically in order to bring it into operative connection with the rotating mechanism. This rotary platform above mentioned may be arranged at the floor-level, so that all inconvenient excavations are made unnecessary.

Referring now to the drawings, 2 represents a stationary frame, which may be conveniently constructed of metal beams and braces and which carries in suitable bearings the vertical shafts 3, by which the runners of the polishing or grinding machine are moved back and forth over the glass plates. In the drawings I show these shafts driven by suitable gearing 4 from the main power-shaft 5; but within the scope of my invention this gearing may be omitted and the motion of the runners effected merely by frictional contact with the glass plates on the moving deck.

6 6 are levers fulcrumed at points 7 and actuated by wheels 8 or other suitable devices, so that they may move the runners vertically into or out of contact with the glass.

9 is the deck, which may be of any suitable construction, its frame being supported by wheels 10, adapted to run on a track leading from one machine to the other and to a place where the glass is fixed on or removed from the deck.

11 is the rotary platform, set at the floor-level under the frame 2 and having rails or other devices 12, adapted to receive the wheels of the deck and to hold the same during the operation of grinding or polishing. The platform is supported by a circular series of antifriction balls, wheels, or rollers 13, which are set between bearing-rings 14, so that the platform may be rotated easily and with little friction thereupon. The driving mechanism by which the platform is rotated consists of a gear-wheel 15, which is fixed to or otherwise driven by the power-shaft 5 and is in gear with an annular rack 16, set on the under side of the table, as in Fig. 1, or at the periphery of the table, as in Fig. 2.

The operation of the machine as thus constructed is as follows: The deck 9, having been fitted with the plates of glass to be



ground or polished, is moved on its wheels 10 upon the rails 12 on the rotating platform 11, and the runners of the machine are lowered, so as to bring the grinding-blocks (or 5 polishing-buffers) into contact with the glass. Then by operation of suitable clutch-gearing or otherwise the platform 11 is rotated at the required speed, so as to move the glass under the grinding blocks or buffers, and at the same 10 time the said blocks or buffers are moved either directly or by frictional contact with the glass, as above explained. When the grinding is completed, the runners are raised from the glass and the deck, carrying the glass, 15 is removed from the platform 11 and taken either to another machine for completion of the treatment of the glass or to a suitable point where the glass can be removed.

In Fig. 2 I show a construction in which 20 the deck is not mounted upon wheels, but is fixedly secured to the rotating platform 11. In this case I derive all the advantages of my invention, except that of the removability of the deck, and after the glass has been ground 25 the runner-frame 2 (which is preferably made removable for this purpose) is shifted and the glass is turned on the deck and the frame replaced to grind the other side, or to avoid turning the glass another frame 2, carrying 30 polishing-buffers, may be brought into position over the deck to perform the polishing of the ground surface of the sheet.

Other modifications will suggest themselves. For example, within my broader 35 claims the rack 16 may be within the circle of the antifrictional bearings.

I claim—

1. A grinding or polishing machine, having 40 a stationary base provided with outer bearings, a rotary platform carried on said bear-

ings at some distance from its center of motion and constructed to receive glass plates thereon, actuating connections arranged to continuously rotate the platform, and rubbers 45 arranged to be moved in contact with the article on the platform while said platform is being rotated; substantially as described.

2. A grinding or polishing machine, having a rotary platform supported on bearings at some distance from its center of motion, actu- 50 ating connections arranged to rotate the platform, a glass-supporting deck carried on the platform, and rubbers arranged to be moved in contact with the glass on the deck; substantially as described. 55

3. A grinding or polishing machine, having a stationary base provided with a circular row of bearings, a rotary platform carried on said bearings outside of its center, a circular 60 rack fixed to the platform, actuating connections arranged to continuously rotate the platform, and a removable glass-supporting deck mounted upon the platform; substantially as described.

4. A grinding or polishing machine, having 65 a rotary platform carried upon stationary bearings at some distance from its center of motion, actuating connections arranged to continuously rotate the platform, a wheeled glass-supporting deck removably carried on 70 the platform, and rubbers arranged to contact with the glass carried on the deck; substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM L. KANN.

Witnesses:

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H. M. CORWIN.