

(No Model.)

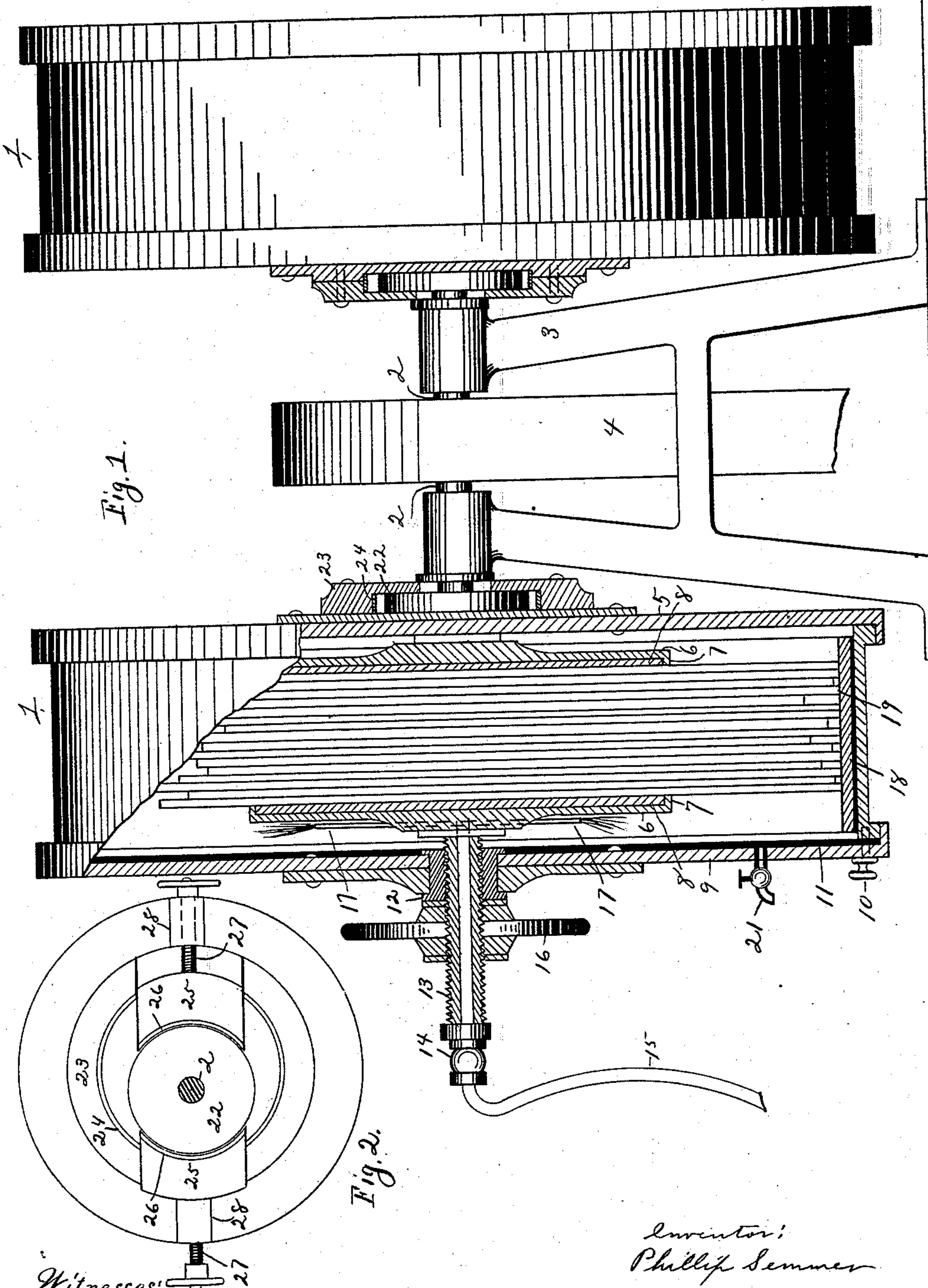
3 Sheets—Sheet 1.

P. SEMMER.

MACHINE FOR GRINDING AND POLISHING GLASS.

No. 578,779.

Patented Mar. 16, 1897.



Witnesses:
E. C. Catts
B. E. Trape

Inventor:
Phillip Semmer
By Glascock & Co
attys.

(No Model.)

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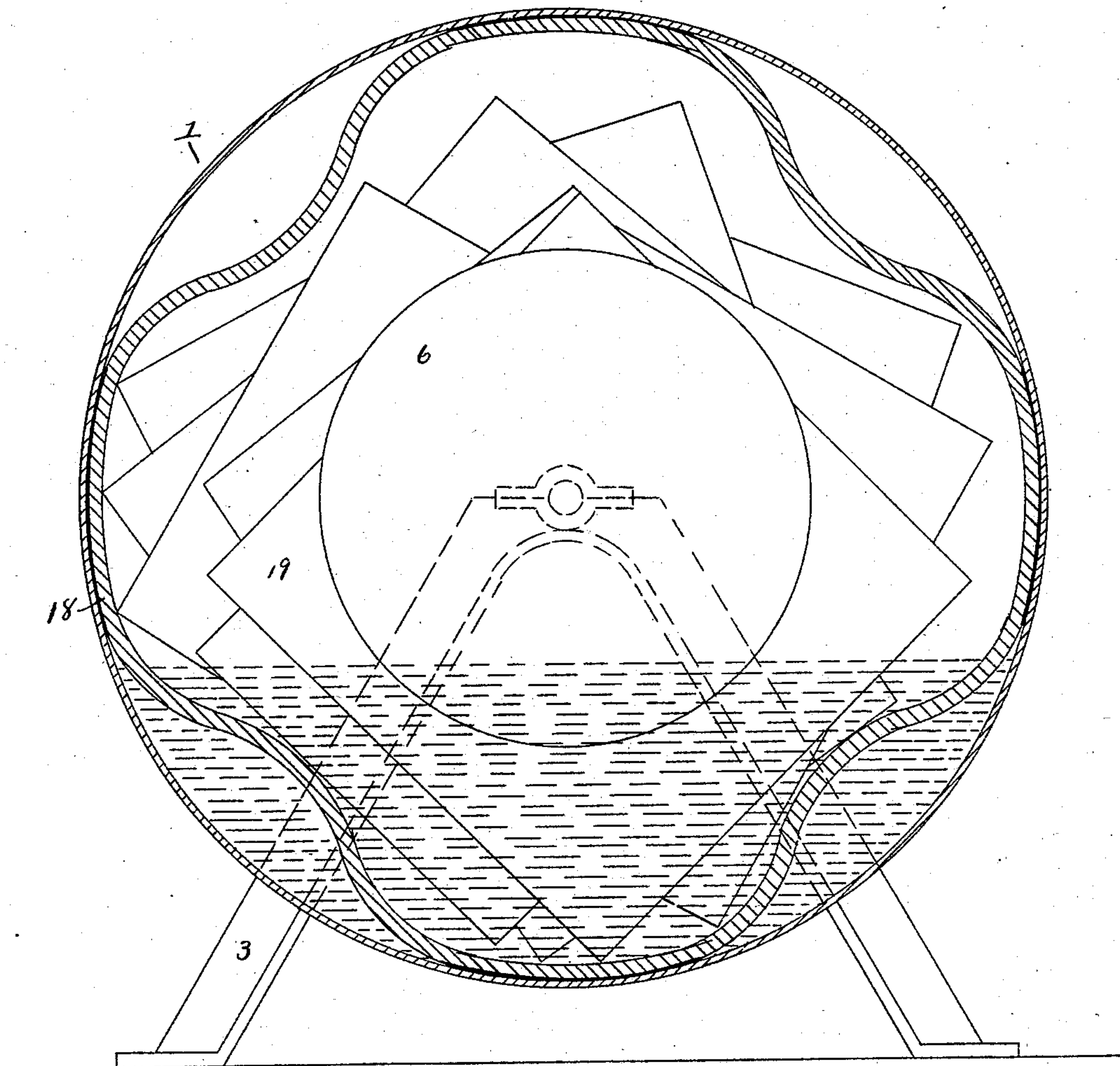
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Fig. 3.



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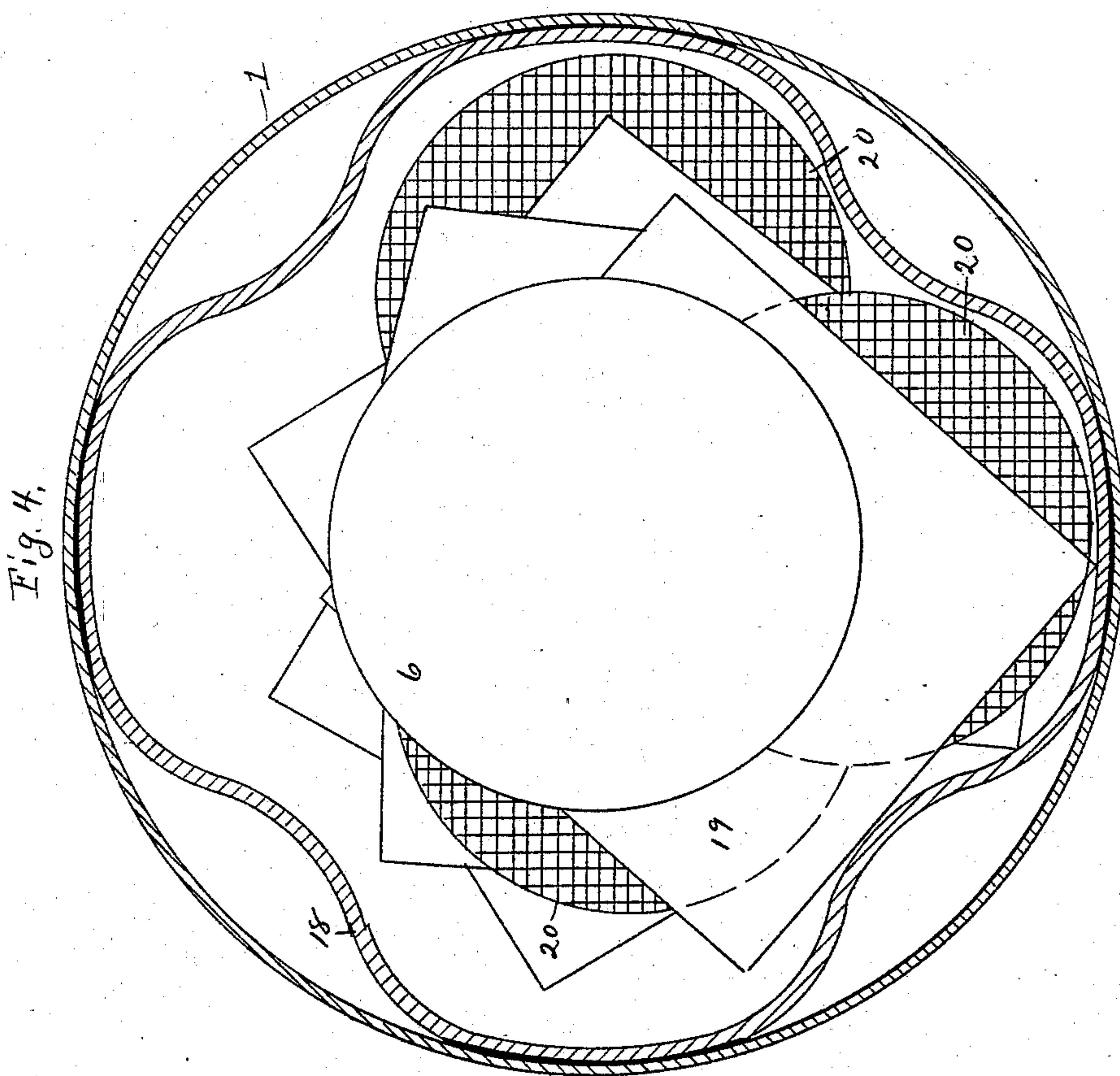
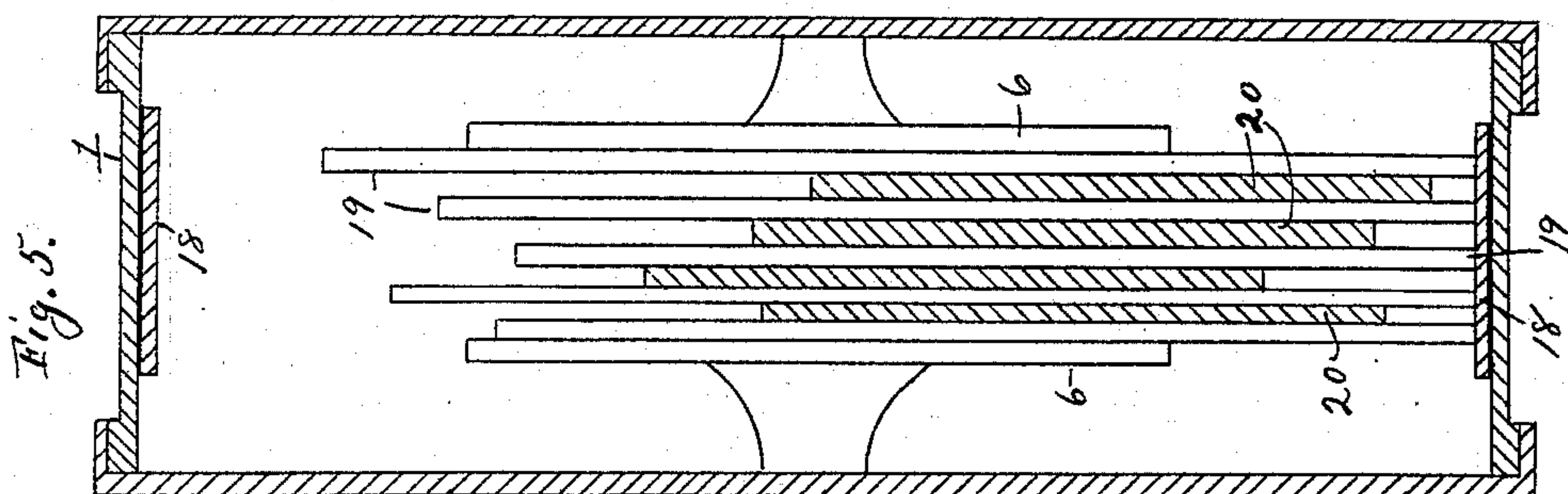
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No. 578,779.

Patented Mar. 16, 1897.



Witness:
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Inventor:
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UNITED STATES PATENT OFFICE.

PHILLIP SEMMER, OF IRWIN, PENNSYLVANIA.

MACHINE FOR GRINDING AND POLISHING GLASS.

SPECIFICATION forming part of Letters Patent No. 578,779, dated March 16, 1897.

Application filed December 10, 1895. Serial No. 571,662. (No model.)

To all whom it may concern:

Be it known that I, PHILLIP SEMMER, a citizen of the United States, residing at Irwin, in the county of Westmoreland and State of Pennsylvania, have invented a certain new, useful, and valuable Improvement in Machines for Grinding and Polishing Glass, &c., of which the following is a full, clear, and exact description.

My invention has relation to machines for grinding and polishing the surfaces of plate-glass, marble and stone slabs, &c.; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

In the accompanying drawings, Figure 1 is a side view of the machine, partly in section. Fig. 2 is a side view, partly in section, of the device for varying the motion of the cylinders of the machine. Fig. 3 is a longitudinal sectional view of one of the cylinders. Fig. 4 is a longitudinal sectional view of one of the cylinders, showing the grinding-disks in position. Fig. 5 is a transverse sectional view of one of the cylinders, showing the grinding-disks in position between the plates, also showing an edge view of the disks 6 6.

The machine consists of the cylinders 1 1, which are substantially the counterpart of each other. Said cylinders are perpendicularly attached to the horizontal shaft 2. Said shaft is journaled in the frame 3, said shaft being provided with a pulley-wheel, around which the belt 4 passes. Each cylinder is provided with a perpendicular permanent side 5, to the inner face of which is fixed the disk 6. The inner face of said disk 6 is provided around its periphery with a flange 7, which retains a plate 8 or a grinding-disk.

The opposite end of the cylinder is provided with a removable side 9, said side being secured in place by suitable turn-screws 10, (see Fig. 1,) the packing 11 being interposed between the end of the cylinder and the side 9. The side 9 is provided in its center with a collar 12, said collar having an internal thread in its central perforation. A horizontal hollow support 13 passes through said collar. The outer surface of said support is provided with a thread which engages the thread in the collar. The inner end of the said support is provided with a disk and plate

similar to the disk 6 and plate 8. The outer end of the said support is provided with a swivel-joint 14, to which is connected the pipe or hose 15. A wheel 16 is also located on the outer part of the said support. Said wheel in its center is provided with an internal thread adapted to engage the thread on the support. The inner side of the said wheel is adapted to bear against the outer side of the collar 12 and thereby hold the support 13 firmly in its proper place. The passage in the support 13 connects with the radially-extending outlets 17 17. Through the said passage and the said outlets 17 17 a jet of water may be introduced into the cylinder 1 while the same is closed and in motion.

The inner periphery of the cylinder is provided with a cushion 18. Said cushion is made of rubber or any other suitable material. Said cushion is connected, preferably, by cement to the cylinder at intervals, and between these intervals the cushion extends toward the center of the cylinder, thus making a complete cushion and adding greatly to the elasticity of the material.

The plates 19 19 are arranged in perpendicular positions between the disks 6 6, and between the said plates the grinding-disks 20 may be placed, as shown in Figs. 4 and 5, or the said plates may be arranged against each other, as shown in Fig. 1. Said grinding-disks are provided with rough surfaces, as indicated in Fig. 4.

The cylinder is provided with a suitable draw-off cock 21, (see Fig. 1,) through which the water may be withdrawn at pleasure.

The ends of the shaft 2 may be connected to the cylinder in any suitable manner. However, in order to give the cylinders an irregular or throwing motion, I connect them as follows: The ends of the shaft are provided with a disk 22. Each said disk is located in a receptacle 23, which in turn is secured to the side 5 of the cylinder. The said receptacle 23 is circular in shape and is provided around its inner periphery with a rubber cushion 24. The oppositely-arranged shoes 25 25 are located in the sides of the receptacle 23. Said shoes are provided with the rubber cushions 26 26, which are adapted to come in contact with the periphery of the disk 22. To the back of each shoe 25 is swiveled

a threaded rod 27. Said rods pass through threaded bearings 28, and the outer ends of said rods are provided with suitable handles. As the shoes 25 25 are moved back or forth by means of the said screw-rods the cylinder 5 is shifted to one side or the other, and if the center of the cylinder is shifted to one side of the center of the shaft 2 as the said shaft is revolved the cylinder will have a throwing or eccentric motion, which will cause the contents of the cylinder to vigorously pass around the inner periphery. I do not wish to confine myself to this specific construction for giving the cylinder the eccentric motion, as any suitable means accomplishing this result may be employed. Such a motion in a measure may be imparted to the cylinder by withdrawing the shoes 25 25 until their inner sides, together with the inner sides of the receptacle 23, form a circle. Then the disk 22 will engage and bear against the cushion 24 and the cushions 26 26, and as the shaft 2 is revolved the weight of the cylinder and its contents will create sufficient friction between the disk and the said cushions to make the cylinder have an irregular revolving motion. As the cylinders are revolved the plates 19 19 rub against each other and a suitable abrasive material is placed in the cylinders. A jet of water is let into the cylinders through the support 13. This liquid takes up the abrasive and carries it between the plates, and thus a surface is put on the plates. Through the cock 21 the water may be withdrawn from the cylinder and also any debris that is removed from the surface of the plates. If it is desirable to use grinding-disks 20, they may be interposed between the plates, as shown in Fig. 5.

The peculiar arrangement of the elastic pathway 18 prevents the plates 19 19 from breaking or chipping at the edges.

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

1. A machine for grinding and polishing plane sheets of glass and other plane surfaces, consisting of a horizontal cylinder adapted to receive the glass, the glass resting on edge in the cylinder, and a cushion located in said cylinder, said cylinder having a revolving motion.

2. A machine for grinding and polishing glass, consisting of a cylinder adapted to receive the glass, and a cushion located in said cylinder, said cushion being secured to the cylinder at intervals and between the intervals extending toward the center of the cylinder.

3. A machine for grinding and polishing plane sheets of glass and other plane surfaces, consisting of a horizontal cylinder adapted to receive the glass, and perpendicularly-arranged grinding-disks located in said cylinder, said cylinder having a revolving motion.

4. A machine for grinding and polishing plane sheets of glass and other plane surfaces, consisting of a horizontal cylinder adapted to receive the glass, the glass being adapted to rest on edge in the cylinder, a removable side closing one end of the cylinder, and perpendicularly-arranged grinding-disks located in said cylinder, said cylinder having a revolving motion.

5. A machine for grinding and polishing plane sheets of glass and other plane surfaces, consisting of a horizontal cylinder adapted to receive the glass, the glass resting on edge in the cylinder, a perpendicular grinding-disk permanently secured to one end of the cylinder, and a grinding-disk perpendicularly arranged and adjustably secured to the opposite end of the cylinder, said cylinder having a revolving motion.

6. A machine for grinding and polishing plane sheets of glass and other plane surfaces, consisting of a cylinder adapted to receive the glass, and a laterally-adjustable grinding-disk secured to one side of the cylinder, said cylinder having a revolving motion.

7. A machine for grinding and polishing plane sheets of glass and other plane surfaces, consisting of a cylinder adapted to receive the glass, and a laterally-adjustable grinding-disk secured to one side of the cylinder, and a device for retaining said disk in a desired position, said cylinder having a revolving motion.

In testimony whereof I affix my signature in presence of two witnesses.

PHILLIP SEMMER.

Witnesses:

EMIL FISCHER,
HENRY KLEIN.