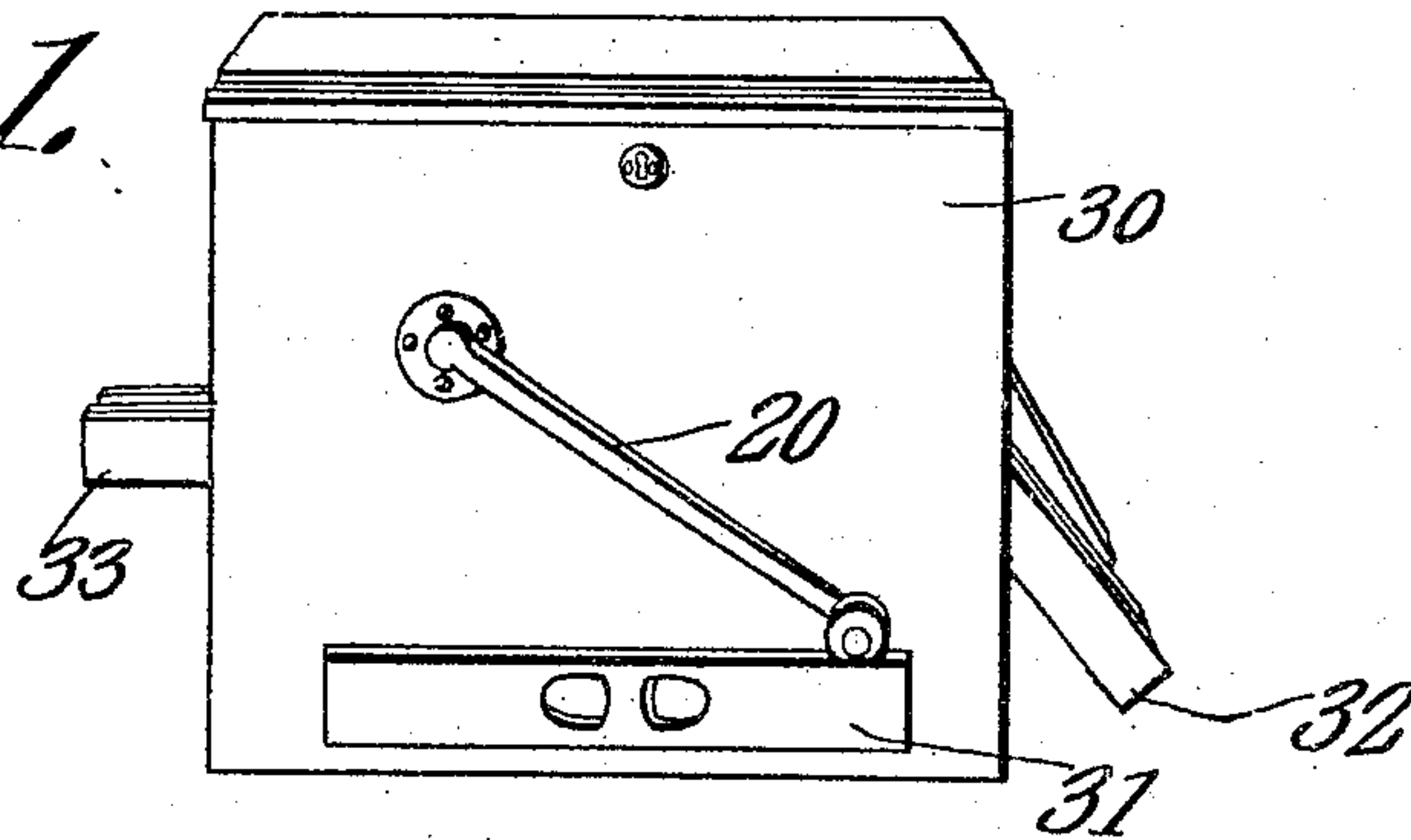


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ERASER CLEANING MACHINE.  
APPLICATION FILED JAN. 15, 1909.

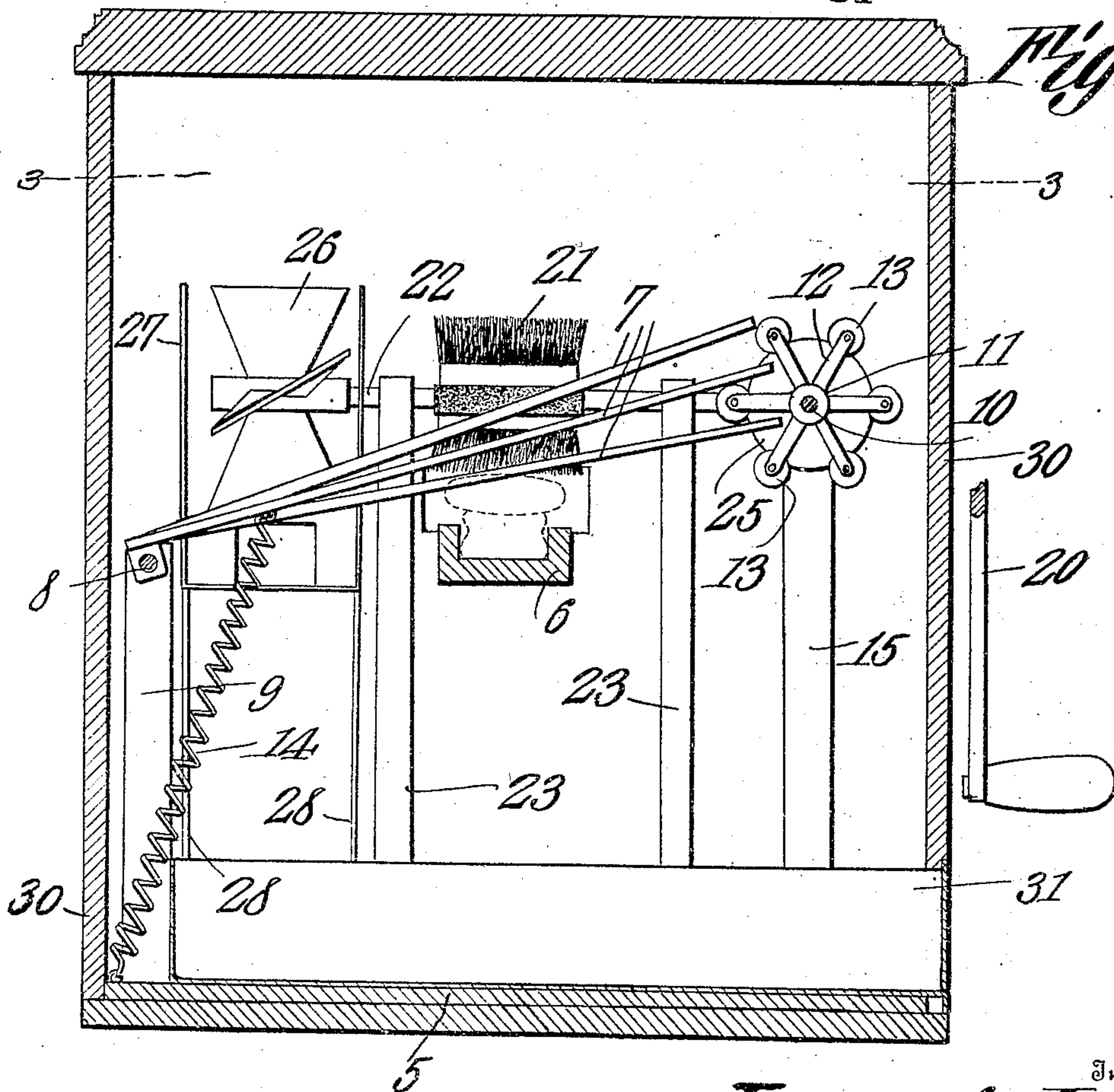
940,254.

Patented Nov. 16, 1909.  
2 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2.*



Witnesses

*W. H. Stewart*  
*W. A. Schmitt*

Inventor

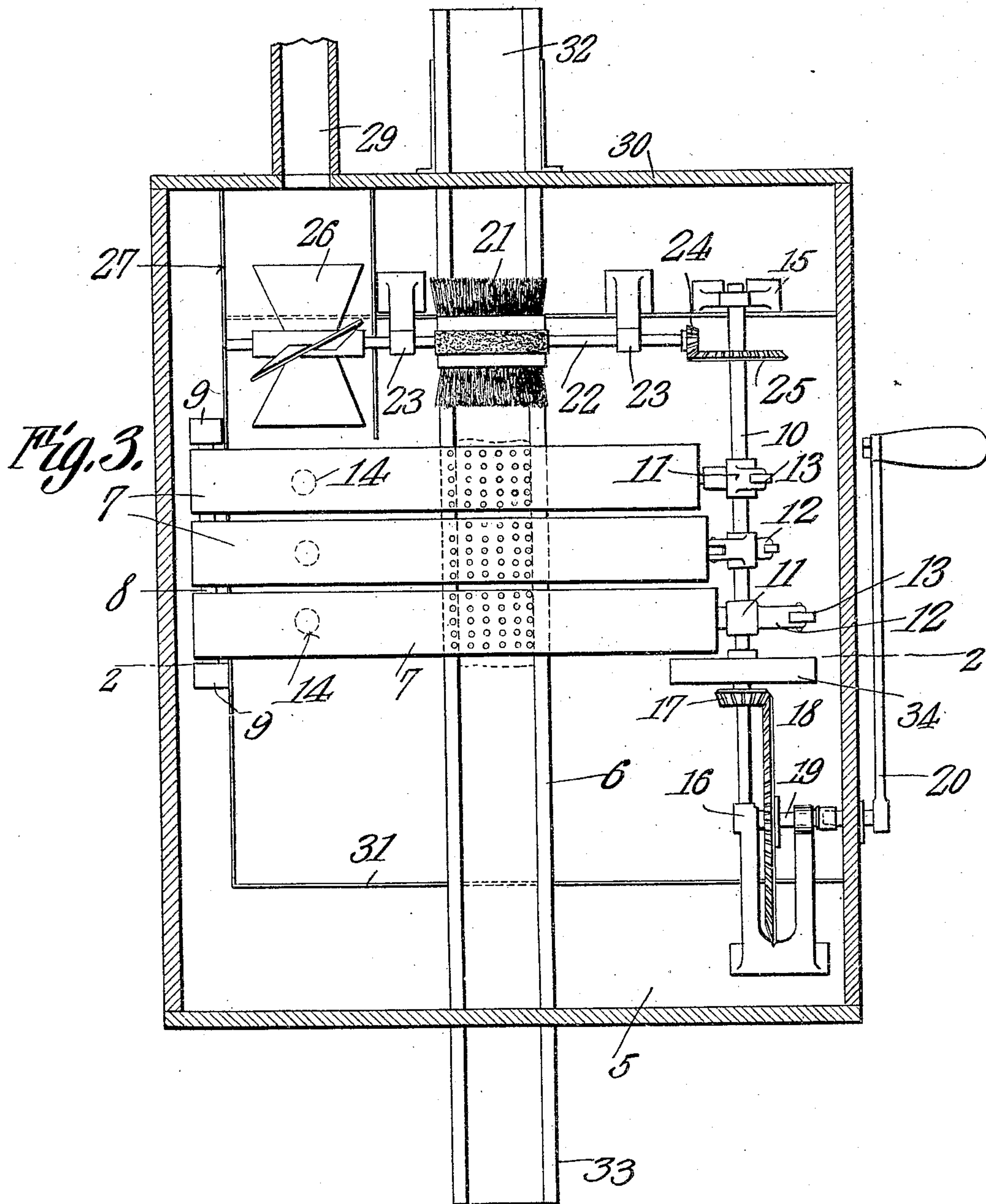
*James A. Jones.*

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WITNESSES

*E. J. Stewart*  
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# UNITED STATES PATENT OFFICE.

JAMES A. JONES, OF LOGANSPORT, INDIANA.

ERASER-CLEANING MACHINE.

940,254.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed January 15, 1909. Serial No. 472,530.

*To all whom it may concern:*

Be it known that I, JAMES A. JONES, a citizen of the United States, residing at Logansport, in the county of Cass and State of Indiana, have invented a new and useful Eraser-Cleaning Machine, of which the following is a specification.

The purpose of the present invention is to provide improved means for beating and brushing black-board erasers to remove the chalk-dust therefrom, and to collect the dust in a drawer or other receptacle, which can be emptied at any time.

The invention also has for its object to provide a machine of this kind which is simple in construction and operation, and which will rapidly clean the erasers; and to this end it consists in the novel construction and arrangement of parts hereinafter described and claimed, reference being had to the drawing hereto annexed, in which:—

Figure 1 is a perspective view of the machine. Fig. 2 is a vertical section on the line 2—2 of Fig. 3. Fig. 3 is a horizontal section on the line 3—3 of Fig. 2.

In the drawing, 5 denotes a bed plate on which the working parts are supported.

The erasers to be cleaned are fed through the machine and supported, while being operated on, on a slideway 6, which is channeled, as clearly shown in Fig. 2, to receive the erasers. Extending above this slideway is a plurality of beaters 7, which are pivotally mounted at one end on a shaft 8, supported in bearing standards 9, rising from the bed plate 5. The free ends of the beaters are engageable by wipers, which are mounted on a rotatable shaft 10 and comprise each a hub 11 and a pair of arms 12 extending radially from said hub on diametrically opposite sides thereof, the outer ends of said arms being forked and fitted with rollers or wheels 13, to reduce friction. A wiper as herein described is provided for each beater, and the wipers are equally spaced apart on the shaft and engage the beaters successively. When the shaft 10 is rotated, the wipers, upon engaging the free ends of the beaters, throw them upwardly, and when the wipers clear the beaters, they are pulled downwardly in the direction of the slide-way 6 by means of springs 14, connected respectively to the beaters, whereby the eraser on the slide-way is given a sharp, sudden and forcible blow, which quickly dislodges the chalk-dust. The springs 14 are

connected at one end to the beaters, and at the other end to the bed plate 5.

The shaft 10 is supported in suitable bearing standards 15 and 16 respectively, rising from the bed plate, and on said shaft is a beveled pinion 17, which meshes with a beveled gear 18, on a shaft 19. The standard 16 is provided with bearings for the shaft 19, and in one end of said shaft is a socket for the attachment of a crank-handle 20, whereby the machine is operated.

Above the slide-way, adjacent to and behind the beaters, is mounted a rotary brush 21, said brush being carried by a shaft 22, supported in bearing standards 23, rising from the bed plate. This shaft is geared to the shaft 10 by beveled gears 24 and 25. The brush 21 extends transversely across the slide-way and engages the eraser as it leaves the beaters.

On the shaft 22, on one side of the brush 21, is mounted a fan 26, inclosed in a casing 27. The fan-casing is supported by brackets 28, secured to the bed plate. A piece of rubber hose or tubing may be slipped over the discharge nozzle 29 of the fan-casing, to conduct the dust to a window, the furnace, or any other suitable place.

The mechanism herein described is preferably inclosed within a casing 30. The casing contains a drawer 31, which is spaced from the bottom of the casing a sufficient distance so as to extend across the bed plate when the machine is within the casing. The bearing standards 15 and 16 are spaced apart sufficiently to accommodate the drawer. In one of the walls of the casing is an opening to permit the attachment of the crank-handle 20 with the shaft 19. In line with the slide-way 6, the opposite walls of the casing are provided with openings, into one of which the erasers are inserted. After the erasers are cleaned they are discharged from the other opening. The last mentioned opening is provided with a discharge chute 32, and the other opening is provided with a short tray 33, on which the erasers are placed as they are fed through said opening to the machine.

The operation of the machine is as follows:—The operator turns the crank-handle 20 with the right hand, and feeds the erasers from the tray 33 through the adjacent opening in the wall of the casing 30 with the left hand. As the slide-way 6 is in a direct line with the opening, the eraser enters the



slide-way as soon as it passes through said opening. The second eraser is now inserted in the same manner, which moves the first one under the beaters, which are playing  
 5 rapidly up and down by means of the wipers and the springs. The combined width of the beaters is substantially the same as the length of the eraser, so that the entire surface of the eraser is operated on by the  
 10 beaters.

It will be understood of course that the felt side of the eraser is presented to the beaters. The eraser is beaten as long as the operator sees fit, and then the third eraser  
 15 is inserted, which moves the second eraser under the beaters, and moves the first eraser under the brush 21, which removes any dust that may be remaining on the surface of the eraser, and, when the next eraser is inserted,  
 20 the first one is discharged on to the chute 32, through the opening in the wall of the casing adjacent thereto.

The advantage of providing a plurality of beaters is that only a small amount of the  
 25 surface of the eraser is covered by each beater, thus requiring a lighter spring, which in turn requires less power. Another advantage is that one beater is always on the eraser, thus holding it to its place, and preventing it from bouncing out of the slide-  
 30 way. By setting the wipers at regular intervals on the shaft 10, less balancing power is required, said shaft being provided with a balance wheel 34.

35 When the machine is in the casing, and the lid is closed, the fan draws its air through the two opposite openings where the erasers enter and leave the machine. This blast of air prevents any dust from floating  
 40 out at these openings, and draws it into the fan casing from which it is discharged through the nozzle 29. Thus, the dust that is not precipitated into the dust drawer is immediately discharged from the machine,

by the blast, allowing the rotary brush to 45 keep clean and preventing the dust from lodging and collecting on the sides of the erasers.

What is claimed is:—

1. In an eraser cleaner, a horizontally ex- 50 tending slideway on which the erasers are supported, and a plurality of beaters arranged side by side, and working in succession across a single eraser on the slideway, whereby said beaters also operate to succes- 55 sively act as holders for the eraser.

2. In an eraser cleaner, a horizontally extending slideway on which the erasers are supported, a plurality of beaters working above the slideway, and engageable with the 60 erasers thereon, a rotatable shaft extending parallel to the slideway, wipers on the shaft for actuating the beaters, a shaft extending transversely of the slideway above the same, and geared to the aforesaid shaft, a brush 65 mounted on the transverse shaft, and engageable with the erasers after they pass the beaters, and operating means connected to the first-mentioned shaft.

3. In an eraser cleaner, a base, standards 70 rising therefrom, a shaft supported by the standards, beaters pivotally mounted at one end on the shaft, a rotary shaft, wipers thereon engageable with the free ends of the beaters for lifting them, an eraser support 75 beneath the beaters, springs connected at one end to the base, and at their other ends to the beaters between the eraser support and the pivoted ends of the beaters, and operating means for the rotary shaft. 80

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES A. JONES.

Witnesses:

ABRAHAM L. JONES,  
 T. N. CASH.