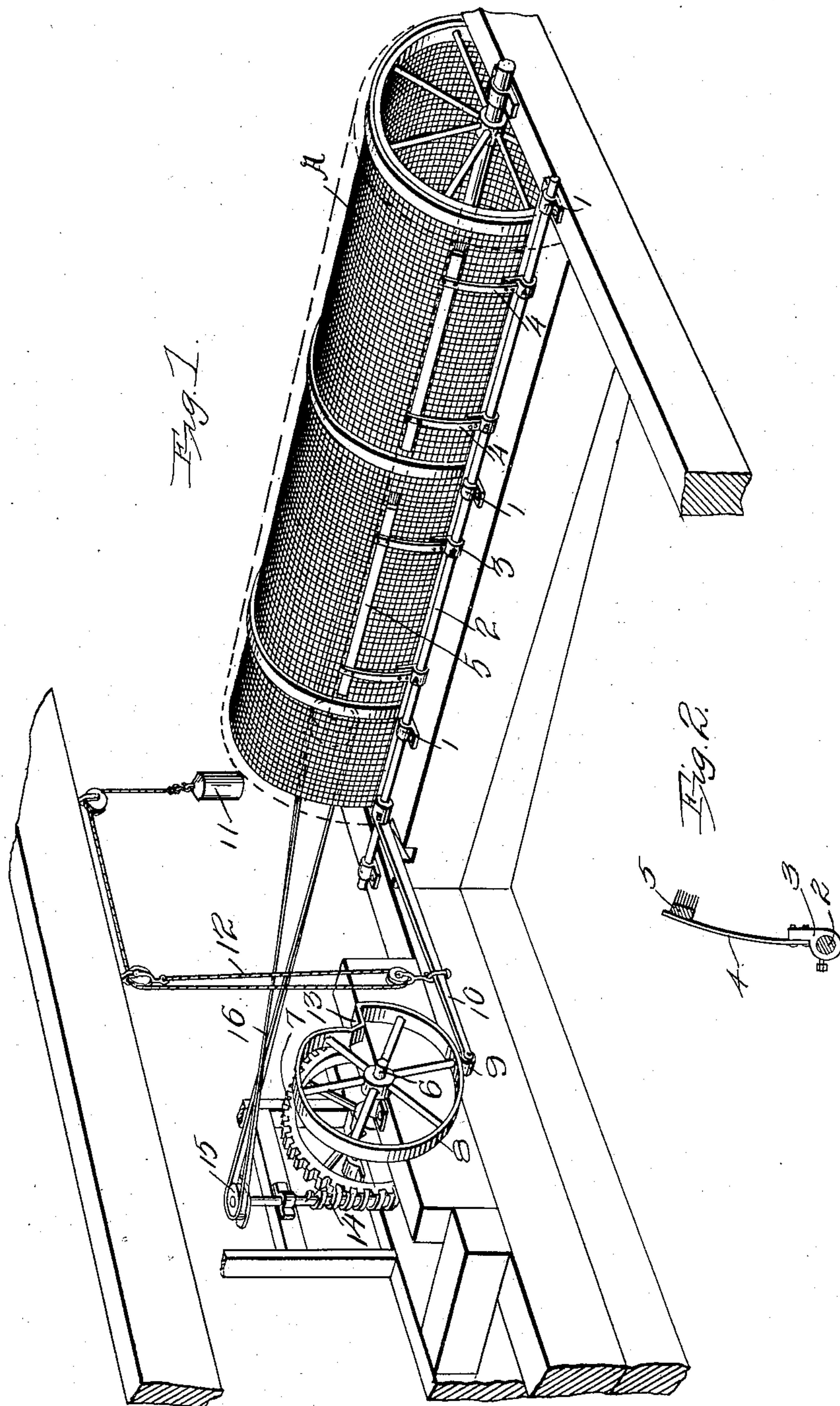


No. 735,713.

PATENTED AUG. 11, 1903.

M. R. CROFOOT.  
AUTOMATIC SCREEN BRUSH.  
APPLICATION FILED OCT. 3, 1902.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

MERT R. CROFOOT, OF COLORADO CITY, COLORADO.

## AUTOMATIC SCREEN-BRUSH.

SPECIFICATION forming part of Letters Patent No. 735,713, dated August 11, 1903.

Application filed October 3, 1902. Serial No. 125,824. (No model.)

*To all whom it may concern:*

Be it known that I, MERT R. CROFOOT, a citizen of the United States, residing at Colorado City, in the county of El Paso and State of Colorado, have invented a new and useful Automatic Screen-Brush, of which the following is a specification.

The object of the present invention is to provide an improved device for automatically cleaning revoluble screens, and while applicable to screens in general is particularly adapted for use in connection with the revolving screens used for sifting comminuted ore from stamping-mills.

A further object of the invention is to provide an automatically-operated brush movable at regular intervals into contact with the surface of the screen as a substitute for hand-brushing as now practiced, the hand-cleaning of the screens being imperfect, laborious, and wasteful, owing to the fact that the casing inclosing screen must be opened to permit the brushing, and when so opened allows the escape of finer particles of gold or other material, which may be carried away by air-currents.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of an automatic screen-brush constructed and arranged in accordance with my invention and showing the same as applied to an ordinary form of revoluble screen. Fig. 2 is a detail view of one of the brush-supporting springs, showing the connection between the spring, its supporting-shaft, and the brush.

The screen A, which may be of any size and driven in any suitable manner, is inclosed within a suitable casing B, a portion of which is indicated by dotted lines in the drawings.

At one side of the screen are a number of bearings 1 for the reception of a horizontally-disposed shaft 2, running parallel with the axis of the screen and provided at intervals with adjustable collars 3, to which are secured plate-springs 4. The upper ends of the springs serve as supports for brushes 5, formed of any suitable material and adapted for contact with the screening-surface.

At a short distance from the cylinder is a horizontally-disposed shaft 6, mounted in suitable bearings and provided with a worm-wheel 7 and cam-wheel 8, the latter being adapted for contact with an anti-friction-roller 9, disposed at one end of a rocker-arm 10, which is rigidly secured to the rock-shaft 2, the anti-friction-roller being maintained in constant contact with the periphery of the cam-wheel by a counterweight 11, connected by cords or chains 12 to the rocker-arm. The cam-wheel has a recessed portion 13, into which the anti-friction-roller passes once during each revolution of said cam-wheel, the rocker-arm being raised by the counterweight and the rock-shaft 2 revolved to an extent sufficient to force the brushes 5 into contact with the surface of the screen. The pressure exerted on the brushes depends to some extent on the size of the counterweight and the resiliency of the springs 4, the latter yielding to prevent injurious pressure of the brushes on the surface of the screen.

The worm-wheel 7 intermeshes with a worm 14, having at its upper end a belt-wheel 15, connected by a belt 16 to a driving-wheel on the screen-shaft, and as the screen is rotated at a comparatively rapid speed the worm serves to reduce the speed and impart a slow rotative movement to the cam-wheel 8. In practice it is preferred to so arrange the gearing as to force the brushes into contact with the screen during two or three revolutions out of about every two hundred revolutions of the screen, although the number of contacts may be increased or diminished by a change of gearing or by altering the size of the belt-wheels in accordance with the character of the screen and the material being sifted. It is obvious that a spring may be

employed to elevate the rocker-arm 10 in the place of the counterweight, and in such cases the brush-carrying arms 4 may be rigid.

The construction is such as to permit of the  
5 adjustment of the collars 3 and rocker-arm 10 circumferentially of the shaft to compensate for wear of the brushes or to increase or decrease the pressure of the brushes on the screen.

10 Having thus described my invention, what I claim is—

1. The combination with a revoluble cylindrical screen, of a cleaning-brush, a rock-shaft, plate-springs carried by the rock-shaft,  
15 a cleaning-brush secured to the free ends of the springs, and a cam-wheel for operating the rock-shaft to force the brush into contact with the screen for a predetermined number of revolutions of the latter and for removing  
20 the brush from engagement with the screen-

ing-surface and holding the same out of engagement therewith for a predetermined number of revolutions.

2. The combination with a revoluble screen, of a cleaning-brush, a rock-shaft operatively  
25 connected thereto, a rocker-arm carried by the shaft, a cam-wheel in contact with said rocker-arm, a counterweight having a flexible connection with said arm, a shaft carrying the cam-wheel, a worm-wheel on said  
30 shaft, a worm intermeshing with the worm-wheel, and a belt-wheel connection between the worm and the screen-shaft.

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

MERT R. CROFOOT.

Witnesses:

G. W. OTT,

CHAS. L. CUNNINGHAM.