J. BURNS.

Revolving-Screens.

No. 147,370. Patented Feb. 10, 1874.

Fig. 1.

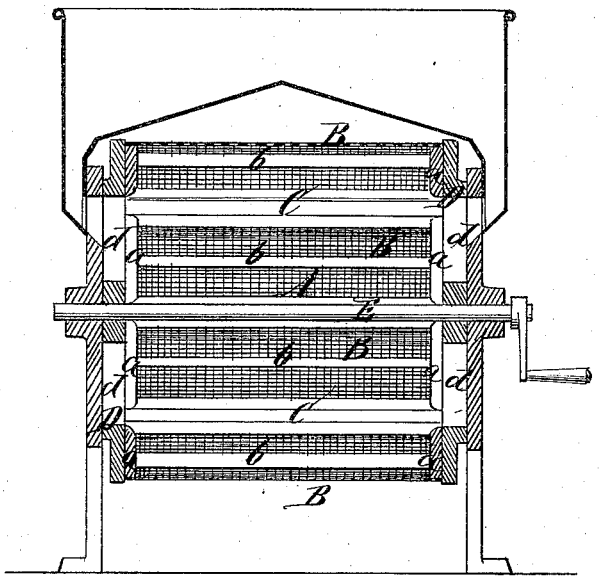
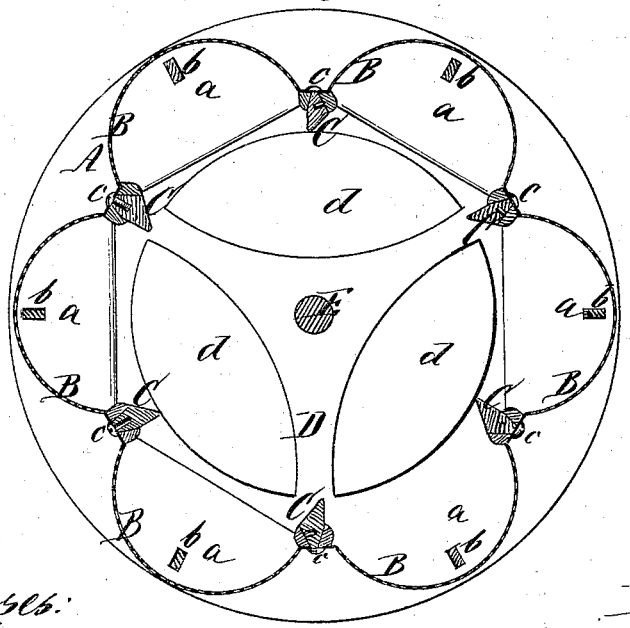


Fig. 2.



Witnesses:
Ernst Bilhuber
Henry Gentner

Inventor:
Jabez Burns
by
Van Santvoord & Hauff
Attys

UNITED STATES PATENT OFFICE.

JABEZ BURNS, OF NEW YORK, N. Y.

IMPROVEMENT IN REVOLVING SCREENS.

Specification forming part of Letters Patent No. **147,370**, dated February 10, 1874; application filed October 2, 1873.

To all whom it may concern:

Be it known that I, JABEZ BURNS, of the city, county, and State of New York, have invented a new and useful Improvement in Revolving Sieves; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which drawing—

Figure 1 represents a longitudinal section of this invention. Fig. 2 is a transverse section of the same on a larger scale than the previous figure.

Similar letters indicate corresponding parts.

This invention consists of a sieve composed of a series of segments of a cylinder united to each other and to intermediate supplemental buckets in such a manner that an undulating cylinder is produced, and that when this cylinder is turned the material contained therein becomes divided in two or more of the segments, each segment with its supplemental bucket carrying up its contents and then dumping the same, and thereby the material to be sifted is prevented from lodging at or near the bottom part of the sieve, the motion of the sieve is facilitated, and the sifting operation is materially improved.

In the drawing, the letter A designates a sieve, which is composed of a series of semi-cylinders or cylinder-segments, B, best seen in Fig. 2. Each of these segments is made separate from the others, and each is provided with its own heads *a*, which are held in the desired relation toward each other by braces *b*. The segments B are connected to each other and to supplemental buckets C by means of screws *c*, and after they have been thus united they form an undulating cylinder, which is secured between the main heads D. These main heads are provided with aperture *d*, through which the material to be sifted is introduced and removed. In practice, said undulating cylinder is mounted on shaft E, which has its bearings in suitable standards supporting a hopper, (see Fig. 1,) through which the material to be sifted is fed to the undulating cylinder from both ends. The supplemental buckets C extend across the entire length of the cylinder, so that when the undulating cylinder is revolved the material to be sifted is carried up by the several segments B, and then dumped down into the succeeding segments, and by these means said material is prevented from lodging at or near the bottom part of the revolving sieve, and as the material is being carried up in the various segments B of my undulating sieve it is rolled over the meshes of the sieve and its immediate discharge over the lower edge of the rising segment arrested by the supplemental buckets until said segments have passed a point of at least ninety degrees, when the material is dumped upon the segments below, and thereby the sifting operation is materially facilitated.

This sieve is intended particularly for crushers or grinding-mills of that class for which I have obtained a patent dated June 4, 1872, No. 127,561, and in which the crushing operation is accomplished in the interior of the sieve; but it must be remarked that my undulating sieve can also be used with advantage for sifting flour or other materials.

Having thus described my invention, what I claim is—

An undulating sieve made of a series of segments, B, united to each other and to supplemental buckets C, substantially in the manner herein shown and described.

JABEZ BURNS.

Witnesses:
W. HAUFF,
CHAS. WAHLERS.