A. REISERT

Machine for Purifying Cream of Tartar.

No. 168,287. Patented Sept. 28. 1875.

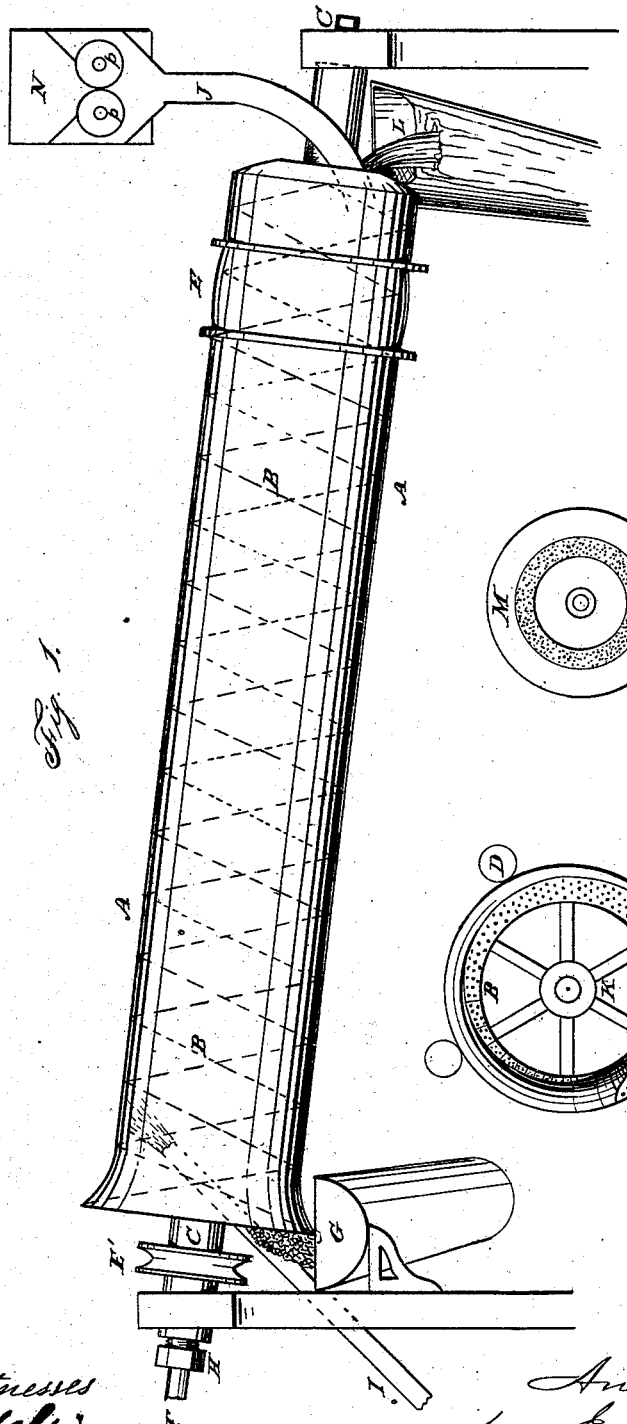

Fig. 1.

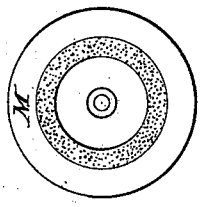

Fig. 3.

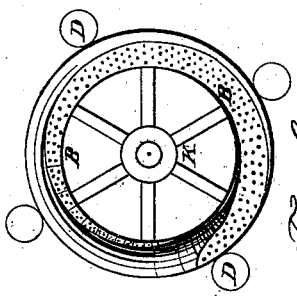

Fig. 2.

Witnesses
W. S. Delbridge
W. Munch

Anton Reisert
by Earle H. Smith
atty

UNITED STATES PATENT OFFICE.

ANTON REISERT, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR PURIFYING CREAM OF TARTAR.

Specification forming part of Letters Patent No. **168,287**, dated September 28, 1875; application filed August 6, 1875.

To all whom it may concern:

Be it known that I, ANTON REISERT, of the city, county, and State of New York, have invented, made, and applied to use certain new and useful Improvements in Apparatus for Mechanically Cleansing Crude Cream of Tartar, whereof the following is a specification:

The cleansing of cream of tartar from the impurities incident to its production consists in first breaking up the material and then washing it in water. Previous to this invention this operation has been performed exclusively by hand. By the use of my new improvements it has been successfully accomplished in a continuous process wholly by mechanical means.

In my said invention I have a hollow revolving cylinder having one or more spiral conveyers on the inner periphery thereof, said cylinder being inclined at an angle of about twenty-five degrees with the horizon, combined with a suitable feeder of water. One or more complete circuits of the spiral conveyers at the elevated end of the cylinder are perforated, to allow the water to drain away. In the vicinity of the washing-cylinder, preferably over it, is located a suitable crusher—for example, a pair of rollers—by which the cream of tartar is first broken up, and when so broken it is fed to the washing-cylinder. Such cylinder, in some cases, is provided with a hollow perforated shaft, as a feeder of the water; but the more usual way is to have the water let in under force, and directed toward the upper side of the interior of the cylinder.

Referring to the annexed drawing, wherein I have shown an apparatus embodying my invention, Figure 1 is a side elevation of the whole. Fig. 2 is an end view of the upper or elevated end of the cylinder. Fig. 3 is a representation of the flange at the lower end of the cylinder.

The cylinder A is set at a suitable inclination—say, twenty-five degrees—with the horizon, and is provided with one or more spiral flanges, B, as endless conveyers. It may be affixed to a central shaft, *c*, mounted in suitable bearings, or arranged to revolve on friction-rollers D, placed at intervals around it, (see Fig. 2,) and power may be communicated in either case by a belt applied to a pulley formed on the cylinder, as at E in Fig. 1, or to one on the shaft *c*, shown at E′. The cylinder may also be turned by hand. The crude cream of tartar, having been broken up, is fed in at the depressed end of the cylinder, and thence conveyed to the other end by the spiral conveyers, and there discharged into a suitable trough, G. Water is let in at the elevated end of the cylinder through a hollow shaft having openings within the cylinder, as by the pipe F passing through a stuffing-box, H, or by a pipe, I, placed so that water issuing therefrom under force will be directed against the upper side of the interior of the cylinder, or both. The latter plan has the advantage of washing down whatever may adhere thereto, and the water, with all impurities, flows out into a trough, L. One, two, or more circuits of the spiral conveyer at the upper end of the cylinder are perforated with small holes, and this serves to drain off the water which otherwise would be discharged with the cream of tartar, particularly the finer pieces or particles, these perforations permitting the water to flow back and toward the lower end. There may be several of the spiral conveyers, the increase in number increasing the angle of pitch, and where more than one is used (the dotted lines in Fig. 1 to represent them indicate two) about the same number of feeders J are used, and more water is required. Where the pipe or feeder J or I enters the cylinder the arms K are removed. The lower end of the cylinder is partially closed by a wide flange or rim, M, part of which may be perforated to allow more or less of the water to drain through. N represents a suitable crusher for breaking up the cream of tartar, *p p* indicating rolls revolving toward each other, worked by hand or power, surmounted by a hopper, and having a channel or feeder, J, for conducting and feeding the material as crushed into the cylinder A.

The construction of the crusher is not material to the invention; it may consist of rollers or not. Neither is its location of vital importance, whether near to or far from the cylinder. When placed above, as seen in the drawing, the cream of tartar will find its way

by gravity, and such location is advantageous for that reason, as no mechanism is then required to carry it to the cylinder.

Another plan for feeding the cylinder is to have the spiral conveyers B extended beyond the end of the cylinder A, at the end where the cream of tartar is fed in, and formed of such shape that when the cylinder is rotated they will scoop the material from a suitable trough, and by taking up a certain portion every time they come around they will thus serve to feed or charge the cylinder.

What I claim as my invention is—

1. In a machine for purifying cream of tartar, the combination, with an inclined revolving cylinder having interior spiral perforated conveyers, of a suitable feeder of water, arranged for directing the water against the upper side of the interior of the cylinder.

2. The hollow perforated shaft, in combination with the cylinder having spiral perforated conveyers.

3. The combination, with cylinder and spiral perforated conveyers and a water-feeder, of a suitable crusher having a channel leading to the cylinder, for crushing and cleansing the cream of tartar at one continuous operation.

ANTON REISERT.

Witnesses:
EARLE H. SMITH,
W. MUNCH.