C. E. ROWAN.

Rice Cleaner.

No. 38,915. Patented June 16, 1863.

Fig. 1,

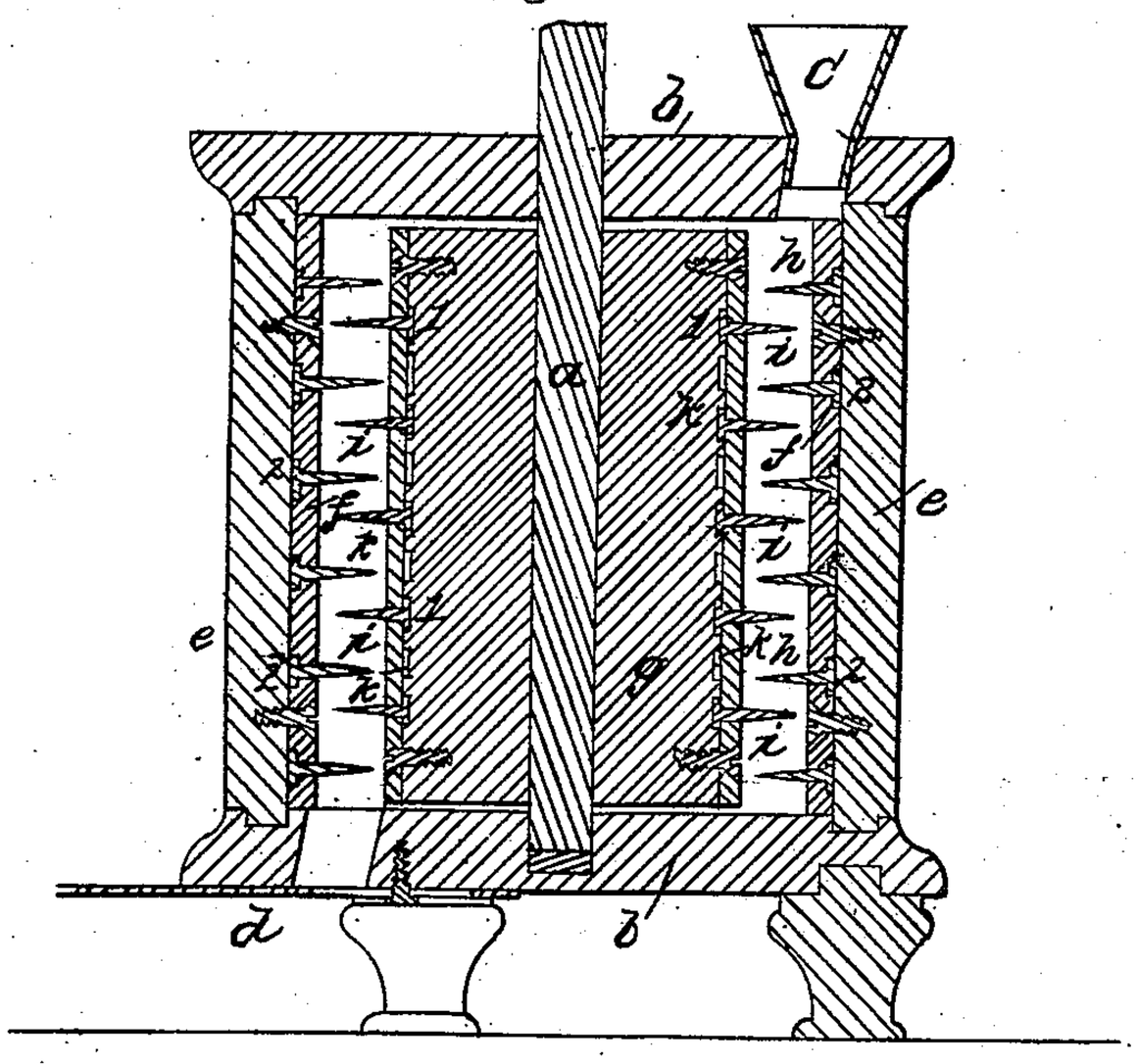
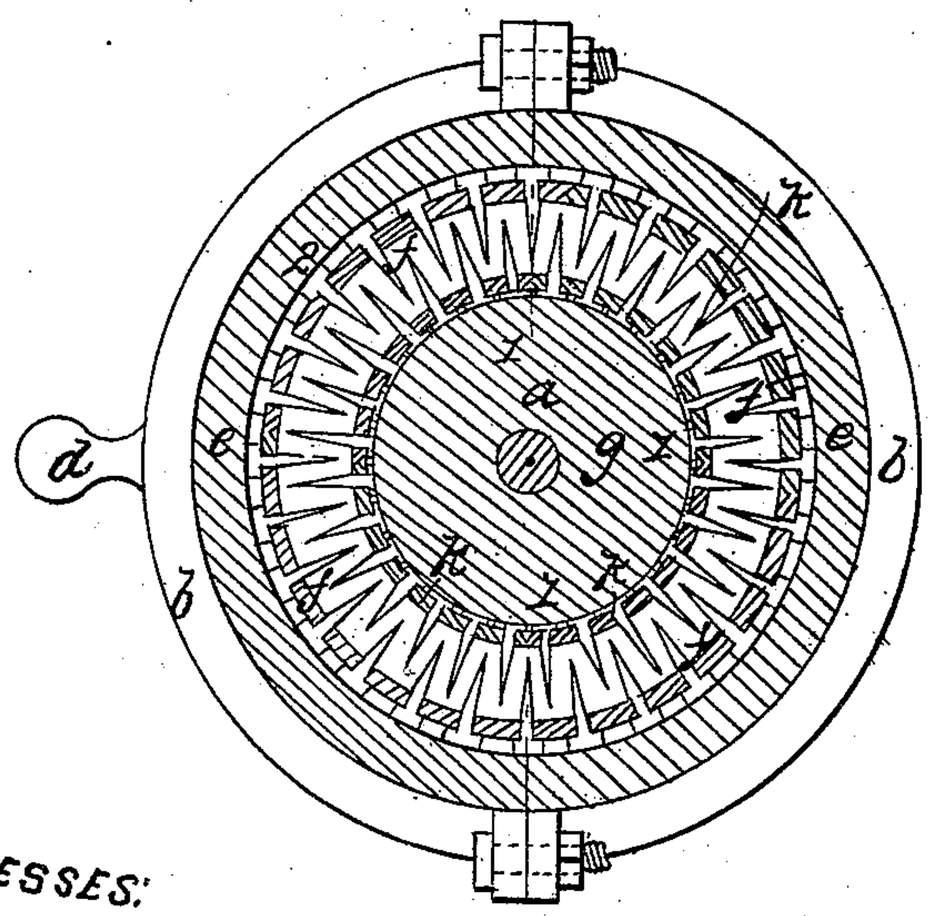


Fig. 2,



WITNESSES:

Samuel W. Sewall

Chas. H. Smith

INVENTOR:

Chas. E. Rowan

UNITED STATES PATENT OFFICE.

CHARLES E. ROWAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN RICE-CLEANERS.

Specification forming part of Letters Patent No. **38,915**, dated June 16, 1863.

To all whom it may concern:

Be it known that I, CHARLES E. ROWAN, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Rice-Cleaners; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a vertical section of said cleaner, and Fig. 2 is a plan of the same.

Similar marks of reference denote the same parts.

The rice-cleaners heretofore constructed have been provided with rotary cylinders containing a variety of beaters and rubbers to scour and clean the rice after the hulling operation has been performed. To scour and clean the rice sharp angles are required on the parts that perform this operation, and the rice wears away and smooths these angles, rendering them inefficient in a short period of time.

The nature of my invention consists in headed pins introduced through metallic plates, which are then secured to the respective surfaces of the scouring or cleaning machine, and can be replaced when worn smooth or otherwise rendered unfit for use by taking off the plates, removing the old pins, and filling their places with new pins, and againat taching the plates in position, thus giving opportunity for replenishing the pins when worn with but little trouble, so that the machine may continue fully operative in use.

In the drawings, *a* is a vertical shaft in journals of any suitable character. *b b* are the heads of my machine. *c* is the hopper through which the rice is supplied, and *d* is a slide, by means of which its delivery is regulated at the bottom of the machine. *e* is a casing between the heads *b b*, that is lined with metal plates *f f*, perforated with holes in the desired positions, and of the required number and size, and into these holes are to be inserted headed pins previous to said plates being secured in place by screws or otherwise, so that the heads of the pins are confined between the metal plate and casing, while the pins themselves project inward. The central cylinder, *g*, on the shaft *a*, is armed with similar pins, *i*, projecting through the metal plates *k*, with the heads of said pins between the plates and cylinder. The cylinder may have grooves to receive the heads of the pins, as at 1 1, or the rear of the plates may be grooved or countersunk for the same purpose, as at 2 2, and these plates are to be made in sections of any convenient size and attached by screws or other means in their places. The pins which I prefer are large-sized steel tacks or small cut nails, as being both cheap and efficient, and the sharp, square edges clean the rice as aforesaid. The cleaners formed in this manner, if made rather small and arranged one above the other on a vertical shaft, will be very efficient, as the rice will not become heated, but pass from one to the other until sufficiently cleaned or scoured by the action of the said pins that are revolved by the shaft, the same moving between the grains, and also moving them against the stationary pins of the casing. The upper head, *b*, may be dispensed with if the case *e* is made sufficiently deep to prevent the rice being thrown out by the agitation from the cylinder *g* and pins *i*.

What I claim, and desire to secure by Letters Patent, is—

The movable perforated metallic plates, receiving the headed pins as aforesaid, and applied to the surfaces of rice-cleaning machines, for the purposes and as specified.

In witness whereof I have hereunto set my signature this 16th day of December, 1862.

CHAS. E. ROWAN.

Witnesses:

LEMUEL W. SERRELL,

CHAS. H. SMITH.