

J. VOYLE.
Rice Huller.

No. 243,016.

Patented June 14, 1881.

Fig. 1.

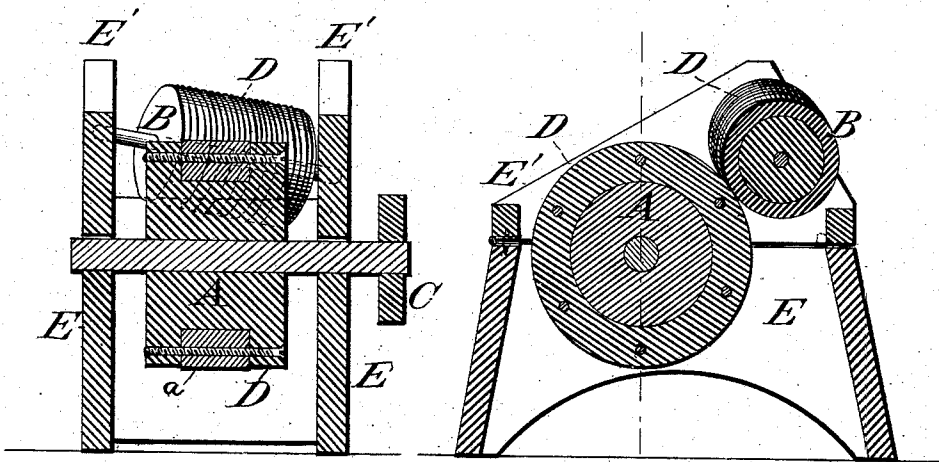
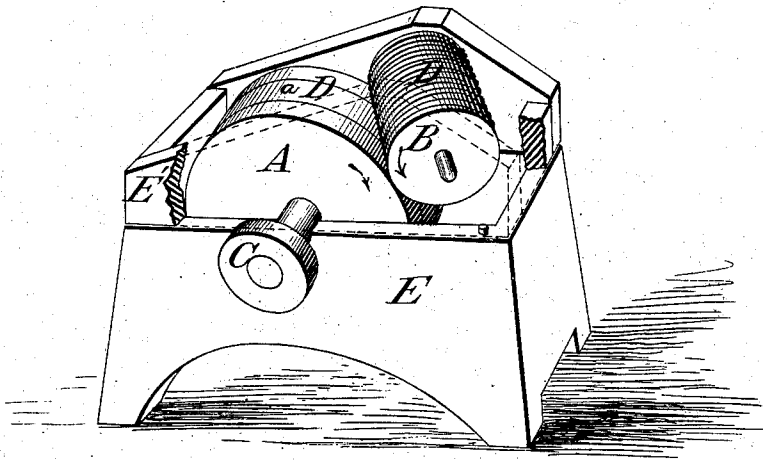


Fig. 2.

Fig. 3.

Witnesses:
J. F. M. Lantry
Wm. H. Robertson.

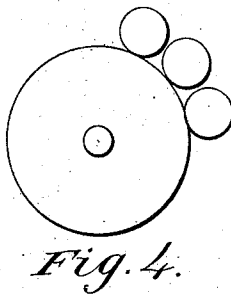


Fig. 4.

Inventor:
Joseph Voyle.

UNITED STATES PATENT OFFICE.

JOSEPH VOYLE, OF GAINESVILLE, FLORIDA.

RICE-HULLER.

SPECIFICATION forming part of Letters Patent No. 243,016, dated June 14, 1881.

Application filed February 16, 1880.

To all whom it may concern:

Be it known that I, JOSEPH VOYLE, of Gainesville, in the county of Alachua and State of Florida, have invented a new and Improved Rice-Huller; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to furnish an improved rice-huller which is simple and inexpensive, and which will remove the hull from the rice more thoroughly and with but little loss from broken grains.

The invention consists of a hard grooved roller having its axis at an angle to the axis of a large roller whose surface is soft and yielding; and it further consists of a roller grooved or provided with grain-holding face formed by winding wire spirally upon a roller or cylinder, as hereinafter fully described.

In the drawings, Figure 1 is a perspective view, with the frame partially broken away to show the working parts. Fig. 2 is a vertical section parallel with the axle of the roller A. Fig. 3 is a vertical section at right angles to Fig. 2. Fig. 4 is a modification showing three grooved rollers.

In the drawings, A represents a large roller having a soft or yielding surface, *a*, mounted upon the frame E.

C is a pulley upon the axle of the roller A. The soft or yielding surface *a* of this roller is formed by securing sections of soft wood endwise between two disks of hard wood, so that the sections will present the end of the grain of the wood on the periphery of the roller. Instead of sections of wood, a soft or yielding surface may be formed by winding strips of leather on a roller. I have also obtained a good yielding surface by cutting the entire roller from a tree having a soft sap wood and a hard heart, thereby obtaining the axle body and surface in one piece. When the surface is not uniformly elastic I wet the hard parts and beat them while wet until they possess the same degree of elasticity as the other parts.

B is a roller of hard wood mounted in the hinged frame E, so that its axis will be at an

angle to the axis of the roller A, whereby the faces of the rollers at the line of contact will have a divergent motion. Upon this roller I wind wire spirally, thereby forming a spirally-grooved surface. By this means I obtain a cheap and durable grooved or grain-holding surface, and one which I find gives better satisfaction than when made entirely of wood. It holds the grain better, and, owing to the wire being hard and smooth, the grain slips easily over it and out of the machine.

The roller B is shown driven by frictional contact with the roller A; but any other suitable means may be employed.

The action of the rollers is as follows: The rice being passed between them, it is seized by both surfaces, partially embedding itself in one and entering the grooves of the other roller, each holding it during divergence with sufficient firmness to pull its part of the hull off in its own direction.

I am aware that it is not broadly new to mount the rollers so that one axis is at an angle to the other, and I do not claim, broadly, rollers mounted in this way; but I have found by experience that a hard grooved and a soft or yielding surface revolving in contact one at an angle to the other produces the best possible results.

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

1. The combination, in a rice-huller, of the roller A, having a soft or yielding surface, and the hard grooved roller B, set at an angle to the said roller A, substantially as herein shown and described.

2. In a rice-huller, the combination, with the frame E E' and the roller A, provided with a soft or yielding surface, of the roller B, mounted in the frame with its axis at an angle to the roller A, and having its grain-holding face formed by wire wrapped spirally upon it, substantially as and for the purpose set forth.

JOSEPH VOYLE.

Witnesses:

J. F. MCKINSTRY,
WM. H. ROBERTSON.