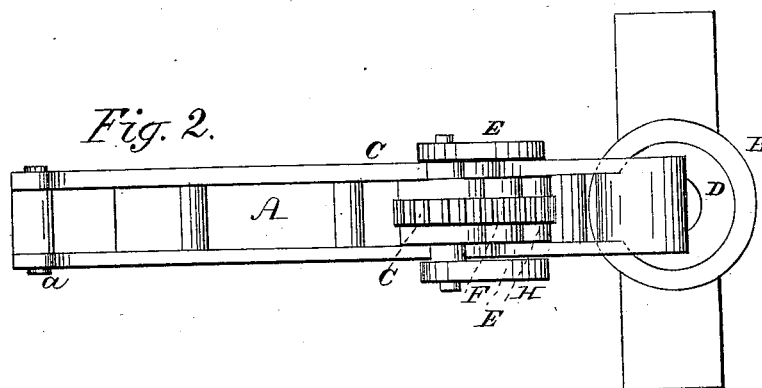
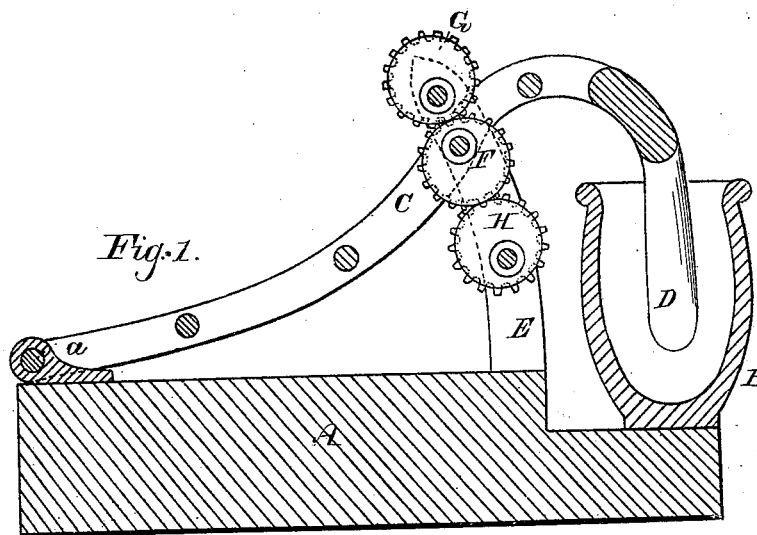


J. F. TAYLOR.  
Rice Huller and Cleaner.

No. 20,830.

Patented July 6, 1858.



# UNITED STATES PATENT OFFICE.

J. F. TAYLOR, OF CHARLESTON, SOUTH CAROLINA.

## RICE-HULLING MACHINE.

Specification of Letters Patent No. 20,830, dated July 6, 1858.

*To all whom it may concern:*

Be it known that I, JOHN F. TAYLOR, of Charleston, in the district of Charleston and State of South Carolina, have invented a new and useful Improvement in Rice Hulling and Cleaning Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical central section of a rice hulling and cleaning machine constructed according to my invention. Fig. 2, is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obviate the difficulty attending the use of the crank, which has hitherto been most commonly employed for giving a reciprocating motion to a pestle which works within a vessel of proper form. The pestle requires to be driven with a rapid motion, and as the resistance to its movement is of course variable, more force being required at its downward than at its upward stroke, the crank pin as well as the journals of the crank shaft soon becomes worn and rendered useless.

This invention consists in giving a reciprocating motion to the pestle by attaching the same to a lever which is operated through the medium of three geared eccentrics arranged as hereinafter fully shown and described, whereby the pestle may be rapidly driven with but little wear of the working parts and by a moderate expenditure of power.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a bed-piece, to the front end of which a vessel B, is attached. This vessel contains the rice to be operated upon and it is of the usual semi-ellipsoidal form, as shown clearly in Fig. 1.

C, is a lever, or lever frame one end of which is attached by a fulcrum pin *a*, to the back part of the bed-piece A. This lever is of curved form and to its front end the pestle D, is permanently attached, said pestle being within the vessel B.

E, E, are two curved or segment arms attached to the bed-piece A, at opposite sides. Between these arms the front part of the lever frame C, passes and works.

Within the lever frame C, an eccentric F, is fitted or placed. This eccentric is toothed and it gears into two similar eccentrics G, H, one, G, being above and the other H, below it. The shafts or axes of the eccentrics G, H, have their bearings in the arms E, E, the bearings of the eccentric G, H, being permanent. The eccentrics are all of the same size, and the upper and lower eccentrics G, H, always coincide in position. See Fig. 1. The eccentric F, has a reverse position relatively with the eccentrics G, H, and consequently by turning the axis or shaft of either eccentric G, H, a reciprocating motion will be given the lever and pestle.

The fulcrum pin *a*, is placed at a level or nearly so, with the bottom of the pestle, when the latter is down, see Fig. 1. Consequently the pestle as it rises and falls, will, when its motion is considered relatively with the vessel B, approximate as near as possible to a vertical movement.

The pestle operated by the above described arrangement of means may be rapidly driven with but little wear of the working parts. The pestle being permanently attached to the lever frame C, prevents any play of the same, which occurs to a greater or less degree in all rice hullers and cleaners with which I am acquainted of previous construction. The machine works smoothly, requires but a moderate amount of power to operate it, and it may be constructed at a reasonable price.

The operation of the pestle on the rice within the vessel B, is precisely the same as in the old machines and therefore need not be described.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is,

The employment or use of the curved lever frame attached at one end to the bed piece A, and having the pestle D, permanently secured to its opposite end, the above parts being placed relatively with the vessel B, as shown and described, and used in connection with the geared eccentrics F, G, H, arranged relatively with each other and the lever frame C, substantially as and for the purpose set forth.

J. F. TAYLOR.

Witnesses:

A. ROBERTSON,  
E. H. RODGERS.