

## Hulling Machine.

Patented May 12, 1840.

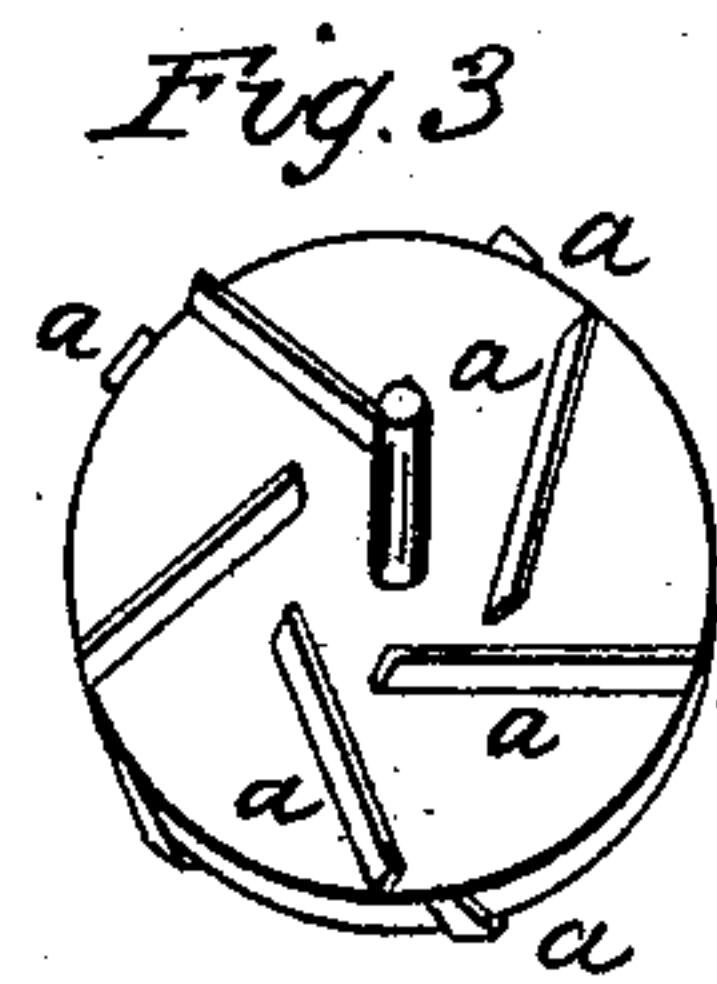
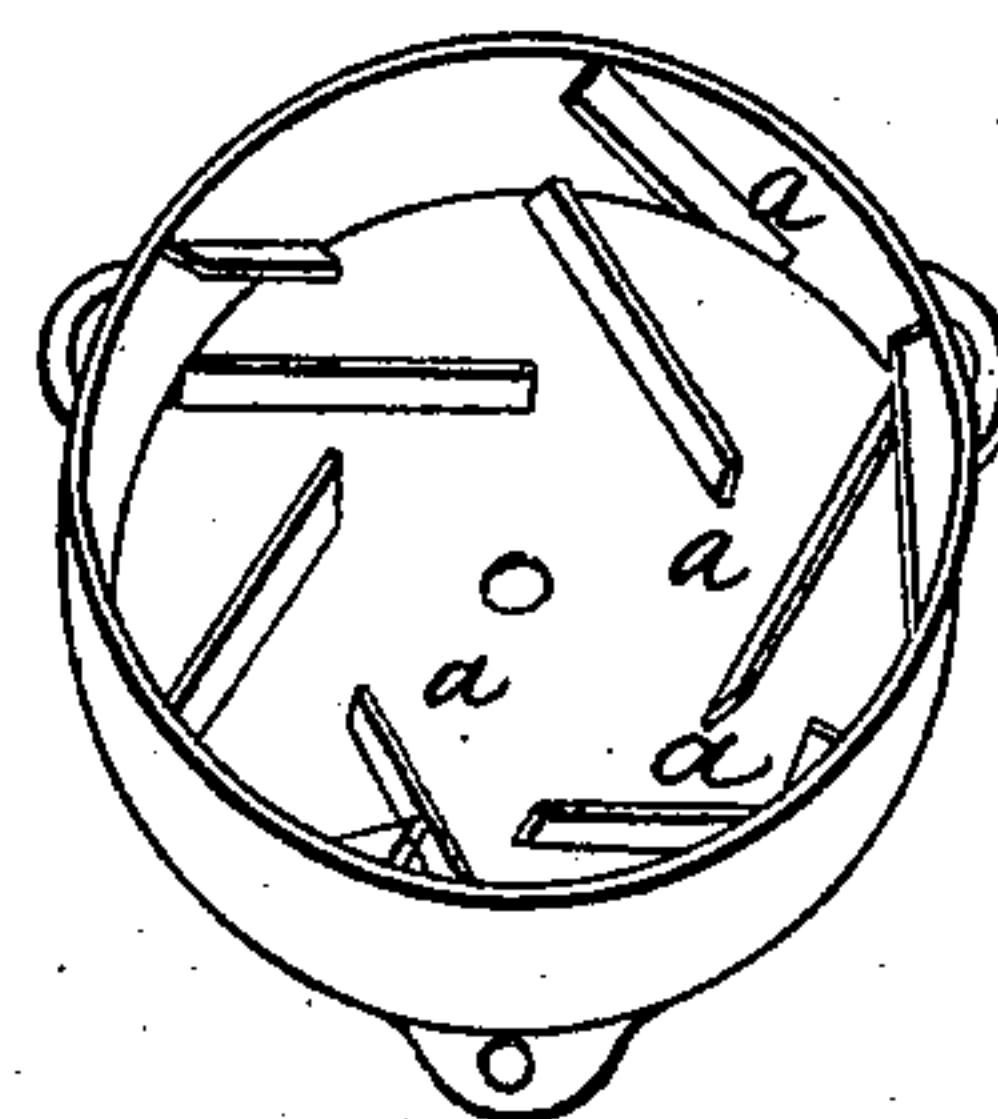


Fig. 2



# UNITED STATES PATENT OFFICE.

JAMES MACGREGOR, JR., OF SARATOGA, NEW YORK.

## HULLING-MACHINE.

Specification of Letters Patent No. 1,600, dated May 12, 1840.

*To all whom it may concern:*

Be it known that I, JAMES MACGREGOR, Jr., of Saratoga, in the county of Saratoga and State of New York, have invented an improved machine for rubbing grain, for the purpose of detaching from it those foreign substances which require to be separated preparatory to its conversion into flour, and also for hulling and cleaning other seeds; and I do hereby declare that the following is a full and exact description thereof.

My grain and seed rubbing machine consists, in general, of a circular disk affixed to a vertical shaft, and made to revolve within a stationary, cylindrical case, or drum, adapted thereto. Upon each side, and upon the edge of said disk, and upon the interior of each head, and on the rim of the drum, there are placed strips of metal, usually denominated flights, which have such a direction given to them as shall carry the grain, from near the center of the upper side of the disk, where it is fed in, toward its periphery, and then, on the under side, from the periphery toward the center, whence it is delivered, the grain, or seed, during its passage, being kept under pressure by the direction given to the flights, and also by means of a valve borne up against the aperture through which the grain, or seed, is to escape, a spring, or weighted lever, being applied thereto.

In the accompanying drawing, Figure 1, shows a vertical section of my machine, through its center. A, is the revolving disk, which may be two feet in diameter, for a machine of the ordinary size; but this may be varied according to the power to be applied. C, is the shaft to which the disk is attached, and which may be driven by any adequate power. D, is the feed hole in the upper head of the drum, and E, that in the lower for the delivery of the rubbed seed. F, is a valve covering this hole, and represented as forced against it by the weighted lever G.

Fig. 2 shows the interior of the upper portion of the drum *a, a, a*, being the flights fixed upon it.

Fig. 3, shows the upper side of the disk, having also flights *a, a, a*, upon it. The lower portion of each is similarly furnished with flights. The direction of these flights is such, as already noticed, as will tend to carry the grain toward the outside on the upper, and toward the center on the lower side of the disk.

One great object in the construction of this machine, is to rub the grain under considerable pressure, and this, it will be manifest, may be made greater, or less, according to the direction given to the flights, which may be varied at pleasure, while the main object is kept in view. This pressure may be further increased and regulated, also, by that of the valve F, to which any desired degree of force may be applied.

Projecting knobs may be substituted on either side of the disk for the flights, they being so placed as to operate in the same way, the whole arrangement being such as to give the proper direction to the seed, or grain.

What I claim as my invention, and desire to secure by Letters Patent, in the above described machine, is—

1. The manner in which I have combined and arranged the revolving disk, and the hollow drum, or cylinder, with flights, or projecting pieces thereon, affixed in such a way as to carry the grain, or seed, under considerable pressure, toward the periphery, on the upper side, and toward the center, on the under side, of the revolving disk.

2. I also claim in combination therewith the valve bearing against the delivery opening, for the purpose of increasing the pressure to any desired extent.

JAMES MACGREGOR, JR.

Witnesses:

THOS. P. JONES,  
B. K. MORSELL.