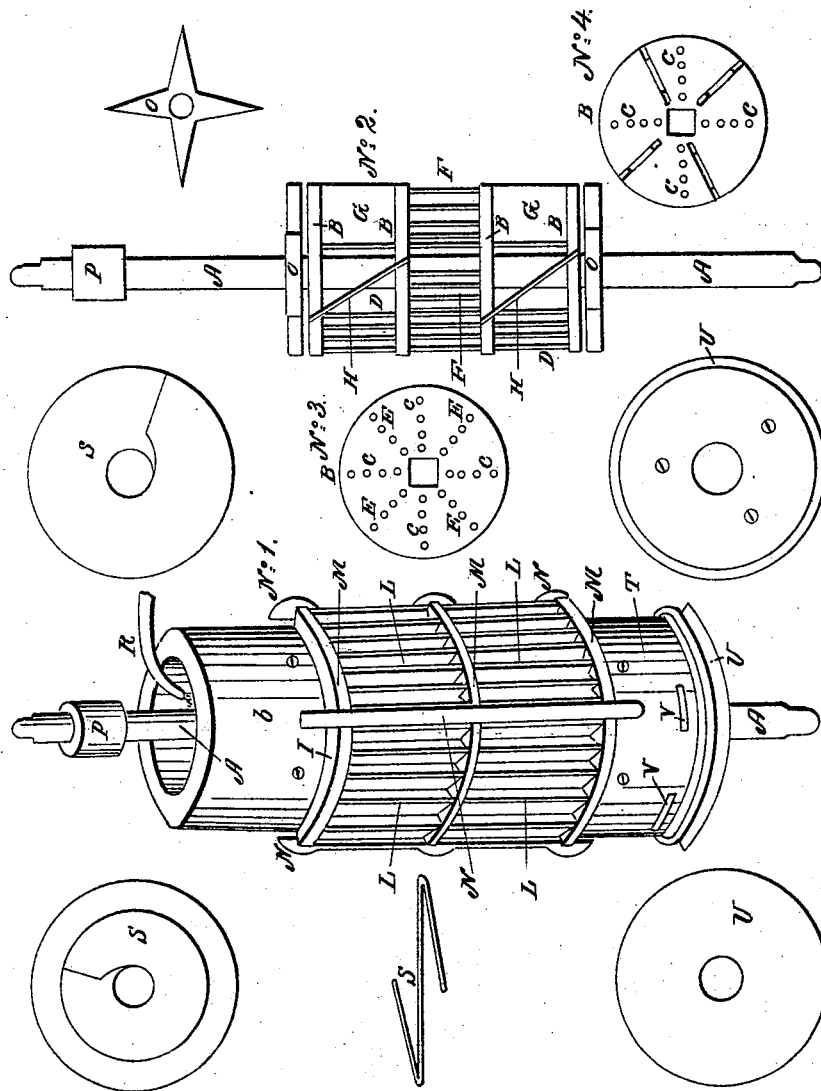


DEMUTH, BAUMAN & BECK.

Smut Machine.

No. 2,087.

Patented May 11, 1841.



Inventors:

Jacob Demuth.  
Benjamin Bauman.  
Levi Beck.

# UNITED STATES PATENT OFFICE.

JACOB DEMUTH, OF LANCASTER, BENJAMIN BAUMAN, OF LANCASTER TOWNSHIP, AND  
LEVI BECK, OF LAMPETER TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA.

## SMUT-MACHINE.

Specification of Letters Patent No. 2,087, dated May 11, 1841.

*To all whom it may concern:*

Be it known that we, JACOB DEMUTH, of the city of Lancaster, BENJAMIN BAUMAN, of Lancaster township, and LEVI BECK, of Lampeter township, and all of the county of Lancaster and State of Pennsylvania, have invented a new and useful Improvement for Cleaning Smut from Wheat, called the "Double Revolving Machine to Drive Smut from Wheat"; and we do hereby declare that the following is a full and exact description.

Our invention is as follows, to wit: We make a shaft or axle of wrought iron of about four feet in length, and an inch and a half in thickness, A. We make four circular plates of strong sheet iron of about fifteen inches in diameter, and place them firmly on the shaft about eight inches from each other, and occupying the center part of the shaft, as at B. Four or more sets of holes, c, are drilled through these plates from the circumference toward the center, through which holes round iron rods, D, of about one fourth of an inch thick are fastened. A similar set of holes, E, are made between each of these sets in the middle division, into which similar rods, F, of about one third in length are fixed. In two opposite sides in the two end divisions plates of sheet iron is fixed, G, corresponding with the short rod F. On the other two opposites are plates of sheet iron in an angular position, the end next the whirl being placed farther forward, as at H. All these plates serve to drive the dust and impurities from the grain and to force the wheat through the machine. This part of the machine is called the beater. We make three wooden hoops I, the end ones about one and a fourth inches square, the center one not quite so thick and has grooves cut on each side of it. The end hoops have grooves in the side toward the center. These grooves are cut at an angle of about sixty degrees with each other around the hoop. We cut a sufficient number of straps of sheet iron about one and a fourth inches broad and one foot long L, and place the ends of them in the groove. These straps form a zigzag around the cylinder, and are confined to their places by iron bands around the wooden hoops M, and similar

bands on the inside fastened through with screws or rivets. The hoops and straps are held together by four pieces of iron, forming as it were braces on the outside of the cylinder lengthwise, and at equal distances from each other. These braces N, being riveted through the iron and wooden bands keep all these hoops and straps to their proper places. When the straps L approach nearest each other both outside and in, a space is left sufficient to let anything pass smaller than a grain of wheat. This forms the cylinder. The hoops I, may be made of cast metal. At each end of the beater the shaft is rounded, and a nut O made to fit on each end to go up to the beater, with about four arms extending out, to which the two end rings of the cylinder are attached in order that they may revolve around the shaft or axle. The model accompanying these instead of arms has screws. A whirl of about five inches in diameter P, is placed on one end of the shaft. A cap of sheet iron is made of about six or eight inches long, and about sixteen inches in diameter Q. One end of it is fastened to the cylinder, and the other end closed about four inches from the verge all around. Through this opening a pipe, R, is introduced to carry the grain into the machine. In the inside about midway of this cap is a piece of sheet iron which extends nearly close around the shaft, forming a screw S, once and a half around. This assists in taking the grain into the machine. On the other end is a cap T, nearly similar to the one above described, the end of which is closed by a wooden pulley U, with a diameter as large as the cylinder. This cap has about four holes V, in the side of it to let out the grain. A band is placed on each of these whirls. The one on the small whirl causes the beaters to revolve fast the one way, while the band on the whirl of the cylinder causes it to revolve in the opposite direction at a slower rate.

The advantages of this machine over others are that the zigzag openings between the iron straps L, of the cylinder as it revolves continually carries the grain up and causes it to be tossed through the beaters, while the impurities escape through the opening between them,

No. 1, machine in perspective; No. 2, the beaters; No. 3, one of the center plates; No. 4, one of the end plates.

What we claim as our invention, and desire to secure by Letters Patent, is—

5 The beaters consisting of the rods D, and F, and the plates H, and G, arranged on the shaft A, as set forth, in combination with the cylinder constructed with angular

straps, as described, revolving horizontally, 10 the beaters and cylinder in opposite directions.

JACOB DEMUTH.  
BENJAMIN BAUMAN.  
LEVI BECK.

Witnesses:

SAML. DALE,  
LEAT L. DALE.