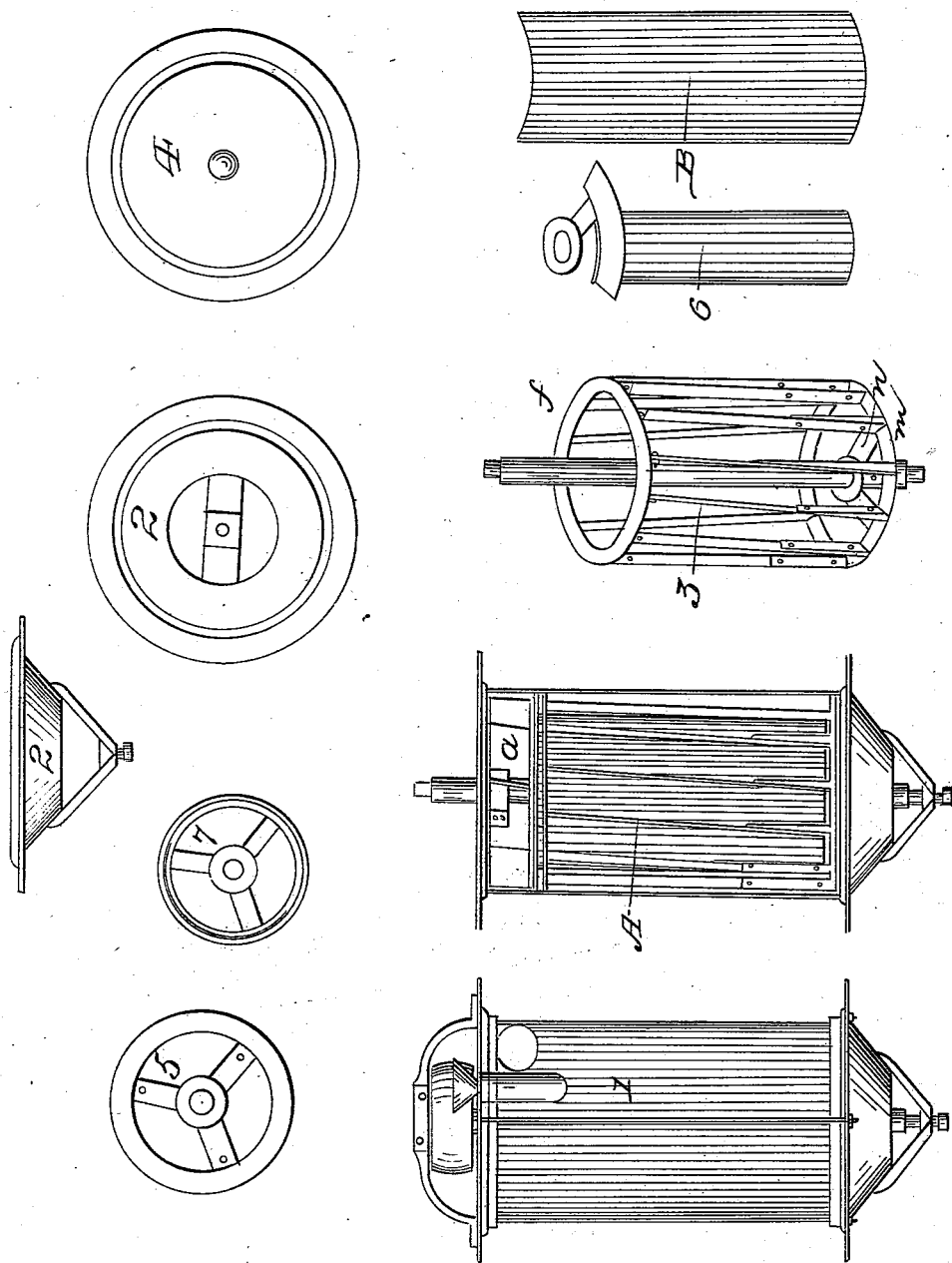


H. A. BUCK.  
Smut Machine.

No. 3,108.

Patented May 26, 1843.



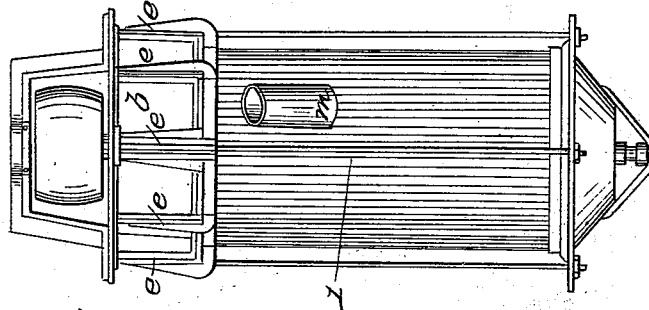
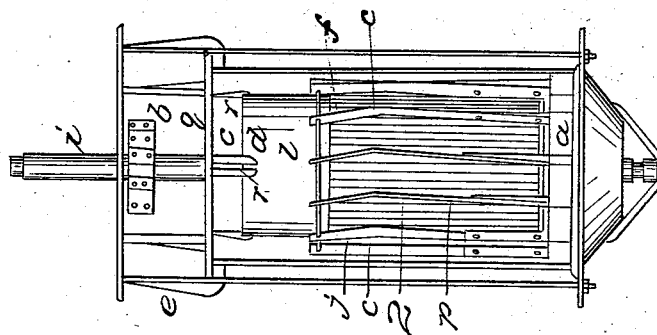
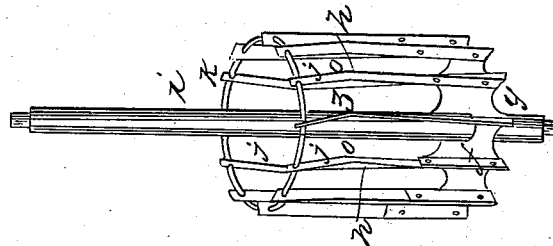
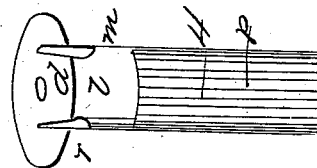
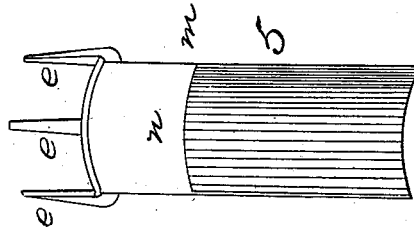
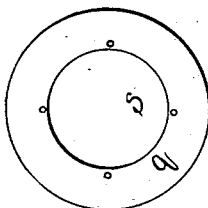
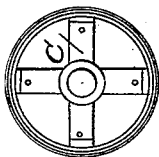
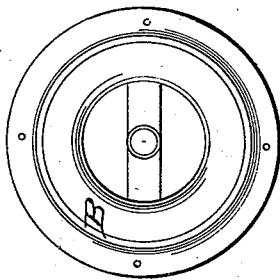
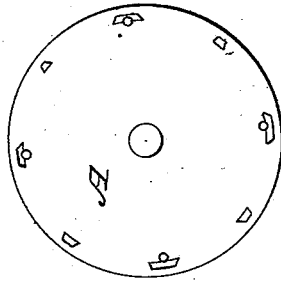
WITNESSES:  
Orenell Clear  
Francis H. Ryggle

INVENTOR:  
Henry A. Buck

H. A. BUCK.  
Smut Machine.

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WITNESSES:  
Orlando C. Cline  
Francis H. Ruggles

INVENTOR:  
Henry A. Buck

# UNITED STATES PATENT OFFICE.

HENRY A. BUCK, OF FREDONIA, NEW YORK.

## SMUT-MACHINE.

Specification of Letters Patent No. 3,108, dated May 26, 1843.

*To all whom it may concern:*

Be it known that I, HENRY A. BUCK, of Fredonia, in the county of Chautauqua and State of New York, have invented a new and useful Improvement upon My Smut-Machine called "Buck's Stationary-Center Double-Cylinder Smut-Machine," patented July 10, 1841; and I do hereby declare that the following is a full and exact description of my said improvement.

My said improvement consists in altering the construction of the said machine from the original specification without in any manner adding to, diminishing, or changing the principle of the "combination of the revolving frame or beaters with the inner and external stationary cylinders" as claimed in the said original specification and secured by the said Letters Patent, and the said alterations in constructing the said machine are as follows, viz.: The outer cylinder instead of being a close structure as represented in the original drawing (Figure 1) is open from the bottom of the wings (Impt. letter *b*,) upward, except a number of standards (Impt. letter *e*) which are a continuation of the plates of the outer cylinder, and may be made to project as represented in the drawing (Impt. Fig. 1) so as to increase the length of the wings (Impt. letter *b*,) or may be straight with the plates without projecting. An inside view of one of the plates of the outer cylinder with projecting standards is given (Impt. Fig. 5). Instead of being fluted all the way inside this cylinder is made smooth (Impt. letter *n*,) on the inside from the place where the grain runs in (Impt. letter *m*,) upward, to prevent the grain from bounding out by being driven against the fluted edges. The lower head of the moving part of the machine (Impt. Fig. 3 letter *f*,) instead of being a horizontal rim and arms as represented in the original drawing (letters *m* and *n*) is now made tight from the shafts outward and scalloped (Impt. letter *g*,) at the outer edge between the beaters (Impt. letter *h*,) to the depth of two inches or more and a set of wings (Impt. letter *a*) is added, to be fastened to the lower side of said head and to the shaft (Impt. letter *i*,) and the upper ends (Impt. letter *j*) of the beaters

are bent forward about five inches from the top (Impt. letter *o*,) so as not to throw the grain upward and out by striking it in their swift revolution; and the upper ends of the beaters instead of being fastened to a heavy rim of cast iron as represented in the original drawing (letter *f*,) are merely steadied by a stiff wire (Impt. letter *k*,) passing through them; and the upper wings, original drawing (letter *a*,) are enlarged to a width of six inches or more (Impt. letter *b*,). The center cylinder (Impt. letter *p*,) is connected with the outer cylinder in the same manner as formerly by a projecting head (Impt. letter *q*) which is fastened to arms or standards (Impt. letter *r*) which are a continuation of the plates of said center cylinder. An outside view of one of the plates of the center cylinder is given, (Impt. Fig. 4). Said projecting head is entirely open in the middle over the center cylinder (Impt. letter *s*,) and there is an open space below it of about two or three inches (Impt. letter *c*,) at the bottom of which open space a tight head (Impt. letter *d*) is fitted in with only a hole through it for the shaft to pass through. The body of said center cylinder instead of being bars of iron with open spaces between as represented in the original drawing (Fig. 6) is now a tight fluted cylinder, made smooth from the hopper upward (Impt. letter *l*,) like the inside of the outer cylinder and for the same purpose. The rest of the machine is described and constructed the same as formerly and the object of the above specified alterations is to create a stronger current of wind and to confine it in its upward movement to the same space occupied by the grain in its descent and to give a freer opportunity for the wind and dust to escape at the top of the machine.

What I claim as my invention and desire to secure by Letters Patents is—

The arrangement and construction of the revolving beaters and also in combination therewith the outer and inner stationary cylinders, all as described.

HENRY A. BUCK.

Witnesses:

ALVAH D. L. F. UTLEY,  
FRANCIS H. RUGGLES.