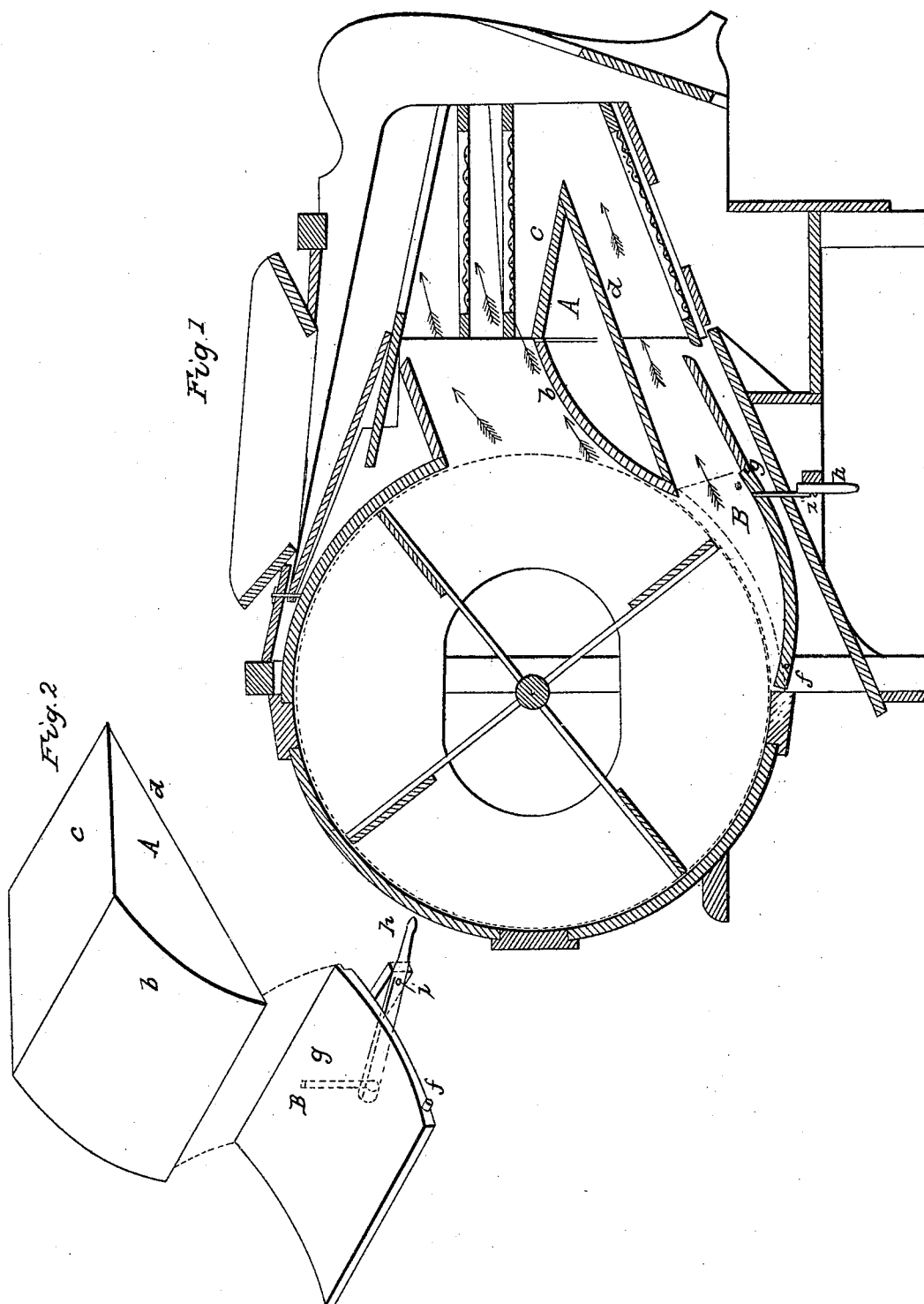


G. R. REMINGTON.

Grain Winnower.

No. 5,607.

Patented May 30, 1848.



UNITED STATES PATENT OFFICE.

GEO. R. REMINGTON, OF LOWER SANDUSKY, OHIO.

WINNOWER-MACHINE.

Specification of Letters Patent No. 5,607, dated May 30, 1848.

To all whom it may concern:

Be it known that I, GEO. R. REMINGTON, of Lower Sandusky, Sandusky county, and State of Ohio, have invented a new and useful Improvement in Wheat-Fans; and I do hereby declare that the following is a full, clear, and exact description of its nature and construction, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a longitudinal section of a fancy mill with my improvements applied, the damper being open, and Fig. 2, an isometrical view of said improvement taken separate.

The same letters indicate like parts in both figures.

The nature of my invention consists in so regulating the current of air created by the fan, by means of what I denominate a swell or air divider that by its aid the position of the grains is so changed with reference to its distance from the tail of the mill as to be perfectly cleaned in once passing through the mill. Without it, grain to be well cleaned must be twice passed through the mill—the first time it falls immediately from the bottom of the hopper into and passes the mill at such distance from the tail of the mill as that grain mixed with heavy bodies of chaff cannot be blown away. After being chaffed in this way, the chess board which is placed immediately under the bottom of the hopper in grooves is slid back toward the tail of the mill to pass the grain further back, in its second passage and so near the tail of the mill that light bodies would be blown away in passing the grain through the mill the second time. This is the mode of cleaning without the swell, but by means of it, the grain in passing from the hopper through the coarse screens and upper current of air down to the swell, is chaffed at a safe distance from the tail of the mill; after which by the inclination of the swell the grain is slid so near the tail of the mill as to be perfectly cleaned in passing the lower current of air and the long fine screens. The swell performs two important offices: First. To divide the air into two currents, and to direct their course. Second. To change the position of the grain in passing the mill, and saves the labor of passing the grain once through the mill.

The construction is as follows: In the accompanying drawings (A) represents the

swell or air divider, which is stationary and made hollow to render it light, and is placed in the position represented in Fig. 1, the upper part (b) or that part toward the wings made convex to almost half the length of the swell and it then inclines down in a straight line toward the front end of the mill as is shown at (C) within the shoe. This end is then connected to the end of the convex part nearest the wings or fan by another straight board (d) inclining down toward the rear end of the mill and parallel with the lower screen of the shoe. The course screens of the shoe are situated above that portion of the air divider which enters the shoe, and the fine screen or screens below it.

To regulate the current of air above and below this swell or air divider (A) I arrange a damper (B) shown in its proper place and open in Fig. 1. This damper is made concave, the rear end of which turns on a pivot (f) and the front end (when the damper is closed) just touches the air divider as represented by the dotted lines (x x x) Figs. 1 and 2. To operate this damper (B) a rod (g) projects down from it toward the bottom of the mill and connects with a lever (h) whose fulcrum is at (i) Fig. 2, and by the raising of this lever the damper opens and vice versa.

The grain in passing through the upper and lower screens is exposed to the upper current of air (which is made to pass over the swell or air divider) and it then falls upon the inclined part of the swell at (C) and in its passage to the lower and finer screens is exposed also to the lower current of air.

It will of course be understood that the damper (B) by means of the lever (h) can be partially or entirely open or closed to regulate the lower current of air according as the weight of the grain or seed being cleaned may require.

Having thus fully described the nature of my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

The within described construction and arrangement of the swell or air-divider with a grain cleaner for the purpose herein specified and made known.

GEORGE R. REMINGTON.

Witnesses:

R. H. CALDWELL,
JOHN BELL.