N. H. SHERBURNE.

Grain Winnower.

No. 20,899. Patented July 13, 1858.

Fig: 1.

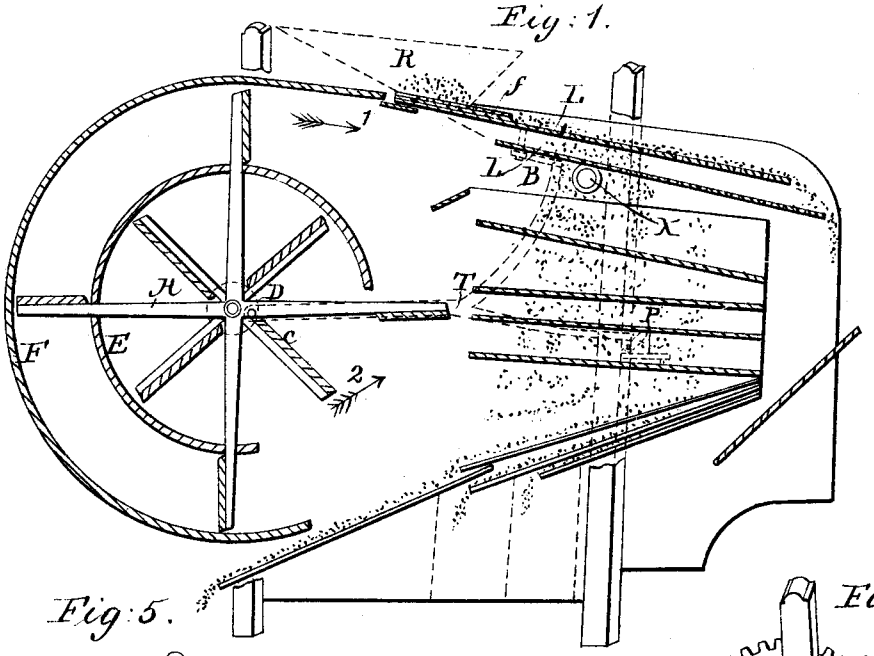


Fig: 4.

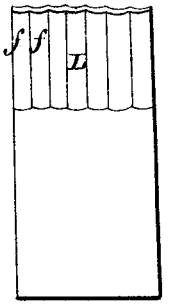


Fig: 5.

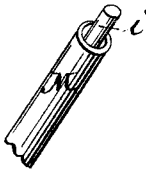


Fig: 2

Fig: 3

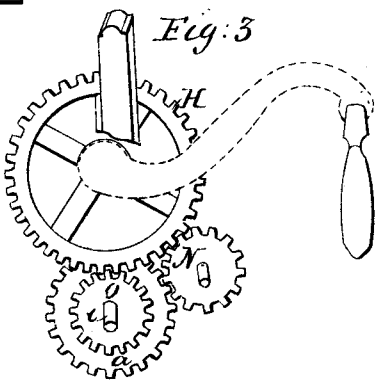
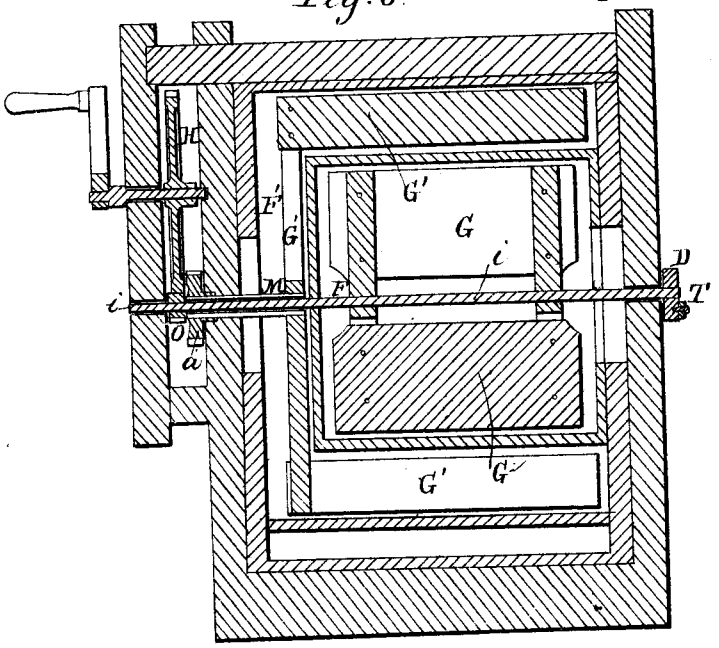


Fig: 6.



Witnesses.
William F. Keller
L. M. Draher.

Inventor.
N. H. Sherburne

UNITED STATES PATENT OFFICE.

N. H. SHERBURNE, OF CAMPTON, ILLINOIS.

GRAIN-CLEANING MACHINE.

Specification of Letters Patent No. 20,899, dated July 13, 1858.

To all whom it may concern:

Be it known that I, N. H. SHERBURNE, of Campton, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Grain-Cleaning Machinery; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, forming part of this specification, in the several figures of which similar characters of reference denote the same part.

Figure 1 is a vertical longitudinal section of the machine. Fig. 2 is a detached view of parts employed for shaking the screens. Fig. 3 is a detached view of gearing for driving the fans. Fig. 4 is a top view of upper screen showing the corrugations at the head thereof. Fig. 5 is a view showing shafts of fans. Fig. 6 is a vertical transverse section of the machine through fan shaft; showing the two fans.

The nature of my invention consists in constructing the machine with concentric fan chambers containing fans driven in opposite directions, so as to produce two separate and distinct currents; the object being to effect the separation of oats and wheat previous to the cleaning of the wheat; this construction of fanning apparatus being used in connection with a corrugation of the head of the upper screen as hereinafter to be set forth.

In the drawing F is the inner fan chamber and F′ the outer chamber; the former containing the fan G on shaft *i*, and the latter containing a fan G′, on hollow shaft M, these fans being made to revolve in opposite directions as indicated by arrows 1 and 2 in Fig. 1.

The upper screen L, has at its head a system of corrugations *f*, which form a series of longitudinal grooves or channels, which receive the oats and cause them to move in direction of their length, and thereby prevent them from falling through the perforations of the upper screen.

The two systems of screens are moved from the rotation of shaft *i* by means of double branched rod T eccentrically connected with pulley D, and levers B and P.

The gearing by which the fans G G′ are driven consists of wheels *o* on shaft *i* and *a* on shaft M moved in opposite directions from the rotation of wheel H as follows,— wheel H meshes with wheels O and N, while wheel N meshes with wheel *a* of hollow shaft M.

This machine is designed for use where there exists a mixture of oats and wheat, the upper current shown by arrow I blowing the oats from screen L as they fall flat upon it by the action of corrugations *f*.

The blast from the interior fan acts in the ordinary manner, while a strong blast is created by the union of the two currents, for driving off the impurities lifted from the grain by the upward blast.

What I claim and desire to secure by Letters Patent is,

The concentric and opposite moving fans G G′ constructed arranged and operating substantially as described in combination with the corrugated head of the upper screen L, the whole operating as specified.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

N. H. SHERBURNE.

Witnesses:

JOHN S. HOLLINGSHEAD,

GEO. PATTEN.