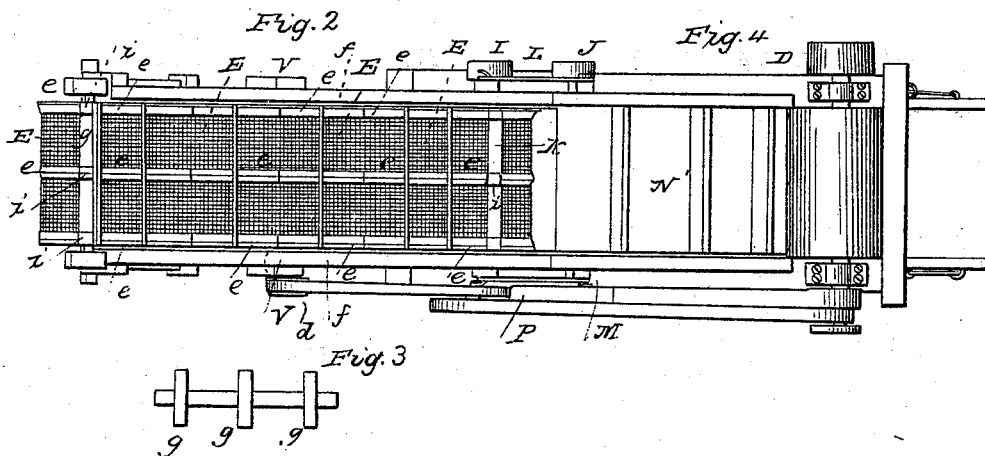
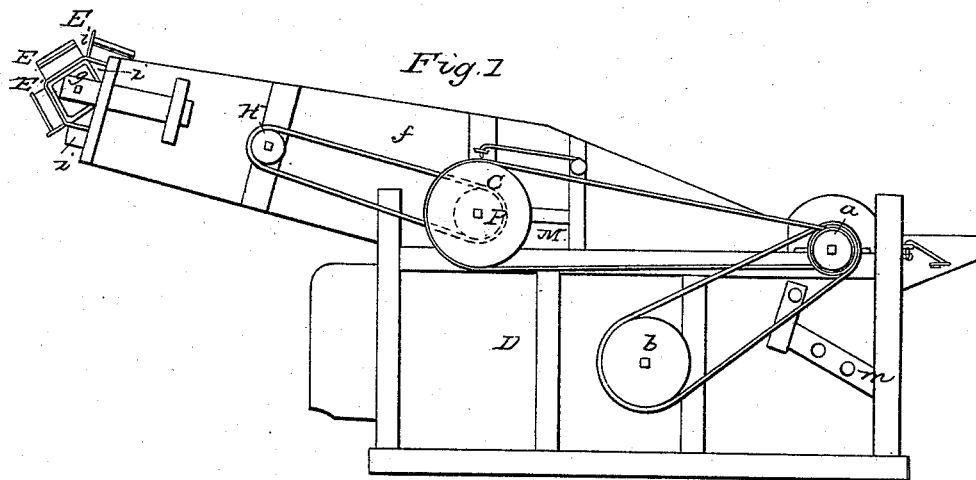


WEMPLE & WESTINGHOUSE.

Grain Separator.

No. 3,663.

Patented July 13, 1844.



UNITED STATES PATENT OFFICE.

J. V. A. WEMPLE, OF MOHAWK, AND GEORGE WESTINGHOUSE, OF SCHOHARIE, NEW YORK.

GRAIN-SEPARATOR.

Specification of Letters Patent No. 3,663, dated July 13, 1844.

To all whom it may concern:

Be it known that we, JACOB V. A. WEMPLE, of the town of Mohawk, county of Montgomery, and State of New York, and
5 GEORGE WESTINGHOUSE, of the town and county of Schoharie and State aforesaid, have invented a new and useful improvement in a separator to be combined with a threshing and winnowing machine for
10 threshing, separating, and cleaning grain; and we do declare the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making
15 a part of this specification, in which—

Figure 1 represents a longitudinal or side view of the combined parts of the whole machine. Fig. 2 represents the separator or wire screen. Fig. 4 represents the elevator
20 hereinafter described showing the combination with the separator. Fig. 3 is a revolving shaft about 5 inches square which is placed at the upper end of the separator Fig. 2 for shaking the separator.

25 Letter *a* shows a double pulley upon the shaft of the cylinder of which one is 3 inches diameter and propels the winnower *b*; the other is 2 inches diameter and propels the wheel *c*, which is 2 feet 4 inches diameter,
30 upon a revolving square shaft *K* that carries the separator or screen *E* and upon the opposite end of this shaft is a pulley *I* 7 inches diameter which by means of a leather belt *L* is connected with another pulley *J* of
35 the same size upon a revolving shaft *M* and carries the elevator *N*, Fig. 4, hereinafter described. *d*, shows a pulley 8 inches diameter upon the shaft of a revolving vibrator *V* which is 6 inches wide and by its motion
40 raises and falls the separator Fig. 2 by which means it is kept in motion to separate the grain from the straw; this vibrator receives its propelling power from a pulley *P* connected with the wheel *c*.

45 The machine as represented by Fig. 1 we make of joist 2½ inches square; the sills 7½ ft. long, the plates 7 ft. long framed into posts 4 ft. 3 inches high and 2 ft. 8 inches above the sills; also four studs two on each
50 side framed into the plates and sills as shown by the drawing Fig. 1. We place two girders in the lower part of the frame and one near the upper end of the back posts so as to sustain the trunk *f* which contains

the separator or wire screen Fig. 2 and one 55 cross plate framed on the top of the front posts. The machine we make 2 ft. 7 inches to 3 ft. wide; there are 4 posts, two on each side, framed into the plates as represented by the drawing which supports the trunk *f*. 60

The cylinder on the shaft of *a*, and the concave below it may be made in the most common form. We place a revolving shaft *m* directly under the cylinder and concave 3 inches diameter to sustain the lower part of 65 the elevator Fig. 4.

The winnower or fanning mill we make in the most common form.

The elevator Fig. 4 we make of canvas from 2 ft. to 2 ft. 4 inches wide with slats fastened 70 across to elevate the grain and runs on two revolving shafts *M*, *m*, described above; this elevator *N* receives the grain and straw as it passes from the cylinder, and carries it to the separator or screen *E* which we make of 75 No. 16 wire and weave it about 5 inches wide and cut it to a suitable length according to the width of the separator. We then fasten to the pieces or sections *E* which are thus cut to three blocks *e e e* 1½ inch square, one 80 at each end and one in the center; these blocks we fasten to three endless belts *i* with slats between them and when connected together forms the separator, Fig. 2.

The operation of this separator as it passes 85 over the revolving shafts or square heads *g*, *K*, is such as to open and let out the straw that may gather inside, which is one essential advantage. A raker may be placed over the elevator upon a revolving shaft with a 90 double pulley and receive its propelling power from the 2 inch pulley *a*; and in that case the wheel *c*, must be reduced to a proper size and receive its motion from the double pulley upon the shaft of the raker. 95

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

The separator *E* as above described; that is to say a revolving screen or separator composed of separate portions or sections of 100 wire gauze *E* constructed and secured by endless belts *i* in the manner described.

JACOB V. A. WEMPLE.
GEORGE WESTINGHOUSE.

Witnesses:

JOHN V. WEMPLE,
JAMES L. VEEDER.