H. KURTH.

Grain-Separator.

No. 163,213. Patented May 11, 1875.

Fig. 1.

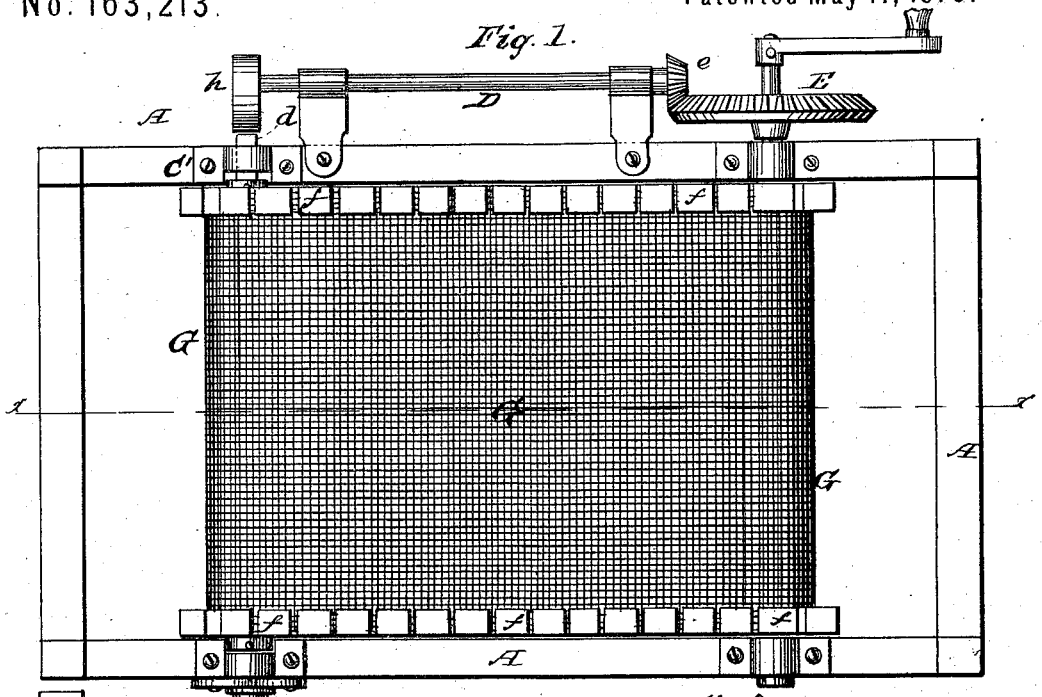


Fig. 2.

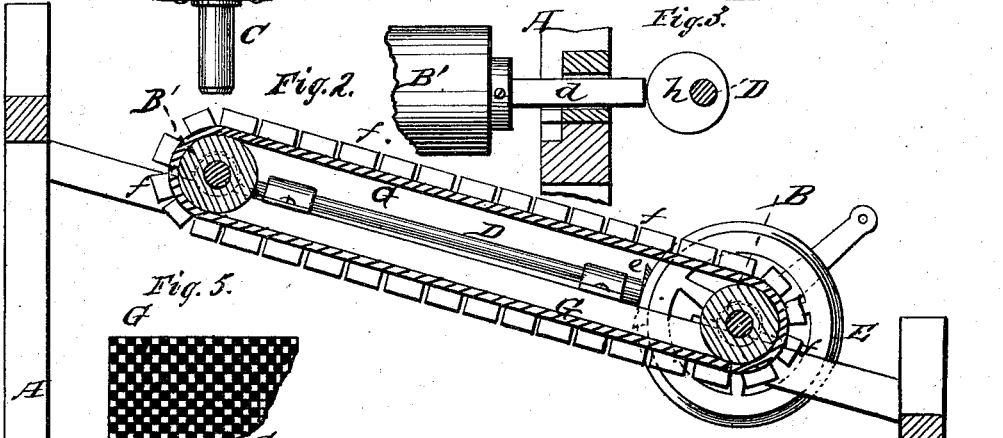


Fig. 3.

Fig. 5.

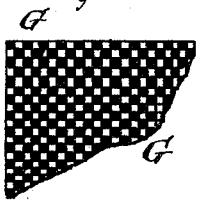
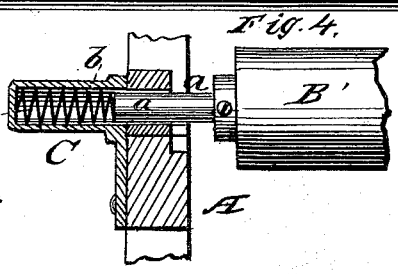


Fig. 4.



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UNITED STATES PATENT OFFICE.

HERMANN KURTH, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **163,213**, dated May 11, 1875; application filed April 12, 1875.

To all whom it may concern:

Be it known that I, HERMANN KURTH, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Cockle-Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of machines which are used to separate oats, cockle, and other foreign substances from wheat; and the nature of my invention consists in the construction of the cockle-screen, and in the devices for vibrating the same, as will be hereinafter more fully set forth.

In the annexed drawing I have merely shown the screen and devices immediately connected therewith, and Figure 1 is a plan view of my invention. Fig. 2 is a central vertical section on line *x x*, Fig. 1. Figs. 3, 4, and 5 are detail views of my invention.

A represents a part of the separator-frame, in which are two rollers, B B′, at different height from the bottom. The lower roller B has its journal-bearings in boxes on the frame A, and is revolved by being suitably connected with some of the operating parts of the separator. The upper roller B′ has at one end a journal, *a*, which rests in a tubular box, C, on the frame, in which box is a spring, *b*, for throwing the roller in the opposite direction. At the other end the roller B′ is provided with a square journal, *d*, which rests in and projects through a corresponding box, C′, on the frame. On this side of the frame is held a shaft, D, on the lower end of which is a bevel-pinion, *e*, that meshes with a bevel cog-wheel, E, on the journal of the roller B. On the upper end of the shaft D is an eccentric, *h*, which bears against the end of the square journal *d*. G represents the conveyer-belt, which is an endless apron made of thick rubber cloth, the outer surface of which is stamped or otherwise formed with longitudinal and transverse grooves made very close together, so as to form numerous cavities or depressions therein. This endless apron is passed around the two rollers B B′, and revolves upward by the revolution of the lower roller B.

As the grain is passed through the sieves of the shaker it falls on this belt or apron, and the grain proper rolls down the same, while the cockle, dust, &c., are collected in the cavities on the screen, and carried upward over the upper roller B′, where it falls down, it being assisted therein by the shaking of said upper roller, which is accomplished by the revolution of the eccentric *h*. This eccentric, operating against the square journal *d*, moves the roller in one direction, and the spring *b*, operating against the other journal, throws the roller back, the roller thus obtaining a reciprocating motion. Along the edges of the belt G are projecting flanges *f f*, made in sections, and attached to the screen, to prevent the grain from falling off at the sides.

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

1. The revolving endless conveyer-belt G, made of rubber cloth, with longitudinal and transverse or other grooves made in its outer surface, to form cavities therein, for the purposes herein set forth.

2. The combination of the rotating roller B, reciprocating rotating roller B′, rubber conveyer-belt screen G, gears *e* E, shaft D, eccentric *h*, and spring *b*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HERMANN KURTH.

Witnesses:
HARRY C. SCOTT,
EDWIN CLARK.