

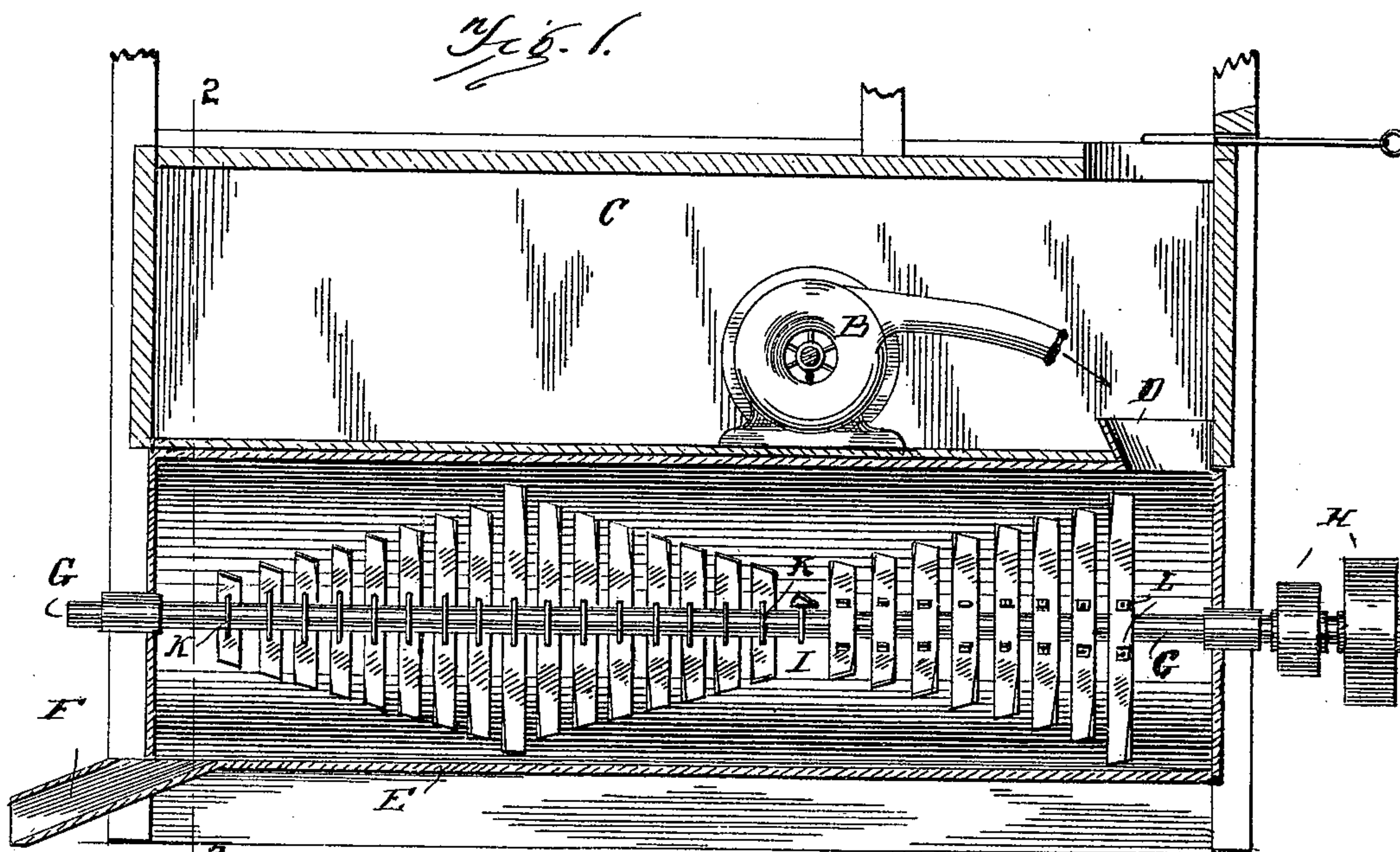
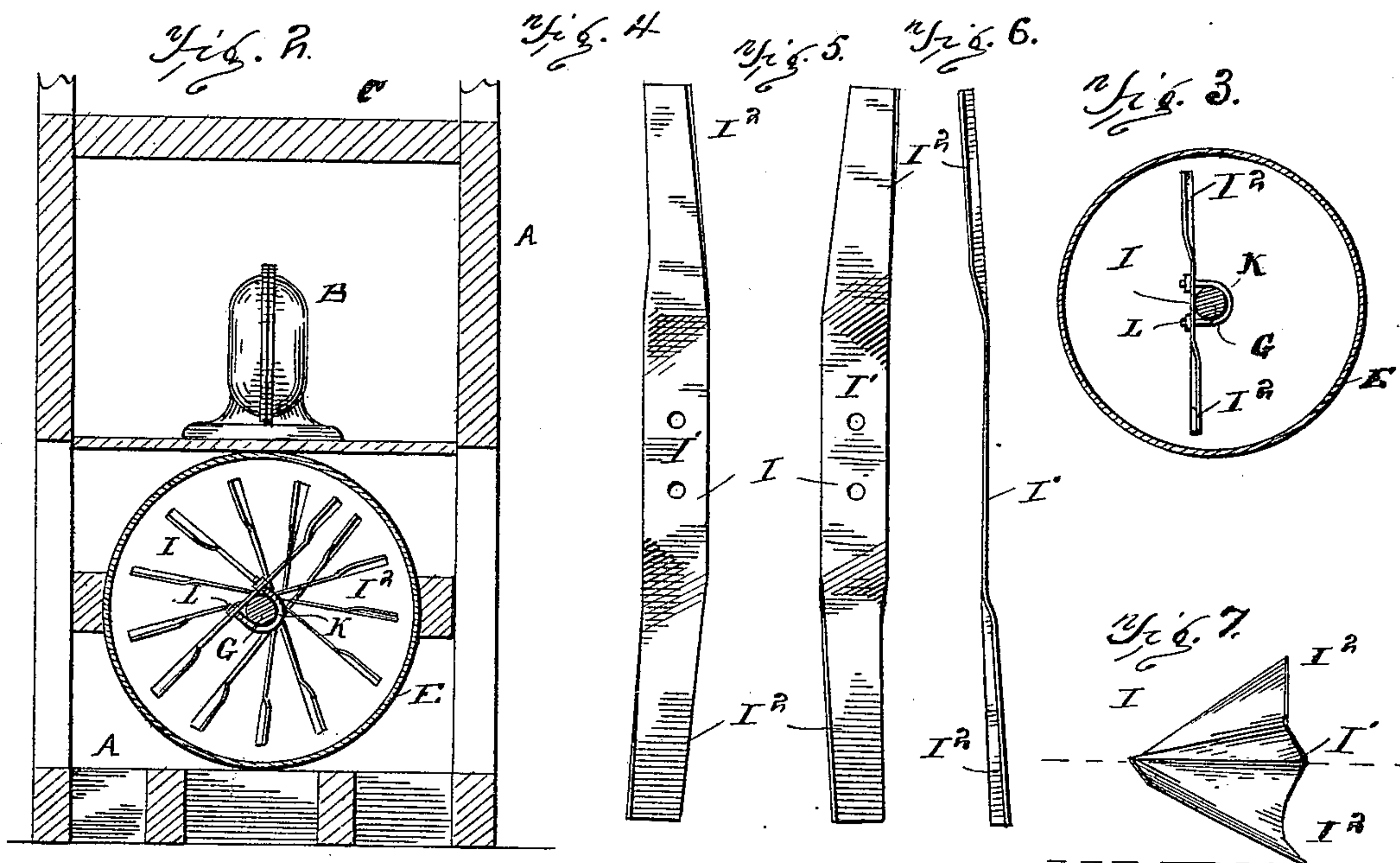
No. 641,869.

Patented Jan. 23, 1900.

C. W. KLOCK & G. W. ROSE.
GRAIN CLEANER OR BEATER.

(Application filed June 15, 1899.)

(No Model.)



WITNESSES
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UNITED STATES PATENT OFFICE.

CHARLES W. KLOCK AND GEORGE W. ROSE, OF HENNESSEY, OKLAHOMA TERRITORY; SAID ROSE ASSIGNOR TO ALBERT S. BARR, OF SAME PLACE.

GRAIN CLEANER OR BEATER.

SPECIFICATION forming part of Letters Patent No. 641,869, dated January 23, 1900.

Application filed June 15, 1899. Serial No. 720,684. (No model.)

To all whom it may concern:

Be it known that we, CHARLES W. KLOCK and GEORGE W. ROSE, citizens of the United States, residing at Hennessey, in the county of Kingfisher and Territory of Oklahoma, have invented certain new and useful Improvements in Grain Cleaners or Beaters, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to grain-cleaners, and is particularly adapted for use in cleaning wheat, rice, and other grains.

The object of the invention is the production of a machine by which the kernels of wheat or other grain are cleaned partly by cleaning and partially by attrition, by which smut, mold, and must are removed and the quality of the grain for mercantile purposes materially improved.

Figure 1 is a longitudinal section of the machine. Fig. 2 is a cross-section about on line 2 2, Fig. 1. Fig. 3 is a detail cross-section of conveyer-casing, shaft, and one blade or beater. Figs. 4 and 5 are face views of beater blades or bars, and Fig. 6 is an edge view. Fig. 7 is an end view of such bar enlarged.

The machine is supported by any suitable frame, as A A. Preferably a blower, as B, is located within the casing; but this is not very material, as the blower may have any convenient construction and location. A grain-bin C and supply-passage D to the beater-tube may be of any suitable construction. A cylindrical tube E extends lengthwise of this machine. The tube may be of any suitable material. The passage D opens into the top of this tube near one end, and an escape-passage F at the other end permits the escape of screened grain. A suction-fan may be applied to passage F. A shaft G extends along the central axis of tube E and is provided with driving means, such as pulley or pulleys H. The shaft G is supported in bearings at opposite ends of the machine. Secured to shaft G within the cylinder are a number of beater-bars I I I. Each bar is composed of a central portion I¹, which part is bolted to the shaft G, and two end portions I², arranged at angles relatively to the body I¹. Each succeeding

bar is secured in a different radial relation to the shaft, so that the rotation of shaft G when the bars are secured to said shaft causes the ends of these bars to describe a circle; but the inclination of the ends will be in a spiral line. When the shaft rotates, the bars act as pushers or conveyers, as well as beaters, to the passing grain. The bars I are secured to shaft G by yokes K, the bend of the yoke passing around the shaft and the ends passing through holes in the bar. Nuts, as L, applied to the screw-threaded ends of the yokes hold the bars firmly to the shaft. By this yoke connection of the beater-bars to the shaft the bars may be arranged a greater or lesser distance apart on the shaft. One set of bars arranged at a given angle may be replaced by another set having different inclination or a different length, and the facility for changes and repairs is great.

Assuming now that grain is introduced at opening D and an air-blast supplied through the same opening, the shaft G is driven at a high speed. The bars or beaters I, moving rapidly, strike the grain with a glancing blow, causing the grains to move among each other and to move along toward passage F, from which passage the grain issues. The loosened dirt, mold, and extraneous matter also passes out of the passage F and is removed by screening or fanning, or both, in usual manner of grain-cleaning.

The great advantages of the above-described grain beater or cleaner over others known to us consists in the ready adaptability of this machine to different conditions, the low first cost, and convenience of repairs.

We claim—

1. In a grain beater or cleaner, the combination of a hollow cylindrical casing, a rotating shaft extending lengthwise thereof, and a series of beater-bars, each bar having a flat central portion secured to the shaft, and inclined outer ends projecting nearly to the cylindrical casing, all substantially as described.

2. In a grain-beater, the combination of the inclosing casing, an axial shaft therein, and a series of beater-bars each independently secured to the shaft by a yoke passing through the bar and the bend of the yoke lying next

the shaft, and securing mechanism, whereby the bars may be arranged at different distances and at different radial positions, all substantially as described.

5 3. In a grain-beater, the cylindrical casing having proper feed and exhaust mechanism, the rotating shaft arranged axially of said casing, and the beater-bars, each having a flat central portion and inclined ends, and a
10 yoke with its ends extending through holes in the bar and its bend around the shaft and nuts securing each bar to the shaft, all combined substantially as described.

4. In a grain-beater, the shaft, an integral

beater-bar having a flat central portion and 15 inclined ends, and a yoke with its ends extending through holes in the flat portion of the beater-bar and its bend around the shaft, and nuts on the yoke whereby the bar is secured, all substantially as described. 20

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES W. KLOCK.
GEO. W. ROSE.

Witnesses:

I. F. CROW,
W. A. ROSE.