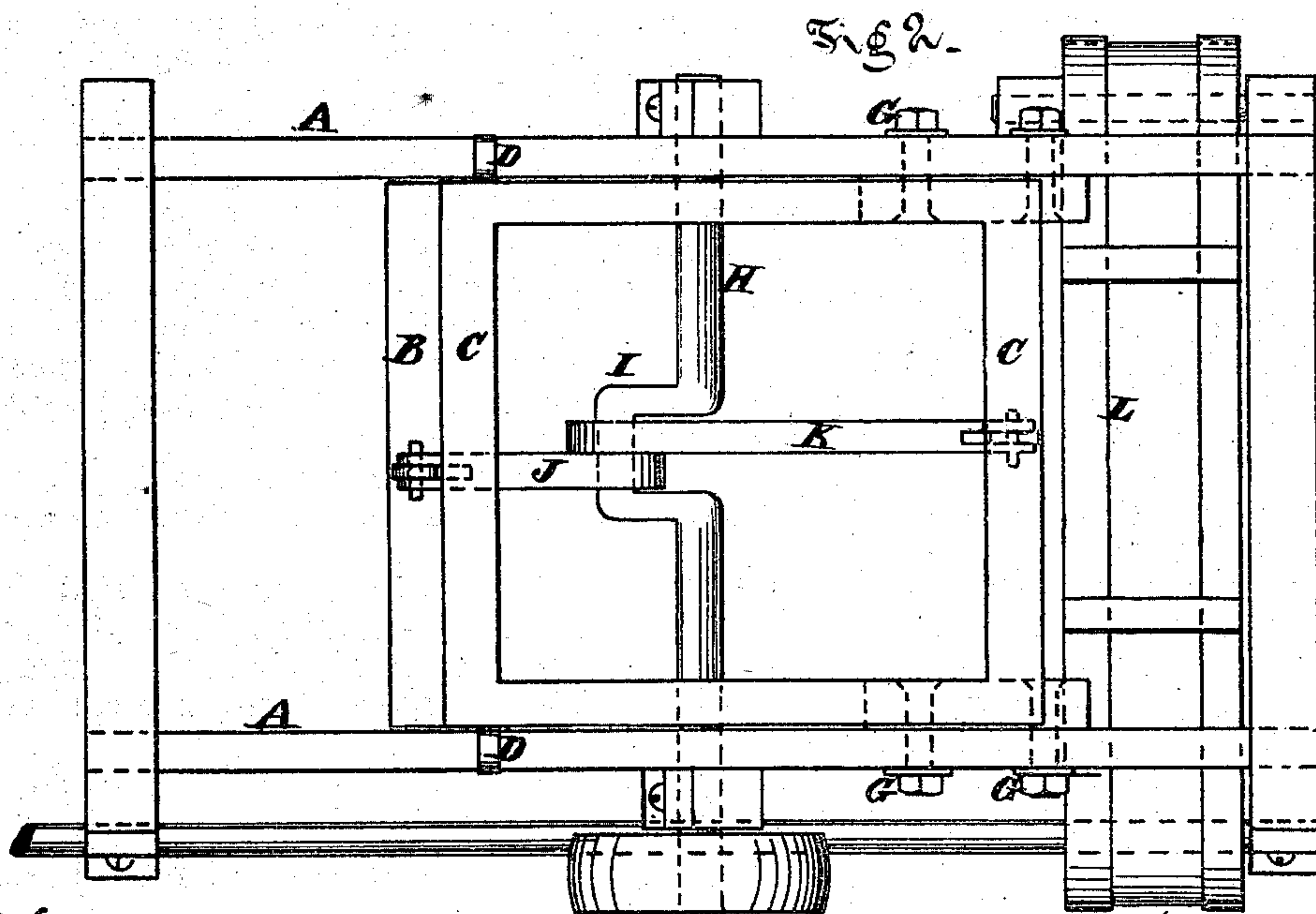
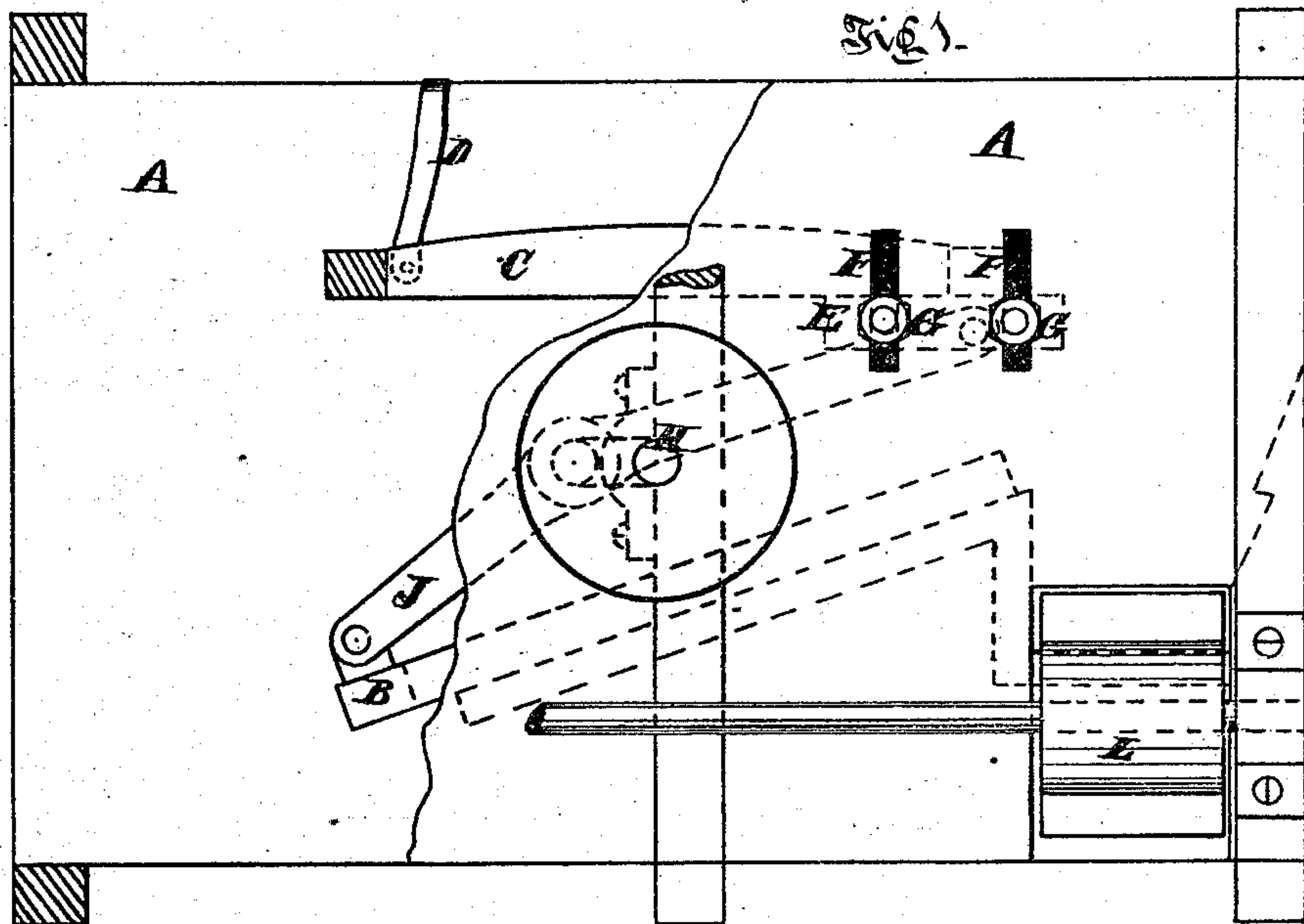


T. J. HUBBELL.
Grain-Separator.

No. 159,414.

Patented Feb. 2, 1875.



Witnesses
Raymond Gibbons.
E. E. Schenck

Inventor
Thomas J. Hubbell
By his atty
C. W. M. Smith.

UNITED STATES PATENT OFFICE.

THOMAS J. HUBBELL, OF YOUNTVILLE, CALIFORNIA, ASSIGNOR TO
JONATHAN BATEMAN AND THOMAS J. HUBBELL.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **159,414**, dated February 2, 1875; application filed
September 15, 1874.

To all whom it may concern:

Be it known that I, THOMAS J. HUBBELL, of Yountville, county of Napa and State of California, have invented an Improved Grain-Separating Attachment to Thrashing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters marked thereon.

My invention relates to certain improvements in devices for cleaning grain; and it consists in the employment of a peculiarly-shaped riddle and screen, together with a crank and operating pitman, by which the screens are moved in unison.

Any unthrashed heads which may fall upon the riddle will be carried over and fall upon a carrying-belt, to be returned to the thrashing-cylinder.

Referring to the drawings for a more complete explanation of my invention, Figure 1 is a side elevation and partial section. Fig. 2 is a plan or top view.

A A are the sides of a separator-shoe, between which the riddles move. The lower riddle-frame B lies upon an incline, while the upper one, C, has one end suspended by the links or straps D, while the other one moves upon the supports E. These supports are secured to the sides of the machine by means of bolts passing through slots F, and secured at any point by nuts G. A shaft, H, extends across the machine between the riddles, and

has a crank, I, within its length. The connecting-rod or pitman J extends from this crank to the end of the lower screen, while the pitman K gives motion to the riddle-frame C. By this construction the two have a simultaneous movement, that of the lower one being a sliding motion, approaching the upper one and receding from it as it moves, while the upper one has a sort of combined swinging and sliding movement, which loosens up the grain and keeps it agitated all the time. In order to more completely effect this I make the upper riddle convex, so that it will overcome all tendency to settle in the middle. Any unthrashed heads will be carried over and fall upon the conveyer L, which transfers them to an elevator, by which they are returned to the thrashing-cylinder.

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

The combination of the riddle-frames B and C, the intermediate pitmen J K, operated by the same crank I in such manner as to move the screens in the same direction simultaneously.

In witness whereof I hereunto set my hand and seal.

THOMAS J. HUBBELL. [L. S.]

Witnesses:

JOHN D. LITTLE,
J. H. POTTS.