(No Model.)

# J. A. HUGHES & R. C. BLACKWELL.

## FEEDER AND BAND CUTTER FOR THRASHING MACHINES.

No. 283,710. Patented Aug. 21, 1883.

*Fig. 1.*

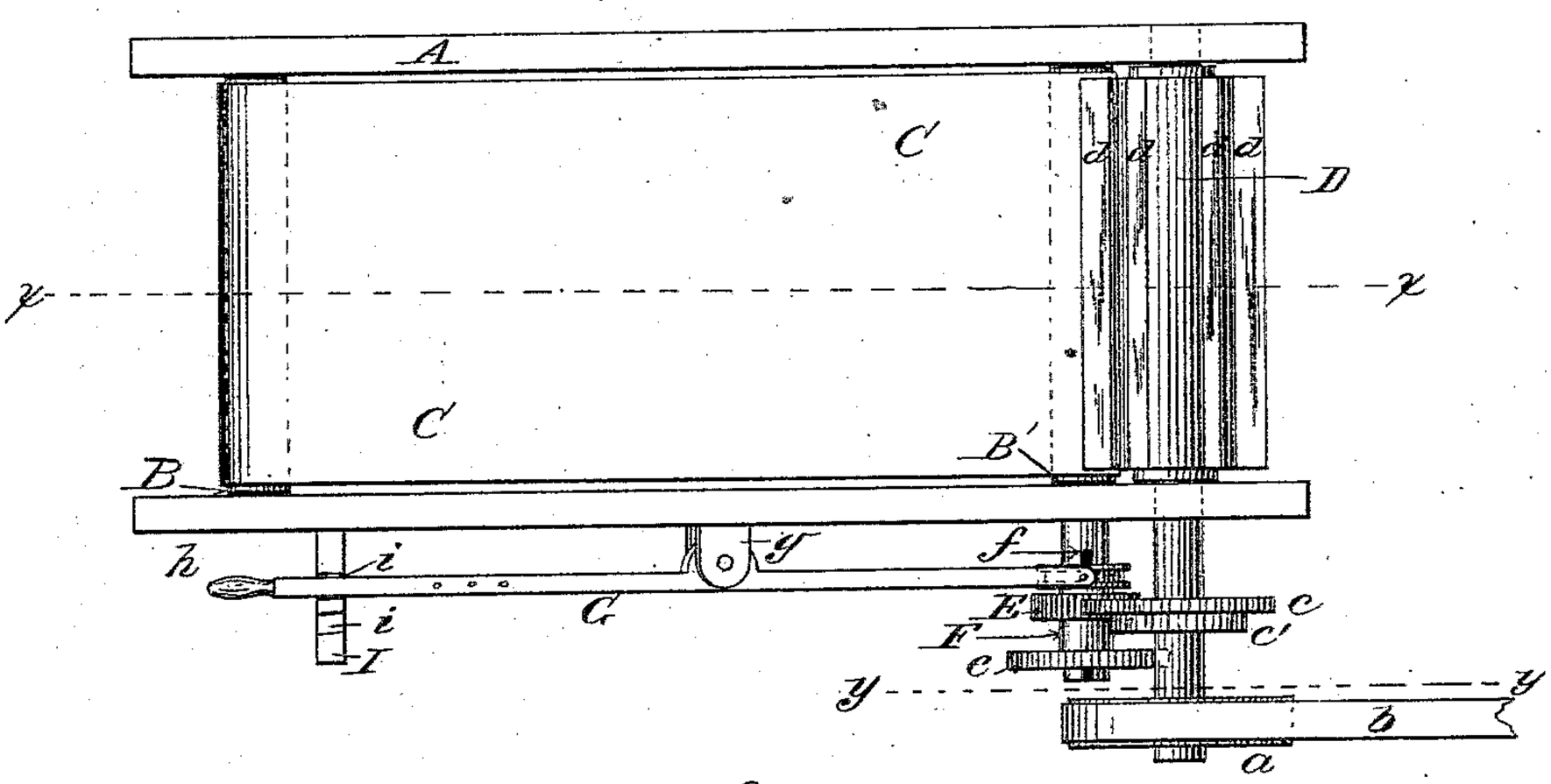



*Fig. 2.*

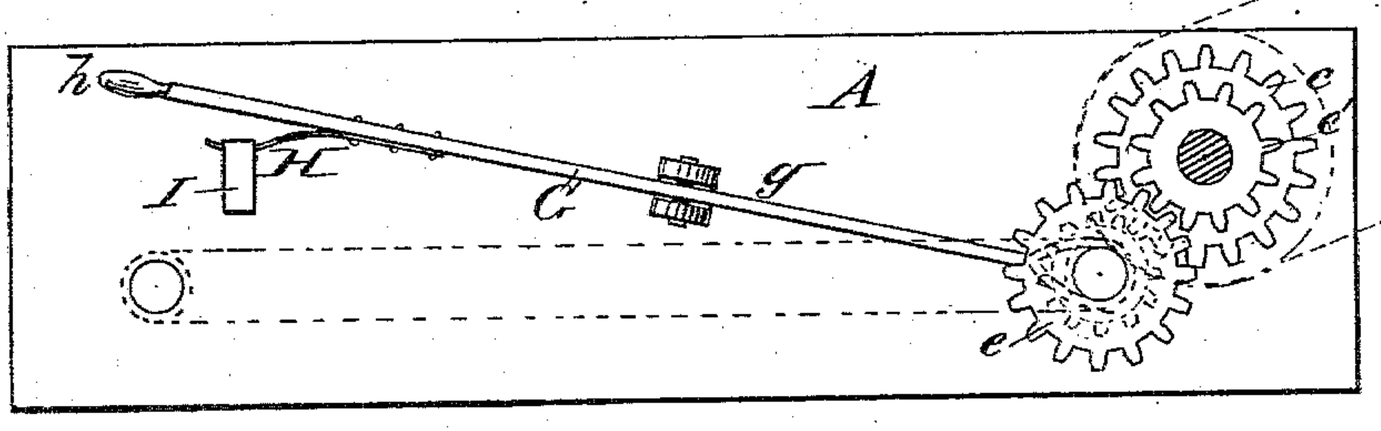



*Fig. 3.*

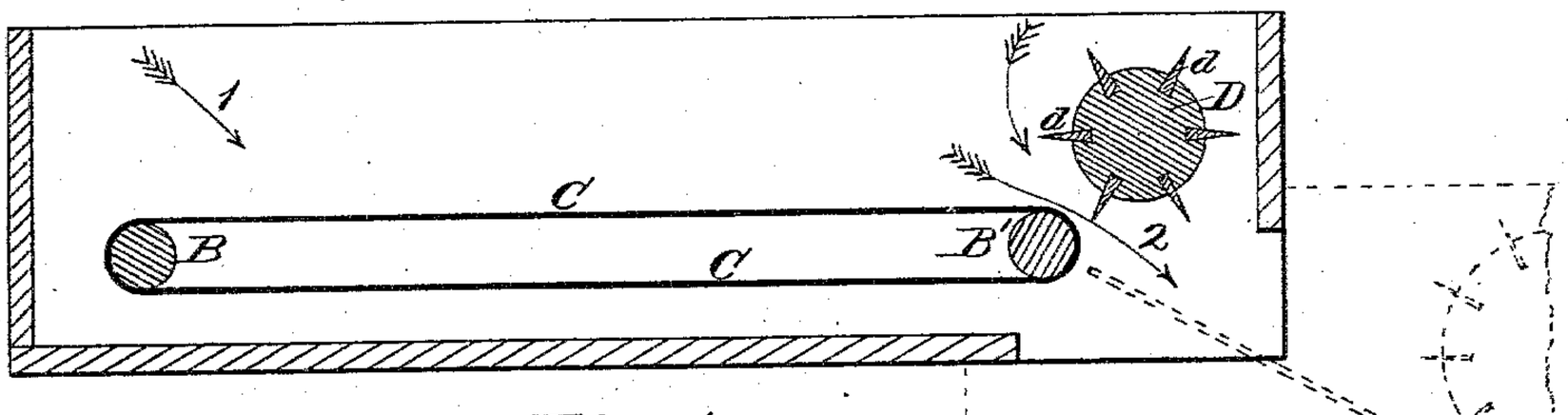
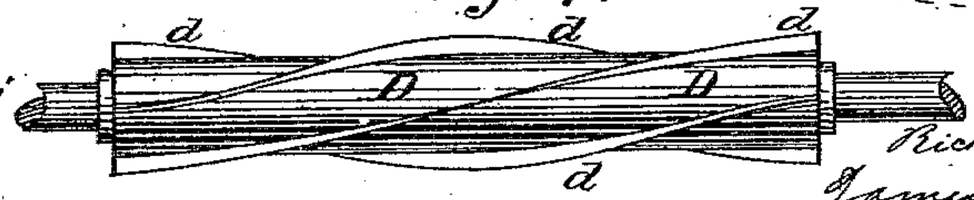



*Fig. 4.*




Witnesses:

Robt W. Matthews—
Alex F. Roberts

Inventors:

Richard Chapman Blackwell,
James Albert Hughes.—
by A. W. Almqvist
Attorney.

# UNITED STATES PATENT OFFICE.

JAMES ALBERT HUGHES AND RICHARD CHAPMAN BLACKWELL, OF HENDERSON COUNTY, KENTUCKY, ASSIGNORS OF ONE-THIRD TO WILLIAM HENRY LEWIS, OF SAME PLACE.

## FEEDER AND BAND-CUTTER FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 283,710, dated August 21, 1883.

Application filed September 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES A. HUGHES and RICHARD C. BLACKWELL, both citizens of the United States, and residents of the county of Henderson and State of Kentucky, have invented certain new and useful Improvements in Feeders and Band-Cutters for Thrashing-Machines, of which the following is a specification.

The object of our invention is to provide an improved feeding attachment to thrashing-machines, whereby the bands will be cut off from the unthrashed bundles of straw just before the latter are entered or are delivered by the feeder to the thrashing-cylinder.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a plan view of our combined feeder and band-cutter. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal vertical section of the same, taken on the line *x x* of Fig. 1; and Fig. 4 is a detail side view of the cutting-roller.

A is the frame-work.

B B′ are two rollers mounted in bearings in the frame A.

C is an endless feed-belt running over the said rollers B B′, upon which the unthrashed and banded bundles of straw are placed at the end marked by the arrow 1, and which are carried forward and dropped into the thrashing-cylinder (shown in dotted lines in Fig. 3) at the place indicated by the arrow 2. As thus far described the arrangement is old.

D is a roller mounted in bearings in the frame A, above and a little in front of the forward roller, B′, of the feed-belt, in such a position that the bundles of straw will pass between the said rollers D B′ just before entering between the concave and the cylinder of the thrashing-machine. Along the surface of the roller D are set a series of radial spiral knives, *d*.

The object of placing the cutting-roller in front of the endless belt is to give the heads of the grain a downward tendency, so that they will strike the thrashing-cylinder below the center; also to divide the friction between the endless belt and the feed-board at the time of cutting the bands, for if the cutter were immediately above the roller all the weight of the knife would be on the belt, thus causing unnecessary wear, and requiring additional strength of the belt which carries the bundles to the thrashing-cylinder or to the band-cutter.

The shaft of the cutting-roller D extends beyond the frame of the machine on one side, and is provided with a pulley, *a*, which receives motion by a belt, *b*, from the thrashing-machine. Upon the said shaft, between the pulley *a* and the frame A, are secured one larger and one smaller cog-wheel, *c c′*, respectively, which communicate motion to the rollers of the feed-belt C by means of one smaller and one larger cog-wheel, E *e*, respectively mounted upon a sleeve, F, which is arranged to slide upon the laterally-projecting shaft of the forward belt-roller, B′.

To allow the sleeve F to slide upon the shaft and yet turn the shaft with it when revolving, a feather, *f*, is secured to the shaft and works in a groove in the sleeve F. The sleeve F has a groove upon its surface, in which acts a pin secured to the end of a lever, G, pivoted to a bracket, *g*, at the outside of the frame A, by which lever the said sleeve may be slid on its shaft (in the ordinary manner of constructing levers and sleeves for couplings and reversing-gears) to bring the wheels E and *e* in gearing contact, as shown in Fig. 1, or, instead thereof, the wheels *e* and *c′* in gearing contact, to vary the proportional speed between the feed-belt C and the thrashing-cylinder, according as made necessary by the greater or less dampness of the straw. To retain the gears in the aforesaid positions for producing greater or less velocity, the forward end of the lever G is provided on its under side with a spring, H, entering one or the other of two notches, *i*, in the surface of a resting-piece, I, secured to the frame A, the outer end of the said spring and the handle *h* being grasped simultaneously to raise the spring and move the lever. As the straw bundles leave the feed-belt C they are acted upon by the knives *d* of the revolving cutter-roller D, the said knives cutting the said bands against the roller B′, which furnishes the resistance to the cutters, without, however, being so close to the knives as to allow them to come in contact with the belt.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with a feed-belt, C, and roller B′ of a thrashing-machine feeder, of the revolving roller D, having radial knives *d*, forming continous spirals in one direction upon the surface of the said roller, and operating upon the bands of the straw bundle at or before the delivery to the thrashing-machine, substantially as hereinbefore set forth.

2. The combination of the roller B′ of a thrashing-machine feeder, said roller having a sleeve, F, sliding upon its feathered shaft, and cog-wheels E *e*, of different sizes, upon the said sleeve, with the cutting-roller D, having radial knives *d* arranged spirally upon its surface, and cog-wheels *c c′*, of different sizes, upon its shaft, the lever G, pivoted to stationary lug *g*, and provided with a spring, H, and the rest I, provided with notches *i*, substantially as and for the purpose hereinbefore set forth.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 7th day of September, 1882.

JAMES ALBERT HUGHES.
RICHARD CHAPMAN BLACKWELL.

Witnesses:
JOSEPH B. CABELL,
EDWARD ATKINSON.