No. 684,644. Patented Oct. 15, 1901.

I. W. LITCHFIELD.

HARVESTING MACHINERY.

(Application filed Aug. 22, 1901.)

(No Model.)

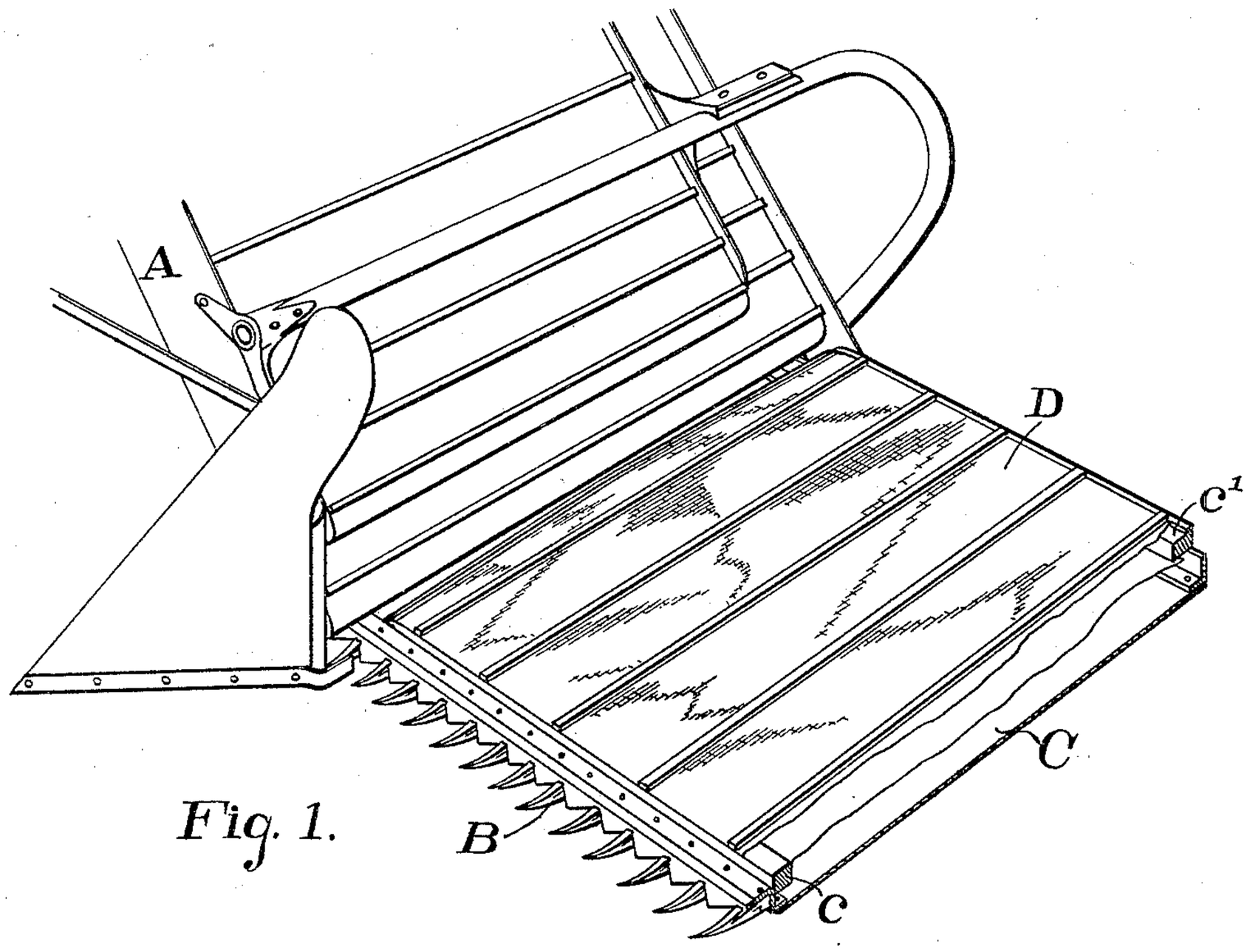

Fig. 1.

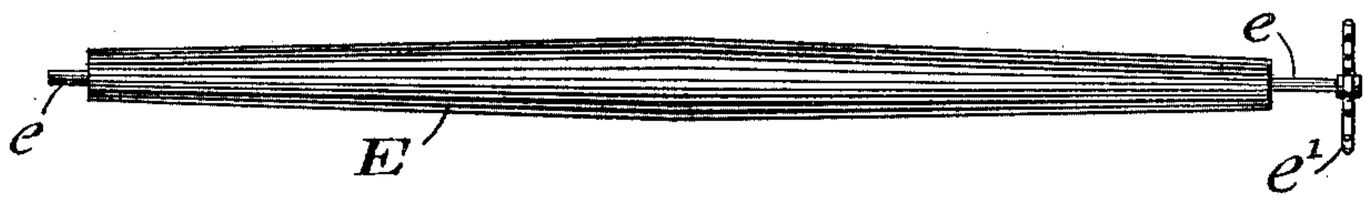

Fig. 2.

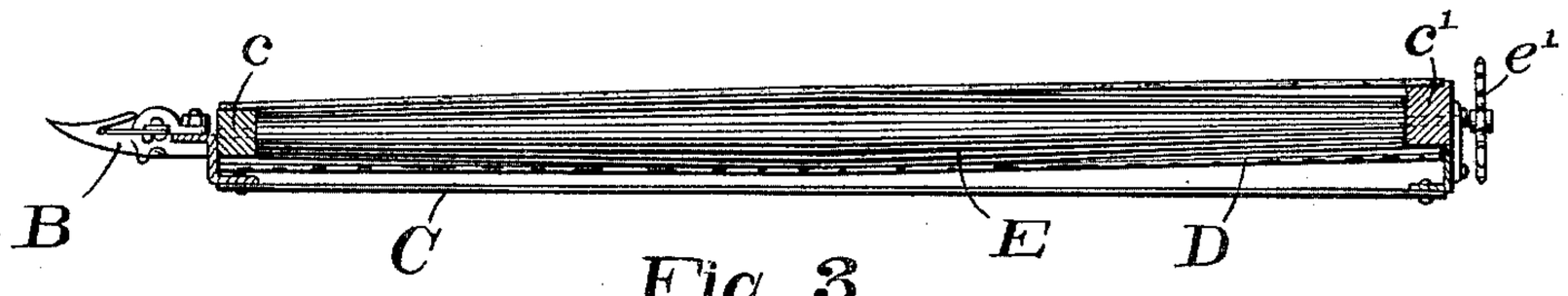

Fig. 3.

WITNESSES:

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ISAAC W. LITCHFIELD, OF CHICAGO, ILLINOIS.

HARVESTING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 684,644, dated October 15, 1901.

Application filed August 22, 1901. Serial No. 72,932. (No model.)

To all whom it may concern:

Be it known that I, ISAAC W. LITCHFIELD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Harvesting Machinery, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to driving-rollers for endless carriers for the platforms of harvesters.

It has for its object to provide a roller which will permit the front edge of the platform to be made thin, so that the cutting may be as close as possible, and which still will permit the canvas to run as close to the guards as possible. By so doing I am able to cut and elevate shorter grain than otherwise I would be.

In the drawings, Figure 1 is a perspective view of a portion of a harvester, showing my platform-roller in position. Fig. 2 is a side elevation of the roller. Fig. 3 is a transverse sectional view of the platform, showing the roller in position.

In a platform-canvas it is customary to place a small roller at the outer end and a large one at the inner end. Thus the inner roller, which is the driver, may be run slower and still keep up the speed of the canvas and deliver the grain more readily to the elevators. This requires the platform to be made deep if the canvas is to be brought down close to the guards. Hence the cutting will not be close. If the platform be made shallow, so that the cutting may be close, the canvas is raised high above the guards. Hence it will be with difficulty that short grain is placed upon the canvas. I overcome these difficulties by tapering the front half of the inner roller and necessarily the rear half, so that the ends may be substantially the same size as the outer roller and as small as practical. I keep up the speed of the canvas by leaving the middle of the roller much larger.

In Fig. 1, A is the elevator, B is the cutting apparatus, C the platform, and D the platform-canvas. The roller E, having the shaft or gudgeons *e* and *e* and the driving-sprocket *e'*, is journaled in the canvas-slides *c* and *c'* in the usual manner. The front slide *c* is placed as close to the platform C as practical, so that short grain may be readily placed upon the canvas. This necessitates raising the rear slide *c'* slightly to clear the center of the roller. Inasmuch as the slats of the canvas D will not conform to the shape of the conical roller E as readily as the canvas, there would be a tendency to hold the edges of the canvas away from the roller and the slides as the slats pass, and thus permit straw and chaff to work inside and choke the canvas. To avoid this and insure the front edge of the canvas lying close to the slide *c*, I make the slide *c'* a little higher at the inner end.

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

1. In a harvester in combination with a receiving-platform, a cutting apparatus and an endless carrier, a driving-roller having its largest diameter substantially at the center thereof.

2. In a harvester in combination with a receiving-platform, a cutting apparatus and an endless carrier, a driving-roller, the surface of which is that of two frustums of a cone, having the largest diameters coincident at the center thereof substantially as described.

3. In a harvester in combination with a receiving-platform, a cutting apparatus and an endless carrier, a driving-roller formed of two frustums of a cone, having their largest diameters coincident at the center thereof substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC W. LITCHFIELD.

Witnesses:

CHAS. N. CHAMBERS,

MARVIN CRAMER.