

No. 729,438.

PATENTED MAY 26, 1903.

H. L. STEEL.  
SNAPPING ROLLS FOR CORN HARVESTERS.

APPLICATION FILED FEB. 4, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

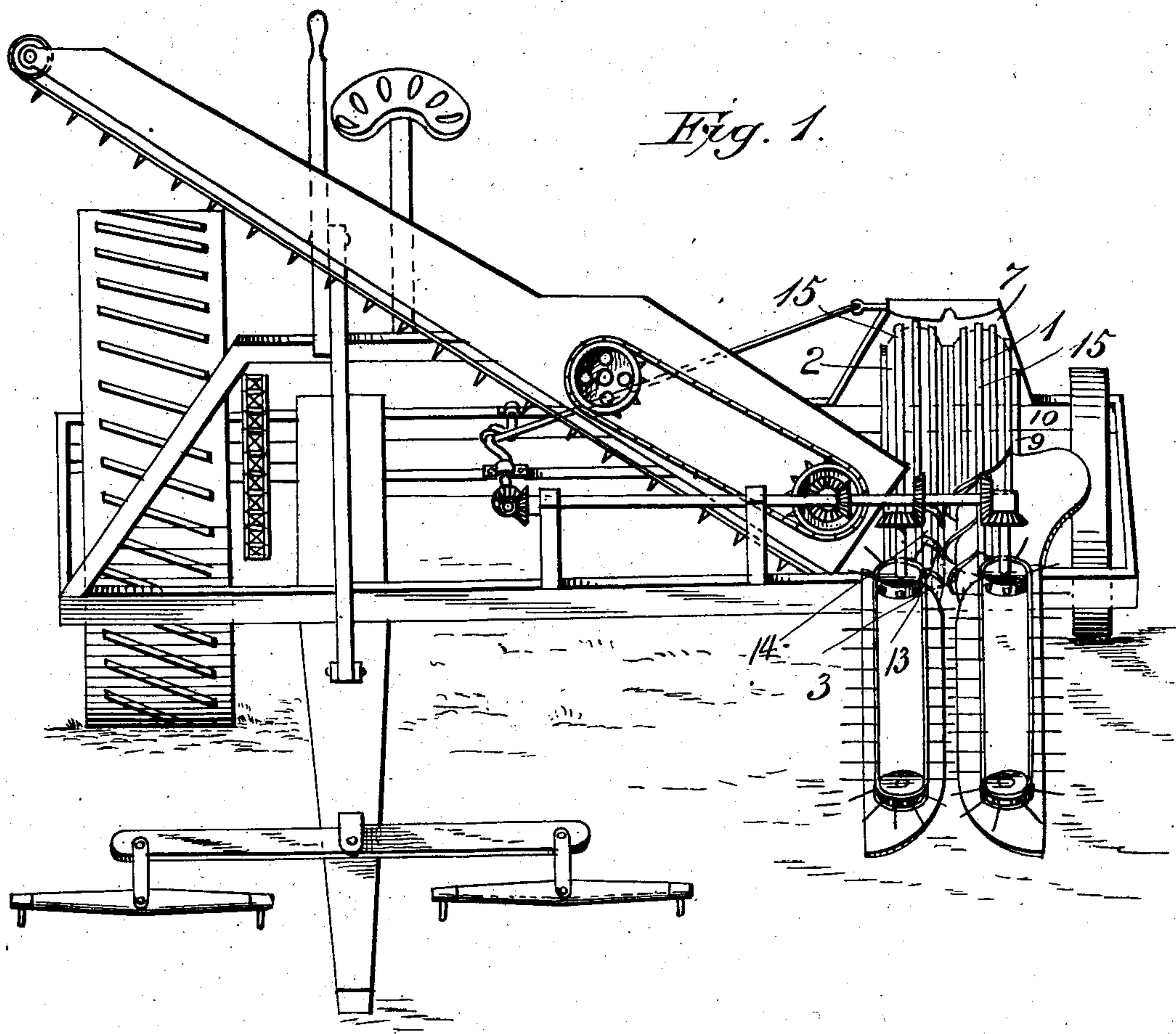
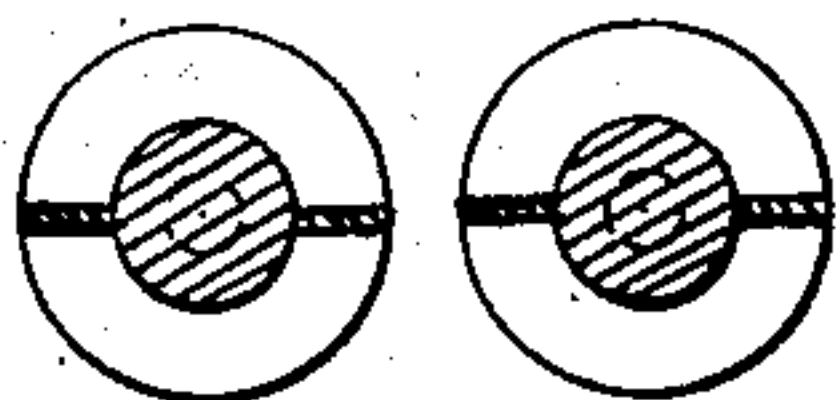


Fig. 5.



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Witnesses:

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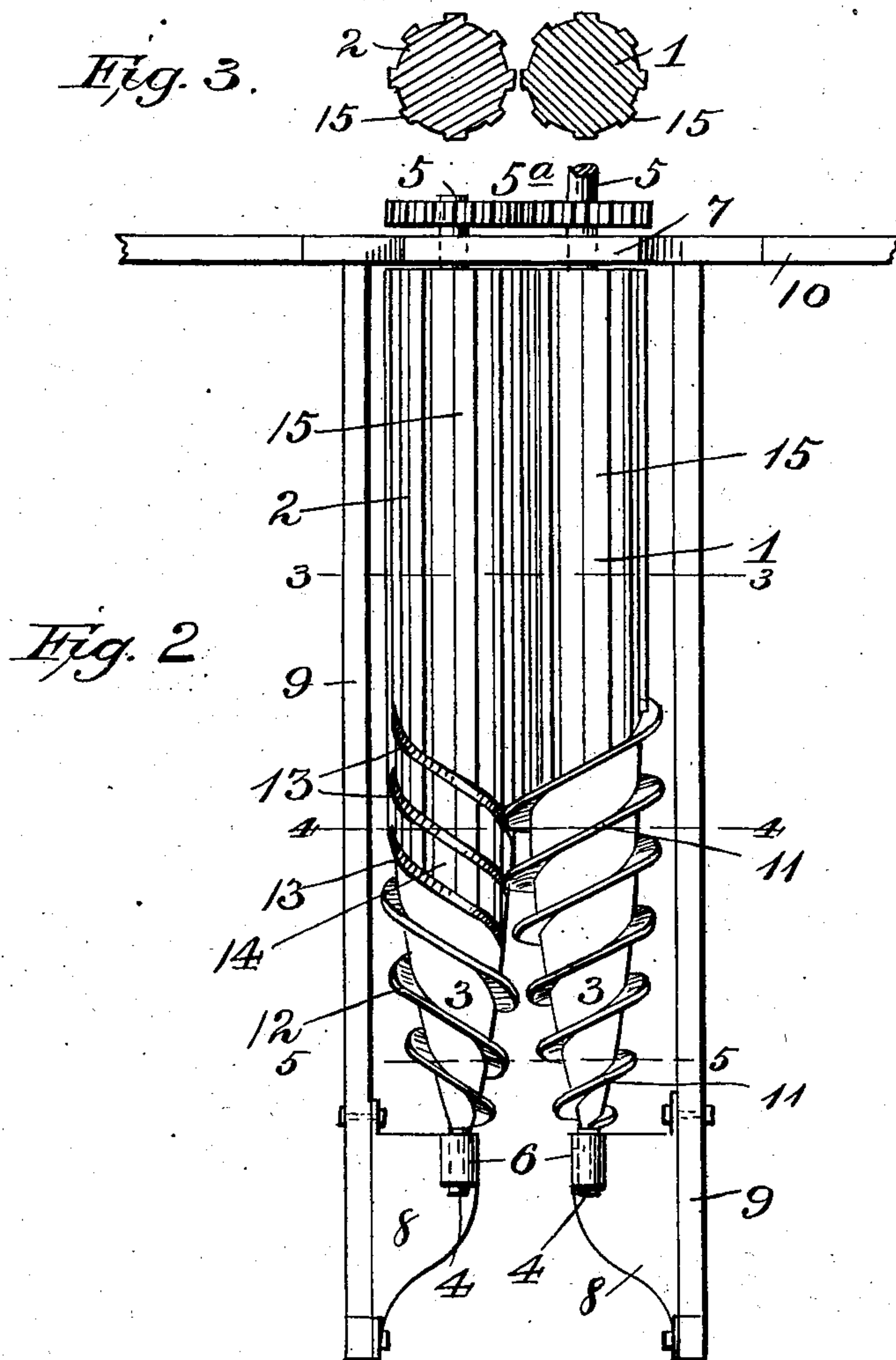
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Inventor:  
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Witnesses:  
*F. L. Ourand.*

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# UNITED STATES PATENT OFFICE.

HARRY L. STEEL, OF DAYTON, INDIANA, ASSIGNOR TO THE INDIANA DEVELOPMENT COMPANY, OF AUGUSTA, MAINE.

## SNAPPING-ROLLS FOR CORN-HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 729,438, dated May 26, 1903.

Application filed February 4, 1903. Serial No. 141,899. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY L. STEEL, a citizen of the United States, residing at Dayton, in the county of Tippecanoe and State of Indiana, have invented new and useful Improvements in Snapping-Rolls for Corn-Harvesters, of which the following is a specification.

My invention relates to improvements in snapping and conducting rolls for corn-harvesters; and the object of the same is to construct improved rolls of this description which snap off the ears, carry them along and loosen the husks thereon, and husk many of the ears before they pass over to the husking-rolls.

The simple and novel construction employed by me in carrying out my invention is fully described and claimed in this specification, and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a front elevation of a harvester equipped with my improved rolls. Fig. 2 is a plan view of the rolls. Fig. 3 is a section on the line 3 3, Fig. 2. Fig. 4 is a section on the line 4 4, Fig. 2. Fig. 5 is a section on the line 5 5, Fig. 2.

Like numerals of reference designate like parts in the different views of the drawings.

The numeral 1 designates the outside snapping-roll, and 2 the inner roll, which rolls extend substantially parallel throughout their lengths excepting their forward ends, which are beveled to form conical noses 3. Spindles 4 and 5 are formed on the rolls and are journaled in boxes 6 and bearings 7. The boxes are supported by brackets 8, secured to side bars 9, which are connected at their rear ends by a cross-bar 10, within which the bearings 7 are located. The spindles 5 carry gears 5<sup>a</sup> for driving the rolls. Spiral flanges 11 are formed on the roll 1 and extend throughout the length of the nose 3 and about one-fourth of the length of the body portion of the roll. The roll 2 has spiral flanges 12 thereon, inclined oppositely from the flanges 11 and extending throughout the length of the nose 3 thereon or a little beyond. Formed in the roll 2, beyond the flange 12 and located to mesh with the flange 11, is a spiral groove 13. This construction enables the surface of the two rolls

1 and 2 to be brought as close together as desired. The sections of the roll 2, subtended by the convolutions of the groove 13, are grooved longitudinally to form ridges 14, which serve to engage and loosen the husks on the ears. The combination of flanges 12 and grooves 13 extend throughout the length of the nose 3 and about one-fourth the body of the roller, as does the flange 11 on the roll 1. The remaining three-fourths of the body is grooved longitudinally to form ridges 15, the outer faces of the ridges on the opposite rolls being located to oppose each other and come in contact when the rolls are set sufficiently close. The rolls 1 and 2 are set at an angle of from thirty to forty-five degrees and driven by suitable chains or belts connected to the master-wheel of the harvester.

The stalks are first caught by picker-chains or other feeding means and brought opposite the noses 3, between which they then pass as the machine progresses and are caught by the spiral flanges 11 and 12, which force the stalks downwardly and snap off the ears, which are then caught by the flanges 11, meshing with the grooves 13, and the husks thereon loosened, after which they pass to the opposed ridges 15, which pull off the greater portion of the husks before the ears pass on to the husking-rolls, the work of which is much lightened.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the spirit of my invention.

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

1. The combination of an outer snapping-roll, having a cigar-shaped or conical nose, said roll having a spiral flange thereon which extends throughout the length of the nose and about one-fourth the length of the body thereof, the remaining portion of said roll being grooved longitudinally to form ridges, and an inner roll mounted substantially parallel to said outer roll, and having a conical or cigar-shaped nose bearing a spiral flange, the body of said inner roll having a spiral groove therein which begins where the last-



mentioned flange discontinues and extends up to the end of the flange on said outside roll and meshes therewith, the remaining portion of the body of said inner roll being  
5 grooved longitudinally to form ridges which oppose the ridges on said outside roll, substantially as described.

2. In a snapping and husking mechanism, the combination of an outer roll having a tapering nose, said roll having a spiral flange  
10 thereon which extends throughout the length of the nose and a portion of the body thereof, the remaining portion of said body having longitudinally-extending ridges thereon, and  
15 an innersnapping-roll mounted substantially parallel to said outer roll and having a tapering nose thereon, a spiral flange formed on said inner roll and a groove connecting with the end of said flange and meshing with  
20 the flange on said outer roll, said groove extending up to the end of said last-mentioned flange, the remaining portion of said inner roll beyond said groove having longitudinally-extending ridges thereon which are op-

posed to the said ridges on said outer roll, 25 substantially as described.

3. The combination of an outer snapping-roll, having a beveled nose thereon, said roll having a spiral flange thereon which extends throughout the length of said nose and a portion  
30 of the body of said roll, the remaining portion of said roll having longitudinally-extending ridges thereon, and an inner roll having a beveled nose and a spiral groove therein which meshes with said spiral flange  
35 on said outer roll, the portions of the roll intervening between the convolutions of said groove having ridges formed thereon, and the portion of the roll beyond said groove having  
40 ridges thereon opposed to the said ridges on said outer roll, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY L. STEEL.

Witnesses:

J. B. SHAW,  
L. B. SMITH.