

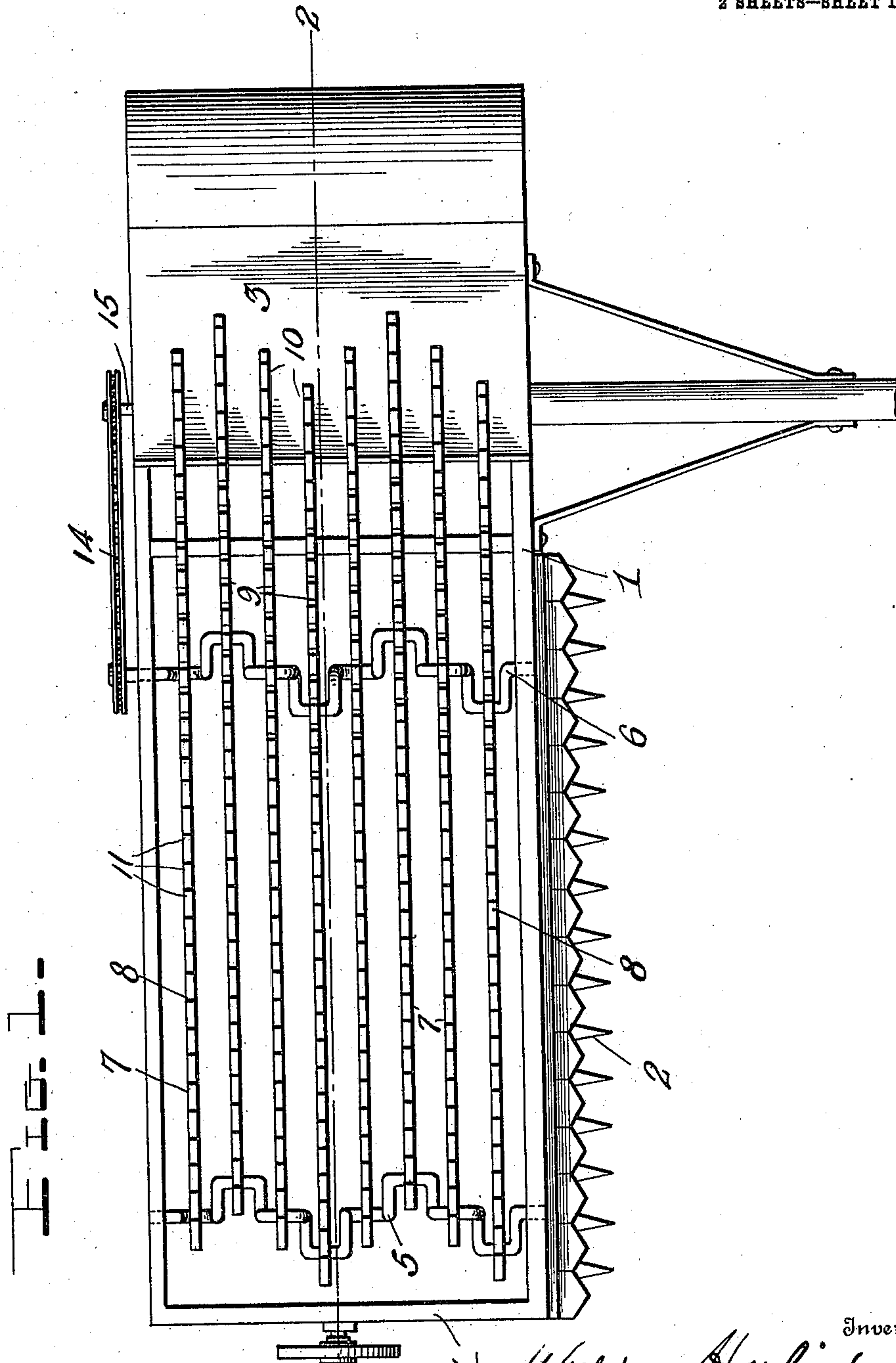
W. HARLIN & S. WESTERHAUSEN.
GRAIN HARVESTER.

APPLICATION FILED JULY 27, 1909.

963,220.

Patented July 5, 1910.

2 SHEETS—SHEET 1.



Witnesses

Chas. R. Griebner
E. M. Ricketts

Inventors

William Harlin
Stephen Westerhausen

By

Watson E. Coleman
Attorney

W. HARLIN & S. WESTERHAUSEN.

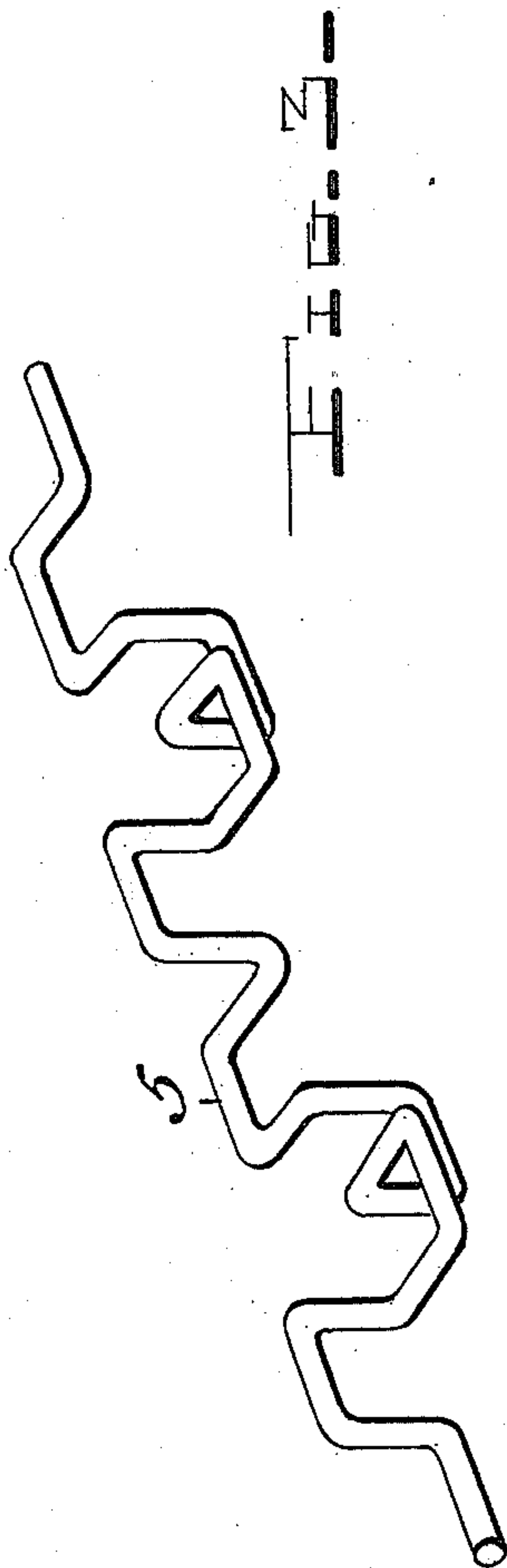
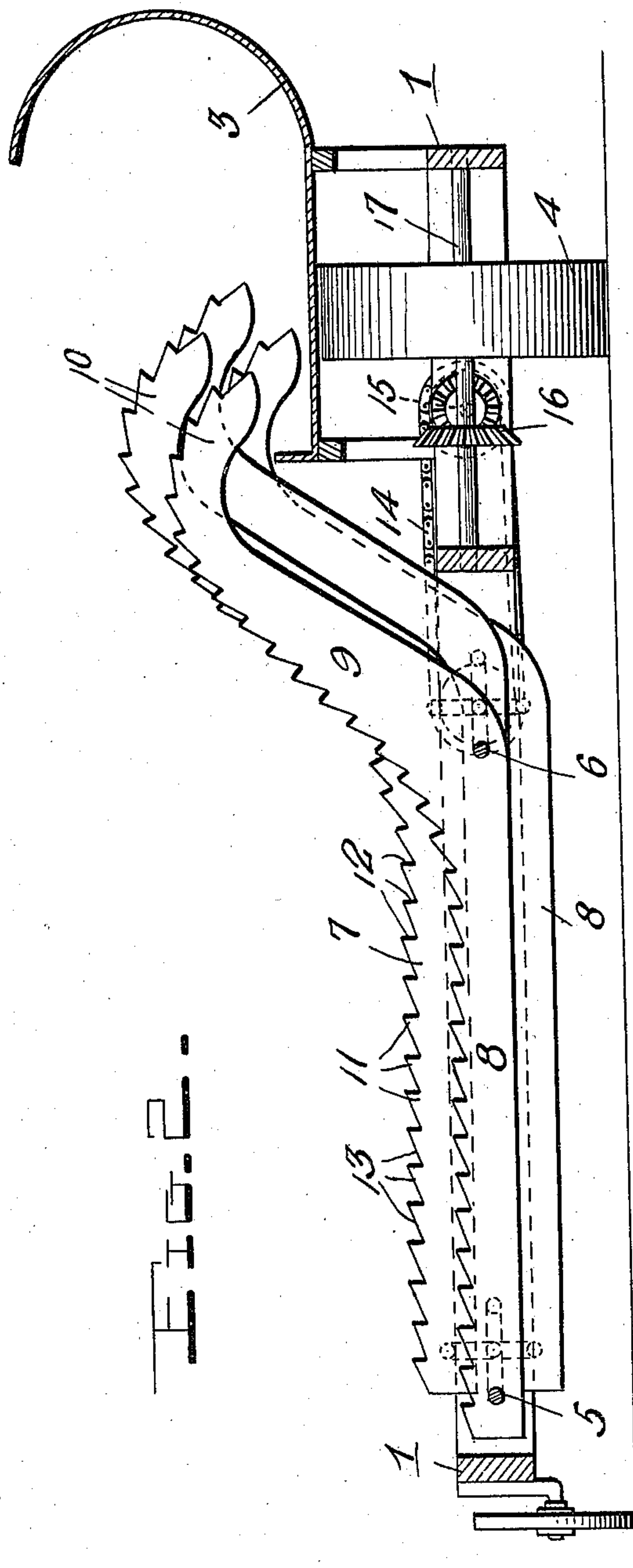
GRAIN HARVESTER.

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2 SHEETS—SHEET 2.



Witnesses

Chas. L. Griestbauer.
E. M. Ricketts

By

William Harlin
Stephen Westerhausen
Watson E. Coleman
Inventors
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM HARLIN AND STEPHEN WESTERHAUSEN, OF PIPER CITY, ILLINOIS.

GRAIN-HARVESTER.

963,220.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed July 27, 1909. Serial No. 509,802.

To all whom it may concern:

Be it known that we, WILLIAM HARLIN and STEPHEN WESTERHAUSEN, citizens of the United States, residing at Piper City, in the county of Ford and State of Illinois, have invented certain new and useful Improvements in Grain-Harvesters, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in grain harvesters and more particularly to improved means for elevating and packing the grain on self binding machines.

The object of the invention is to provide a simple and practical device of this character which will dispense with the use of the usual elevator apron and packers and which will effectively elevate the grain from the cutting mechanism and pack it on the platform or other support containing the binding mechanism.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of portions of a self binding harvester showing the application of the invention thereto; Fig. 2 is a vertical section taken on the plane indicated by the line 2—2 in Fig. 1; and Fig. 3 is a detail perspective view of one of the four-way crank shafts.

In the drawings 1 denotes the main frame of a self binding harvester, 2 denotes the usual grain cutting mechanism, 3 denotes the platform or support containing the usual grain bundling and binding mechanism (not illustrated), and 4 denotes the bull wheel from which the several mechanisms of the machine are driven in the usual manner. These parts are old and well known and form no part of the present invention.

In the practice of the invention two crank shafts 5, 6 are arranged in suitable bearings in the front and rear bars of the frame 1 and on the crank portions of said shafts are mounted rack bars 7. Each of these rack bars has a straight horizontally disposed portion 8 disposed in rear of the cutting mechanism 2, an upwardly and inwardly inclined portion 9 projecting from the inner end of the horizontal portion 8 and a downwardly and inwardly curved portion 10 projecting from the upper end of the inclined

portion 9, as clearly shown in Fig. 2. The inclined portion 9 disposes the downwardly curved extension or portion 10 over the inner edge of the platform 3 so that said portions or ends 10 will serve to pack the grain on the platform or suitable receiving devices on the latter. The upper edges of the rack bars 7 are formed with V-shaped teeth 11, each of which has a vertical face 12 and an inclined face 13 so that the grain falling upon said bars after being cut by the mechanism 2, will be fed across the horizontal portions 8, then up the inclined portions 9 and finally discharged from the downwardly curved portions 10 of said rack bars, said portions 10 also serving to pack the grain on the platform or in the bundling and binding mechanism.

Any number of the rack bars 7 may be provided and the crank portions on the shafts 5, 6 may be set at any angle with respect to each other or distance from each other but four-way crank shafts, such as shown in Fig. 3, are preferably provided. When said shafts are rotated, it will be seen that the movement imparted to the rack bars will cause them to effectively elevate and feed the grain from the cutting mechanism to the bundling and binding mechanism. While the crank shafts may be driven in any suitable manner, the innermost one 6 is preferably connected by sprocket chain gearing 14 to a forwardly and rearwardly extending shaft 15, which latter is driven by means of beveled gears 16 from the shaft 17 of the bull wheel 4.

Having thus described the invention what is claimed is:

1. In a grain harvester, the combination of a main frame, a cutting mechanism, an elevated platform for the binding mechanism, vibrating rack bars arranged in the rear of the cutting mechanism to receive the grain and elevate it on to said platform, a grain retaining means, and means upon the upper portions of the rack bars and disposed above the platform for packing the elevated grain thereon and against said retaining means.

2. In a grain harvester, the combination of a main frame, a cutting mechanism, an elevated platform for the binding mechanism, a retaining wall on the platform, vibrating rack bars arranged in the rear of the cutting mechanism to receive the grain and elevate it on to said platform, and down-

wardly curved rack bar extensions upon the upper ends of said vibrating rack bars and disposed over the platform for packing the grain thereon and against said retaining
5 wall.

3. In a grain harvester, the combination of a main frame, a bull wheel, a cutting mechanism, an elevated platform for supporting the binding mechanism, four-way
10 crank shafts arranged in the main frame, rack bars arranged on said crank shafts and actuated thereby, each of said rack bars having a horizontal portion disposed in rear of the cutting mechanism, an upwardly and

inwardly inclined portion and a downwardly 15 curved inner end, said downwardly curved ends of the rack bars extending over the platform, and means for driving one of said crank shafts from the bull wheel.

In testimony whereof we hereunto affix 20 our signatures in the presence of two witnesses.

WILLIAM HARLIN.

STEPHEN WESTERHAUSEN.

Witnesses:

I. W. DANCY,

J. H. FEY.