

No. 843,493.

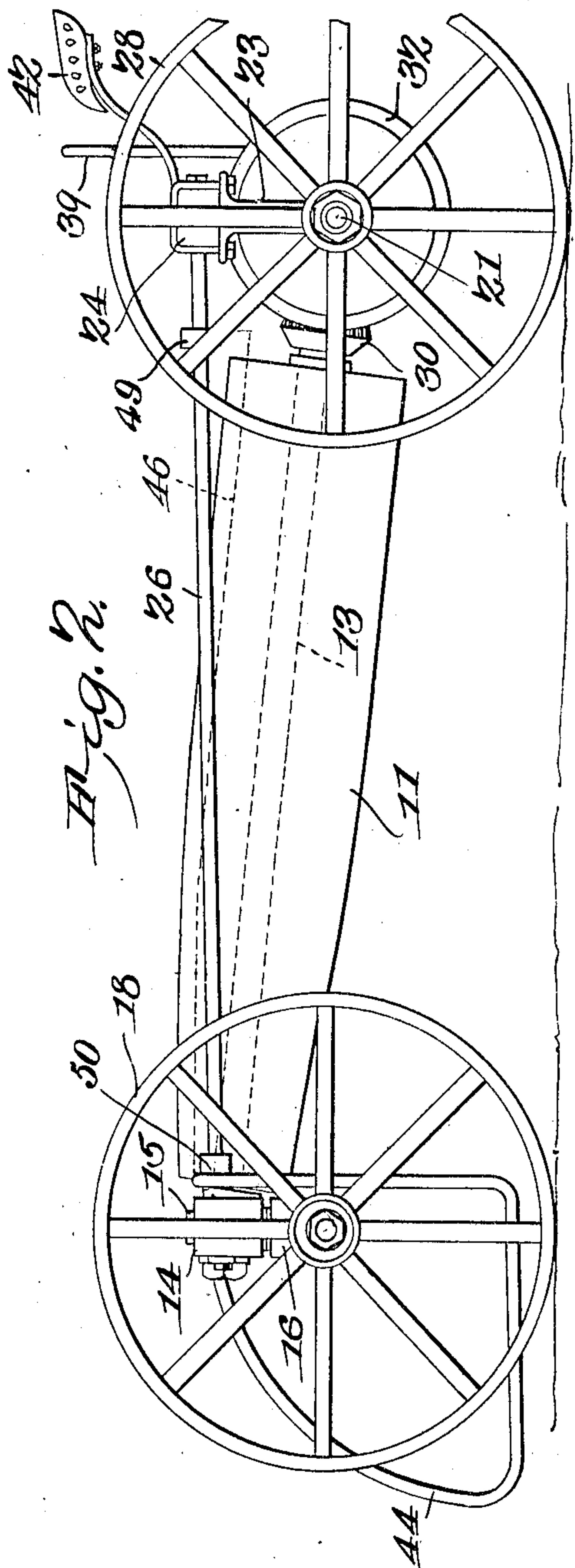
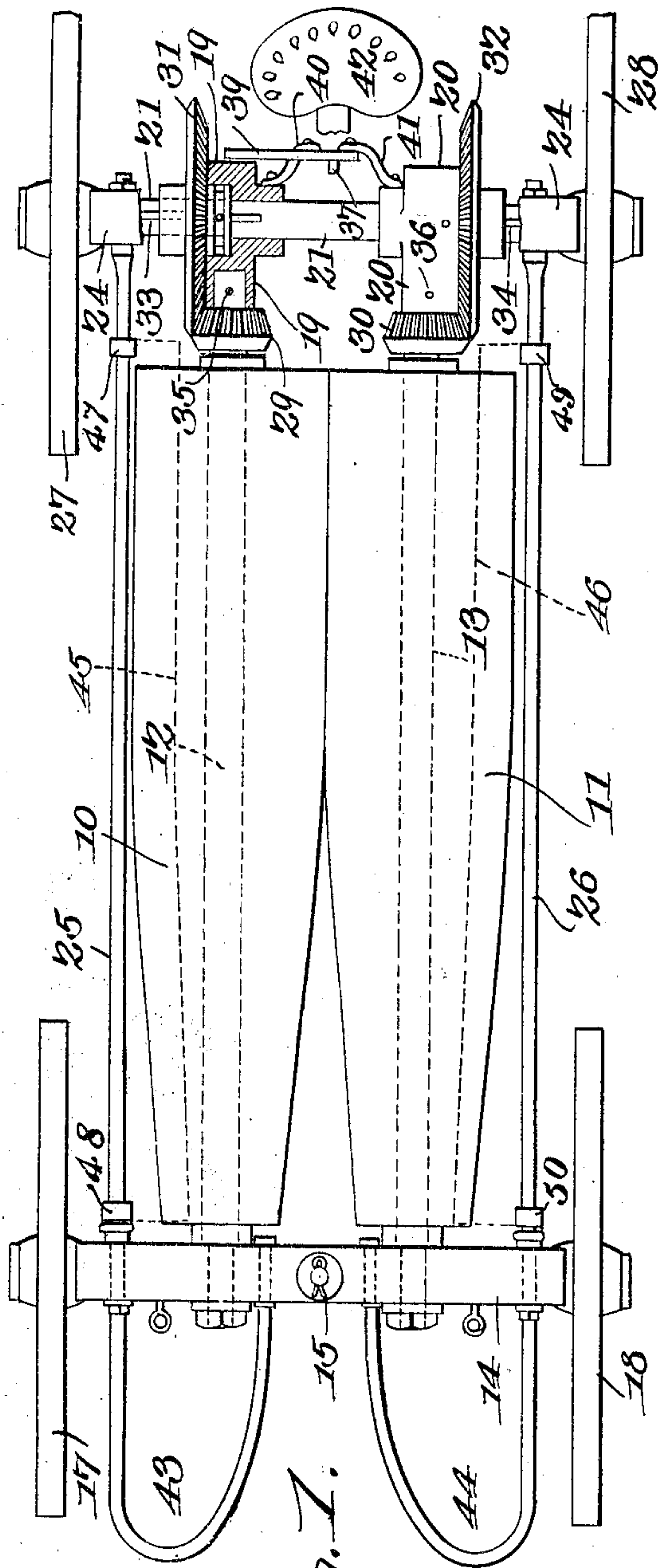
PATENTED FEB. 5, 1907.

C. J. RICHARDSON.

STALK PULLER.

APPLICATION FILED APR. 20, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

E. J. Hewitt
C. H. Woodward

Columbus J. Richardson,
INVENTOR.

By *C. Snow & Co.*
ATTORNEYS

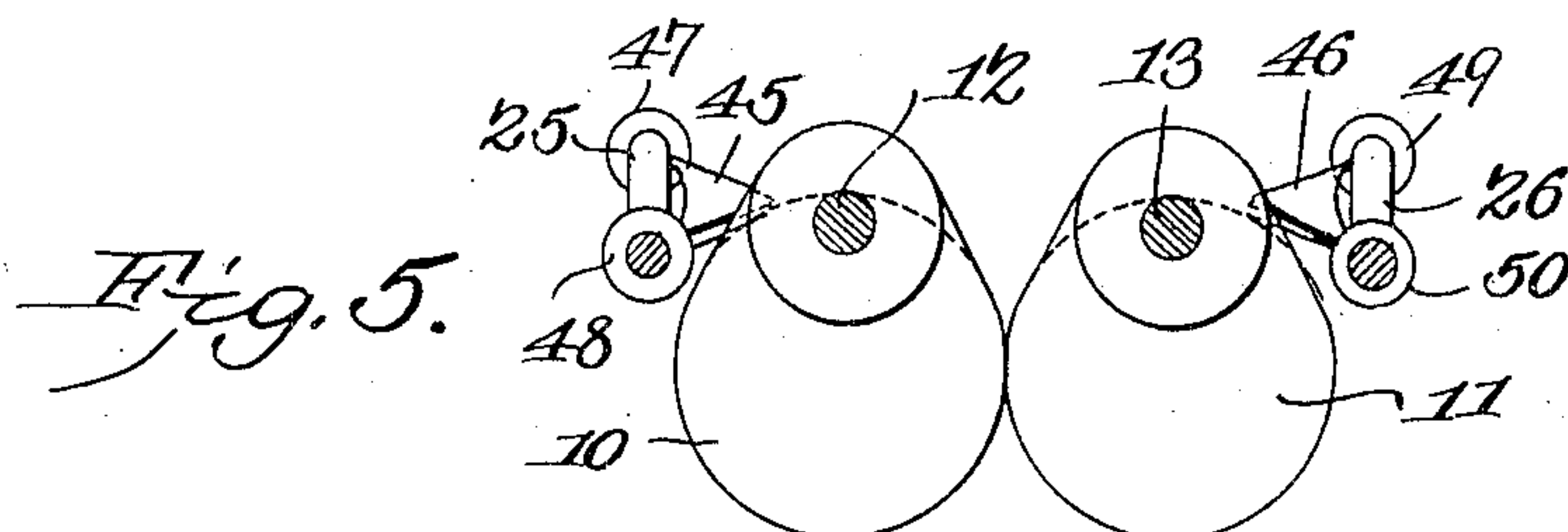
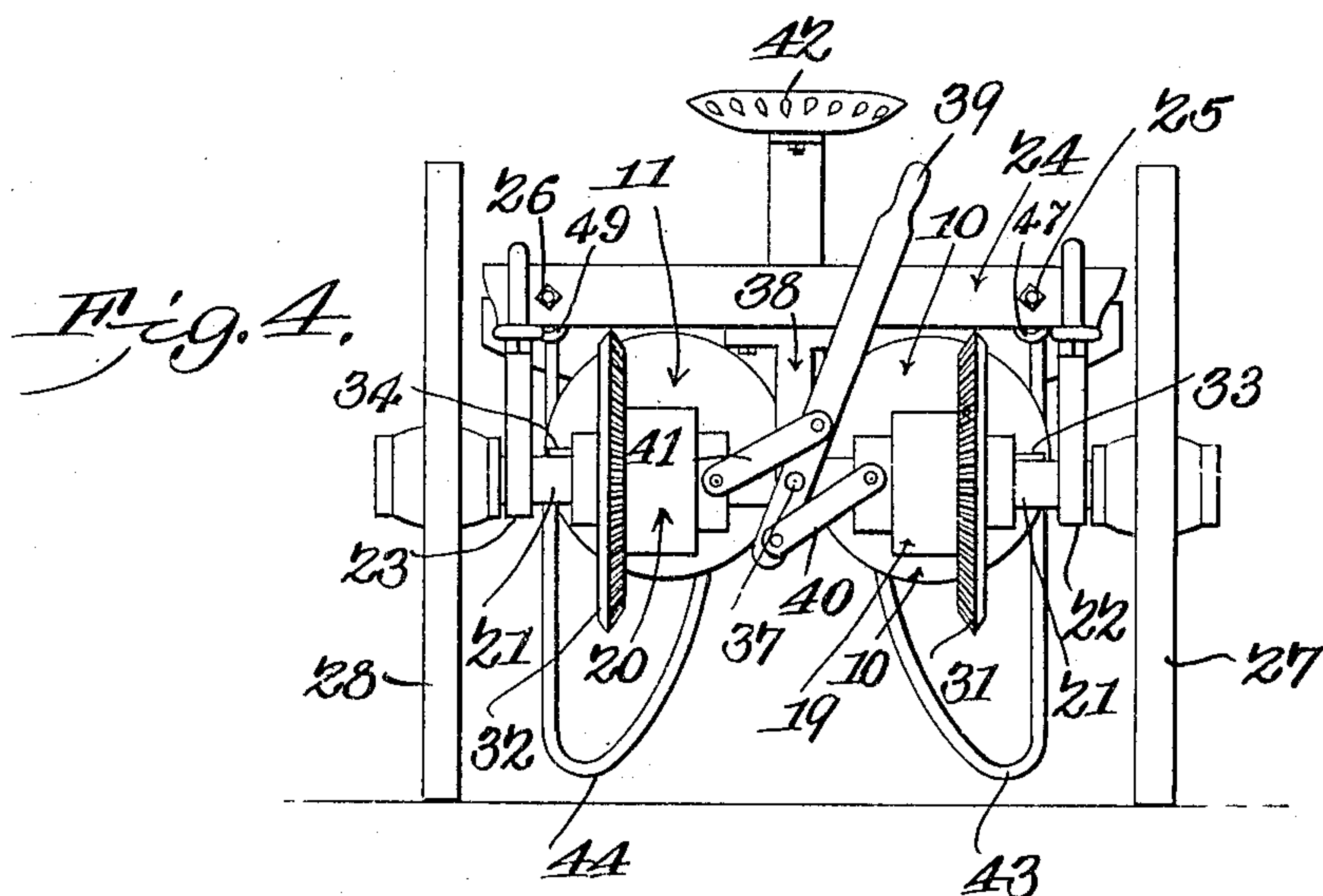
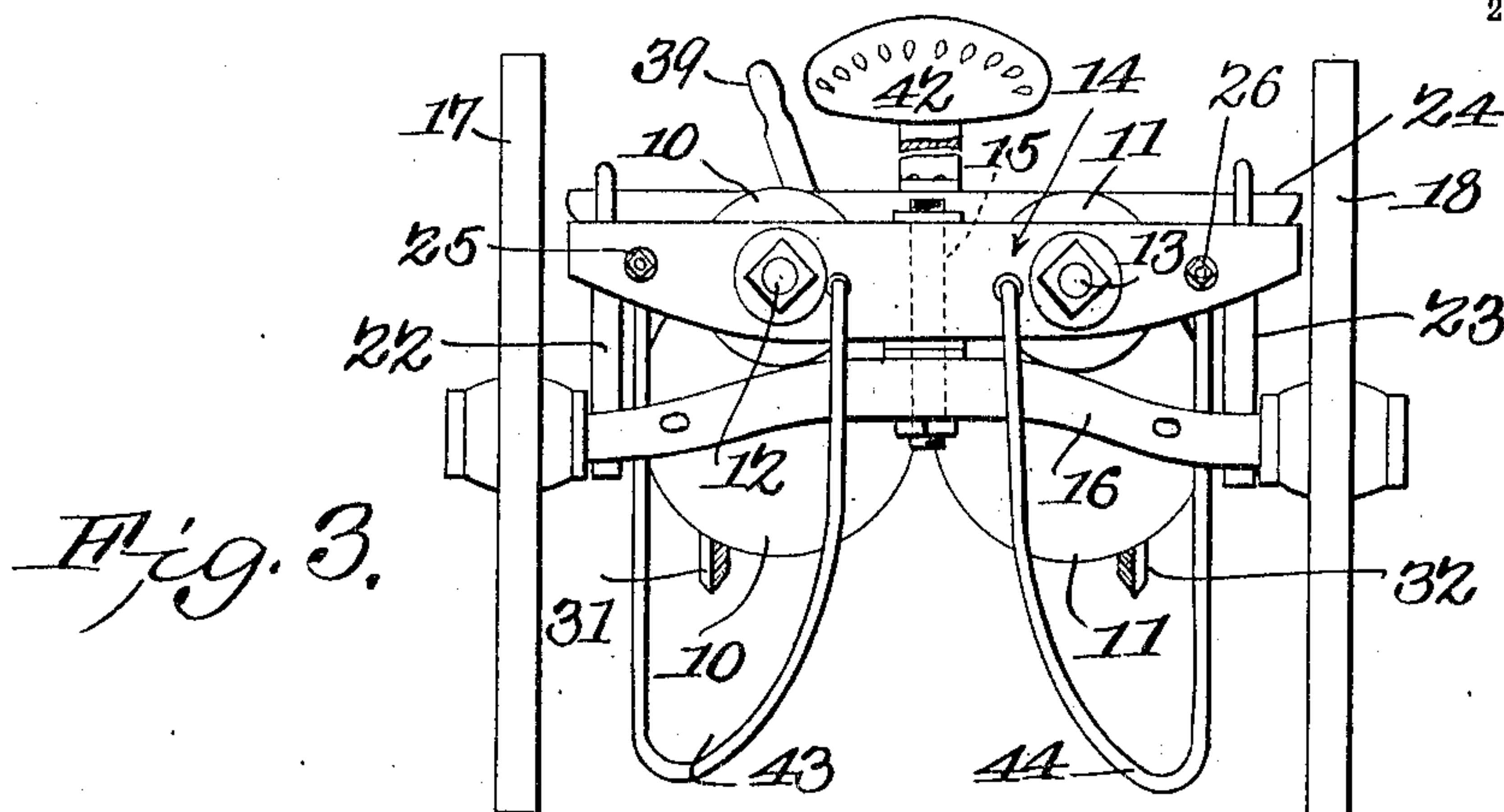
No. 843,493.

PATENTED FEB. 5, 1907.

C. J. RICHARDSON.
STALK PULLER.

APPLICATION FILED APR. 20, 1906.

2 SHEETS—SHEET 2.



WITNESSES:
E. J. Stewart
C. H. Woodward

Columbus J. Richardson,
INVENTOR.

By *C. A. Snow & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

COLUMBUS JOHN RICHARDSON, OF CALDWELL, TEXAS.

STALK-PULLER.

No. 843,493.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed April 20, 1906. Serial No. 312,832.

To all whom it may concern:

Be it known that I, COLUMBUS JOHN RICHARDSON, a citizen of the United States, residing at Caldwell, in the county of Burleson and State of Texas, have invented a new and useful Stalk-Puller, of which the following is a specification.

This invention relates to apparatus for pulling stalks, more particularly for pulling cotton-stalks, and for similar purposes, and has for one of its objects a simply-constructed and efficient device of this character which may be readily adapted to stalks of different sizes.

Another object of the invention is to improve the construction and to increase the efficiency and utility of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation.

In the drawings, Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is a front elevation. Fig. 4 is a rear elevation. Fig. 5 is a front view of the pulling-drums and stay-rods with the scrapers in position thereon.

The improved device comprises two opposing rollers having their axles substantially parallel and inclined rearwardly and downwardly, with the rollers tapering from the front to the rear, so that the forward ends of the rollers are smaller than their rear ends, and the rollers inclined downwardly toward the rear, or with their larger ends nearer the ground than their smaller forward ends.

The rollers are preferably formed with the rear portions having parallel sides. The rollers are arranged to be rotated simultaneously and also arranged to be laterally adjusted simultaneously at the rear or larger ends.

The rollers are represented, respectively, at 10 11 and rotatively disposed upon rods 12 13, the latter supported at their forward ends in a bolster 14, pivoted at 15 centrally of the forward axle 16, the latter curving

downwardly at the ends and provided with carrier-wheels 17 18, while the rear ends of the rods are secured in brackets 19 20, through which the rear axle 21 is rotatively disposed.

Supported by brackets 22 23 from the rear axle 21 is a bolster 24, and coupling the two bolsters 14 and 24 are tie-rods 25 26. The rear axle 21 is provided with carrier-wheels 27 28, fast to the axle, so that the latter is rotated with the rear wheels.

Mounted upon rods 12 13 rearwardly of the rollers 10 11 are bevel gear-pinions 29 30, and mounted upon the axle 21 are bevel-gears 31 32, respectively, engaging the pinions 29 30. The gears 31 32 are slidably disposed upon the axle and caused to rotate therewith by feathers 33 34 engaging recesses in the hubs of the bevel-gears in the usual manner. The bevel-gears 31 32 are also provided with inwardly-extending hubs fitting into recesses in the brackets 19 20, the latter hubs having annular channels in which set-screws operating through the brackets fit to couple the gears rotatively to the brackets, while at the same time causing the gears to be moved with the brackets when the latter are adjusted longitudinally of the axle 21. The rods 12 13 are firmly united to the brackets 19 20, as by pins 35 36, and when the brackets are adjusted longitudinally of the axle 21 the gears 29 31 and 30 32 will be moved therewith and retain their relative position at all points of the adjustment. By this means the opposing rollers 10 11 may be adjusted laterally toward each other or away from each other without interfering with the operation of the gearing.

Pivoted at 37 to a bracket 38, depending from the bolster 24, is a lever 39, the lever coupled by links 40 41, respectively, to the sliding brackets 19 20, so that by moving the lever 39 laterally the rollers will be adjusted laterally to a corresponding extent.

A driver's seat 42 is supported from the bolster 24, and the lever 39 is disposed at a point convenient to the hand of the driver upon this seat, so that he can adjust the rollers 10 11 conveniently. Gather-rods 43 44 are connected to the bolster 14 and extend forwardly of the same and serve to guide the material into position to be engaged by the rollers as the apparatus is drawn forward. Spaced eyebolts are connected to the forward axle 16 to provide means for the at-

tachment of the draft-tongue; but as the tongue forms no part of the present invention it is not illustrated.

The rear wheels 27 28 provide the requisite traction, and when the machine is drawn forward the motion of the wheels is communicated to the axle 21 and thence through the gearing to the rollers, the stalks being caught between the rollers and pulled out of the ground and carried above the rollers and discharged in any suitable manner from the machine; but as the discharge means forms no part of the present invention it is not illustrated. The supporting-rods 12 13 being disposed in parallel position and inclining rearwardly and downwardly or toward the rear of the machine and the rollers being smallest at the forward ends a space having inclined sides is formed, as shown at Fig. 1, into which the tops of the stalks are gathered, and as the machine moves forward the larger rear and lower ends of the rollers gather the stalks and pull them from the ground by the friction between the rollers.

The machine is simple in construction, may be inexpensively manufactured, and operates effectually for the purposes described.

If required, scrapers may be attached for removing any adhering matter from the drums 10 11, the scrapers being represented at 45 46 and attached to spaced collars 47 48 and 49 50, respectively, disposed upon the stay-rods 25 26.

Having thus described the invention, what is claimed as new is—

1. In an apparatus of the class described, a rear axle having the rear carrier-wheels and a rear bolster, a forward axle having the forward carrier-wheels and swinging from the forward bolster, a frame connecting said bolsters, rollers carried by said swinging bolster and said rear axle, means for communicating the motion of said rear axle to said rollers, and means for adjusting said rollers and the operating means of the same laterally at the rear ends.

2. In an apparatus of the class described, a supporting-frame including a rear axle, carrier-wheels and bolster, a forward axle, carrier-wheels and swinging bolster, and

coupling means between said bolsters, in combination with opposing rollers mounted for rotation between said rear axle and swinging bolster, and means whereby the motion of said rear carrier-wheels is simultaneously communicated to said rollers.

3. In an apparatus of the class described, a supporting-frame including a rear axle carrier-wheels and bolster, a forward axle, carrier-wheels and swinging bolster, and coupling means between said bolsters, in combination with rods spaced apart and connected between said swinging bolster and rear axle, rollers mounted for rotation on said rods, and means for communicating the motion of the rear wheels to said rollers.

4. In an apparatus of the class described, a supporting-frame including a rear axle and carrier-wheels, a forward axle and carrier-wheels and a swinging bolster, opposing rollers mounted for rotation between said swinging bolster and rear axle, and means for communicating the motion of said rear wheels to said rollers.

5. In an apparatus of the class described, a supporting-frame including a rear axle and carrier-wheels, a forward axle and carrier-wheels and a swinging bolster, rods spaced apart and extending between said bolster and rear axle, opposing rollers mounted for rotation upon said rods, and means for communicating the motion of said rear wheels to said rollers.

6. In an apparatus of the class described, a supporting-frame including the rear axle and carrier-wheels, a forward axle and carrier-wheels and a swinging bolster, opposing rollers mounted for rotation between said swinging bolster and rear axle, means for communicating the motion of the rear wheels to said rollers, and gather-rods connected at one end to said swinging bolster and extending in advance of the rollers.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

COLUMBUS JOHN RICHARDSON.

Witnesses:

CHAS. GRAMM,
R. S. BOWERS.