

(No Model.)

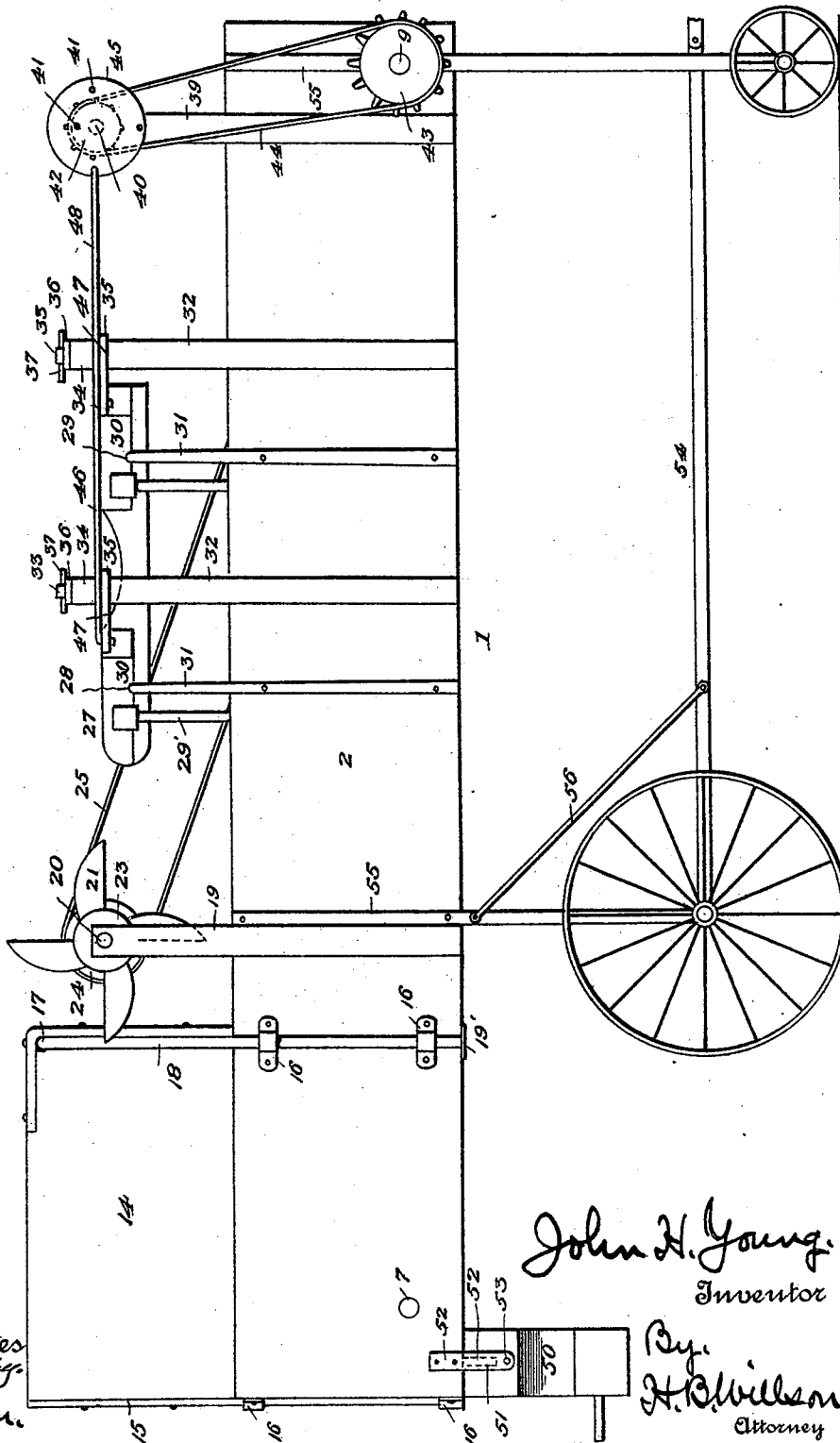
3 Sheets—Sheet 1.

J. H. YOUNG.
BAND CUTTER.

No. 582,712.

Patented May 18, 1897.

Fig. 1.



Witnesses
J. A. Wilson.

John H. Young.
Inventor

By
H. B. Wilson.
Attorney

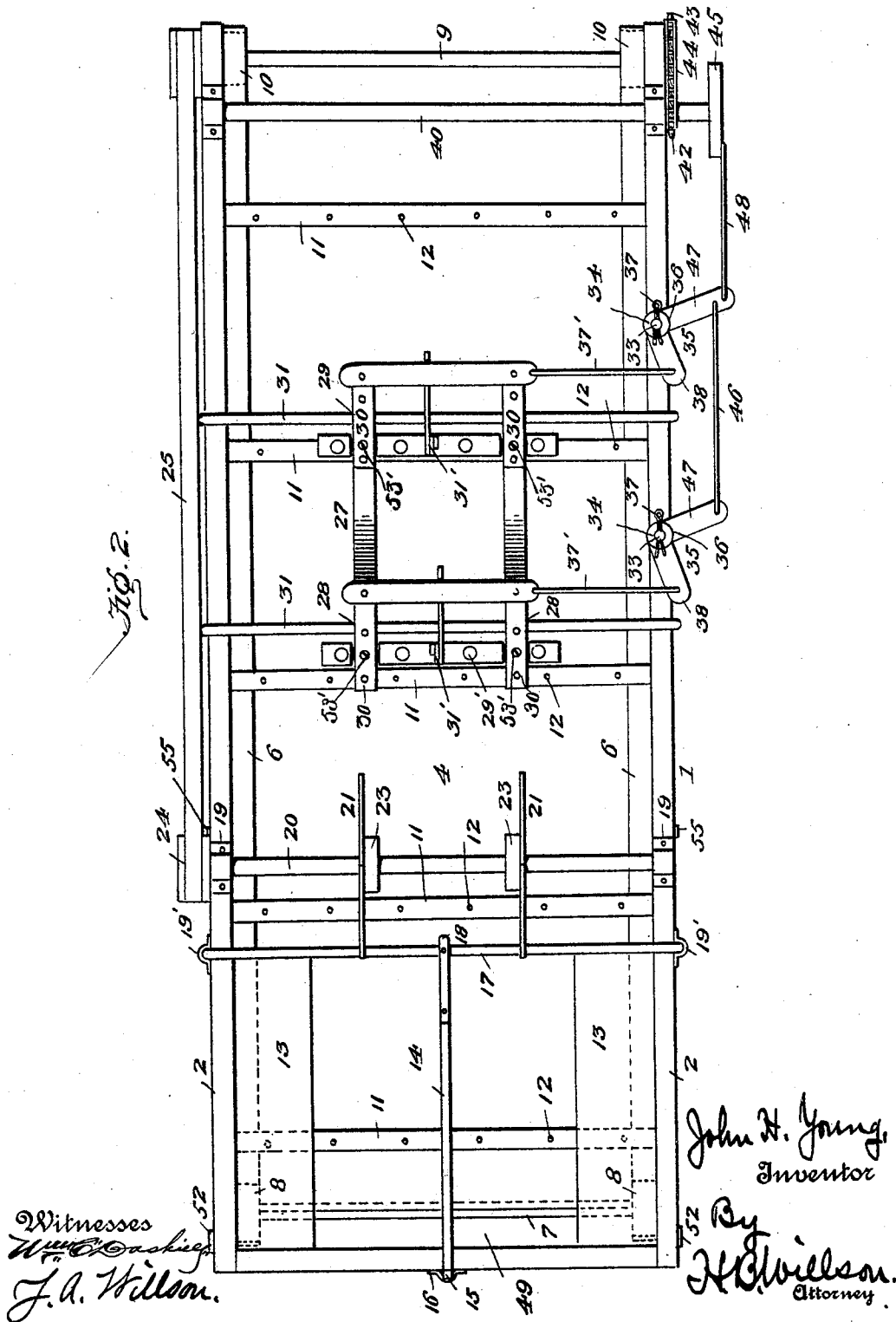
(No Model.)

3 Sheets—Sheet 2.

J. H. YOUNG.
BAND CUTTER.

No. 582,712.

Patented May 18, 1897.



(No Model.)

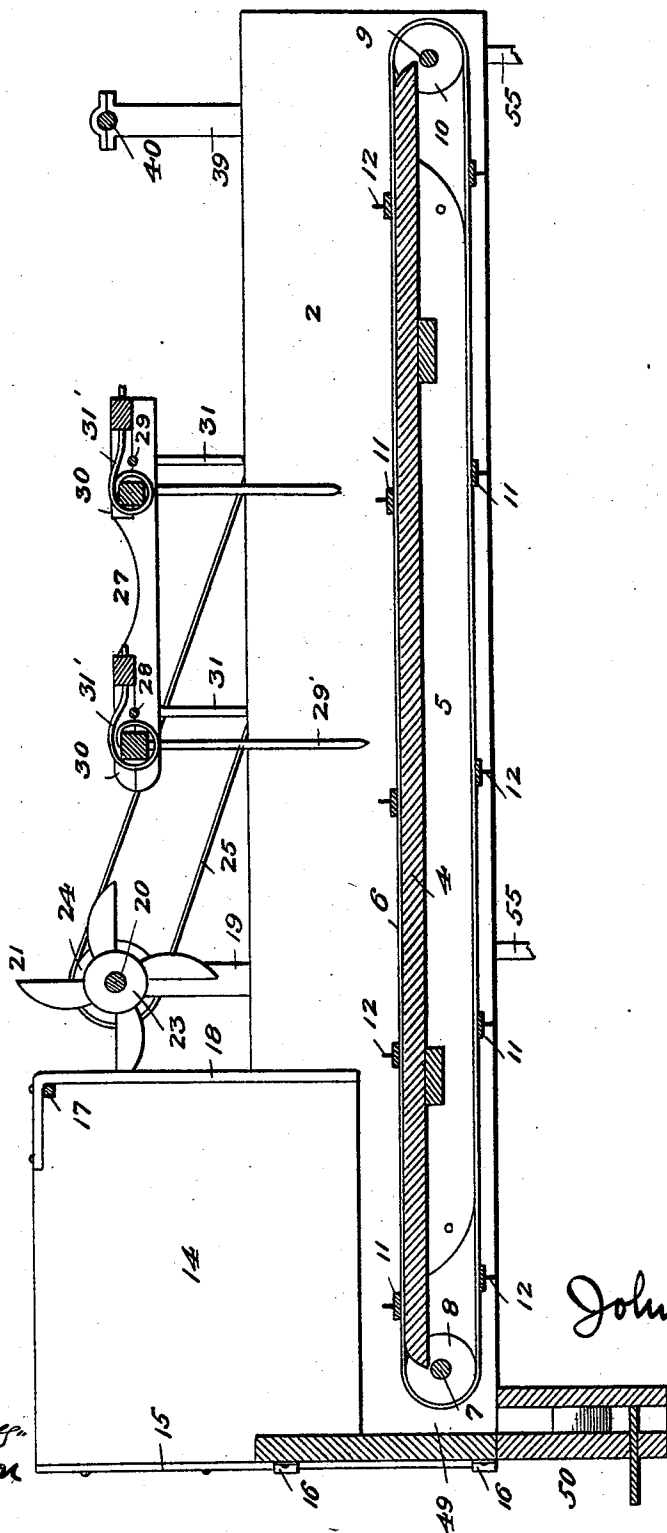
3 Sheets—Sheet 3.

J. H. YOUNG.
BAND CUTTER.

No. 582,712.

Patented May 18, 1897.

Fig. 3.



Witnesses
J. A. Wilson

John H. Young
Inventor
By
H. B. Wilson
Attorney

UNITED STATES PATENT OFFICE.

JOHN HENRY YOUNG, OF KINGSBURY, INDIANA.

BAND-CUTTER.

SPECIFICATION forming part of Letters Patent No. 582,712, dated May 18, 1897.

Application filed December 29, 1896. Serial No. 617,394. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY YOUNG, a citizen of the United States, residing at Kingsbury, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Band-Cutters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved band-cutter and feeder for threshing-machines.

The object of the invention is to provide a band-cutter and feeder which will be simple, efficient, and give satisfactory results, and which will feed the grain to the threshing-cylinder in a spread mass, whereby the grain is more effectually threshed.

With these objects in view the invention consists of certain features of construction and combination of parts, as will be hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a side view of my improved band-cutter and feeder. Fig. 2 is a top plan view of the same, and Fig. 3 is a longitudinal vertical sectional view.

In the drawings, 1 denotes the frame of the feeder, which consists of side pieces 2 and the rear end piece 3 and the bottom 4, the lower side of which is provided with two guide-cleats 5 for the belts of the endless conveyer 6.

7 denotes a shaft journaled to the side pieces at the front of the machine and provided with pulleys 8, and 9 denotes a drive-shaft journaled at the rear of the side pieces and provided with pulleys 10. The belts of the conveyers are connected by slats 11, which are provided with upwardly-projecting pins 12, which prevent the bundle, as a whole, rolling from one side of the machine to the other.

13 denotes the feed-boards at the front end of the machine. These boards slant downward and toward the center of the bottom of the frame and serve to deliver the bundle to the center of the slats of the conveyer.

14 denotes a divide which consists of a board the front edge of which is preferably notched to permit it to fit over and rest upon the end piece of the frame, and is provided with a rod 15, which extends downwardly and is engaged in straps or eyes 16, secured to the

outer face of the end piece. The inner upper corner of this board is provided with a piece of strap-iron and with a notch through which extends the cross-bar 17, connecting two standards 18, the lower ends of which project through staples or straps secured to the sides of the frame and rest upon two steps 19, secured to the lower edge of the frame.

The divide is provided to separate the sheaves when they are fed through each side of the machine and to cause them to move lengthwise along the table and may be made detachable from the machine to enable the full width of the conveyer to be used when required.

Mounted in standards 19, secured to the sides of the frame in advance of the divide, is a rotary shaft 20, provided with a number of disks 23, to which the band-cutters 21 are secured. The outer end of this shaft is provided with a gear-wheel 24, which is connected by a belt 25 with a gear 26 on the rear belt-driving shaft, hereinbefore described.

27 denotes the spreader or stirrer, which consists of a rectangular frame provided with bearings 28 and 29 at each end, which are covered by caps 30. Journaled in the bearings 28 are the rake-heads, which are provided with tines 29', that project downward toward the endless conveyer. The tines of one head project a greater distance than those of the other head for a purpose which will be hereinafter set forth.

The bearings 28 receive the yokes 31, the lower ends of which are secured to the sides of the box. These yokes serve to support the rake or stirrer and permit of its moving transversely across the machine.

31' denotes two coiled springs, each of which is connected to a rake-head and to one of the end bars of the stirrer-frame, as shown in Fig. 2.

32 denotes two posts which are secured to the side of the box and project upwardly above its upper edge and are provided with two spindles 33, upon which are journaled sleeves 34 of bell-crank levers 35. Washers 36 are arranged on these spindles above the sleeves of the bell-crank, and pins 37 are inserted in holes in the upper ends of the spindles and hold the bell-crank levers in position.

37 denotes two links, each of which is con-

needed to a limb 38 of the bell-crank lever and to the rake-frame.

39 denotes two standards which are secured to the side of the frame near their rear ends and which support the shaft 40, having fixed to one end a sprocket-wheel 42, which is connected with the sprocket-wheel 43 of the drive-shaft 9 by a sprocket-chain 44. A crank 45 is also secured to this shaft 40 and is provided with a series of apertures 41, which extend at different distances away from the axis of the wheel.

46 denotes a link which connects the outer limbs 47 of the bell-crank levers, and 48 denotes a link which connects the outer limb of the rear bell-crank lever with the crank-wheel.

By referring to Fig. 3 it will be noticed that the bottom of the frame stops short of the side pieces, thus forming an opening 49, through which the kernels of grain from the stalks may be dropped. To catch this grain, I provide a hopper 50, which is arranged beneath the opening and which is provided with a valve at its outlet end. This hopper is provided with sockets 51 in its sides and into which project pins 52, that extend below the lower ends of the side pieces of the frame. Spring-plates 52 are secured at one end to the side pieces and have their other ends projecting downward and formed with apertures which receive laterally-projecting studs 53 on the sides of the hopper. When the hopper has become filled with grain, a bag may be attached to its mouth, the slide withdrawn, and the contents of the hopper emptied into the bag.

54 denotes a wheeled truck provided with uprights 55 and braces 56, by means of which the frame of the feeder is attached to the trucks.

In operation the bundles of grain are fed at the front end of the machine and will roll over against the divide and be carried rearward by the conveyer underneath the band-cutters, which will sever the bands, and as the grain continues on its course the tines of the rakes will engage the same and spread it evenly over the entire surface of the conveyer. The front set of tines but partially spreads the grain, while the rear set of tines completely spreads it. These tines have a rocking motion, whereby, should there be any obstruction or should the grain be fed too fast, the tines will free themselves from the mass and prevent the choking of the machine. When fine stuff, such as clover, is fed to the machine, it is not necessary that the tines have a rocking motion, and they may be set

at the desired angle and retained in that position by the set-screws 53'. After the grain has passed the tines it is discharged from the rear end of the conveyer to the cylinder of the thresher. (Not shown.)

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

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

In a band-cutter and feeder, the combination with the frame of a traveling endless conveyer mounted upon pulleys fixed to shafts journaled in the side pieces of said frame, a drive-wheel secured to one of the ends of said shafts, and a sprocket-wheel secured to the other end of said shaft, a cutter-shaft mounted across the top of the frame and provided with a gang of cutters, a pulley upon the end of the cutter-shaft, having a belt connection with the drive shaft, guides secured across the top of the frame at the rear of the cutters, a rake-frame mounted upon said guides, two sets of rake-heads journaled in said rake-frame to rock longitudinally of the frame, and to move transversely therewith, springs for controlling the rocking movement of said rake-heads, set-screws for rotatably adjusting and locking said rake-heads, two sets of tines projecting downwardly from said rake-heads, one set being arranged in advance of and shorter than the other set, bell-crank levers, connections between the bell-crank levers and rake-frame, a crank-wheel secured to the end of a shaft journaled in standards at the rear end of the frame, said crank-wheel being provided with sockets in its face at different points from the axis of the wheel, a sprocket-wheel secured to said shaft and connected with the first-mentioned sprocket-wheels by a sprocket-chain, and a link connected with the rear bell-crank lever and adapted to engage one of said sockets, whereby the transverse throw of the rake-frame may be varied, substantially as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN HENRY YOUNG.

Witnesses:

THOMAS CRAFT,
CHAS. A. PARKER.