

No. 667,242.

Patented Feb. 5, 1901.

W. MORLEY.
BAND CUTTER AND FEEDER.

(Application filed May 28, 1900.)

(No Model.)

2 Sheets—Sheet 1.

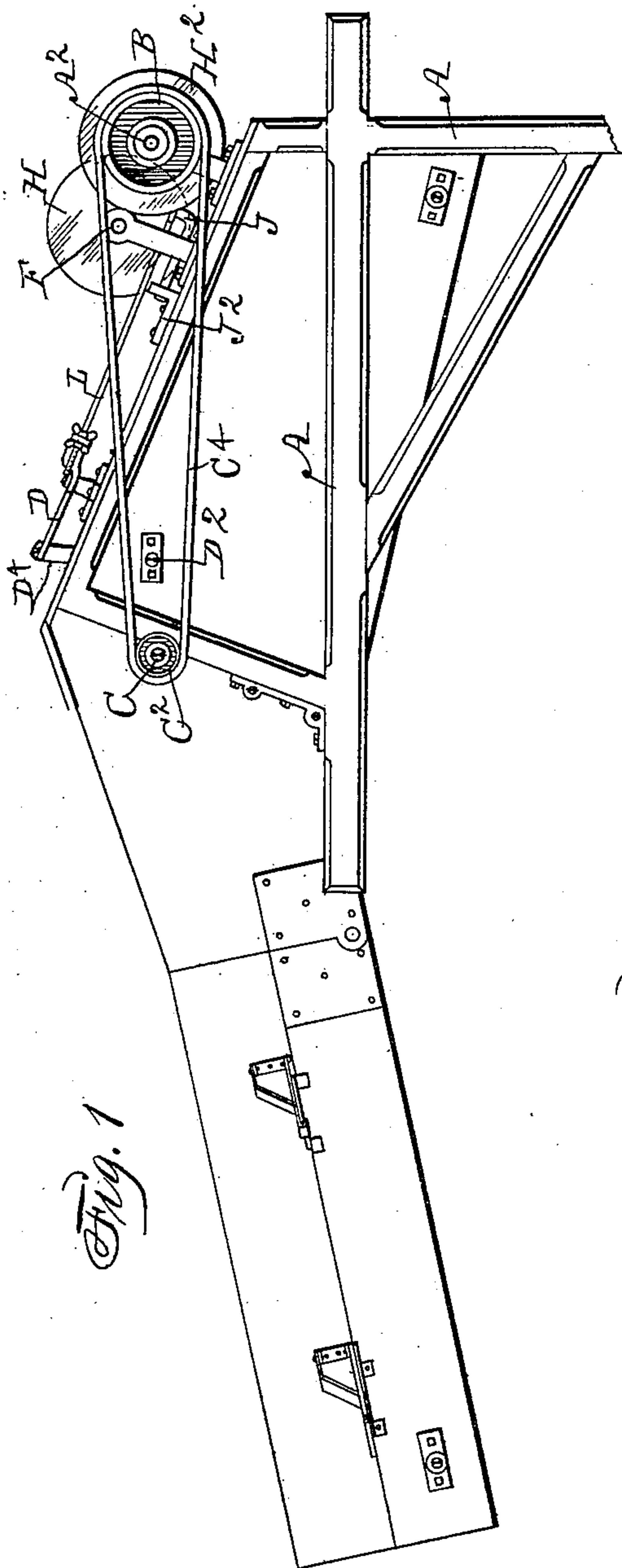


Fig. 1

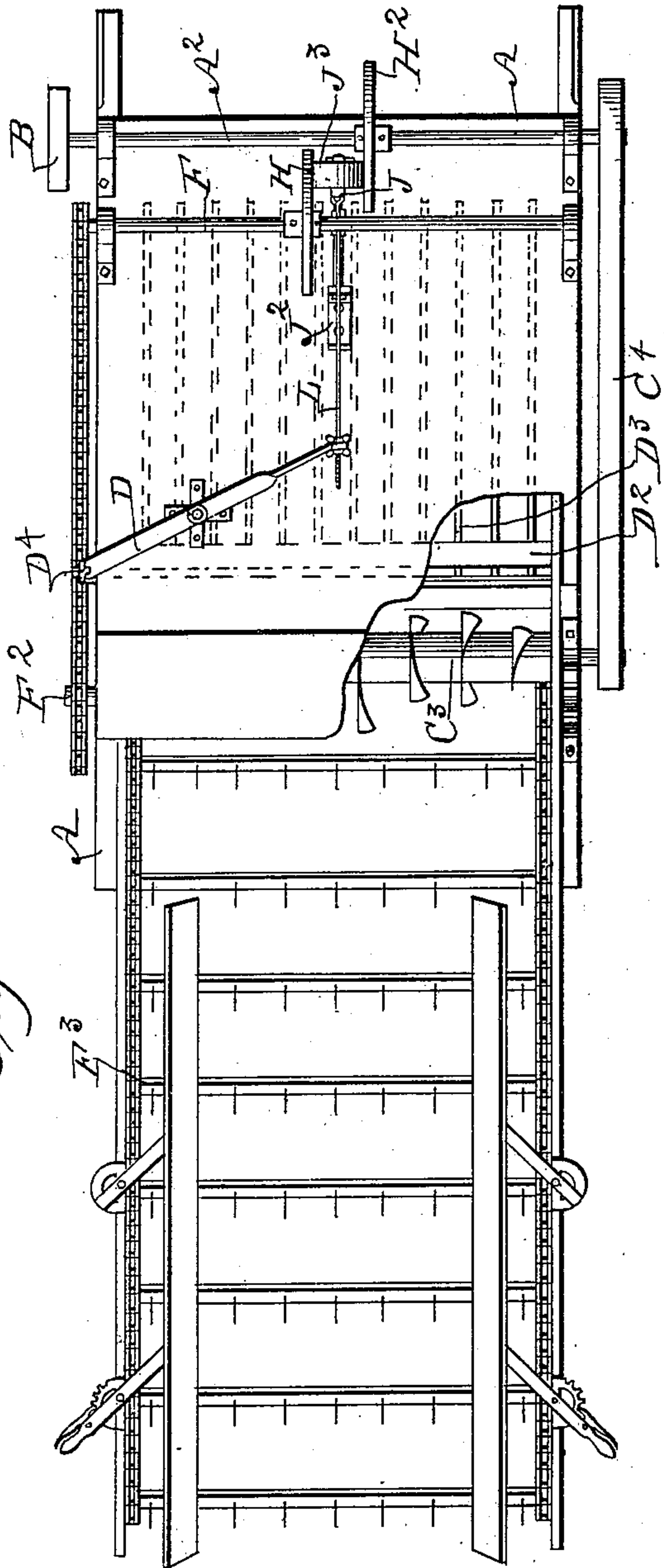


Fig. 2

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Inventor: William Morley,
By Thomas G. Orwig, Attorney.

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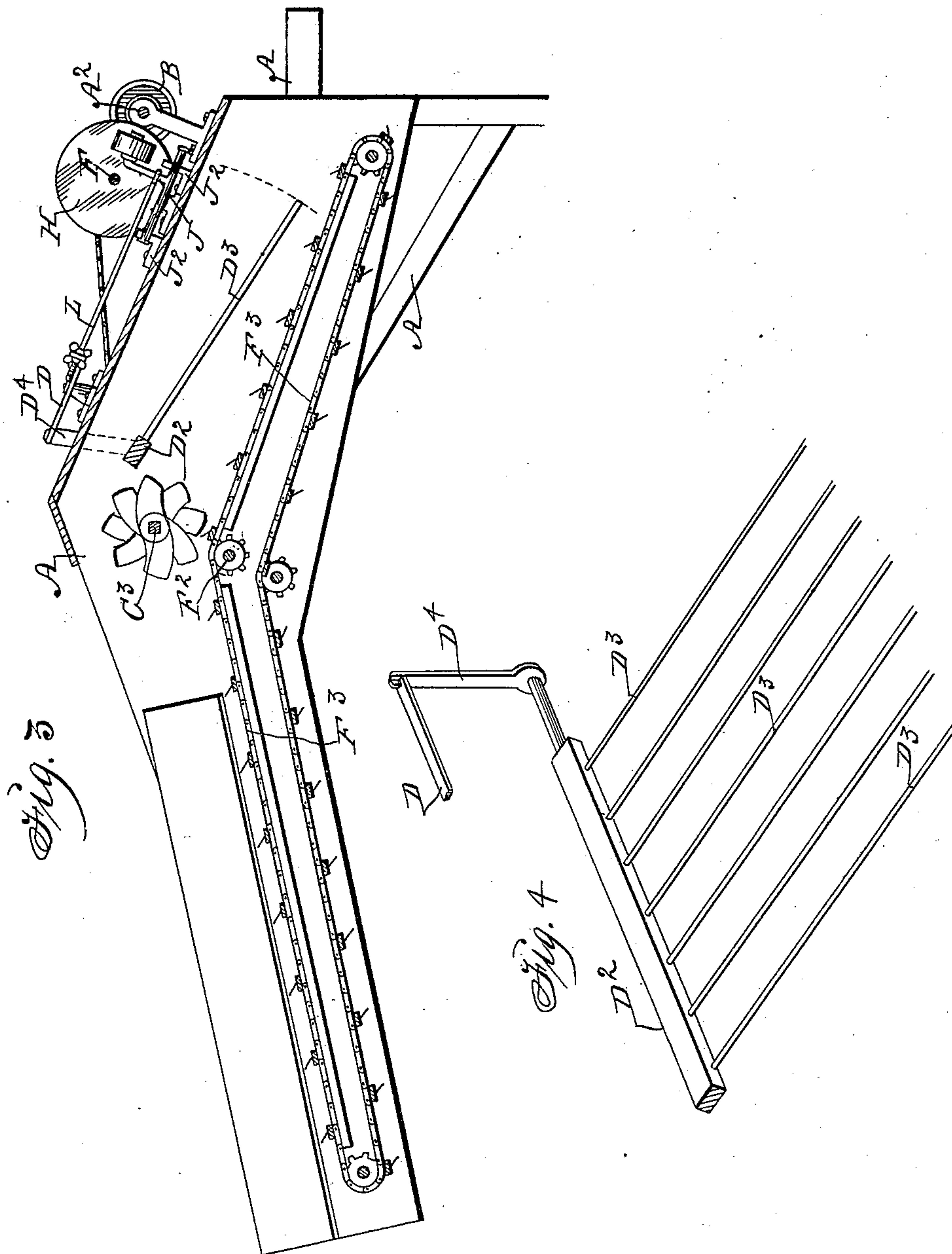
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UNITED STATES PATENT OFFICE.

WILLIAM MORLEY, OF FONTANELLE, IOWA.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 667,242, dated February 5, 1901.

Application filed May 28, 1900. Serial No. 18,217. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MORLEY, a citizen of the United States, residing at Fontanelle, in the county of Adair and State of Iowa, have invented a new and useful Improvement in Automatic Band-Cutters and Feeders, of which the following is a specification.

My improvement relates to the band-cutter and feeder for which United States Letters Patent were granted to me December 29, 1896, No. 573,898, and January 2, 1900, No. 640,684; and my invention consists in the construction, arrangement, and combination of elements and subcombinations, as hereinafter set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved machine, in which two disks and a brush-wheel are used for governing the advance of grain to the cylinder of a thresher. Fig. 2 is a top view from which parts are broken away to disclose the band-cutter and other operative mechanism. Fig. 3 is a central longitudinal sectional view showing the relative positions of different parts of the machine. Fig. 4 is a perspective view of a detached portion of the speed-governing mechanism.

The letter A designates the frame of the machine, and A² the driving-shaft, mounted in bearings fixed on the top and end portion of the frame.

B is a band-wheel on the end of the shaft A², adapted to be connected with the cylinder-shaft of a thresher, as required to transmit power and motion from the thresher to the band-cutter and feeder mechanism. B² is a band-wheel on the other end of said shaft connected with the pulley C on the end of the shaft C² of the rotary cutter C³ by means of a band C⁴.

D is a lever pivoted on top of the machine near its apex.

D² is a rock-shaft in bearings fixed to the parallel sides of the machine, and D³ indicates straight bars fixed to the rock-shaft to extend at right angles therefrom and over the endless carrier B in such a manner that the bars will be raised and lowered alternately by the varying quantities of grain advanced on the carrier, and the rock-shaft actuated by such raising and lowering of said bars.

D⁴ is an arm on the end of the rock-shaft D² and connected with the end of the lever D, as required to transmit motion from the rock-shaft to the lever.

F is a rotatable shaft in bearings fixed on top of the machine and in parallel position with the driving-shaft A² and connected with the rotatable shaft F², that actuates the endless carrier F³ by means of sprocket-wheels and a chain, as shown in Fig. 2.

H is a disk fixed on the shaft F, and H² is a mating disk fixed on the driving-shaft A² in such a manner that the two disks will be in parallel planes.

J is a bracket slidably mounted in bearers J², fixed on top of the machine to carry a brush-wheel J³ in right-angled position relative to the rotatable disks.

L is a rod adjustably connected with the end of the lever D and also with the bracket H in such a manner that the bracket will be automatically adjusted, as required to change the position of the brush-wheel relative to the two disks F² and F³ by the actions of the bars D³ and the rock-shaft D², as required to regulate the speed of the endless sheaf-carrier F³.

It is obvious that when grain is advanced too fast by the carrier F³, and the bars D³ are thereby elevated by the quantity of grain crowded under them the rock-shaft D² will be actuated, as required to vibrate the lever D and slide the brush-wheel J³ relative to the disks H and H². Moving the brush-wheel toward the circumference of the disk H on the shaft will diminish the speed of the shafts F and F² and the sheaf-carrier F³ and a reverse motion of the brush-wheel will increase their speed. It is also obvious by thus moving the brush-wheel in a plane parallel to the two disks and in contact with the faces of the disks the two disks will coact and simultaneously and instantly respond to the movement of the adjustment of the brush-wheel relative to the centers of the disks and that a more sensitive governing device is thus produced for regulating the speed of the feeder mechanism relative to the speed of the threshing - cylinder. A simple automatic mechanism is thus provided for governing the speed of the sheaf-carrier and the feeding of grain regularly to the cylinder of a thresher

as required to prevent the annoyances and damages incident to grain being advanced too rapidly to the cylinder of a thresher.

I am aware a brush-wheel has been adjust-
5 ably connected with a rotatable disk in such a manner that the shaft carrying the brush-wheel could be adjusted by hand; but in no instance has a brush-wheel been combined with two rotatable disks and mechanism for
10 automatically adjusting the brush-wheel in opposite directions relative to the centers of the disks in the manner shown and described to accomplish the purposes contemplated by my invention.

15 Having described the construction, combination, and arrangement of the different operative elements, the practical utility of my invention will readily be understood by persons familiar with the art to which it appertains, and
20 tains, and

What I claim as new, and desire to secure by Letters Patent, is—

A band-cutter and feeder comprising a frame, an endless sheaf-carrier in the frame,
25 a rock-shaft having fixed bars extending over said sheaf-carrier and an arm at one end, a rotary cutter mounted above the said rock-shaft and connected with a driving-shaft, a

driving-shaft adapted to be connected with the cylinder-shaft of a thresher, a lever piv- 30
oted on top of the machine and connected with the arm of said rock-shaft, a rotary shaft in bearings fixed to the top of the machine and in parallel position with the driving-shaft, a disk fixed to the driving-shaft, a disk 35
fixed to said parallel shaft, a brush-wheel mounted on a bracket slidably connected with the machine and in contact with the faces of the two disks, a rod adjustably connected with said bracket and said lever to 40
move the bracket and brush-wheel in a plane parallel to the faces of the two mating disks, a band-wheel on the end of the driving-shaft and a fixed pulley on the shaft of the rotary band-cutter, a sprocket-wheel on the end of 45
the shaft mounted on top of the machine and connected with a sprocket-wheel on the end of the shaft of the endless sheaf-carrier and a chain on said sprocket-wheels, all arranged and combined to operate in the manner set 50
forth for the purposes stated.

WILLIAM MORLEY.

Witnesses:

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JOE J. STUE.