

(No Model.)

2 Sheets—Sheet 1.

G. W. HALLETT.

FEED REGULATOR FOR THRASHING MACHINES.

No. 493,706.

Patented Mar. 21, 1893.

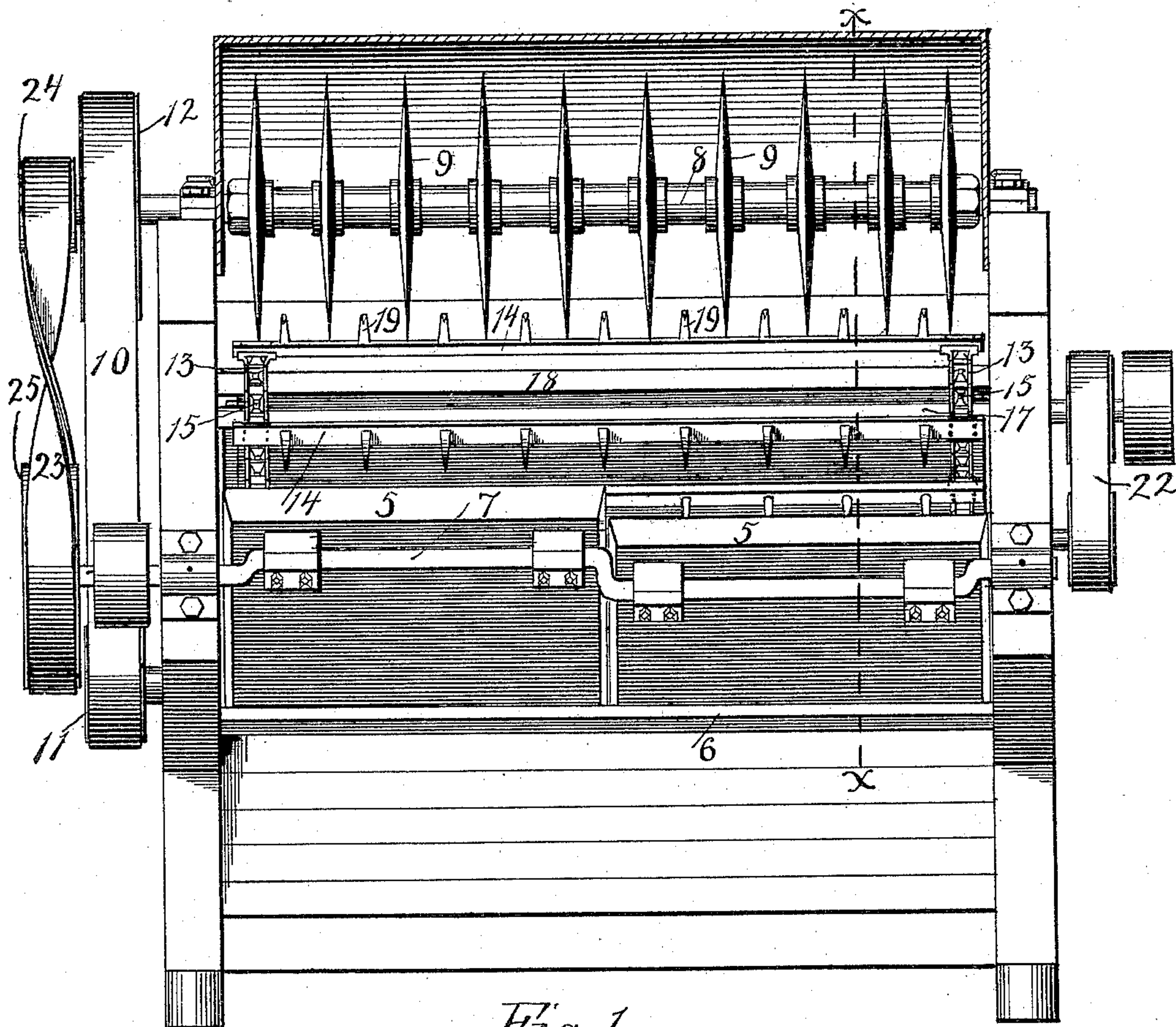


Fig. 1.

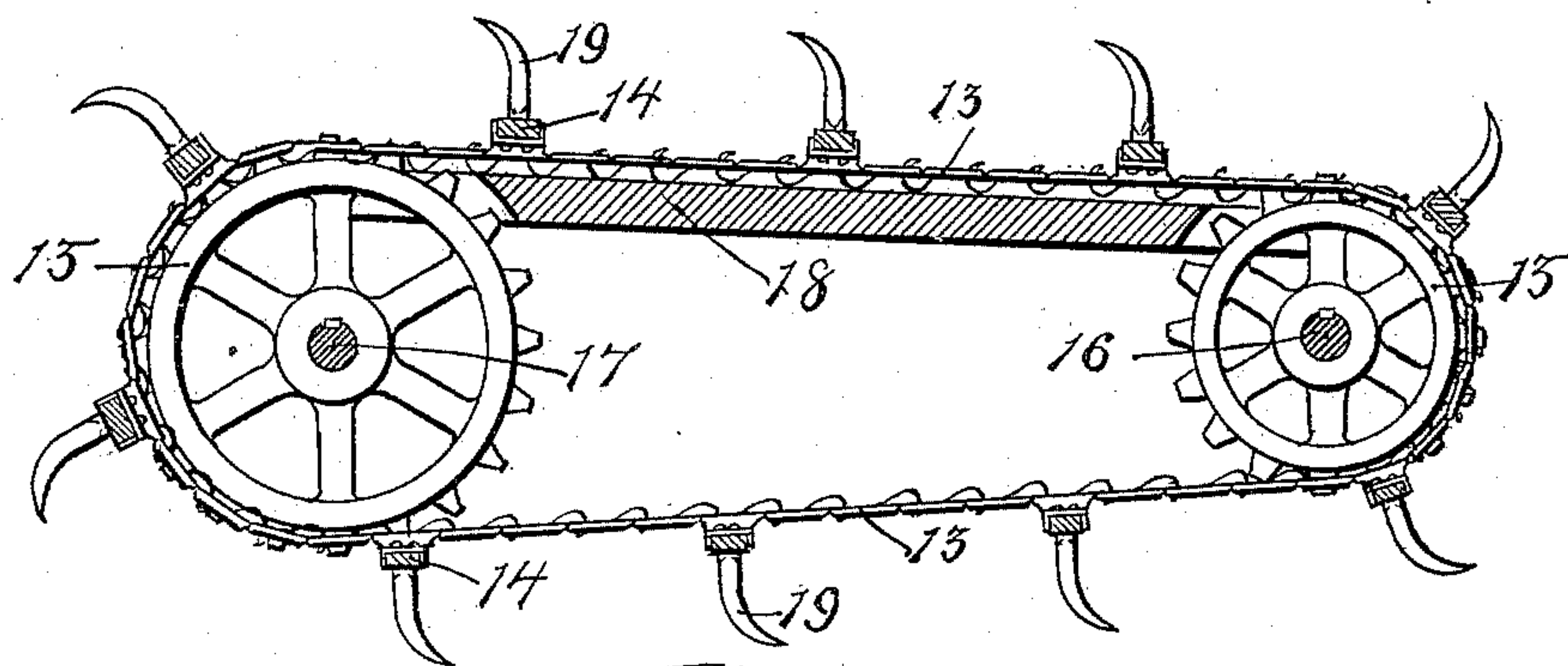


Fig. 2.

Witnesses

G. E. Purple  
C. Hawley.

By

Inventor

George W. Hallett

Paul & Merwin Atty's.

(No Model.)

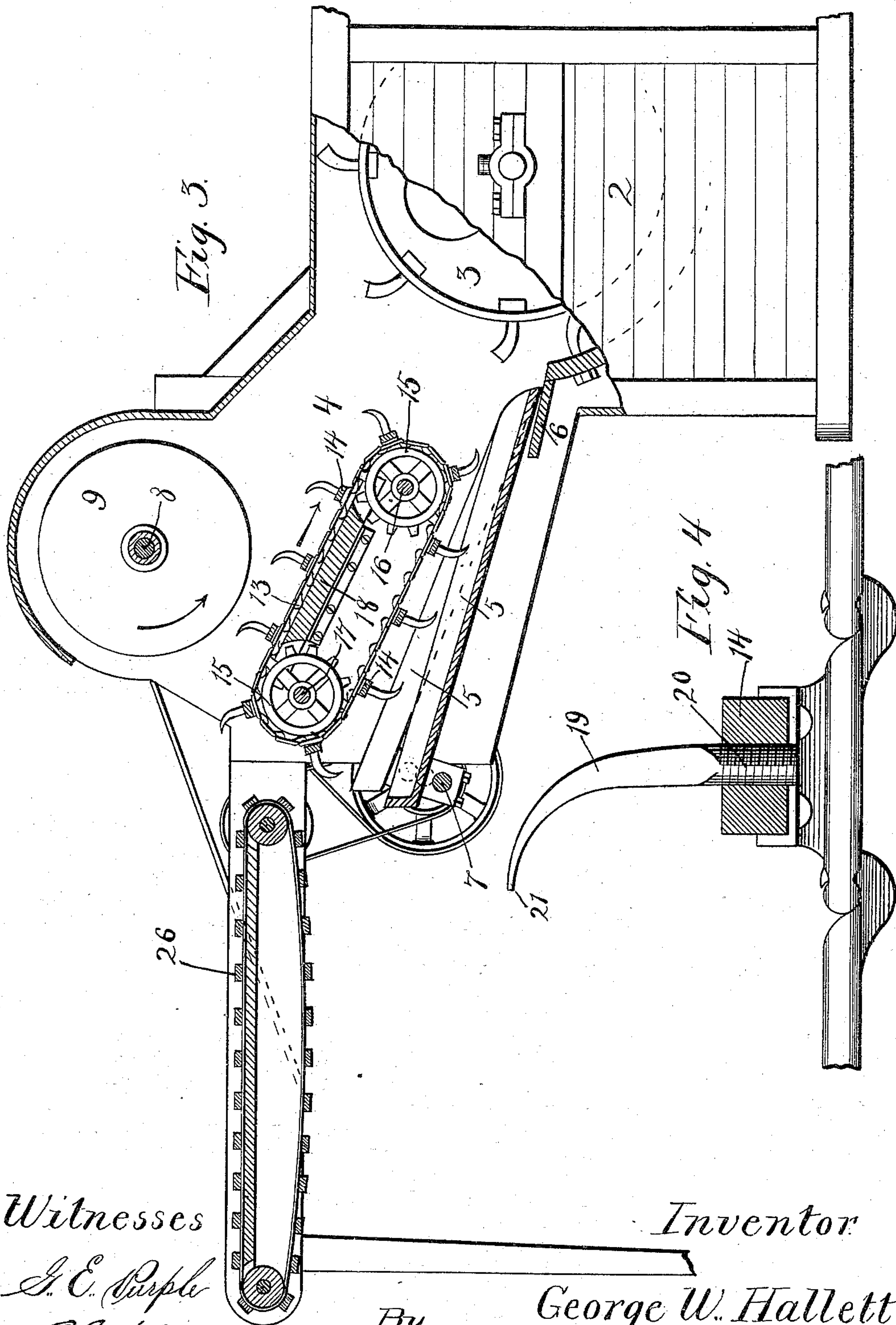
2 Sheets—Sheet 2.

G. W. HALLETT.

FEED REGULATOR FOR THRASHING MACHINES.

No. 493,706.

Patented Mar. 21, 1893.



Witnesses

J. C. Purple

O. J. Hawley.

Inventor

George W. Hallett

By

Paul & Merwin

Atty's.



# UNITED STATES PATENT OFFICE.

GEORGE W. HALLETT, OF ABERDEEN, SOUTH DAKOTA.

## FEED-REGULATOR FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 493,706, dated March 21, 1893.

Application filed May 6, 1892. Serial No. 432,021. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. HALLETT, of Aberdeen, in the county of Brown and State of South Dakota, have invented certain Improvements in Feed-Regulators for Thrashing-Machines, of which the following is a specification.

My invention relates to means for accurately regulating the speed with which the grain is applied to the cylinder of the thrashing machine and its object is to provide a reliable machine for this purpose to operate in connection with band cutters.

The invention consists in the combination with the thrashing machine cylinder and a set of rotating band cutting knives, of an endless toothed carrier or conveyer arranged beneath said knives and operating to feed the stock in the same direction but more slowly than the knives; and in various details of construction and in combinations all as hereinafter described and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings, in which:—

Figure 1 is a front elevation of a machine embodying my invention. Fig. 2 is an enlarged and detached view of the regulator. Fig. 3 is a vertical longitudinal section on the line  $x-x$  of Fig. 1. Fig. 4 is a detail view showing the construction of one of the teeth of the regulator and the manner of attaching the same thereto.

As shown in the drawings, 2 represents the forward end of the machine and 3 a cylinder of the usual construction. Upon the end of the machine and before the opening to the cylinder I arrange the box or casing 4, the bottom of which is composed by the reciprocating pans 5 having their inner ends resting on the short inclined feed board 6 and their outer ends pivoted upon the crank shaft 7, these pans being calculated to catch any loose grain which may fall through the endless regulator device and lead the same down into the cylinder space. In the upper part of the box 4 is the transverse shaft 8 upon which are arranged a number of the band cutting circular knives or disks 9, which are rotated rapidly by a belt 10 passing from the pulley 11 on the cylinder shaft and over a somewhat

larger pulley 12 on the arbor or shaft 8. Between the knives and the pans 5 and occupying an inclined position is the endless regulator device composed of the endless chains or belts 13 and the cross slats 14, the chain belts operating over the sprocket wheels 15 arranged on the upper and lower shafts 16 and 17, respectively. Beneath the upper part of this conveyer I arrange a short floor 18 to receive the pressure of the grain passing over the same and beneath the knives which grain would otherwise fall through between the steel bars. Upon each slat 14 I provide a number of the sharp and backwardly turned teeth 19 having the shanks 20 screwed or otherwise fastened in the slats 14 as shown in Fig. 4. Each of these teeth has a square form in cross section with sharp corners and is tapered out to a comparatively sharp point 21. This form I find best adapted for the work as the straw kinks slightly upon the sharp edges or corners of the teeth and is thereby prevented from slipping between the same. If such slipping took place the conveyer would be of little use as its chief office is to hold back the lower side of the bundle until the upper part has been forced off by the cutting disks operating at a much higher rate of speed.

The conveyer or regulator is preferably driven from the crank shaft 7 by a short belt 22 passing over pulleys on the two shafts 7 and 16, the crank shaft being driven by the twisted belt 23 passing from small pulley 24 on the arbor 8 over the large pulley 25 on the crank shaft. Thus the top of the regulator operates in the same direction as the lower sides of the cutting disks but at a much lower speed. The grain is preferably fed to the regulator by an endless conveyer 26 of a convenient length and supported with its inner end on a level with the upper end of the regulator.

In use the grain in the bundle form is placed lengthwise on the conveyer and carried thereby onto the regulator by which it is caught and held and slowly carried forward under the knives which cut the bands and by their rapid movement immediately and rapidly feed off the top of the bundle which passing over the lower part falls into the cylinder. By the time the upper part of the bundle has thus been disposed of the slowly revolving regu-



lator belt passes the lower or remaining part into the cylinder, the teeth 14 acting to the last to hold the grain from passing too rapidly into the cylinder. The lower end of the regulator operates as closely as possible to the reciprocating pans and the pans catch the loose kernels of grain or the short broken straw which might otherwise pass back with the teeth and become wound about the regulator, passing them finally into the thrasher.

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

1. The combination with the thrashing machine cylinder, of band cutting disks provided on a transverse shaft arranged before said cylinder and rotating at a high rate of speed, an inclined and more slowly operating regulator device arranged beneath said disks and consisting of endless chain belts with transverse bars fixed thereon and provided with backwardly curved square cornered teeth, a table to support the bars of the upper side of

the conveyer, and means for driving the cylinder, disks and conveyer, substantially as described.

2. The combination, with the cylinder, of a series of rapidly rotating cutting disks, a conveyer arranged immediately beneath said disks and operating more slowly and inclined toward the conveyer, said conveyer made up of endless chain belts, metal bars fixed thereon and square cornered curved teeth provided on said bars for holding the lower side of the bundle, a floor over which the upper bars operate, and shaker pans provided beneath said conveyer for catching loose grain falling through the regulating conveyer, substantially as described.

In testimony whereof I have hereunto set my hand this 2d day of May, A. D. 1892.

GEORGE W. HALLETT.

In presence of—

J. H. HAUSER,  
T. A. GILMER.