J. A. BECKETT & G. W. WILLIS.

REEL ADJUSTING MECHANISM FOR MOWING MACHINES.

APPLICATION FILED MAY 13, 1909.

972,321.

Patented Oct. 11, 1910.

2 SHEETS—SHEET 2.

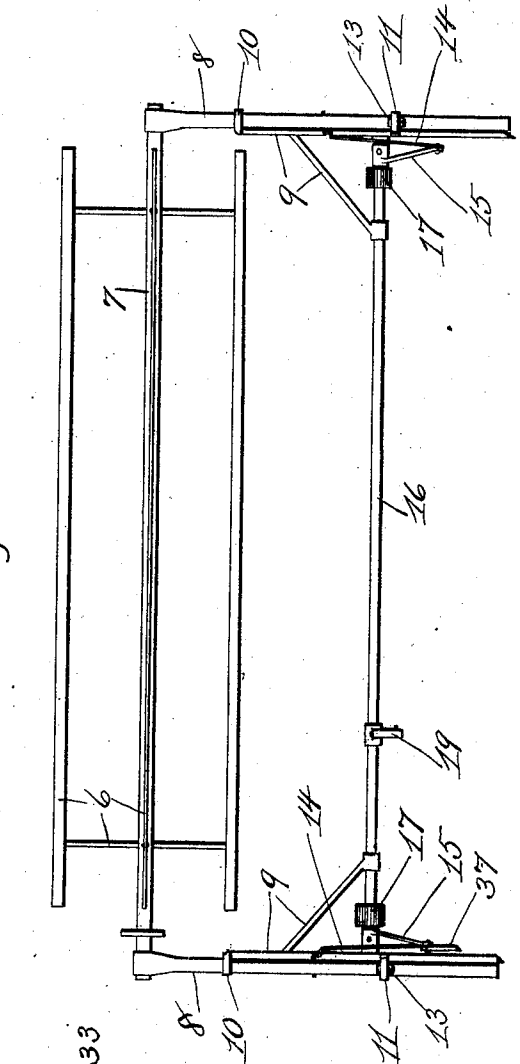


Fig. 2.

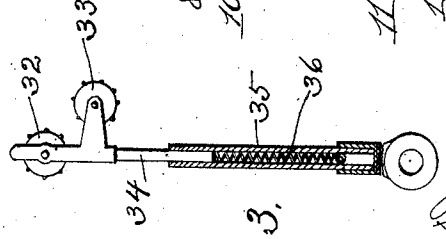


Fig. 3.

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JAMES A. BECKETT AND GEORGE WALTER WILLIS, OF HOOSICK FALLS, NEW YORK; SAID BECKETT ASSIGNOR TO WALTER A. WOOD MOWING AND REAPING MACHINE CO., OF HOOSICK FALLS, NEW YORK, A CORPORATION OF NEW YORK.

REEL-ADJUSTING MECHANISM FOR MOWING-MACHINES.

972,321. Specification of Letters Patent. **Patented Oct. 11, 1910.**

Application filed May 13, 1909. Serial No. 495,694.

To all whom it may concern:

Be it known that we, JAMES A. BECKETT and GEORGE WALTER WILLIS, each a citizen of the United States, residing at Hoosick Falls, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Reel-Adjusting Mechanism for Mowing-Machines, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification. Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in side elevation of a mowing-machine of the header type embodying our invention. Fig. 2 is a top plan view of the reel and adjacent parts of the machine, with the remainder of the machine broken away. Fig. 3 is a central, longitudinal section of the spring-post for tightening the sprocket-chain.

This invention is applicable to various kinds of mowing-machines and reapers, and is particularly adapted for such a machine of the particular type known as a header.

Certain objects of the invention are to facilitate the adjustment longitudinally of the machine of the reel-mechanism, and to automatically maintain the tension of the reel-operating chain in the various positions of adjustment of the reel.

Other objects will appear in connection with the following description.

Referring to the drawings wherein the invention is shown in preferred form, 1, represents the tongue, 2, the tiller-wheel, 3, the draft-wheels and, 18, the main shaft upon which the draft-wheels, 3, are mounted, together comprising the truck of the machine.

The harvester-frame, 4, may be of any known type preferably adjustably mounted in some known manner upon the truck, and provided with cutting-mechanism of the usual type comprising in part guard-fingers 5.

Details of the cutting-mechanism and the grain-receiving apron commonly employed in this type of machine are not shown, as the same form no part of the present invention.

The reel, 6, is fixed upon a shaft, 7, rotatively mounted in bearings in the outer ends of the side bars, 8, supported upon the reel-frame, 9, having uprights, 10 and 11, upon which are rotatively mounted rollers, 12 and 13, the rollers, 12, underlying the forward part of the side bars, 8, and the rollers, 13, overlying the rear part of said side bars. The weight of the reel tends to keep the side bars, 8, in contact with both sets of rollers, 12 and 13.

The side bars, 8, are connected, respectively, by links, 14, with rocker-arms, 15, fixed upon a cross rock-shaft, 16, which shaft is rotatively mounted in bearings in the upper end of a pair of posts, 17, erected from the harvester-frame 4. A rocking movement of the shaft, 16, imparts through the links, 14, a reciprocating movement to the side bars, 8, and reel, 6, whereby the position of the reel can be varied longitudinally of the machine.

Rocking movements can be imparted to the rock-shaft, 16, by means of a rocker-arm, 19, fixed thereon and connected by a link, 20, with an angle-lever, 21, fulcrumed at, 22, upon the harvester-frame, which angle-lever is connected by link, 23, with a hand-lever, 24, fulcrumed at, 25, upon a bracket, 26, mounted upon the tongue, 1, of the truck, said lever being provided with a hand-operated latch, 27, engageable with a toothed segment, 28, on said bracket whereby the lever can be locked in different positions of adjustment.

Rotary movements are imparted to the reel by means of a sprocket-chain, 29, connecting a sprocket-wheel, 30, on the reel-shaft, 7, with a sprocket-wheel, 31, on the main truck-shaft 18. The upper and lower stretches of the chain, 29, pass, respectively, over guide sprocket-wheels, 32 and 33, rotatively mounted upon a spring-supported post, 34, carried by an arm, 35, rotatively mounted upon the main truck-shaft 18. The arm, 35, is made tubular and contains a coil-

spring, 36, adapted to be engaged and held under compression by the post, 34, under the pull exerted by the chain, 29. The telescoping spring-post thus formed by the post, 34, and arm, 35, is connected by means of a link, 37, with one of the rocker-arms, 15, whereby said spring-post is caused to swing to and fro in accordance with the reciprocating movement of the reel, said post serving in all positions of the reel to maintain a proper tension upon the sprocket-chain 29.

The reel-mechanism can be raised and lowered in any known manner.

The reel-frame, 9, is preferably rotatively mounted on the shaft, 16, and, as shown, the sides of said frame are connected at their rear ends, respectively, with posts, 38, erected from the harvester-frame, 4, each having a screw-threaded upper end passing through an aperture in the rear end of one of the side members of the frame, 9, and having a hand-operated nut, 39, engageable with the upper side of said side member. The weight of the reel tends to hold the frame, 9, in engagement with the nuts 39.

By adjustment of the hand-operated nuts, 39, the reel-frame can be rocked upon the rock-shaft, 16, to raise and lower the reel relatively to the harvester-frame.

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

1. In a machine of the class described, and in combination, a truck having a tongue and draft-wheels; a harvester-frame mounted upon said truck; a reel-frame mounted upon said harvester-frame; a forward set of rollers mounted on the reel-frame; a rear set of rollers mounted on the reel-frame; a pair of side bars resting near their forward ends upon said forward rollers, respectively, and having rear portions underlying said rear rollers, respectively; a reel rotatively mounted upon the forward ends of said side bars; a hand-lever mounted upon said tongue; means for locking the hand-lever in selected positions of adjustment; and connections between said hand-lever and said side bars.

2. In a machine of the class described, and in combination, a truck; a harvester-frame mounted upon said truck; uprights erected from said harvester-frame; a rock shaft rotatably mounted in said uprights a reel-frame loosely mounted upon said rock-shaft and provided with bearing-rollers; a pair of side bars adapted to reciprocate longitudinally in the bearing rollers on said reel-frame; a reel mounted upon the forward ends of said side bars; a plurality of rocker-arms fixed upon said rock-shaft two of which are connected with said side bars, respectively; an angle-lever mounted upon said harvester-frame; a link-connection between said angle-lever and a third rocker-arm on said rock-shaft; a hand-lever mounted upon said truck; a link-connection between said hand-lever and said angle-lever; means for locking said hand-lever in selected positions of adjustment; and means for supporting the reel-frame in different positions of rotative adjustment on said rock-shaft.

3. In a machine of the class described, and in combination, a truck having a draft wheel; a harvester frame mounted upon said truck; uprights erected from said harvester frame; a rock-shaft rotatably mounted in said uprights; a reel-frame mounted on said rock-shaft; a reel, reel-supporting mechanism movable longitudinally of the reel-frame; a sprocket wheel fixed to said reel, a sprocket wheel fixed to said draft wheel, a telescoping spring-extending post mounted to rock on the draft-wheel shaft; guide wheels on the spring operated member of said post, and a sprocket-chain connecting said sprocket wheels together, the stretches of said chain passing over the respective guide wheels to keep the chain under tension at all times.

4. In a machine of the class described, and in combination, a truck having a draft-wheel; a harvester-frame mounted upon said truck; uprights erected from said harvester-frame; a rock-shaft rotatably mounted in said uprights; a reel-frame mounted on said rock-shaft; a reel; reel-supporting mechanism movable longitudinally of the machine; a sprocket-wheel fixed to said reel; a sprocket-wheel fixed to said draft-wheel; a telescoping spring-post pivotally mounted concentrically with said draft-wheel; a pair of guide-wheels on the outer member of said post; a sprocket-chain connecting together said sprocket-wheels with its stretches passing over the respective guide-wheels; and a connection between said spring-post and said reel-supporting mechanism whereby movements longitudinally of the machine are imparted to said spring-post corresponding with the movements of the reel-supporting mechanism.

5. In a machine of the class described, and in combination, a truck having a tongue, a main shaft and draft-wheels; a harvester-frame; a rock shaft supported on the harvester-frame a reel-frame mounted upon said rock-shaft and provided with bearing rollers a pair of side bars reciprocatory longitudinally of the machine in the bearing rollers on said reel-frame; a reel mounted upon said side bars; rocker-arms on said shaft two of said arms being connected with said side bars, respectively; an angle-lever mounted on said harvester-frame; a connection between said angle-lever and a third rocker-arm on said rock-shaft; a lever

mounted on said tongue in connection with said angle-lever; means for locking the lever on said tongue in selected positions of adjustment; a sprocket-wheel on said reel; a sprocket-wheel fixed to one of said draft-wheels; a telescoping spring-post pivotally mounted on the main shaft; a pair of guide-wheels mounted on the outer member of said spring-post; a link connection between said spring-post and a rocker-arm on said rock-shaft; and a sprocket-chain connecting together said sprocket-wheels with its stretches passing over the respective guide-wheels.

In testimony whereof, we have hereunto set our hands this 15th day of April, 1909.

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