

R. M. HUGHES.

HAY TEDDER.

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952,250.

Patented Mar. 15, 1910.

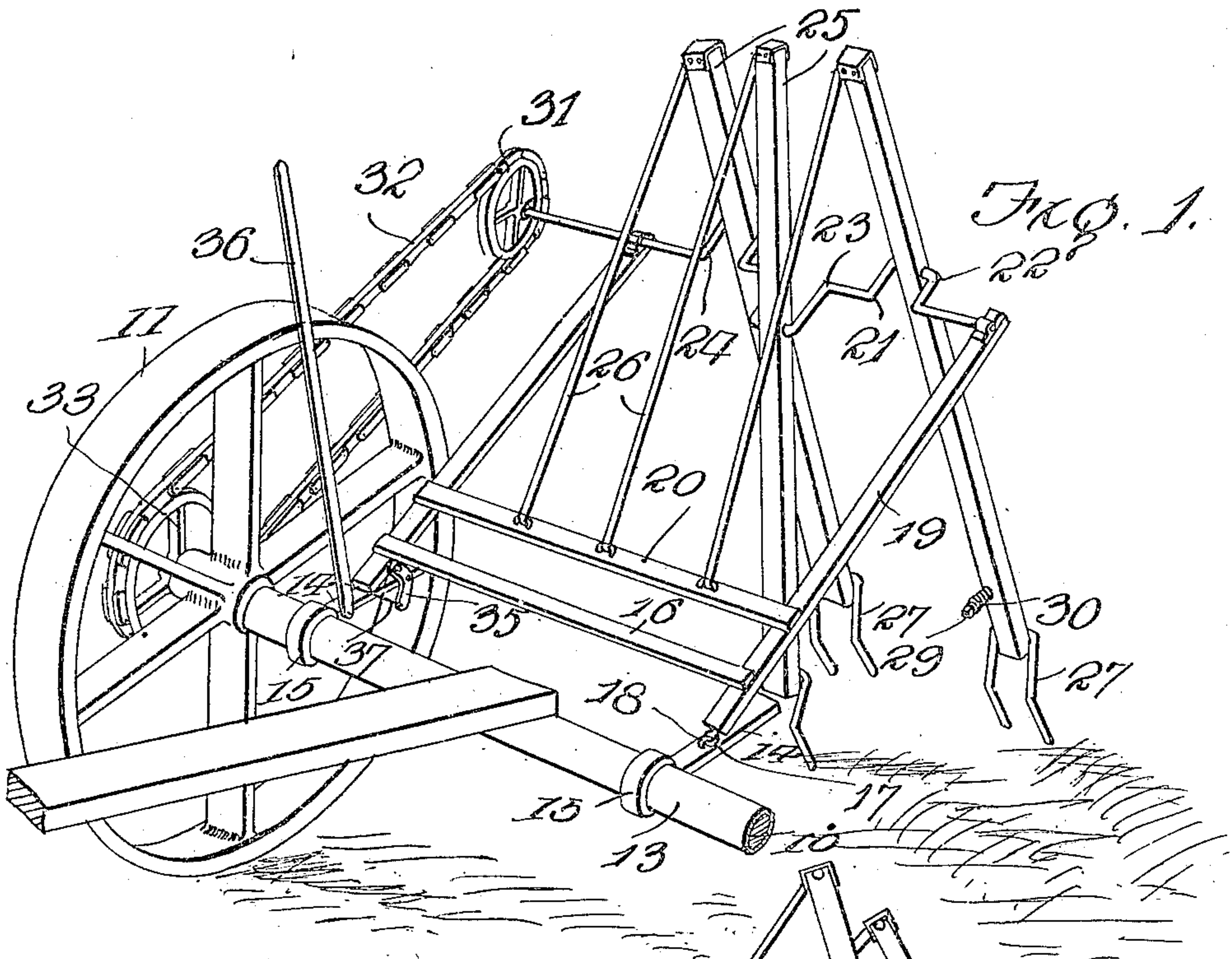


Fig. 1.

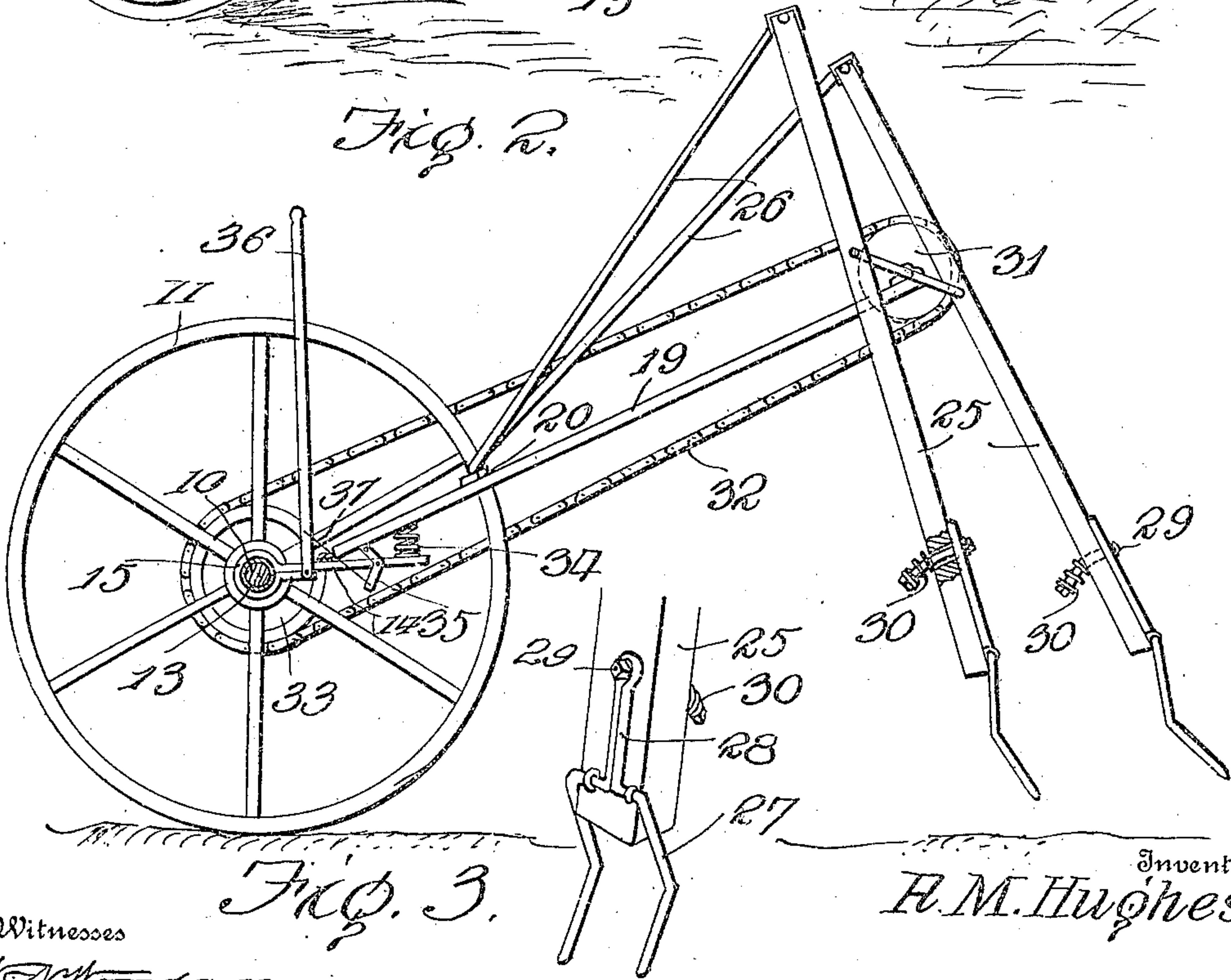


Fig. 2.

Witnesses
W. W. Woodson,
Juana M. Fallin.

Inventor
R. M. Hughes.

By
A. M. Macy, Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT M. HUGHES, OF HOLLOWAY, OHIO, ASSIGNOR OF ONE-HALF TO FRANK GOBLE, OF HOLLOWAY, OHIO.

HAY-TEDDER.

952,250.

Specification of Letters Patent.

Patented Mar. 15, 1910.

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To all whom it may concern:

Be it known that I, ROBERT M. HUGHES, citizen of the United States, residing at Holloway, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Hay-Tedders, of which the following is a specification.

This invention relates to hay-tedders and refers particularly to an attachment which is to be applied to mowing machines and to be operated in conjunction therewith.

The invention has for an object the provision of a simple attachment which may be detachably secured to a mowing machine and which may be connected operatively to the same quickly so as to produce a practical device which is adaptable to mowing machines of various constructions and which admit of the independent operation of the mowing machine when such is desired.

The invention further contemplates the production of a tedder which is provided with resilient forks whereby the same are prevented from being broken when brought into engagement with solid objects such as stones and the like which offer a great resistance to the same and also in providing a resilient mounting for the frame of a tedder in order to further increase the resilient qualities of the same.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a perspective view of the tedder as applied to a mowing machine, the machine being shown fragmentarily. Fig. 2 is a longitudinal vertical section through the same, and Fig. 3 is a detailed perspective view of the lower end of one of the rocker arms having the fork applied thereto.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing the numeral 10 designates the axle of a mowing machine which is provided upon its opposite extremities with traction wheels 11 and which is provided intermediately with an axle sleeve 13 in the usual manner. Disposed upon the opposite ends of the axle sleeve 13 are arms 14 which are held in rigid relation upon the sleeve 13 by means of the circular clamping members 15 which position the arms 14

rigidly in the desired angle, the arms 14 being spaced apart and positioned in parallel alinement for the reception of the tedder frame which will be hereinafter described and which is supported pivotally thereon.

The tedder frame comprises a transverse beam 16 which is provided with eyes 17 adjacent its opposite ends through which are passed clamping bolts 18 of U-formation which are engaged through the arms 14 and adjustably secured to the same by the employment of bolts or the like. The cross-beam 16 is provided adjacent its opposite ends with sides 19 which extend in parallel rigidly therefrom and which are retained and braced in such parallel relation by the employment of a cross-brace 20. The rear extremities of the sides 19 are provided with suitable journal boxes in which are mounted the opposite ends of a crank-shaft 21 which extends across and between the sides 19 and which is provided with three offset portions 22, 23 and 24, the central offset portion 23 being oppositely disposed from the end portions 22 and 24 for the purpose of alternately operating rocker arms 25 which are engaged thereupon. The rocker arms 25 are provided with suitable bearings for the reception of the crank portions 22, 23 and 24 and are engaged at their upper ends upon the rear extremities of retaining rods 26. The retaining rods 26 are pivotally engaged at their forward ends upon the cross-brace 20 at points directly above the crank portions 22, 23 and 24 and thereby serve to retain the rocker arms 25 in alinement therewith. The lower ends of the rocker arms 25 are provided with forks 27 which are hingedly disposed thereon, upon the rear face thereof, the same being provided with extensions 28 which project upwardly therefrom and which engage against the rear faces of the rocker arms 25 to limit the swinging movement of the forks 27.

Each of the rocker arms 25 is apertured at its lower end adjacent the upper extremities of the projections 28 through which are passed bolts 29 which are headed at their forward ends to retain helical springs 30 thereabout which are engaged at their rear extremities against the forward faces of the rocker arms 25, the bolts 29 being extended through the rocker arms and connected to the upper extremities of the projections 28. Such arrangement it is readily observed

forms a tensional retaining means for the forks 27 and prevents the breakage of the tines of the same when they are brought into engagement with solid obstacles.

5 The crank-shaft 21 is extended outwardly beyond one of the sides 19 and is provided with a sprocket wheel 31 which is rigidly secured thereto and over which passes a chain 32 which is carried over a sprocket 33
10 detachably secured upon the outer extremity of the axle 10 adjacent the wheel 11 and against the outer face thereof. The sides 19 are resiliently supported upon the arms 14 by the employment of helical springs 34
15 which are disposed between the upper faces of the arms 14 and the under edges of the sides 19 thereby forming a yieldable support for the tedder attachment.

The device is further provided with means
20 for raising the same so as to lift the forks 27 from engagement with the ground when it is desired to throw the device into an operative position. This mechanism comprises a bell-crank lever 35 which is mounted
25 upon one of the arms 14 and having the short arm thereof engaged against the under face of the adjacent side 19 while the long arm of the same is communicated with a hand-lever 36 through the medium of a rod
30 37 in order to communicate motion between the hand-lever 36 and the bell-crank lever 35 to raise the side 19 and to thereby lift the entire tedder attachment upwardly from the arms 14.

35 In operation when the mowing machine is drawn forwardly the traction wheels 11 and 12 cause the rotation of the shaft 10 which carries the sprocket 33 therewith and communicates such rotary motion to the
40 crank-shaft 21 through the medium of the sprocket 31 and chain 32. Upon the rotation of the crank-shaft 21 the rocker arms 25 are given a gyratory motion which is limited by means of the retaining rods 26
45 which permit of the rising and falling of the upper extremities of the rocker arms 25 and which prevent such extremities from a rotative movement incident to the movement of the offset portions of the crank-shaft 21.
50 The lower extremities of the rocker arms 25 however are given a rotary movement which raises the same when the forks 27 are carried backwardly thereby tending to lift the hay which is engaged upon the forks and
55 throwing the same backwardly from the tedder. When the forks 27 engage in heavy

objects or against stones and the like the same are permitted a yielding motion owing to the provision of the helical springs 30 and the bolts 29 thereby preventing the
60 breakage of the tines of the forks and thus producing a practical and efficient device which is durable and economical in operation.

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

1. The combination with a mower and a sleeve carried by said mower, of circular clamping members disposed upon the sleeve of the mower, arms rearwardly extended
70 from said clamping members, sides hingedly disposed upon said arms adjacent the forward ends thereof, springs interposed between said arms and said sides, a crank shaft journaled in the rear ends of said
75 sides, rocker arms mounted upon said crank shaft, retaining rods carried upon the upper ends of said rocker arms, a cross brace carried by said sides for engagement with said retaining rods, forks mounted upon the
80 lower ends of said rocker arms and means disposed between said crank shaft and said mower for actuating said crank shaft.

2. The combination with a mower of arms rearwardly extended from said mower,
85 a frame pivotally disposed upon the upper faces of said arms and adapted to rest thereon, springs disposed between said arms and said frame for resiliently supporting the same, a bell crank lever carried by one
90 of said arms, for engagement beneath said frame, and an operating lever carried on said arm and connected to said bell crank lever for raising said frame at times.

3. The combination with a mower of arms
95 rearwardly extended from said mower, a frame hingedly disposed upon said arms, and adapted for engagement thereon, springs interposed between the rear ends of said arms and said frame for resiliently support-
100 ing the same, a bell crank lever carried by one of said arms for engagement beneath said frame, to raise the same, and a hand lever carried by one of said arms and connected to said bell crank lever to operate
105 the same.

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

ROBERT M. HUGHES. [L. s.]

Witnesses:

W. L. PATTON,
FRANK GOBLE.