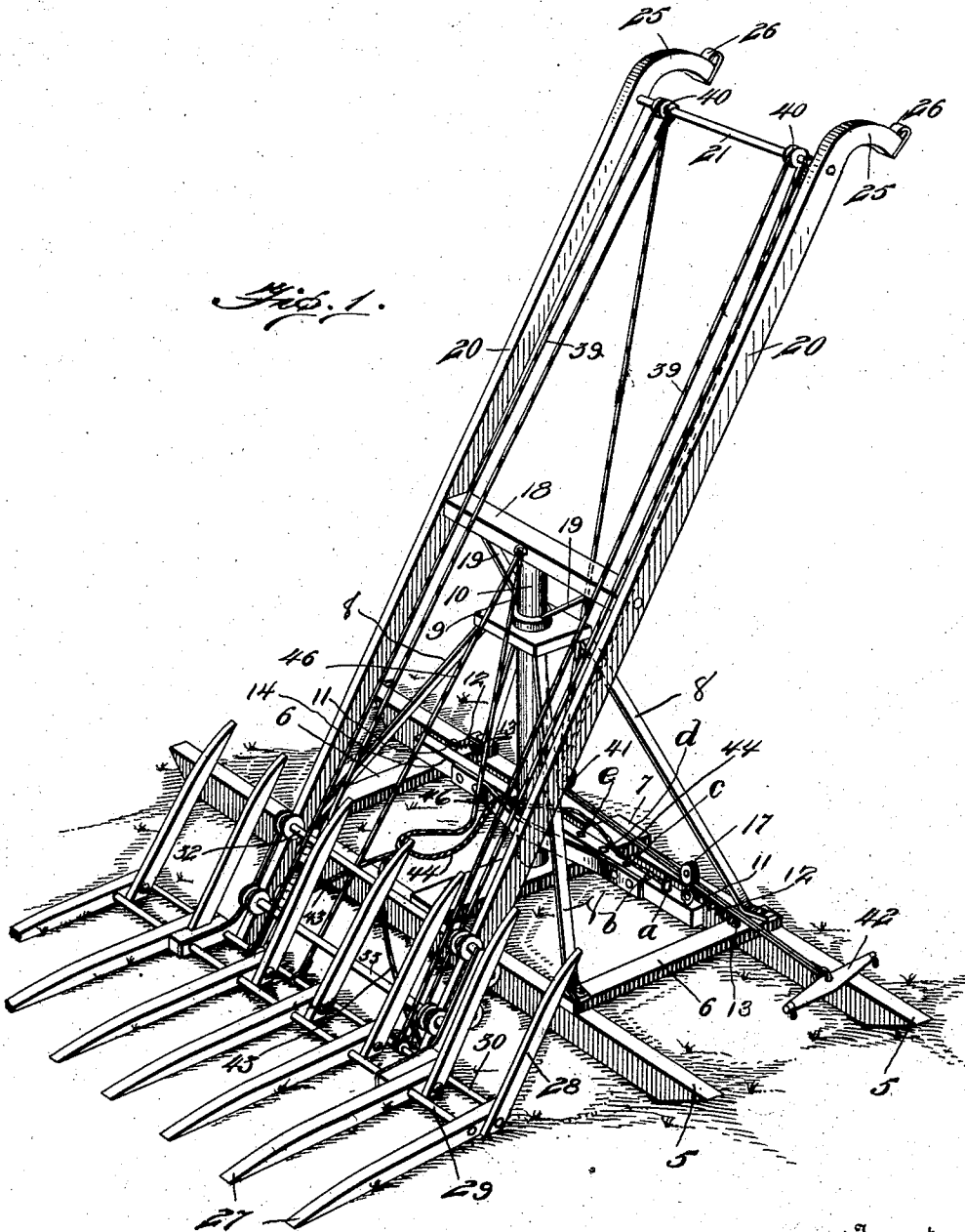


LE ROY R. SHAFTO.
HAY STACKER AND LOADER.
APPLICATION FILED NOV. 29, 1910.

1,021,898.

Patented Apr. 2, 1912.

3 SHEETS—SHEET 1.



Witnesses

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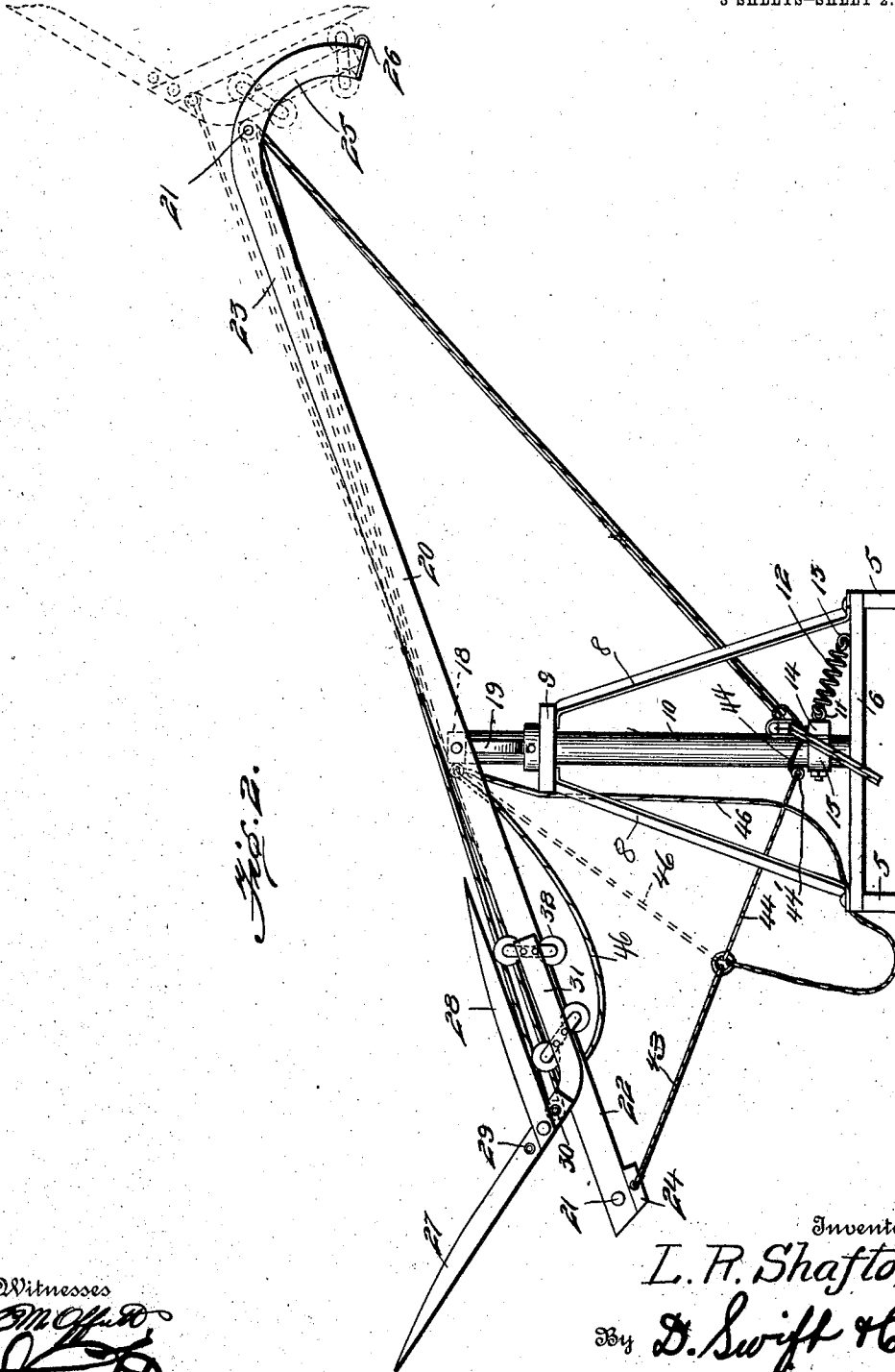


Fig. 2.

Witnesses
Em. Offutt
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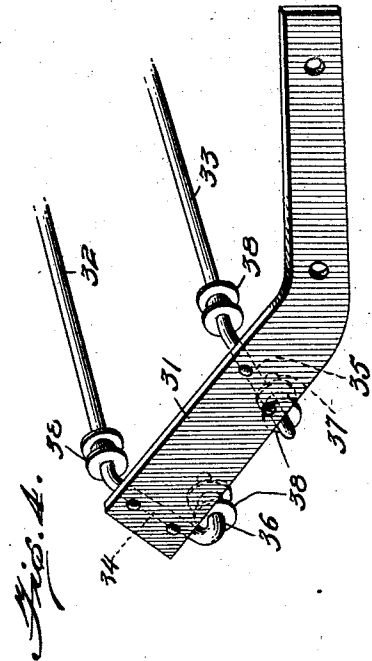
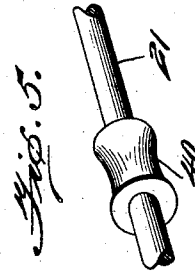
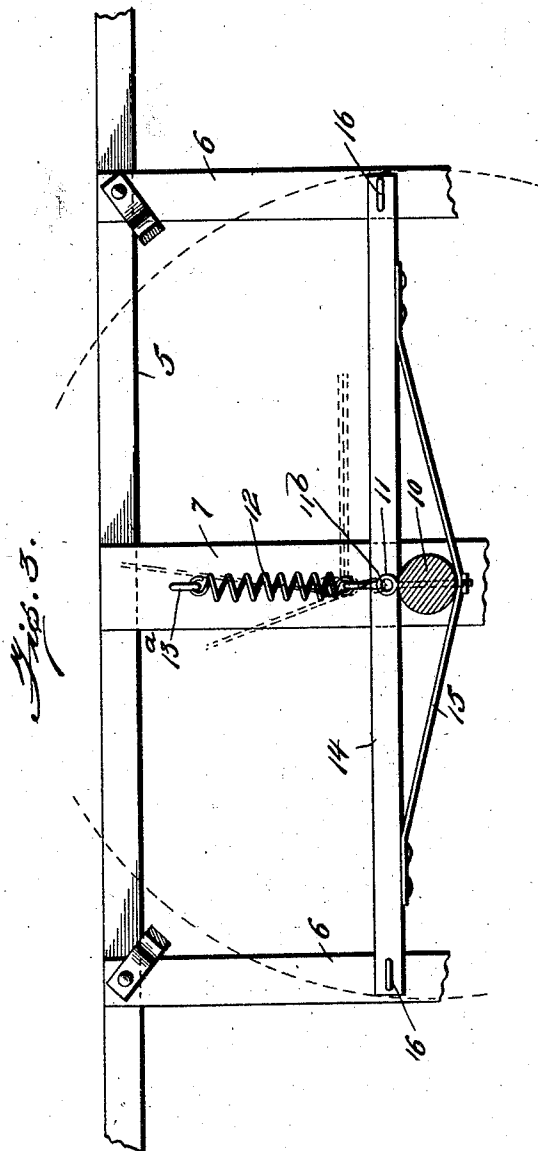
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

LE ROY R. SHAFTO, OF ELM CREEK, NEBRASKA.

HAY STACKER AND LOADER.

1,021,898.

Specification of Letters Patent.

Patented Apr. 2, 1912.

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To all whom it may concern:

Be it known that I, LE ROY R. SHAFTO, a citizen of the United States, residing at Elm Creek, in the county of Buffalo and State of Nebraska, have invented a new and useful Hay Stacker and Loader; and I do hereby 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.

This invention relates to an improved hay stacker and loader.

The principal object of the invention is to provide a support having an inclined track upon which a fork is adapted to be elevated and dumped.

A further object of the invention is to provide an improved recoil arrangement which will assist in returning the fork to its normal position after dumping.

A still further object of the invention is to provide a structure for the purpose described which is comparatively simple in construction, easy of operation and cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of the stacker showing the fork in its lowermost position. Fig. 2 is a side elevation of the stacker, showing the track in position employed previous to the beginning of the movement of the fork, the dotted lines showing the fork when in its uppermost or dumping position. Fig. 3 is a detail plan view of the base showing only one spring 12. Fig. 4 is a detail perspective view of the roller supporting brackets of the fork, and Fig. 5 is a perspective view of one of the rope pulleys.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings, the invention comprises a base consisting of spaced longi-

tudinal beams 5—5 connected at suitable intervals by transverse members 6—6. The beams 5 are furthermore connected centrally by means of a transverse support 7.

Associated with the transverse members 6—6 are upwardly and inwardly extending braces 8, the upper ends thereof supporting a cross head 9, which is adapted to receive a rotatable spindle 10, the upper end thereof projecting above the cross head and the lower end suitably journaled in the transverse member 7 by any suitable means. Transverse eye-bolts 11 are secured to the beams 14. Connected between the eye-bolts 11 and the eye-bolts 13 are springs 12, thus constituting means for tensioning the beams 14 as they are moved. In Fig. 3 of the drawings there is only one spring 12 illustrated, which is connected between the eye 13^a of the base, and the eye 11^b of the spindle 10. The purpose of the spring 12 in Fig. 3 is the same as the springs 12 in the other figures of the drawings, that is, to resiliently hold the spindle 10 in its normal position, as will be readily observed. The two springs 12 in Figs. 1 and 2 are connected to the ends of the beam 14. Also secured to the spindle 10 and preferably below the eye-bolt 11 is a horizontally arranged beam 14 secured in place by any suitable means. A brace 15 has its free ends rigidly connected to the ends of the beam 14 and has its central portion connected to the spindle 10. Associated with each end of the beam 14 are eye-bolts 16, to either one of which may be detachably secured a block 17 for a purpose hereinafter described.

Fixedly secured to the upper end of the spindle 10 is a cross bar 18 which is suitably braced by members 19. Journaled on the ends of the bar 18, is a fork supporting track frame which consists of longitudinal tracks 20—20, which are suitably connected by transverse bars 21. This fork frame is pivoted at one side at its center to form a short lower end and a long upper end, designated respectively by numerals 22 and 23, the lower ends of each track member 20, being preferably undercut, as shown by reference numeral 23, and provided with stop blocks 24 arranged on the underside of the track members 20. The track members 20 are journaled upon the bar 18 in order to have vertical pivotal movements. The upper ends of the track members 20 are down-

wardly curved as shown by reference numerals 25, and are provided on their extreme ends with stops 26.

The invention further comprises a fork consisting of a plurality of angularly disposed fork members 27 and 28. These members are spaced a suitable distance apart and are connected by means of transverse rods 29, and 30. Also carried by these rods 29 and 30, and spaced apart a suitable distance, are bracket members 31—31.

A pair of transverse rods 32 and 33 have their respective ends bent downwardly at right angles, as shown by reference numerals 34 and 35, and have their free ends 36 and 37 respectively bent inwardly. The bent portions 34 and 35 of each member are secured to the brackets 31 by any suitable means, and associated with the rods 32 and 33 and the inwardly extending end portions 36 and 37 are roller bearings 38 which ride above and below the track members 20. These roller bearings are preferably flanged and each pair of roller bearings is disposed in angular relation; that is, the under bearings are closer together than the upper ones.

Connected to the rod 30 of the fork, at opposite points, are cables 39—39. These cables have pulleys 40 which are journaled on the transverse connecting bar 21 of the track frame. They then pass downwardly around a pulley 41 carried by the spindle and thence under the block 17 hereinbefore mentioned. The free ends of the cable are connected to a swingle or double tree 42, from which point a pull may be exerted upon the cable and thereby elevate the fork upon the frame in order to limit the inclination of the frame. A cable 43 has its ends connected to the lower ends of the frame by any suitable means and has its central portion connected to the rope or cable 44, the free end of which is detachably connected to the beam 14, after having been passed through the eye bolt 44'. By means of this adjustment, it will be evident that the limit of inclination can be readily adjusted.

The invention further comprises another cable 46, one end thereof being connected to the transverse member 30 of the frame, and the other end to the connection between the cable 43 and the adjustment 44.

It will be evident from the foregoing, that when pull is exerted upon the swingle tree 42, the track frame 20, by means of the cables 39, will tend to elevate the fork

frame. As the fork frame travels the track rails, the pull and weight of the material in the fork will tend to lower the upper end of the frame. This downward movement of the upper end of the frame is limited by means of the cable 43 before explained. As the fork reaches the upper end of the frame, the roller bearings of the fork will travel the curved ends 25 and will engage the stops 26. As the fork travels around the said curved ends, the material in the fork will, of course, be automatically dumped. It will furthermore be noted at this point that at the time the fork is being dumped, the cables 43 and 44 will be taut, thus preventing the fork from traveling off the curved ends of the tracks 20.

The rope or cable 44 has its end arranged in the recess *a*, and held therein by the pin *a'*. This rope or cable may be arranged in any one of the recesses *a*, *b*, *c*, *d* and *e*. However, any part of the rope or cable 44 may be pressed in these recesses and held therein by the pin *a'*, thus shortening or lengthening the play of the rope, and providing anchoring means for the rope or cable 44.

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

1. In a haystacker, a base, track members carried thereby, a fork movable on the members, brackets carried by the fork, spaced rods connecting the brackets, each rod having its end portions bent around the track members, rollers respectively journaled on each end portion of each rod above and below and engaging the track members, and means for elevating the fork along the track.

2. In a haystacker, a base having a partially revoluble spindle, track members movable therewith, a fork movable on the track members, the spindle having a transverse beam, provided with a strap bracing the beam with regard to the spindle, means co-operating between the ends of the beam and the base for resiliently holding the spindle in position, and a cable connected between the fork and beam.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LE ROY R. SHAFTO.

Witnesses:

J. Cox,

W. N. GARRISON.