W. A. BRITTAIN.

HAY DERRICK.

APPLICATION FILED JULY 17, 1911.

1,035,311.

Patented Aug. 13, 1912.

2 SHEETS—SHEET 1.

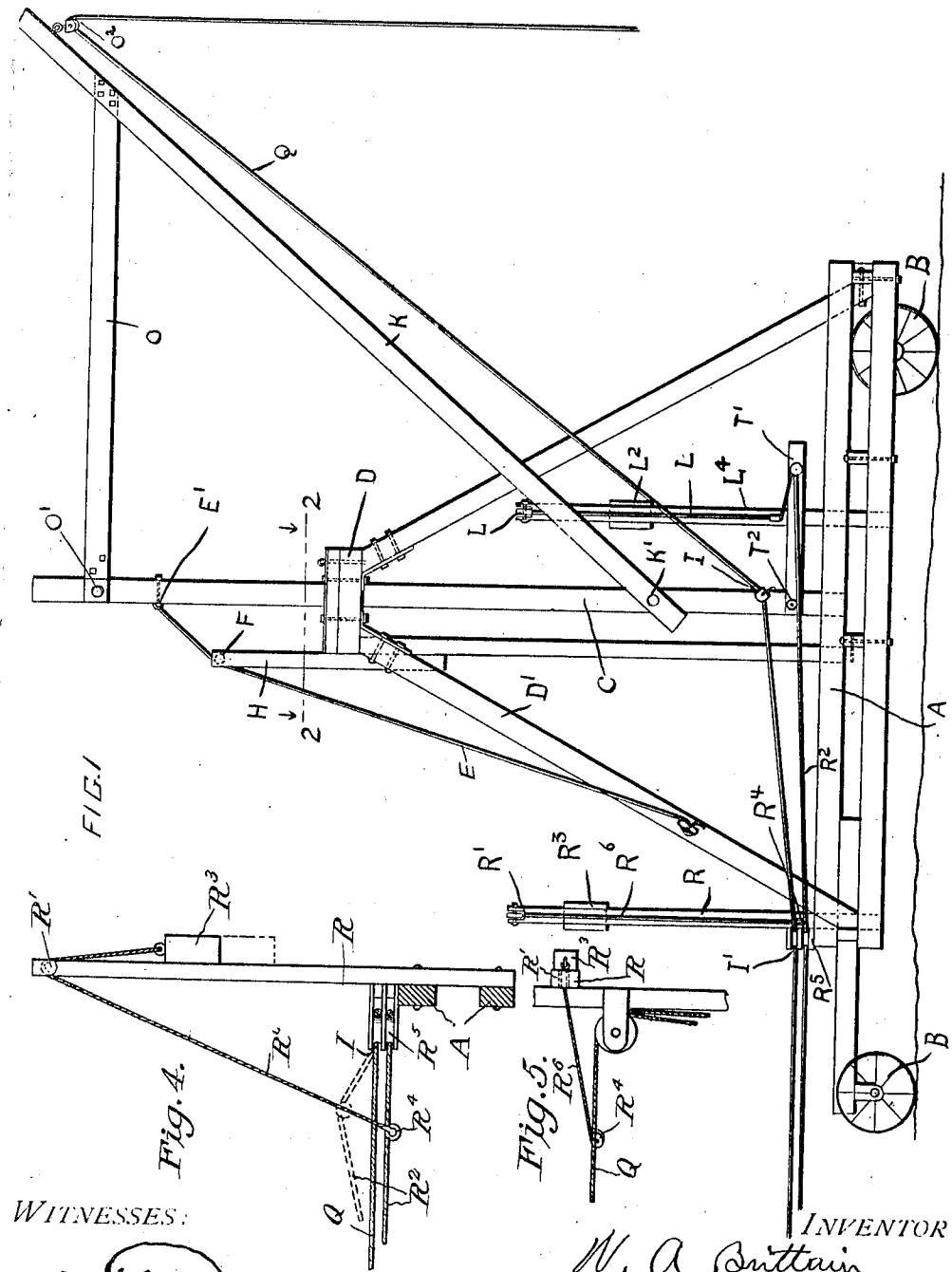

FIG. 1

Fig. 4.

Fig. 5.

WITNESSES:

INVENTOR

W. A. Brittain,

BY Franklin H. Hough

Attorney

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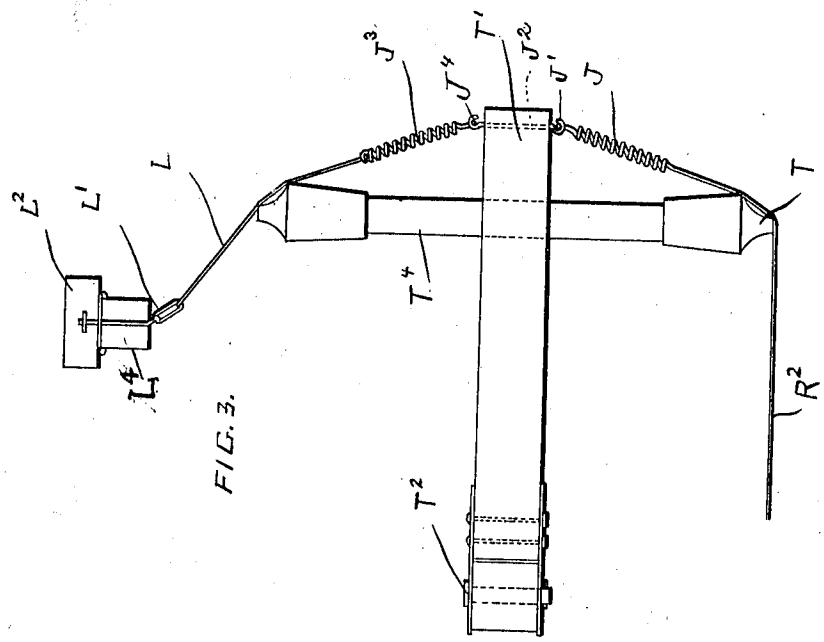

FIG. 3.

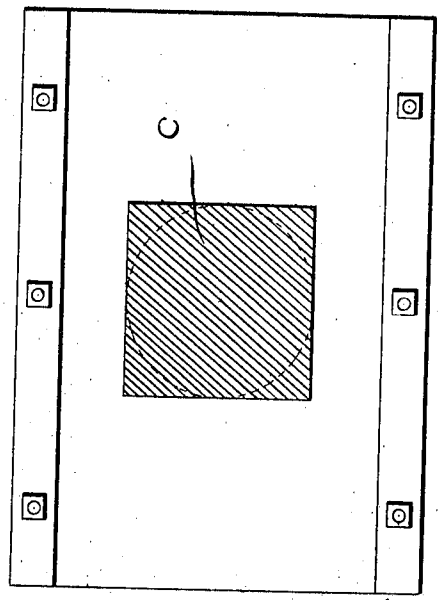

FIG. 2.

WITNESSES:

J. W. Sherwood

INVENTOR

W. A. Brittain,

BY Franklin H. Hough

Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM ANDERSON BRITTAIN, OF YOLO, CALIFORNIA.

HAY-DERRICK.

1,035,311. Specification of Letters Patent. Patented Aug. 13, 1912.

Application filed July 17, 1911. Serial No. 638,952.

To all whom it may concern:

Be it known that I, WILLIAM A. BRITTAIN, a citizen of the United States, residing at Yolo, in the county of Yolo and State of California, have invented certain new and useful Improvements in Hay-Derricks; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in apparatus for stacking hay and comprises a simple and efficient mechanism of this nature having various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a side elevation of a hay stacker made in accordance with my invention. Fig. 2 is a sectional view taken on line 2—2 of Fig. 1 looking in the direction of the arrow, and Fig. 3 is a detail in elevation. Fig. 4 is a detail in elevation of a part of the apparatus, and Fig. 5 is a top plan view showing arrangement of ropes and pulleys forming a part of the apparatus.

Reference now being had to the details of the drawings by letter, A designates a truck mounted upon wheels B. Rising from said truck is a mast C braced by the horizontally disposed plates D which are supported by the braces D′, the lower ends of which are fastened to the truck. Each of said plates is recessed or notched for the reception of the mast and a rope E is fastened to an eye E′ upon said mast and passes over a pulley F upon the upright bar H and affords means whereby the mast may be lowered when detached from its fastenings. A boom K is pivotally connected at K′ to the mast and a cross-piece O is pivotally connected at O′ to the mast and its other end fastened to the boom and affords means for holding the latter in the position shown in Fig. 1 of the drawings. A pulley O^2 is fastened to the upper end of the boom and over which the hoisting rope Q passes, which latter also passes about a pulley I upon the mast, thence about a pulley I′ and its other end is adapted to be fastened to a team or other power whereby the load is adapted to be hoisted.

Rising from the truck at any suitable location is a post R carrying a pulley R′ at its upper end and a rope R^6 passes about said pulley and has a weight R^3 fastened to its end. Said rope R^6 is fastened to a pulley R^4 about which the rope R^2 passes about a pulley R^5, which latter passes loosely about the end of an arm T projecting from the beam T′. Said beam T′ is connected to the mast by means of a pin T^2. A spring J is fastened at one end to the rope or cable R^2 and its other end to a hook J′ upon the rod J^2 which in turn has a second spring J^3 connected to a hook J^4 at its other end, said spring J^3 being fastened to a rope L which moves freely about an arm T^4 and thence passes to and about a pulley L′ upon the post L^4, and a suitable weight L^2 is fastened to the rope L.

The operation of my apparatus will be readily understood and is as follows:—The truck being mounted upon wheels affords convenient means for transporting the apparatus from one place to another. The hay or the mateiral to be hoisted by the machine is fastened to the rope Q. A team or other power for hoisting the hay or other material is adapted to be fastened to the ropes Q and R^2. When draft is applied to the rope R^2, the mast may be swung laterally to deposit the material, said rope R^2 passing loosely over one end T of the arm upon the beam T′, the spring J yielding in order to take up any sudden jar and the spring J^3 also yielding under any sudden lateral pull. Said spring J^3 is connected to the weight as described, causing the same to be raised as the boom swings and serving as a means, when the pull upon the rope R^2 has been released, to return the boom to its normal position. A forward pull upon the rope Q will, through the medium of the rope R^6, cause the weight R^3 to be raised and, when the pull is released upon the rope Q and in the event of a team being fastened to the ropes for hoisting the hay or other material and the team is backed up, said weight R^3 will lower by gravity and take up any slack that there might be in the rope Q incident to the team backing up to get a new pull upon another load to be hoisted. In the event of it being desired to lower the mast and boom, it may be conveniently done

by removing one of the plates D and the pin T^2, the rope E allowing the mast to be lowered to the ground.

What I claim to be new is:—

1. A loading apparatus comprising a truck, a pivotal mast mounted thereon, a boom fixed to the mast, pulleys upon the boom and mast, a hoisting rope passing over said pulleys, weighted means for taking up slack in said hoisting rope, a beam projecting from the mast, arms projecting from the beam, a cable passing loosely in contact with one of said arms, a spring fastened to said cable and its other end fastened to the beam, a second spring fastened to said beam, a weighted rope fastened to said second spring, and a pulley over which said weighted rope passes, as set forth.

2. A loading apparatus comprising a truck, a pivotal mast mounted thereon, a boom fixed to the mast, pulleys upon the boom and mast, a hoisting rope passing over said pulleys, a post rising from the truck, a pulley thereon, a weighted rope passing over the pulley upon the post, a pulley fastened to one end of the weighted rope and engaged by the hoisting rope and adapted to take up slack in the hoisting rope, a beam projecting from the mast, an arm upon said beam, a cable passing over said arm and having spring connections therewith, and a weighted rope having yielding connections with said beam, as set forth.

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

WILLIAM ANDERSON BRITTAIN.

Witnesses:
G. P. HURST,
R. H. PARKER.