

M. K. MAUL.

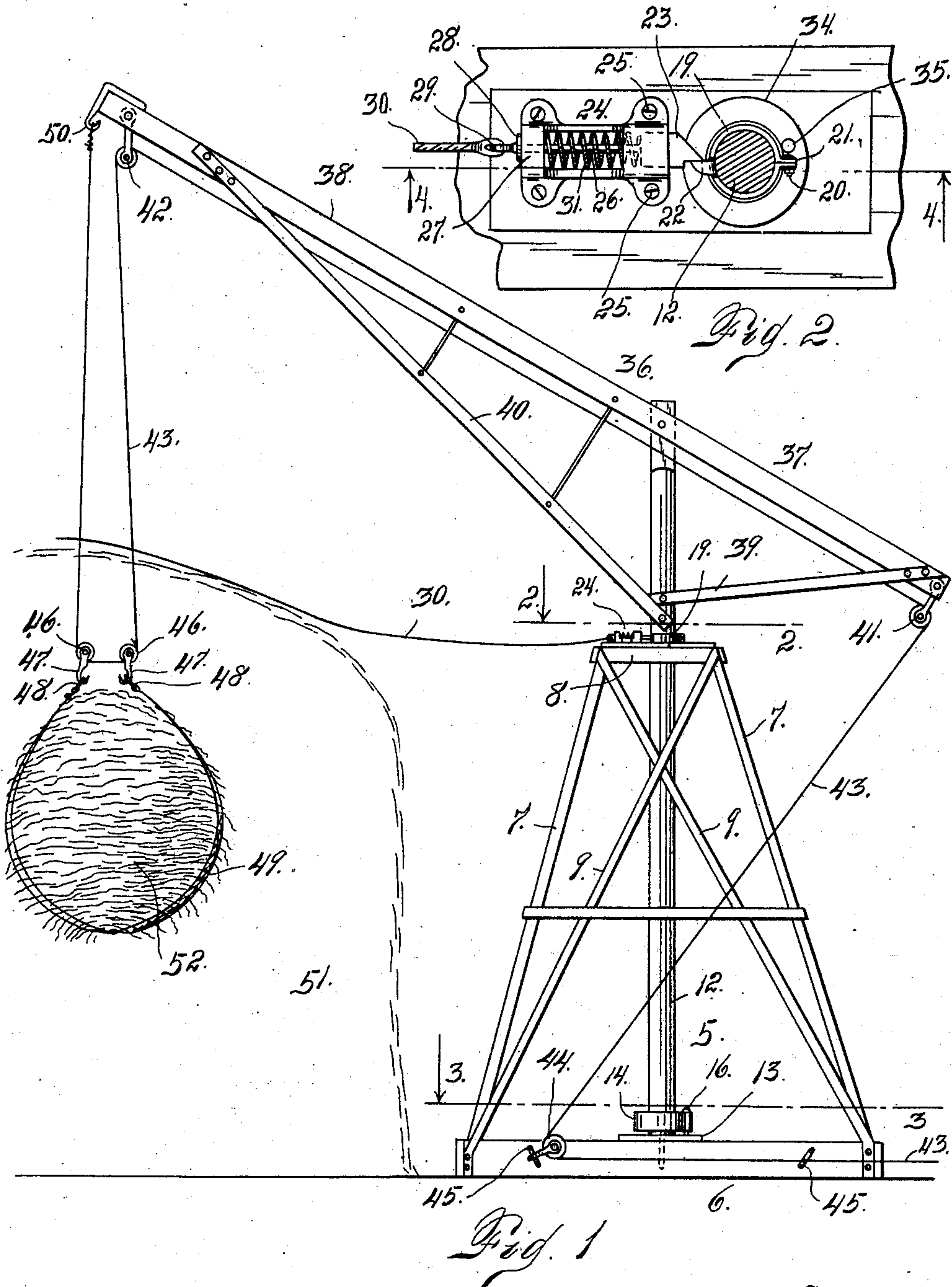
HAY STACKER.

APPLICATION FILED JULY 18, 1910.

Patented June 6, 1911.

2 SHEETS—SHEET 1.

994,324.



Witnesses

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C. H. Roesser.

Inventor

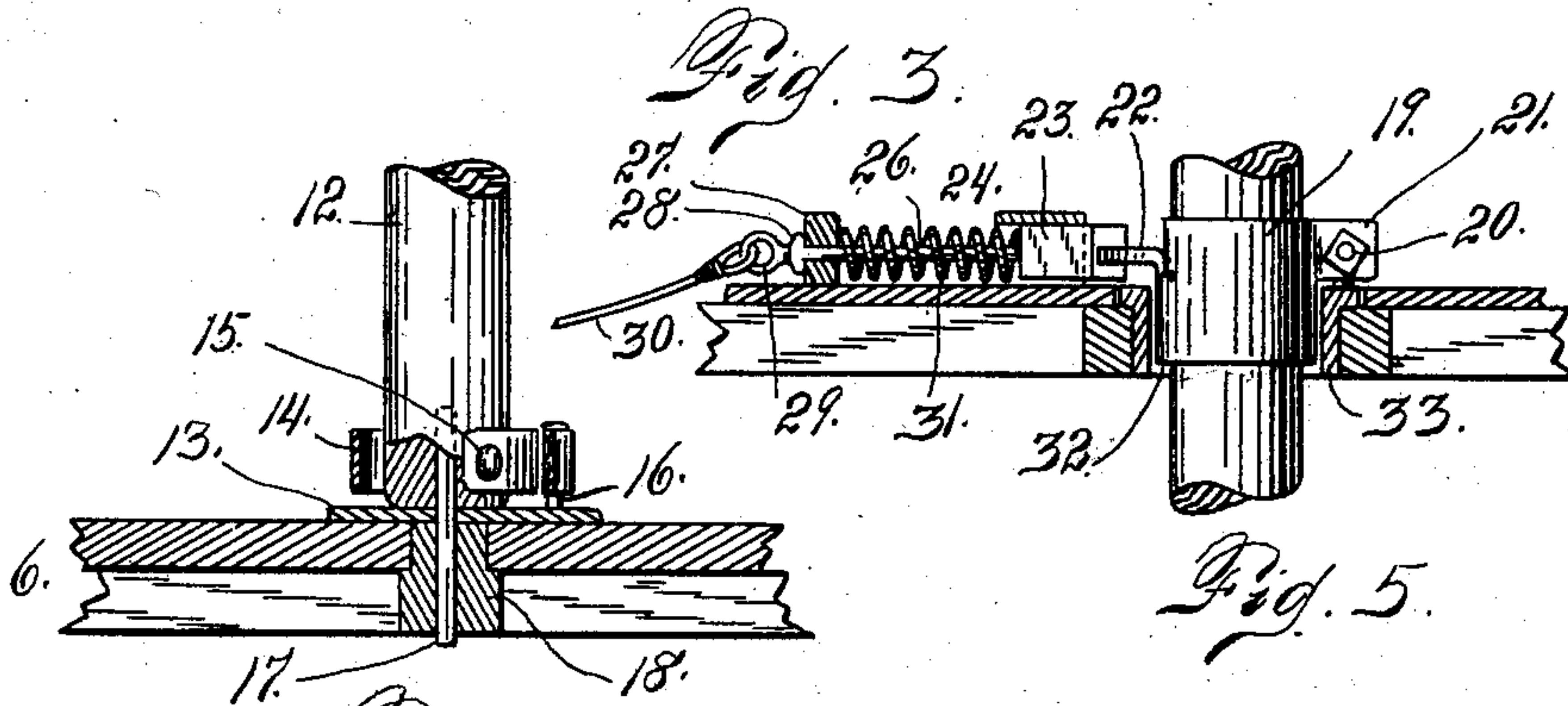
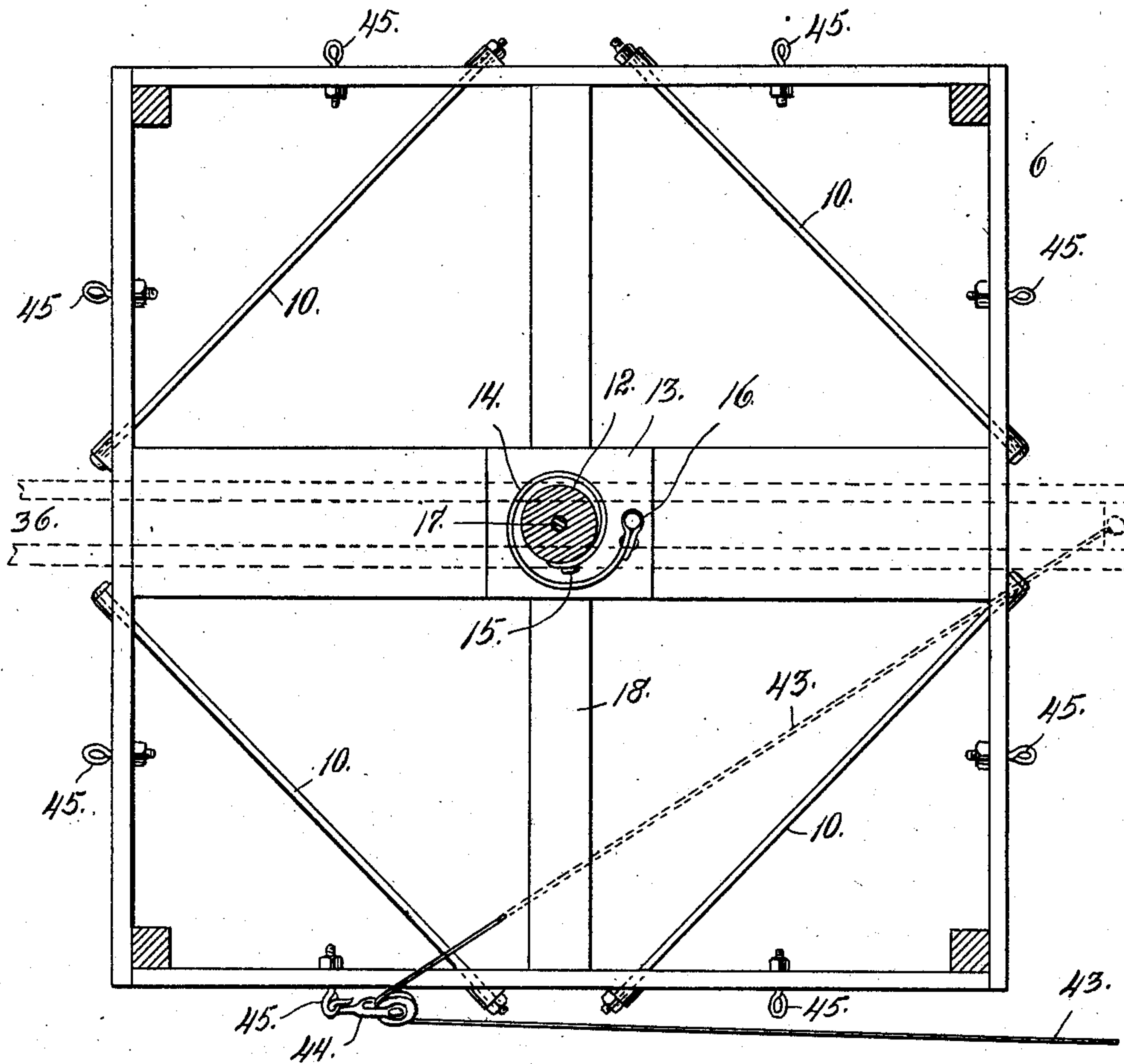
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UNITED STATES PATENT OFFICE.

MAX K. MAUL, OF BRIGHTON, COLORADO.

HAY-STACKER.

994,324.

Specification of Letters Patent.

Patented June 6, 1911.

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To all whom it may concern:

Be it known that I, MAX K. MAUL, a citizen of the United States, residing at Brighton, county of Adams, and State of Colorado, have invented certain new and useful Improvements in Hay-Stackers; and I do declare the following to be a full, clear, and exact description of the invention, such as 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.

My invention relates to improvements in hay stackers of the class in which a vertically-disposed rotatable mast or post is employed, and upon the top of which is rigidly secured a relatively long inclined bar or boom which projects on both sides of the post, and with which is connected a rope or cable arranged to lift a quantity of hay or other similar material during the operation of stacking the same.

The particular improvement covered by my present application, consists in providing means whereby the mast is locked against rotation until the hay is raised to the desired height, after which the locking latch is released, and a spring connected with the mast acts upon the latter to impart thereto a sufficient rotary movement to carry the load of hay to the proper position upon the stack.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing: Figure 1 is a side elevation of a hay stacker provided with my improvements. Fig. 2 is a section taken on the line 2—2 Fig. 1 looking downwardly, the parts being shown on a larger scale. Fig. 3 is a section taken on the line 3—3 looking downwardly, the parts being shown on a larger scale. Fig. 4 is a fragmentary view showing the lower extremity of the mast and the manner in which the same is journaled, the parts being shown partly in section and partly broken away. Fig. 5 is a vertical section taken on the line 5—5 of Fig. 2.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a stationary framework composed of a rectangular base 6

and inclined, upwardly projecting post 7 whose upper extremities are connected with a top platform 8. This framework is provided with braces 9 and the base is strengthened by the tie rods 10.

Suitably journaled in both the base and platform of the framework is a mast 12. To the lower extremity of this mast just above a centrally located base plate 13 is attached one extremity of a spring 14, the connection being made by means of a fastening device 15. This spring is coiled around the post and its opposite extremity is secured to an anchor pin 16 made fast in the base plate 13.

The lower end of the mast has a pivot pin 17, which is secured thereto and turns freely in a metal block 18, extending below the base plate 13. The upper portion of the mast where it passes through the platform 8, is equipped with a relatively wide metal collar 19, the same being clamped to the mast by a bolt 20 passing through meeting lugs 21 with which the upper portion of the collar is provided. The collar is also provided with a laterally projecting stop 22, preferably formed integral with the collar, and cooperating with a latch 23 mounted on the platform, for locking the mast against turning during the operation of lifting the load to the elevation desired for stacking purposes. This latch is slidably mounted in a bracket 24 which is secured to the platform by suitable fastening devices 25. The latch is provided with a stem 26, which passes through the rear upwardly projecting part 27 of the bracket and is freely slidable therein, its rear extremity being equipped with a stop 28 and also provided with an eye 29, with which is connected a manipulating cord 30. Surrounding the stem of the latch is a coil spring 31 which engages the body of the latch at one extremity and the part 27 of the bracket at its opposite extremity, whereby the latch is normally held projecting forward beyond the bracket for the purpose of engaging the stop 22 of the collar 19 mounted on the mast as heretofore explained.

As illustrated in the drawing the body of the platform 8 is composed of wood, but the opening 32 through which the mast passes is equipped with a metal thimble 33 surrounding the collar 19 of the mast. The flange 34 of this thimble is provided with an upwardly projecting stud or pin 35 forming a stop adapted to engage the lugs 21, to prevent the further rotation of the mast after

the latter has been turned sufficiently to allow the latch to engage the stop 22 for locking purposes.

Secured to the top of the mast is a boom 5 36 having a relatively short arm 37 projecting in one direction from the mast and a relatively long arm 38 projecting in the opposite direction. These two arms are further connected with the mast by brace bars 39 10 and 40. Upon the opposite extremity of the boom are mounted guide pulleys 41 and 42 which are engaged by a pull rope or cable 43. This cable also engages a guide pulley 44 and an eye 45 secured to the base of the 15 frame. Extending downwardly from the pulley 42 of the boom, the cable engages pulleys 46 equipped with hooks 47, which engage eyes or rings 48 connected with a flexible load carrier 49, which may consist 20 of canvas or any other suitable flexible material. After the cable has passed through the guide pulleys 46, it extends upwardly, one of its extremities being secured to a hook 50 located to close one extremity of the 25 boom just forward of the pulley 42.

In describing the operation of the stacker, it may be assumed that a stack 51 is partially formed, and that a load 52 of hay is being raised from a position at one end or 30 side of the stack, and that the boom is properly arranged for this operation when the mast is locked against rotation as indicated in Figs. 1, 2 and 5 of the drawing and in which position the spring 14 is under tension. It may also be assumed that the pull 35 cord 30 connected with the latch 23 is lying upon the stack within reach of the stacker or a man on the stack. The operation of lifting the load 52 is accomplished by suitable power connected with the lifting cable 43. A horse may be hitched to the end of the cable beyond the frame of the structure, or the cable extremity may be connected with any other suitable power. When the 45 load 52 is raised high enough for the purpose, or as high as the portion of the stack already formed, the operator pulls on the cord 30 and unlocks the latch, in which event the spring 14, which is under stress 50 or tension when locked, recoils with sufficient power to turn the mast and its connections, whereby the load of hay is thrown to the desired position just above the level

of the stack. The stacker then disconnects the load carrier or a portion thereof from 55 the hooks 47, and the load is deposited upon the stack. The cable 43 is then slackened sufficiently to be thrown to the loading operator, who by pulling on the cable may draw the mast and boom to the desired position 60 for lifting another load, after which the operation is repeated.

Having thus described my invention, what I claim is:

1. In a hay stacker, the combination with 65 a mast mounted to rotate and a boom mounted thereon, of means for locking the mast against rotation when the boom is in a predetermined position, a spring connected with the mast at one extremity and with a 70 stationary member at its opposite extremity, the spring being under tension when the mast is locked against rotation, and means for releasing the latch whereby the spring acts upon the mast to impart a predetermined 75 degree of rotary action thereto, for the purpose set forth.

2. In a hay stacker, the combination with a mast mounted to rotate, a coil spring connected with the mast at one extremity and 80 with a stationary member at its opposite extremity, of means for locking the mast against turning, with the said spring under tension, said means comprising a spring-actuated latch mounted on a stationary support and a cooperating stop carried by the 85 mast, and a pull cord connected with the latch for releasing purposes, substantially as described.

3. In a structure of the class described, 90 the combination with a suitable stationary frame, a mast mounted to rotate in said frame, and a boom connected with the mast, of a coil spring connected with the mast at one extremity and with the frame at its 95 opposite extremity, a latch for locking the mast against turning with the spring under tension, and means connected with the latch for unlocking purposes, substantially as described. 100

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

MAX K. MAUL.

Witnesses:

F. E. BOWEN,
HORTENSE UHLRICH.