

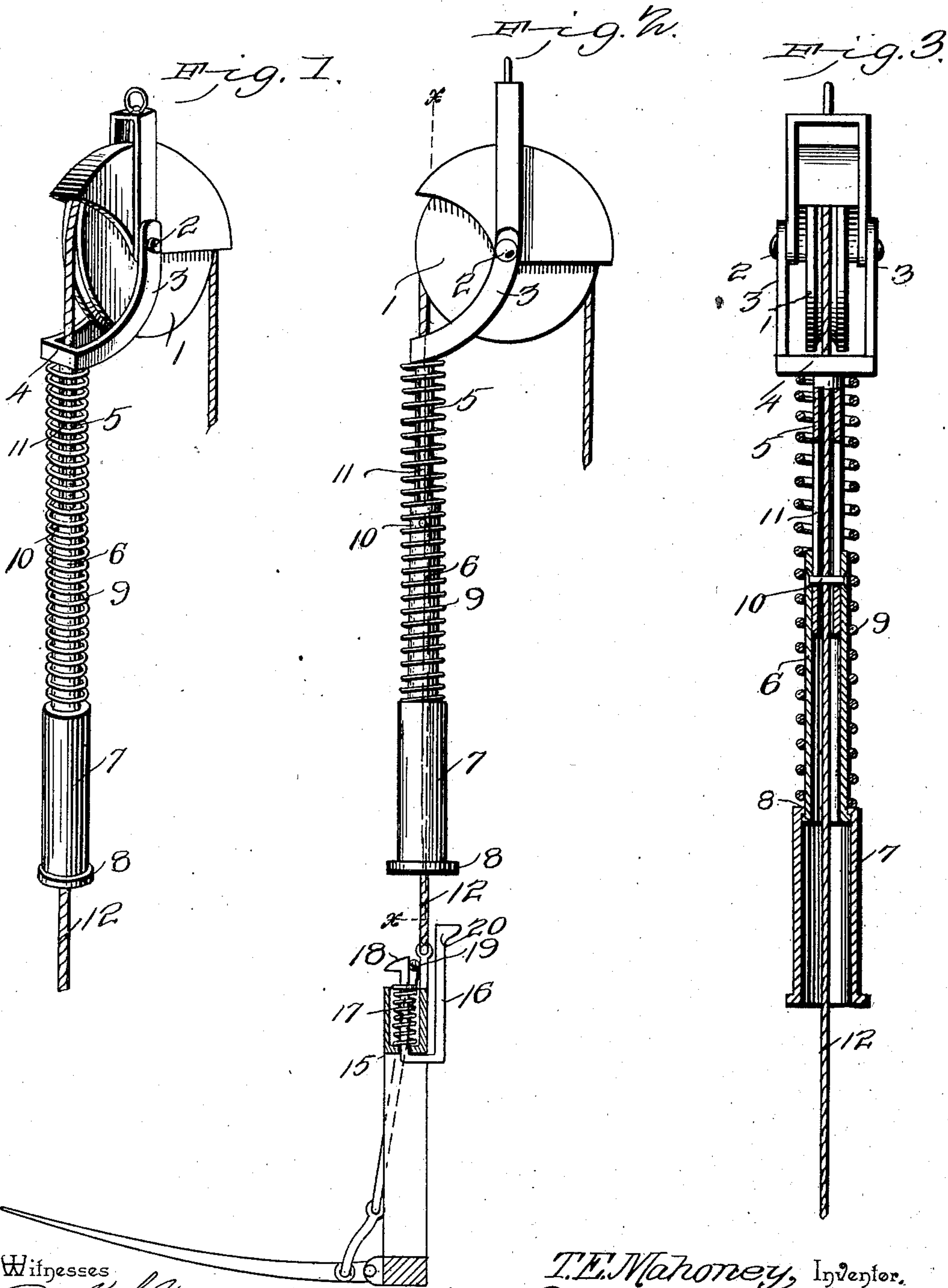
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PATENTED MAY 26, 1903.

T. E. MAHONEY.
AUTOMATIC TRIPPING DEVICE FOR HOISTING MACHINERY.

APPLICATION FILED JULY 31, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS E. MAHONEY, OF BUNKERHILL, KANSAS.

AUTOMATIC TRIPPING DEVICE FOR HOISTING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 729,077, dated May 26, 1903.

Application filed July 31, 1902. Serial No. 117,851. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. MAHONEY, a citizen of the United States, residing at Bunkerhill, in the county of Russell and State of Kansas, have invented a new and useful Automatic Tripping Device for Hoisting Machinery, of which the following is a specification.

This invention relates to hoisting machinery, and especially to that class of hoisting devices which are used for elevating hay and the like and which are used in connection with forks or carriers of various patterns.

My invention has for its object to provide an automatic tripping device whereby the load may be released and caused to drop when it reaches the desired elevation without the necessity of manually operating the trigger or tripping mechanism.

My invention consists in the improved construction, arrangement, and combination of parts whereby a device of this class shall be produced possessing superior advantages in point of simplicity, durability, and general efficiency, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved tripping device. Fig. 2 is a side view of the same. Fig. 3 is a sectional view taken on the line *x x* in Fig. 2.

Corresponding parts in the several figures are indicated by like characters of reference.

In carrying out my invention I avail myself of an ordinary hoisting-pulley 1, and upon the shaft 2 of the same adjacent to the cheeks thereof are mounted a pair of jaws 3 3, the outer ends of which are connected, as at 4, so that together the said jaws may be described as forming a yoke loosely engaging the sides of the pulley. The said yoke supports at its outer end a downwardly-extending tube 5, which is rigidly connected therewith and upon which is mounted another telescoping tube 6. A third tube 7 is mounted rigidly upon the lower end of the tube 6, the upper end of said tube 7 forming a flange 8, between which and the under side of the yoke is coiled a spring 9, the tendency of which is to force the connected tubes 6 7 in a downward direction. Any suitable means, such

as a pin 10, secured in the tube 6 and extending through slots 11 in the sides of the tube 5, may be employed to connect the parts together without interfering with their relative longitudinal movement. 12 designates the hoisting-rope, which passes over the pulley 1 and which has a free sliding movement through the tubular sections 5, 6, and 7.

In the accompanying drawings I have shown my invention applied in connection with the head of a hay-fork, the said head being designated 15. The fork itself has not been shown, inasmuch as it forms no part of the present invention and for the further reason that almost any kind of a fork or carrier may readily be modified or adapted to be used in connection with my invention. The head 15 is here shown as provided with a vertically-slidable trigger or catch, which is here shown as being U-shaped, the said U-shaped device 16 being mounted slidably in the head 15 and forced normally in an upward direction by means of a spring 17, coiled upon one of the arms thereof, which is provided at its upper end with a beveled head 18, adapted to engage the trigger-rod 19. The opposite arm 20 of the trigger 16 projects slightly above the head 15 and is adapted to be engaged by my improved tripping mechanism. Now I desire it to be distinctly understood that the parts just described do not form a part of my invention. A trigger constructed in this manner has been used prior to my invention, but has been manually operated by means of a trip-rope suitably connected therewith. Now my invention is intended and adapted to be used not only in connection with this form of releasing mechanism, but may be used in connection with almost any load-releasing device in general use by slightly modifying the general construction of the parts constituting my invention without departing from the general principle thereof.

The operation of the device will be readily understood. When the load supported by the carrier, the head of which is indicated by 15, approaches the hoisting-pulley, the trigger will be engaged by the lower end of the tubular member 7, and the trip-lever (here indicated by 19) will thus be released from the catch 18. It will be noticed that after

the trigger is engaged by the tripping mechanism the carrier is not brought up with a sudden jolt, but the telescoping members 5 and 6 will be collapsed against the pressure of the spring 9, thus permitting the carrier to be raised above the tripping-point, and thereby avoiding injury in the parts of the device.

I desire it to be distinctly understood that while I have in the foregoing shown and described a preferred form of my invention I do not limit myself in regard to the details thereof. In fact, different kinds of triggers used in connection with hoisting-carriers of different patterns will necessitate modifications and slight departures from the construction herein shown, and I reserve the right, therefore, of making any such alterations and modifications as may be resorted to without departing from the spirit and scope of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a device of the class described, a trigger-engaging slide, a hoisting-pulley, a yoke mounted upon the axis of said pulley and supporting means for the slide depending from said yoke.

2. In a device of the class described, the combination of the hoisting-pulley, a yoke carried by said pulley, supporting means carried by said yoke, trigger-engaging means connected slidingly with said supporting means, and means for forcing the supporting means and the trigger-engaging means normally apart from each other.

3. In a device of the class described, the combination of a hoisting-pulley, a tubular

rope-guide carried thereby and trigger-engaging means connected slidingly with said tubular rope-guide, substantially as set forth.

4. In a device of the class described, the combination of a hoisting-pulley, and telescoping trigger-engaging means carried thereby, substantially as set forth.

5. A tripping device for hoisting machinery comprising a telescoping trigger-engaging means and supporting means for the same, substantially as set forth.

6. A tripping device for hoisting machinery comprising a telescoping trigger-engaging means, means for forcing the members thereof normally apart, and supporting means, substantially as set forth.

7. A tripping device for hoisting machinery comprising a tubular telescoping trigger-engaging means forming a rope-guide, and a hoisting-pulley carrying the same, substantially as set forth.

8. A tripping device for hoisting machinery comprising a hoisting-pulley, telescoping trigger-engaging means carried thereby, and means for normally forcing the members of said trigger-engaging means apart, substantially as set forth.

9. A tripping device for hoisting machinery comprising a hoisting-pulley, and a tubular trigger-engaging means forming a rope-guide, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOS. E. MAHONEY.

Witnesses:

J. C. BEST,

GEO. W. HUPFER.