

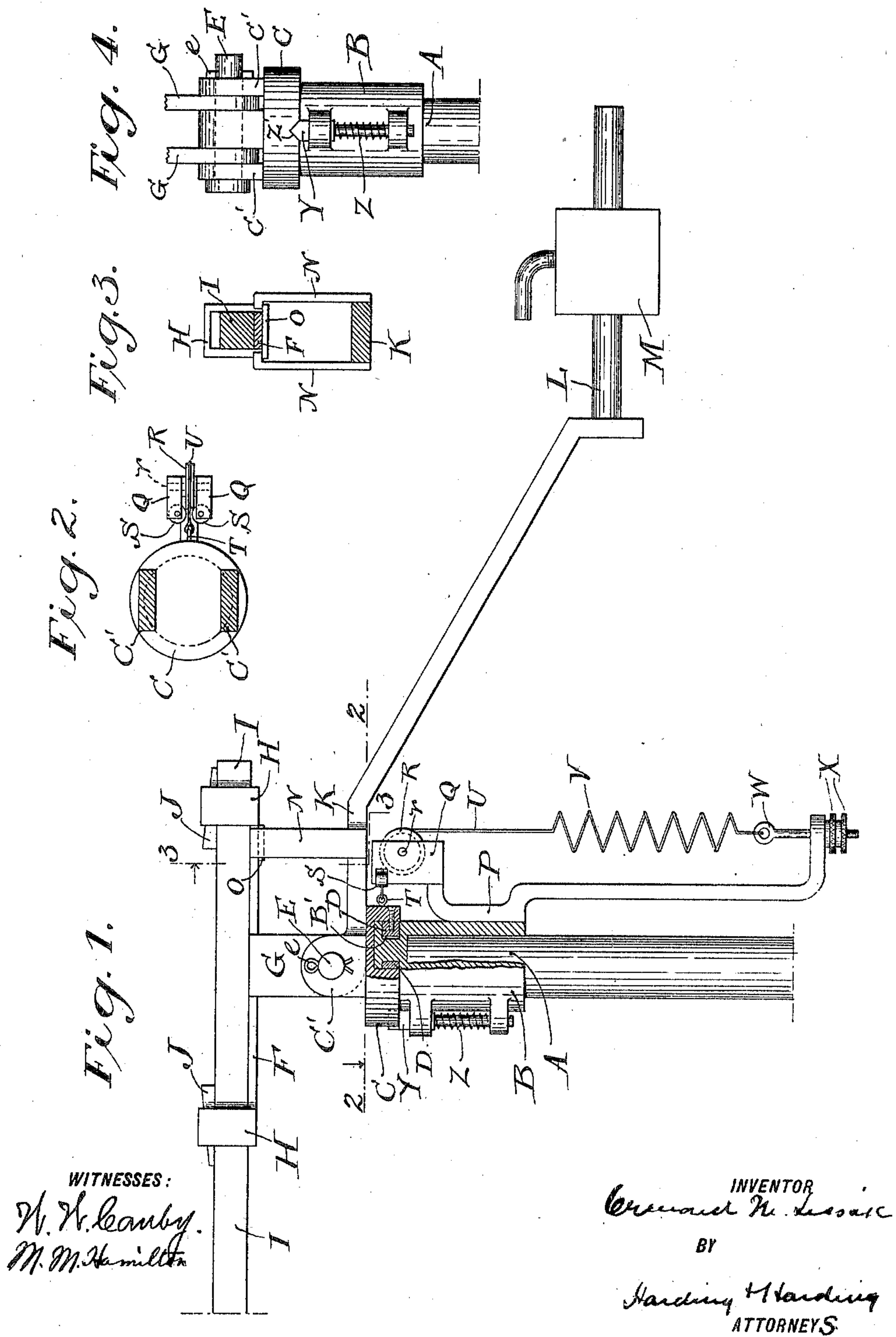
No. 811,417.

PATENTED JAN. 30, 1906.

O. M. LISSAK.
APPARATUS FOR JUMPING AND VAULTING.

APPLICATION FILED JUNE 6, 1905.

2 SHEETS—SHEET 1.



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Fig. 6.

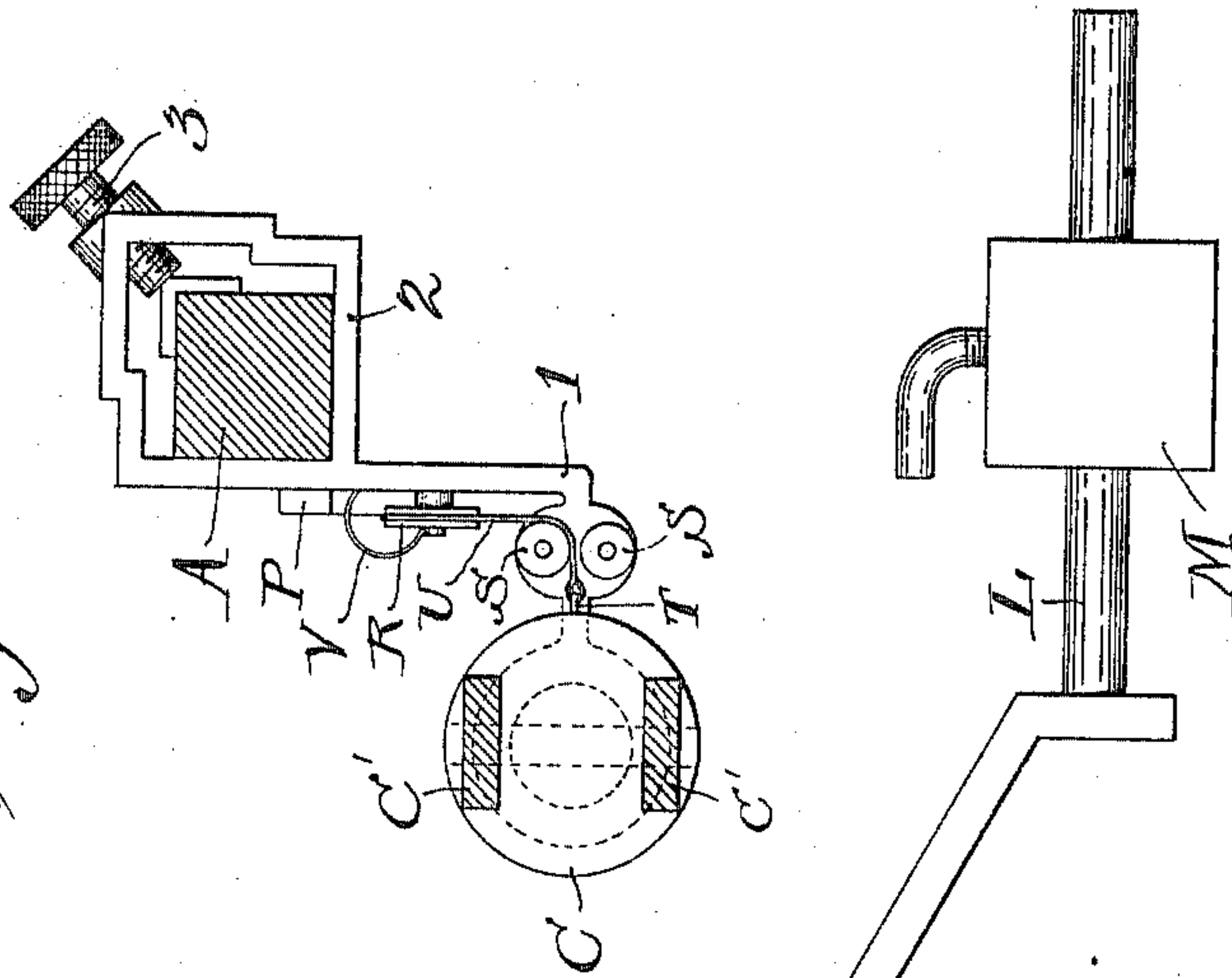
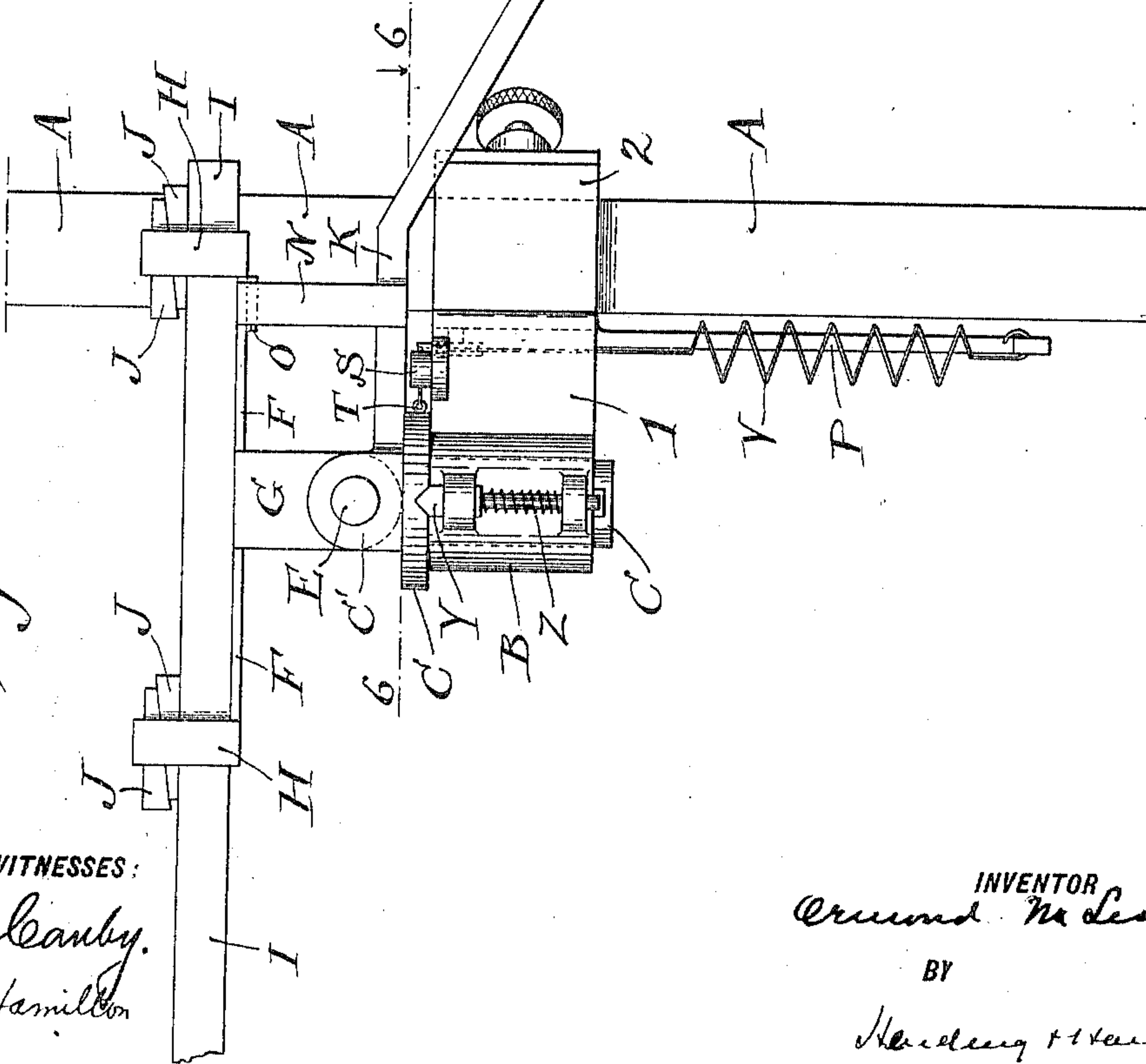


Fig. 5.



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APPARATUS FOR JUMPING AND VAULTING.

No. 811,417.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed June 6, 1905. Serial No. 263,903.

To all whom it may concern:

Be it known that I, ORMOND M. LISSAK, a citizen of the United States, residing at Westpoint, county of Orange, and State of New York, have invented a new and useful Improvement in Apparatus for Jumping and Vaulting, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

In the apparatus for jumping and vaulting now generally in use the bar is supported between uprights in such manner that when struck by the jumper or vaulter it is dislodged and falls to the ground, requiring manual replacement. At heights within ordinary reach this presents but little difficulty; but when the cross-bar reaches any considerable height replacement becomes difficult, requiring auxiliary devices—such as, for instance, a forked stick or a chair or like device—to replace it. The manual replacement, whether at little or great height, is always tedious—as, for instance, where a number are jumping or vaulting—requiring when the bar is displaced by one that the remainder shall await the replacement of the bar.

My invention, speaking generally, has for its object a construction which will automatically restore the bar, no matter in what direction it may be dislodged. I accomplish this object by mounting or supporting the bar in such manner that when struck it can move vertically or laterally, and yet providing mechanism which when the force moving it from its initial position is released the bar automatically returns to its initial position.

I will first describe the specific embodiments of my invention illustrated in the accompanying drawings and then point out the invention in the claims.

In the drawings, Figure 1 represents a side view of my invention. Fig. 2 is a sectional plan as taken on the line 2 2, Fig. 1. Fig. 3 is a detail section as taken on the line 3 3, Fig. 1. Fig. 4 is a detail showing the front view of spring-catch. Fig. 5 is a side view of my invention provided with a vertical adjustment on the supporting-post. Fig. 6 is a detailed sectional plan as taken on the line 6 6, Fig. 5.

Speaking first of Figs. 1 to 4, A is the upper portion of a post, which may be a fixed post or the extensible portion of the post. Fitting around and over the top of this post is

the metal cap B, which is fixedly secured to the part A. In the vertical portion of this cap near the top is the groove B'. C is a cylinder which fits over the top of the cap B and has secured to it the projecting flange or ring D, which is formed in two halves. This ring or flange fits in the groove B', thereby giving the cylinder C a capacity to rotate upon the cap B, but restraining it from vertical movement. Projecting upward from the cylinder C are the lugs C', between and through orifices in which extends the shaft E, which shaft is secured by the split pin e. G G are arms projecting upward from and sleeved upon the shaft E. To the upper end of these arms is secured the bar-supporter F. At each end of this bar-supporter is a clamping-square H. The bar I passes through these squares and is clamped thereto by means of the wedges J. As may be seen with the construction described, the bar I is free to move vertically or laterally when struck, as it is free to move vertically by means of the arms G upon the shaft E and is free to move laterally by means of the movement of the cylinder C upon the cap B. I provide the following mechanism for automatically restoring the bar I to its initial position when displaced: Pivoted upon the shaft E between the arms G is the bar K, to which, at its lower end, is secured the rod L, on which slides the counterweight M. N represents two pieces projecting upward from bar K and having their upper ends bent over a transverse piece O, fixed to the bottom of bar-supporter F. When the bar is displaced downward, the connection with the counterweight lifts the counterweight, and when the force is relieved the counterweight returns it to its initial position. When the bar is displaced upward, the piece F is free to move down independent of the counterweight and when relieved by gravity returns to its initial position. The counterweight M is of weight and adjusted in position to slightly exceed the weight of the bar I. The downward bend of the bar K prevents the weight M from attaining a position directly over the center of motion, even when the bar is brought down to a vertical position. The counterweight will therefore always restore the bar when depressed to its original position. In order to return the bar I when it moves laterally in either direction, I provide the following mechanism: Secured to the cylinder B is the bar P, to which are secured the projections Q, forming supports for

the shaft *r* of the pulley R. Secured to each projection Q is a roller S. To an eye T, secured to cylinder C, is one end of a flexible wire or cord U, preferably a chain. The wire or chain U passes between the rollers S and over the pulley R. The outer end of the wire or chain is fastened to the upper end of the coil-spring V, the lower end of which spring is connected to the adjusting-rod W, which extends through an orifice in the lower part of bar P and beyond bar P is threaded and upon which threaded end are the adjusting and clamping nuts X. By this arrangement whenever the bar moves laterally the cylinder C moves around cylinder B, pulling the wire or chain and extending the spring. When the pressure is relieved from the bar, the spring returns it. In order to bring the bar back to the exact position, I provide the following mechanism: Connected to cylinder B is the catch Y, acted on by the spring Z. In the lower edge of the cylinder C is a detent or notch C'. When there is no pressure upon the bar, the spring Z is strong enough to retain connection of catch Y with cylinder C. When, however, the bar is struck in such a way as to tend to cause it to curve laterally, the spring Z yields, allowing disarrangement of the catch and detent. When the spring V returns the pole, the catch will enter the detent, stopping the bar and locking it in the proper position. As may be seen with this construction, the bar will yield when struck in any direction as readily as the ordinary construction and yet will be automatically returned to its initial position, thus avoiding the trouble and delay of replacing the bar, as in the ordinary construction. If the bar I is of sufficient length to span the desired space, I use only one bar and one support, as described. If, however, the span is too great for one bar, I use two posts in alinement with each other and each provided with a bar and support, as described, the two bars being in alinement with each other and coming in contact or close proximity to each other at their free ends.

In Figs. 5 and 6 instead of supporting the cylinder B C and appurtenant mechanism directly upon the post I support them upon an arm 1, which projects from a frame 2, loosely surrounding the post A and secured to it by the bolt 3. By this construction the vertical position of the bar may be adjusted by moving the frame 2 up or down upon the post A and locking it to the post in the desired position.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In an apparatus for jumping or vaulting in combination, a support for the bar movable vertically and laterally in both directions, and mechanism to return said support to its normal position.

2. In an apparatus for jumping or vaulting in combination, a post, a support mounted on said post to rotate in both directions, a shaft carried by said support, and a bar-supporter connected to said shaft to have a vertical movement in both directions.

3. In an apparatus for jumping or vaulting in combination, a post, a support mounted on said post to rotate in both directions, a shaft carried by said support, a bar-supporter connected to said shaft to have a vertical movement in both directions, and mechanism to return the bar-supporter to its normal position when moved laterally or vertically therefrom in any direction.

4. An apparatus for jumping or vaulting in combination, a bar-supporter, a shaft upon which said bar-supporter is swiveled to move in both directions, and a counterweight acting on said bar-supporter.

5. In an apparatus for jumping or vaulting in combination, a bar-supporter, a support rotatable in both directions, connection between said bar-supporter and said rotatable support.

6. In an apparatus for jumping or vaulting in combination, a bar-supporter, a support rotatable in both directions, connection between said bar-supporter and said support, and means to return said support to its normal position when moved therefrom in either direction.

7. In an apparatus for jumping or vaulting in combination, a bar-supporter, a shaft, connection between said bar-supporter and said shaft whereby said bar-supporter is movably supported, a support, rotatably mounted, carrying said shaft.

8. In an apparatus for jumping or vaulting in combination, a bar-supporter, a shaft, connection between said bar-supporter and said shaft whereby said bar-supporter is movably supported, a support rotatably mounted carrying said shaft, and means to return said bar-supporter to its normal position when removed therefrom.

9. In an apparatus for jumping or vaulting in combination, a bar-supporter, a support mounted to rotate in both directions, connection between said bar-supporter and said support, a spring, a fixed connection for said spring, the free end of said spring being connected to said rotatable support.

10. In an apparatus for jumping or vaulting in combination, a bar-supporter, a support mounted to rotate in both directions, connection between said bar-supporter, and said support, a spring, a fixed connection for said spring, the free end of said spring being connected to said rotatable support, an interlocking device adapted to hold said rotatable support normally in and return it to its normal position.

11. In an apparatus for jumping or vaulting in combination, a bar-supporter, a sup-

port mounted to rotate in both directions,
connection between said bar-supporter and
said support, a post and vertically-adjustable
connection between said rotatable support
5 and the post.

12. In an apparatus for jumping or vault-
ing in combination, a bar-supporter, a shaft,
connection between said bar-supporter and
said shaft whereby said bar-supporter is mov-
10 ably supported, a support, carrying said

shaft, mounted to rotate in both directions,
a post and vertically-adjustable connection
between said rotatable support and the post.

In testimony of which invention I have
hereunto set my hand, at Westpoint, New 15
York, on this 25th day of May, 1905.

ORMOND M. LISSAK.

Witnesses:

J. C. NICHOLLS,
A. H. BRYANT.