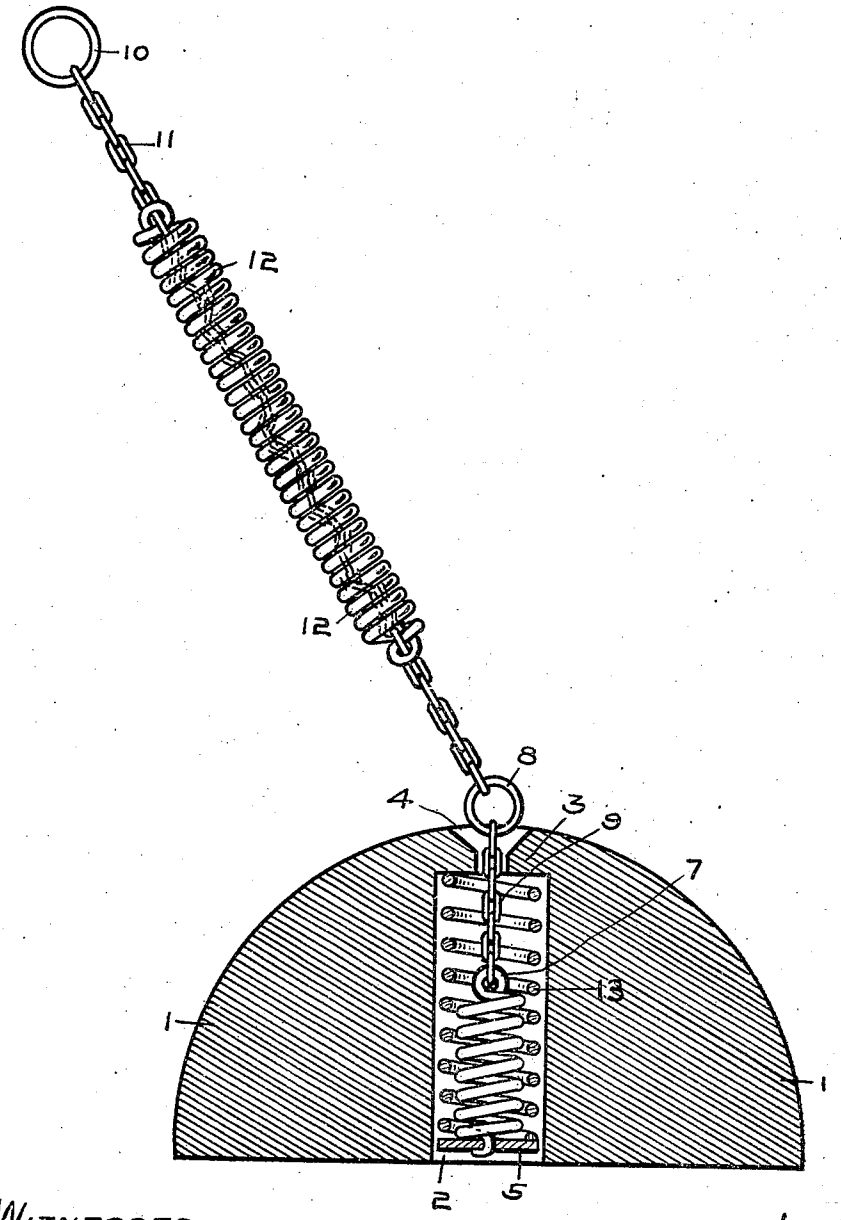
No. 843,543. PATENTED FEB. 5, 1907.

I. MATSUMOTO.

HITCHING WEIGHT.

APPLICATION FILED JUNE 8, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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HITCHING-WEIGHT.

No. 843,543. Specification of Letters Patent. Patented Feb. 5, 1907.

Application filed June 8, 1906. Serial No. 320,903.

To all whom it may concern:

Be it known that I, IKKO MATSUMOTO, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Hitching-Weights, of which the following is a specification.

This invention relates to improvements in weights for hitching horses and other animals to keep them at a given place during the absence of the driver or other attendant; and the object of the invention is to provide a portable weight to which the animal may be hitched; which weight will be more difficult of transportation by being dragged by the animal than the solid weights now in common use.

The invention consists of certain details of construction and arrangement of parts, such as will be hereinafter fully described, and pointed out in the appended claims, and I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawing, which shows the weight in vertical central section with the several parts of the device in the positions which they assume when the weight is in use for the purposes intended.

Referring to the drawing, 1 is a heavy body, preferably of cast-iron, here shown as hemispherical in shape. It is adapted to rest upon its flat side, as shown in the drawing, and extending vertically from the center of this bottom is the cylindrical opening or chamber 2. This chamber does not extend with the same diameter through the body 1, but is restricted near the top of said body, so as to form the shoulder 3. 4 is the inlet to the chamber 2 at the top of said chamber and will preferably have a conical mouth, as shown in the drawing. 5 is a metal plate making a loose fit in the chamber 2. 6 is a spiral spring, the lower end of which is made fast to the center of the plate 5. The upper end of the spring terminates with the eyelet 7. 8 is a ring on the outside of the body 1, too large to pass through the hole 4, and 9 is a chain connecting the ring 8 with the eyelet 7. 10 is a second ring, which is connected, by means of the chain 11, with the ring 8, and 12 is a spiral spring through which the chain 11 passes. The ends of the spring 12 are passed through links of the chain 11, after which said ends are bent to form loops to prevent the withdrawal of the spring from their respective links. The chain is made loose in the spring when the latter is in its normal or unstretched condition, as shown in the dotted lines in the drawing.

Located within the chamber 2, between the plate 5 and the shoulder 3, is a spiral spring 13, which is large enough to surround the spring 6. The spring 13 is normally in an expanded condition and operates in this device by being compressed. The usual hitching-strap will be tied through the ring 10.

Some horses have the habit of dragging their weights for long distances, even though they may be as heavy as twenty pounds or more; but with the device as above described the elasticity of the several springs will permit the animal to move forward a short distance without moving the weight 1, and the tension of the springs will tend constantly to pull him back again. A pull on the chain 11 will expand the spring 12, and this pull will be transmitted by the chain 9 to the spring 6, elongating the latter and causing a compression of the spring 13.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. A hitching-weight having an orifice therein with a restriction to form a shoulder near one end of the orifice, a plate located within the orifice, a spiral spring between the plate and said shoulder, a spiral spring within the first spring having one end fastened to said plate and a chain attached to the other end of said last spring.

2. In a hitching-weight, a heavy body having an orifice with a restriction to form a shoulder at one end, a plate mounted loosely in said orifice, a spirally-wound spring between said plate and shoulder, a spirally-wound spring within said first spring having one end attached to the plate and having an eye at its other end, a chain entering the orifice through its restricted end, said chain being attached to the eye in the second spring, and a third spring on the outside of said body through which the chain passes, the ends of the spring being connected with links of the chain, the chain being normally slack within the spring.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 31st day of May, A. D. 1906.

IKKO MATSUMOTO. [L. S.]

Witnesses:

J. A. MINTURN,

F. W. WOERNER.