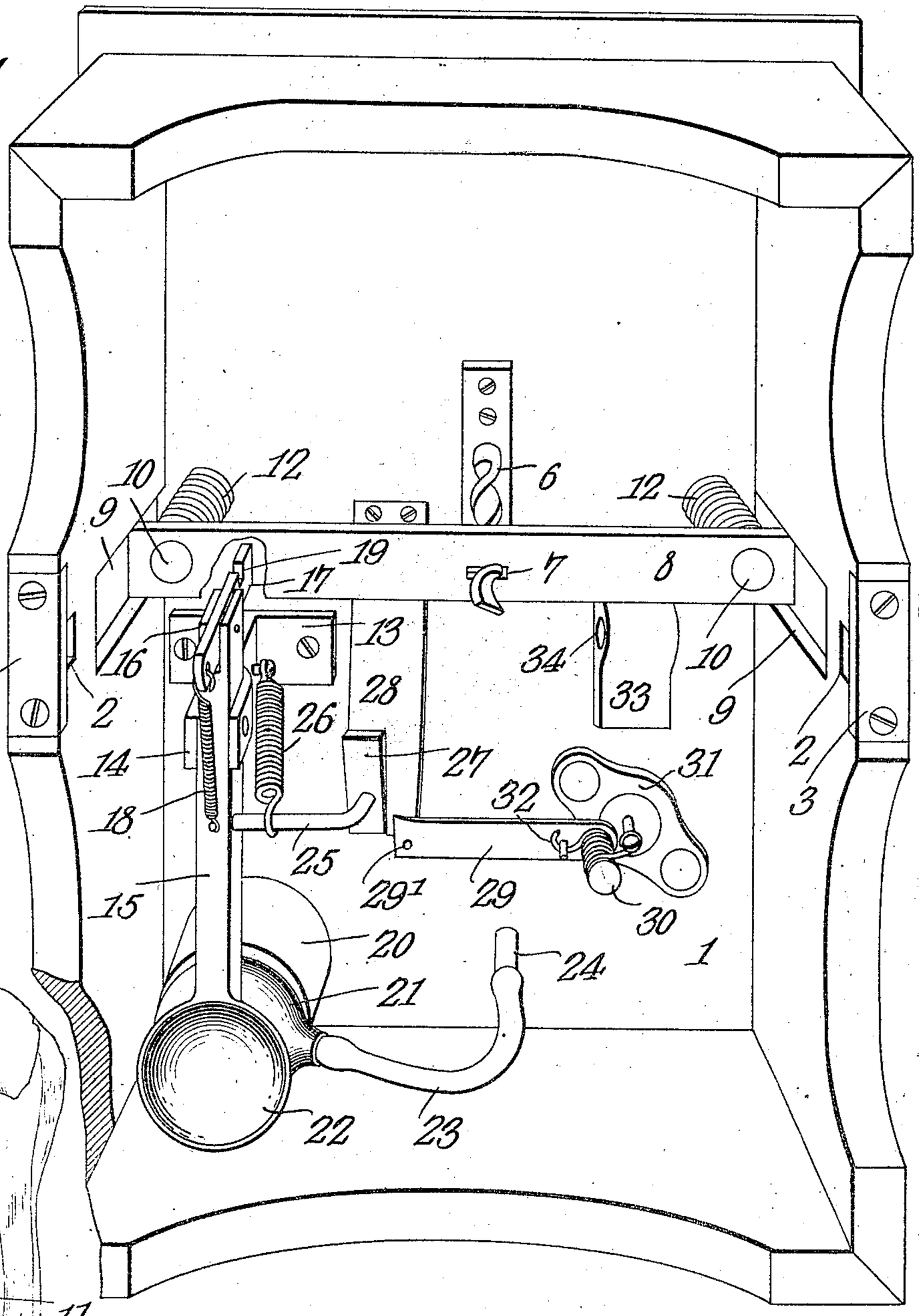
No. 873,733. PATENTED DEC. 17, 1907.

E. & U. S. DE MOULIN.

LIFTING MACHINE.

APPLICATION FILED JAN. 24, 1907.

Fig. 1.



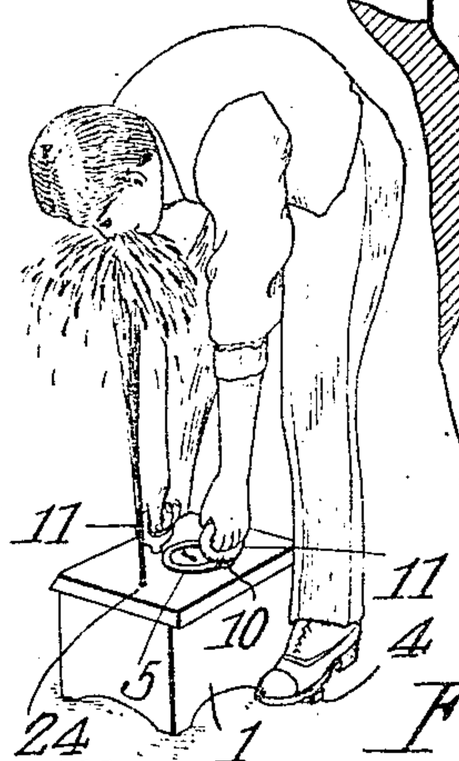


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

EDMOND DE MOULIN AND ULYSSES S. DE MOULIN, OF GREENVILLE, ILLINOIS.

LIFTING-MACHINE.

No. 873,733. Specification of Letters Patent. Patented Dec. 17, 1907.

Application filed January 24, 1907. Serial No. 353,880.

To all whom it may concern:

Be it known that we, EDMOND DE MOULIN and ULYSSES S. DE MOULIN, citizens of the United States, residing at Greenville, in the county of Bond and State of Illinois, have invented a new and useful Lifting-Machine, of which the following is a specification.

This invention relates to machines for testing the strength of persons and is more particularly designed for initiation and other purposes.

The object of the invention is to provide a machine adapted to actually or apparently record the weight which can be lifted by a person and which, when the mechanism has assumed a predetermined position, will operate to startle the user.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a perspective view of the machine inverted; and Fig. 2 is a view showing the manner of using the machine.

Referring to the figures by characters of reference, 1 is a casing open at the bottom and having recesses 2 in the lower edges of the sides thereof across which are secured base plates 3. These recesses are adapted to receive a cross strip 4 shown in Fig. 2 which extends laterally beyond the sides of the machine and is adapted to be overlapped by the feet of the user. A gage 5 is secured upon the top of the casing and the index thereof is fastened to a worm 6 which is rotatably mounted in the top of the casing and extends downward therefrom. This worm projects through a slot 7 formed within a cross strip 8, the ends of which are slidably mounted in grooves 9 formed within the inner faces of the sides of the casing. Rods 10 project from the end portions of the strip and are slidably mounted in the top of the casing, the outer ends of said rods being provided with grips 11. Resistance springs 12 are interposed between the top of the casing 1 and the strip 8 and are preferably coiled around the rods 10. These springs are adapted to retard the upward movement of the strip 8. A bracket 13 is secured upon the lower face of the top of the casing 1 and has a forked end 14 in which is fulcrumed a lever 15. One end of this lever is also forked, as shown at 16, and has a catch 17 pivoted therein. A spring 18 is connected to one end of the catch and to lever 15 so as to hold said catch constantly pressed against the adjoining edge of the cross strip 8. A notch 19 is formed within one edge of the catch so that when the cross strip is pulled to a predetermined point the same will become seated within the notch 19. A block 20 is secured within the casing and has a concave end in which is seated a rubber bulb 21 said bulb being held in place by a disk 22 at one end of lever 15. As the movement of the disk toward the block 20 is normally prevented by catch 17 pressing against the adjoining edge of strip 8 it will be apparent that said bulb will not be compressed ordinarily but will merely be held in place by disk 22.

A tube 23 extends from the bulb and is connected to a nozzle 24 secured within the top of casing 1, the upper end of said nozzle being flush with the top of the casing. An arm 25 extends laterally from the lever 15 and is connected by a spring 26 with the bracket 13. The end of arm 25 bears upon the out-struck portion 27 of a spring leaf 28 fastened in any suitable manner to the top of the casing. The end of this leaf normally extends into the path of a pin 29′ projecting from a lever 29 which is pivoted upon a pin 30 extending from a plate 31. A spring 32 is coiled around the pin 30 and is secured at its ends to plate 31 and lever 29 respectively. A block 33 is secured within the casing 1 and has an opening 34. The center of this opening is in an arc described about pin 30.

As has heretofore been intimated the spring 26 is normally under tension but will not move lever 15 toward the top of the casing 1 because the catch 17 bears against the adjoining edge of strip 8. Lever 29 normally rests upon the end of the leaf 28 so as to be held against movement thereby. When it is desired to use the apparatus the bulb 21 is removed and filled with water or other fluid after which it is replaced between the block 20 and disk 22 and connected to nozzle 24. A blank cartridge is then inserted into the opening 34 so that the cap thereof will be in position to be contacted by the lever 29 when the same is released, said lever acting as a hammer. After the parts have been assembled in this manner the casing is placed with its top uppermost and strip 4 is inserted

through the openings 2. The applicant is then requested to test his strength and as shown in Fig. 2 is placed with his feet upon the ends of the strip 4 and told to pull upward on the grips 11. This upward pull will cause the springs 12 to be compressed, said springs therefore retarding the movement of the grips. Worm 6 will be rotated by the strip 8 sliding therealong and therefore the index of the gage 5 will be rotated to show the weight lifted. After the strip 8 has been raised to a certain point it will register with the notch 19 and the catch 17 will promptly engage the strip 8. As soon as the operator has fully tested his strength in this manner he either releases the grips 11 or lowers them gradually. This will cause the strip 8 to press downward on the catch 17 thereby swinging the lever 15. As a result of this action the bulb 21 will be suddenly compressed between the block 20 and disk 22 and a stream of liquid directed upward through the nozzle 24 and into the face of the operator. Simultaneously with this operation the leaf 28 is pressed upward by arm 25 so as to release the hammer or lever 29 and the same is promptly swung upon its fulcrum by spring 22 so that its end will strike the cap of the cartridge in opening 34 and explode it.

What is claimed is:

1. The combination with a casing, a grip rigidly connected thereto, and a resistance device for retarding the movement of the grip; of mechanism operated by the release of the grip and resistance device for directing a jet of fluid beyond the casing.

2. The combination with a casing, a grip movably connected thereto, and a resistance device for retarding the movement of the grip; of means operated by the release of the grip and resistance device for exploding a cap.

3. The combination with a casing, a grip movably connected thereto, and a resistance spring designed to be tensioned by the movement of the grip in one direction; of a container within and opening through the casing, a lever mounted within the casing, and means operated by the resistance spring when released for actuating the lever to force the contents of the container therefrom.

4. The combination with a casing, a cap holder therein, a spring actuated hammer, a nozzle, and a container therefor opening into the nozzle; of means for holding the hammer against movement, a lever, a grip movably mounted on the casing, a resistance spring for retarding the movement of the casing in one direction, and means operated by the resistance spring upon its release subsequent to the tensioning thereof for actuating the lever to release the hammer and expel the contents of the container.

5. The combination with a casing; of a cross strip movably mounted therein, resistance springs for retarding the movement of the cross strip in one direction, a lever fulcrumed within the casing, a spring pressed catch mounted upon the lever and normally bearing upon and disposed to engage the cross strip, a cap holder within the casing, a spring controlled hammer for exploding the cap, a depressible spring for locking the hammer against movement, a grip connected to the cross strip and disposed when drawn in one direction to tension the resistance springs and place the strip in engagement with the catch, and means operated by the resistance springs when released of stress for releasing the hammer.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

EDMOND DE MOULIN.
ULYSSES S. DE MOULIN

Witnesses:
H. C. Diehl,
A. B. Scheele.