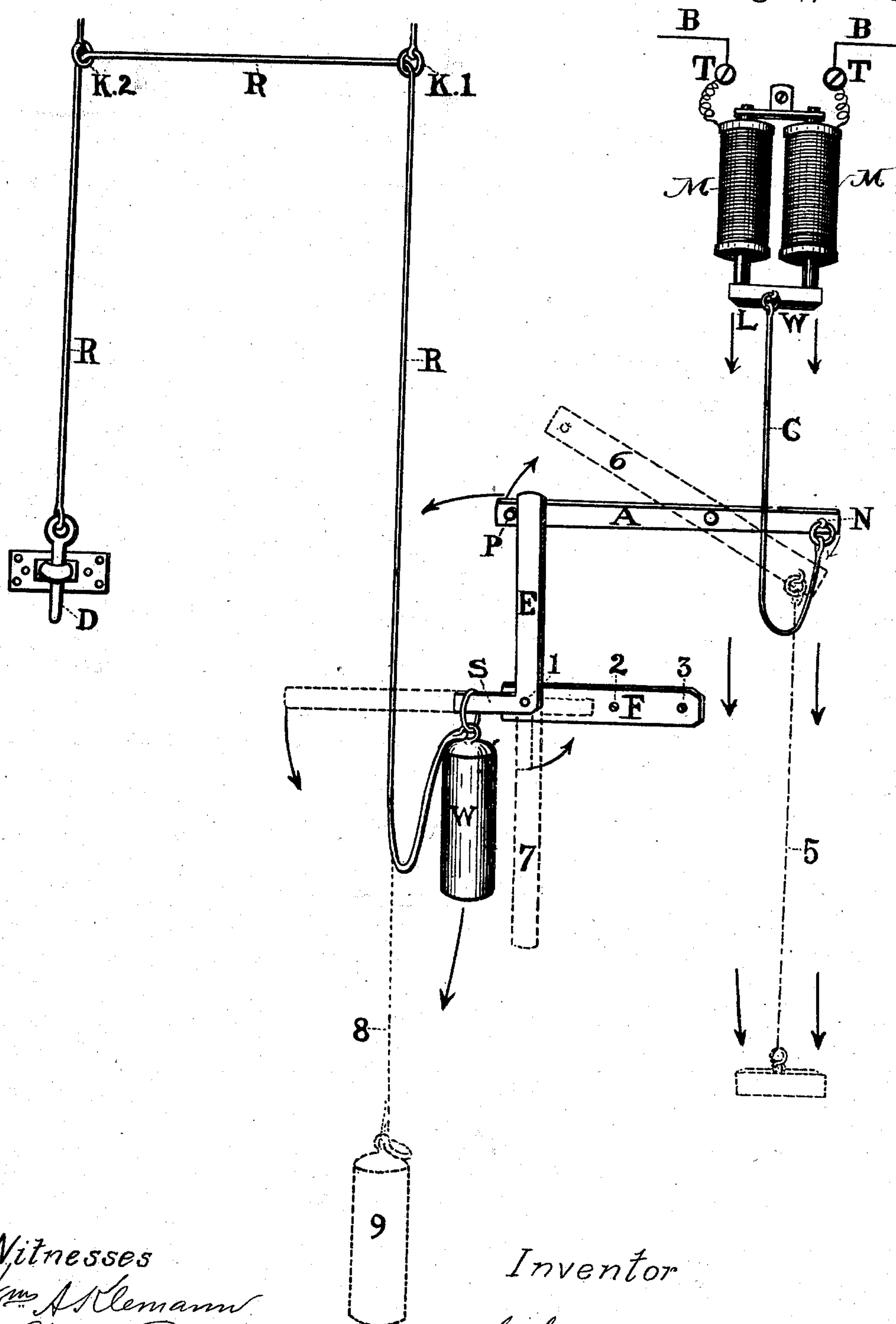


(No Model.)

C. C. DRAKE.
TRIP FOR RELEASING HORSES.

No. 502,487.

Patented Aug. 1, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES C. DRAKE, OF TRENTON, NEW JERSEY.

TRIP FOR RELEASING HORSES.

SPECIFICATION forming part of Letters Patent No. 502,487, dated August 1, 1893.

Application filed November 26, 1892. Serial No. 453,292. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. DRAKE, of the city of Trenton, county of Mercer, and State of New Jersey, have invented an Improvement in Trips for Releasing Fire Engine or Truck Horses, of which the following is a specification.

My invention relates to an automatic trip, operated by the making or breaking of an electric current and the releasing thereby of a light weight which in its turn releases a heavier weight, and such heavier weight in turn operates to withdraw a bolt or other fastening to the stable door and release the horses.

My mechanism is capable of application to any number of stables, and of operation by means of proper electrical connection with one central station by one operation. As the connection of a central station with outlying stations by means of wires and the means of making or breaking electrical connection are all well known I do not herein describe or show them.

I attain my object at each station by the mechanism shown in the accompanying drawing.

The drawing is a front view of my mechanism, and shows the mechanical and electric connections in a closed circuit of an independent magnet, and the devices I employ in connection therewith to operate the trip.

In the drawing M. M. is an independent magnet, connected by means of the binding posts T. T. with the closed circuit B. B. This magnet is provided with a light weight of iron L. W. which is placed as an armature to said magnet. This weight L. W. is attached by the cord C. to the end N. of a pivoted lever A. At the other end this pivoted lever A. is provided with a projecting pin P. which holds in place the arm E. of another lever or strip which is provided with a short extension or arm S. at its lower end, set at right angles thereto, and is pivoted at 1 upon the strip F. at the angle formed by the junction of such lever and short arm. This metal strip F. is held rigid in place by the screws 2. 3. entering any convenient firm support. Upon the arm S. is hung a heavy weight W. To

this weight W. is attached a rope R. which passes through eye-bolts K' and K² or indifferently over pulleys in lieu thereof to the bolt or fastening D. of the door or doors.

The operation of my mechanism is as follows:—Upon an alarm of fire being turned in, the current passing over the wires B. B. is broken, the magnet no longer attracts the weight or armature L. W. and the weight falls to the position indicated by the dotted lines at 5. The weight of the armature and the force of its fall are sufficient to pull down the end N. of the lever A. and bring the lever to the position indicated by the dotted lines at 6. This releases the lever E. and the heavy weight W. The lever E. and arm S. describe a semi-circle, and assume the position indicated at the dotted lines at 7. The weight W. falls and assumes the position shown by the dotted lines at 9, and pulls by its weight and the force of its fall the rope R. and thereby releases the bolt or fastening D. and permits the release at once of the door or doors of the stable or the leads or ties of the horses.

While my device may be worked by a small iron weight sliding upon a metal rod in lieu of the cord C. and the use of strong spiral springs in lieu of the heavy weight W., and by an open circuit, I prefer to use, and do work it by a closed circuit, with a light iron weight, cord, and heavy weight as shown.

The employment of an independent magnet relieves all other telegraph or fire instruments of the extra work required of them to release the horses when an alarm of fire is turned in.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of an electro-magnet included in a closed circuit, a weighted armature held normally raised thereby, and a tripping mechanism consisting of the lever A. pin P. lever E. with arm S. arranged to be actuated by the fall of the armature on a break in the circuit, thereby releasing the heavy weight W. substantially as set forth.

2. The combination of an electro-magnet included in a closed circuit, a weighted armature held normally raised thereby, a tripping mechanism consisting of lever A. pin P.

lever E. arm S. arranged to be actuated by the fall of the armature on a break in the circuit, the heavy weight W. cord R. and fastening D. as shown and described.

- 5 3. The combination of an electro-magnet included in a closed circuit, a light weighted armature held normally raised thereby, the

cord C. lever A. lever E. arm S. weight W. cord R. and fastening D. substantially as set forth.

CHAS. C. DRAKE.

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