

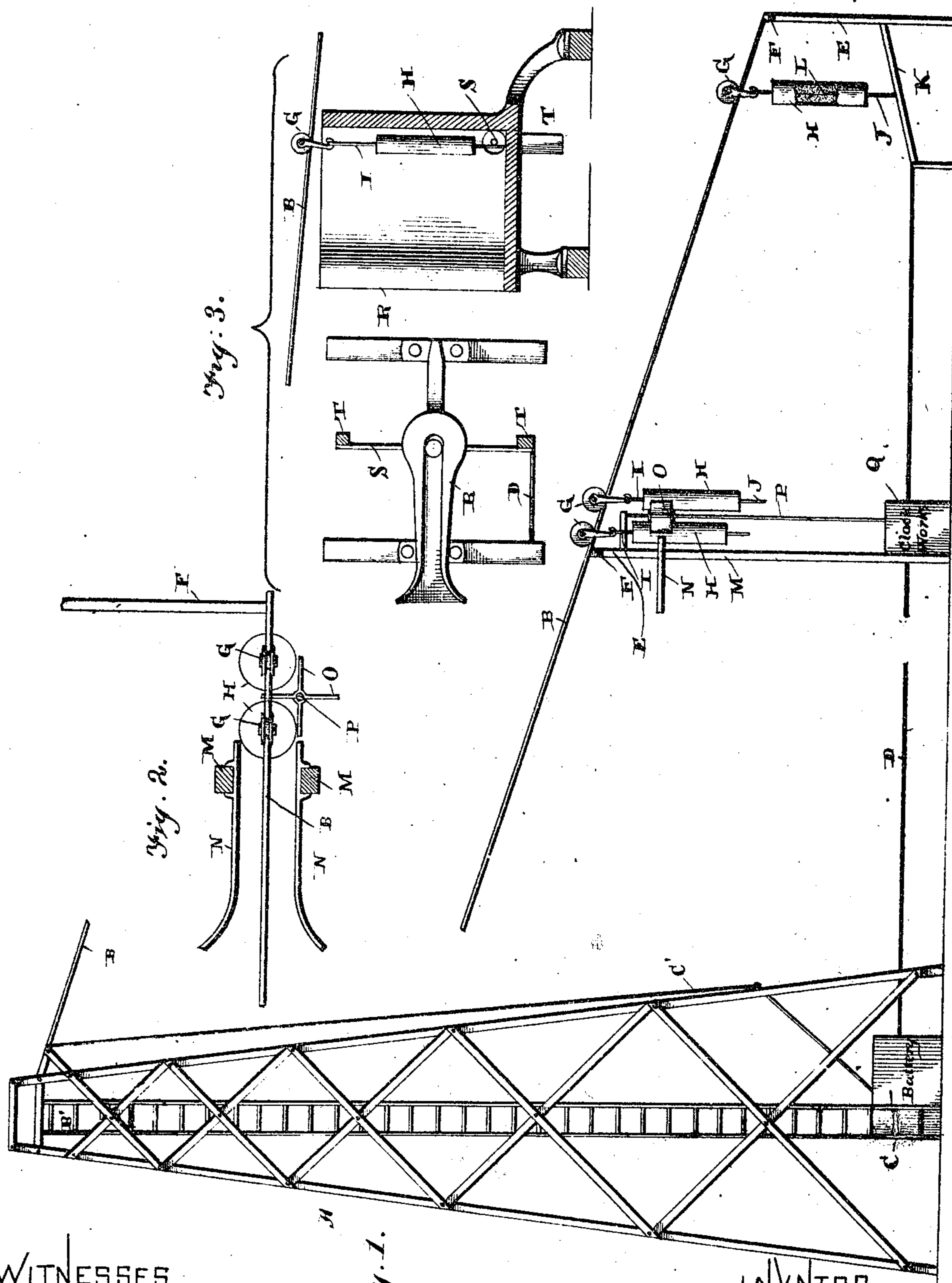
(No Model.)

L. L. BROWN.

AUTOMATIC TRANSPORTER AND EXPLODER FOR EXPLOSIVES
FOR AIDING RAINFALL.

No. 473,820.

Patented Apr. 26, 1892.



WITNESSES—

Geo. E. Smith
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Fig. 1.

INVENTOR—

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per
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UNITED STATES PATENT OFFICE.

LAURICE LEROY BROWN, OF PATMOS, KANSAS.

AUTOMATIC TRANSPORTER AND EXPLODER FOR EXPLOSIVES FOR AIDING RAIN-FALL.

SPECIFICATION forming part of Letters Patent No. 473,820, dated April 26, 1892.

Application filed January 5, 1892. Serial No. 417,084. (No model.)

To all whom it may concern:

Be it known that I, LAURICE LEROY BROWN, of Patmos, in the county of Coffey and State of Kansas, have invented certain new and useful
5 Improvements in an Automatic Transporter and Exploder for Explosives for Aiding Rain-Fall; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled
10 in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention is an automatic transporter
15 and exploder for explosives for aiding rain-fall; and it consists in certain novel features of construction, and in the combination and arrangement of parts, which will be fully described hereinafter, and more particularly re-
20 ferred to in the annexed claims.

The object of my invention is to construct an improved means of transporting the bombs to a safe distance from the operators for ex-
25 plosion, to provide an automatic exploding mechanism, and to provide an automatically-acting mechanism for passing the bombs to the exploder.

Referring to the accompanying drawings, Figure 1 is a side elevation of my improved
30 apparatus. Fig. 2 is a top view of a portion of the same. Fig. 3 is a modification of the bomb-exploding apparatus.

When my improved apparatus is to be employed in a level or undulating section of
35 country, I construct a derrick or tower A, which forms the support for the upper end of the inclined track B; but when the apparatus is to be used in close proximity to a hill the tower may be dispensed with and a suitable
40 support for the upper end of the track constructed thereon. The extreme upper end of the track B is made level, as shown at B', and this level portion extends preferably to the
45 edge of the support or tower A. This portion of the track enables the operator to place the traveling bombs upon the track and with great convenience and ease push them off on the sloping portion at the desired intervals. The track B forms the conductor for an elec-
50 trical current which has its source in a battery C, located at the foot of the tower, as shown, and with which the track is connected

by the vertical wire C'. Extending outward from the battery and in a line with the track B is a wire or conductor D, which terminates
55 at the base of the support for the outer end of the track. The inclined wire B is supported on the outer ends of the horizontal arms F, which project from the vertical posts E. If the said wire were supported on the
60 upper ends of the posts, it is evident that the latter would impede the downward movement of the bombs; but as the wire is supported away from the posts by the said arms it is evident that the movement of the bombs
65 thereon is free and unobstructed.

G represents a trolley to which the bomb II is suspended by means of a rod or wire I, extending down through the bomb and projecting outward from its lower end, as shown
70 at J. The shell of the bomb is preferably formed of paper or other light material, which incloses the explosive, which may be of powder, dynamite, or other material, as may be preferred. A portion of the wire passing
75 through the bomb is made quite thin, as shown at L. The outer end of the wire D is connected to the horizontal bar K, which is directly beneath the terminus of the track B, so that when the bomb has traveled to the
8 lower end of its track the projecting rod J will come in contact with the said bar, and by this means the track B and the wire D will be placed in electrical contact and the circuit
8 completed. The electrical current passing into the bomb through the wire I will heat the reduced portion L to a very high degree, causing the powder or other explosive to ignite, thus firing the bomb. When dynamite
is used, a small quantity of powder will be placed around the point L, so that the same in exploding will cause a jar sufficient to explode the dynamite.

When a very long track is employed, the bombs in traveling down the incline are liable to move at different rates of speed, and thus reach the lower end at irregular intervals. This defect I obviate by an improved apparatus for catching the bombs near the lower end of the track and releasing them at pre-determined intervals. This mechanism consists of a vertical support M or supports, to which are secured on opposite sides of the track B the spring-arms N, which retard the

movement of the bombs in passing through them, allowing the bombs to pass with reduced force against the outwardly-projecting blades O of the vertical shaft P, which is journaled to one side of the track. The blades project over the track and are four in number. The shaft to which they are secured is given a quarter-movement at regular intervals by a clock-work mechanism inclosed in the base Q. By this means the bombs are passed to the lower end of the track with regularity, the length of the interval being varied at will by adjusting the clock-work mechanism.

The modification shown in Fig. 3 for the reception of the bomb at the terminus of the track consists of a mortar or heavy metal receptacle R, having an open flaring side and open upper end, so that the bomb is conveyed therein by its downward movement. Extending through this receptacle is the car S, to which the outer end of the wire D is connected, so that when the bomb has reached the rear side of the receptacle the rod J is brought in contact with this bar, and the circuit being thus completed the explosion immediately occurs. The bar S is held in position by supports T on opposite sides of the receptacle R. The explosion throws the trolley-wheel off the track and out of the way of the next bomb.

The portions of the apparatus in close proximity to the point where the explosion occurs are made very strong and are securely anchored, so as not to be affected or displaced by the shock.

The operator being stationed at the upper end of the wire is quite removed from the locality of the explosion, and the track B having its connection with the battery at U there is no danger of his accidentally coming in contact therewith.

Having thus described my invention, I claim—

1. In an apparatus of the character described, the combination, with a track and an electrical circuit, of a bomb adapted to be carried on said track and close the said circuit, whereby the bomb is exploded, substantially as shown and described.

2. In an apparatus of the character described, the combination, with an inclined track which forms an electrical conductor, and which is connected with the source of supply at its upper end, and a second conductor extending outward from the source of supply and in a line with the track of a bomb, adapted to move on the said track and con-

nect the outer ends of the said conductors, whereby the circuit is closed and the bomb exploded, substantially as herein shown and described.

3. In an apparatus of the character described, the combination, with a tower, a track, vertical supports, arms projecting outward therefrom, and an electrical circuit, of a bomb adapted to travel on the said track and close the said circuit, substantially as shown and described.

4. In an apparatus of the character described, the combination, with the inclined track-conductor B and the conductor D, both of which are connected to a common electrical source, and a bar at the outer end of the conductor D, of a bomb carried by a trolley on the said track and a rod extending through the bomb, having a reduced portion, the lower projecting end of said rod being adapted to engage the said bar when the trolley has reached the lower end of the track, whereby the circuit is closed, the rod passing through the bomb heated, and the explosive ignited, substantially as shown and described.

5. In an apparatus of the character described, the combination, with an inclined track, a support therefor, and a circuit, of a bomb adapted to be carried on said track and close the circuit and a means for moving the bombs at regular intervals on the track, substantially as shown and described.

6. In an apparatus of the character described, the combination, with the inclined track, the circuit, and the bomb moving on the track and adapted to close the circuit, of a vertical support in a line with the said track, guides secured to said support, between which the bomb passes, a shaft journaled to one side of the track, blades extending outward from said shaft and into the line of travel of the bomb, and a means for partially rotating the said shaft at predetermined times, substantially as shown and described.

7. The combination, with an inclined track and an electrical circuit, of a mortar arranged at the lower end of the track and a bomb adapted to be carried on said track and which enters the motor, where it is exploded by closing the said circuit, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

LAURICE LEROY BROWN.

Witnesses:

G. E. MANCHESTER,
JOE ROLSTON.