

E. A. MATHERS.
SPRINKLING APPARATUS.

APPLICATION FILED JAN. 19, 1907. RENEWED FEB. 18, 1913.

1,068,796.

Patented July 29, 1913.

2 SHEETS—SHEET 1.

Fig. 8

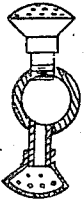
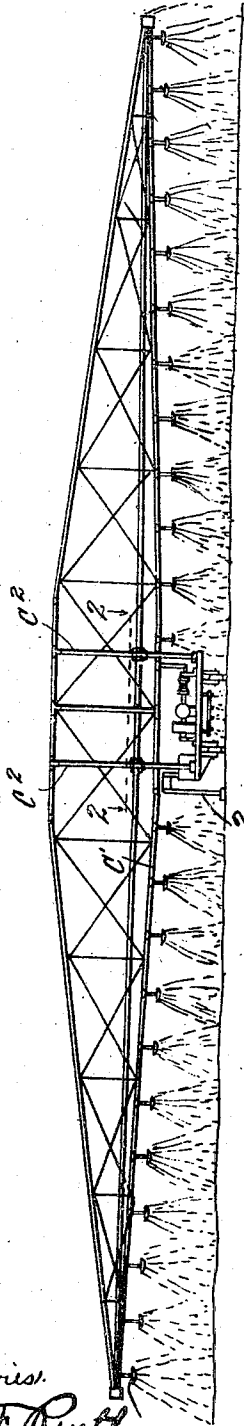


Fig. 1.



Witnesses

Chas. K. Davis.

Harry B. Ruether

Fig. 7.

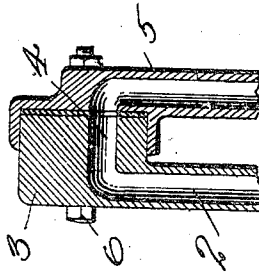


Fig. 6.

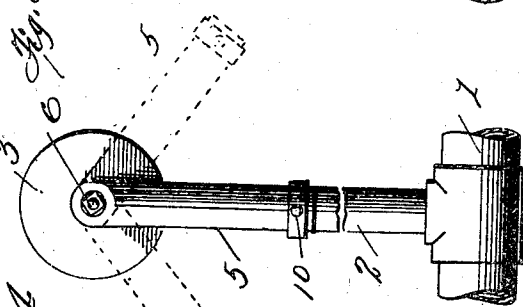
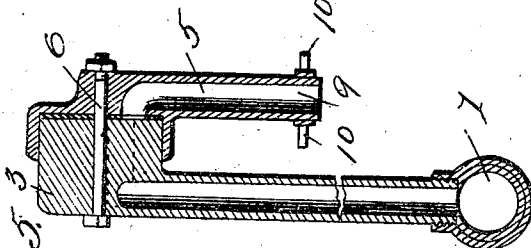
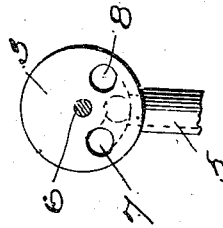


Fig. 4.

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2 SHEETS—SHEET 2.

Fig. 2

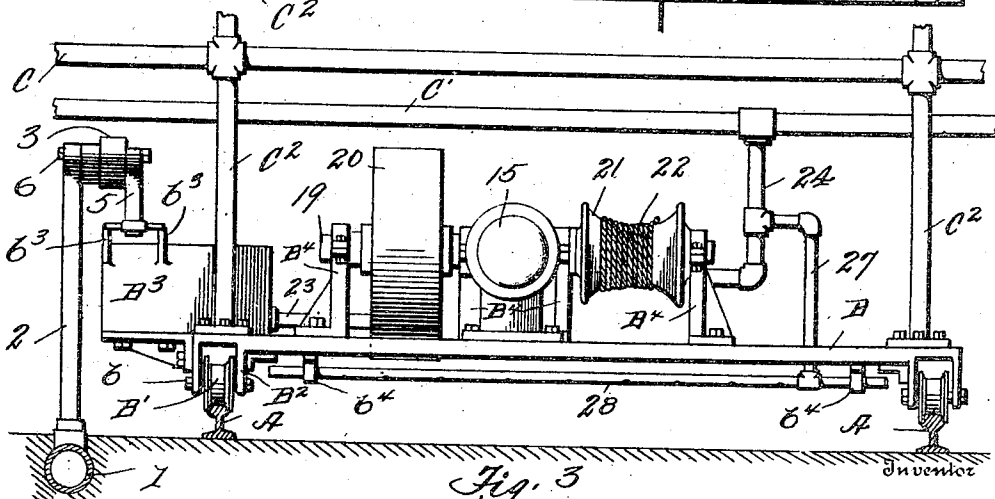
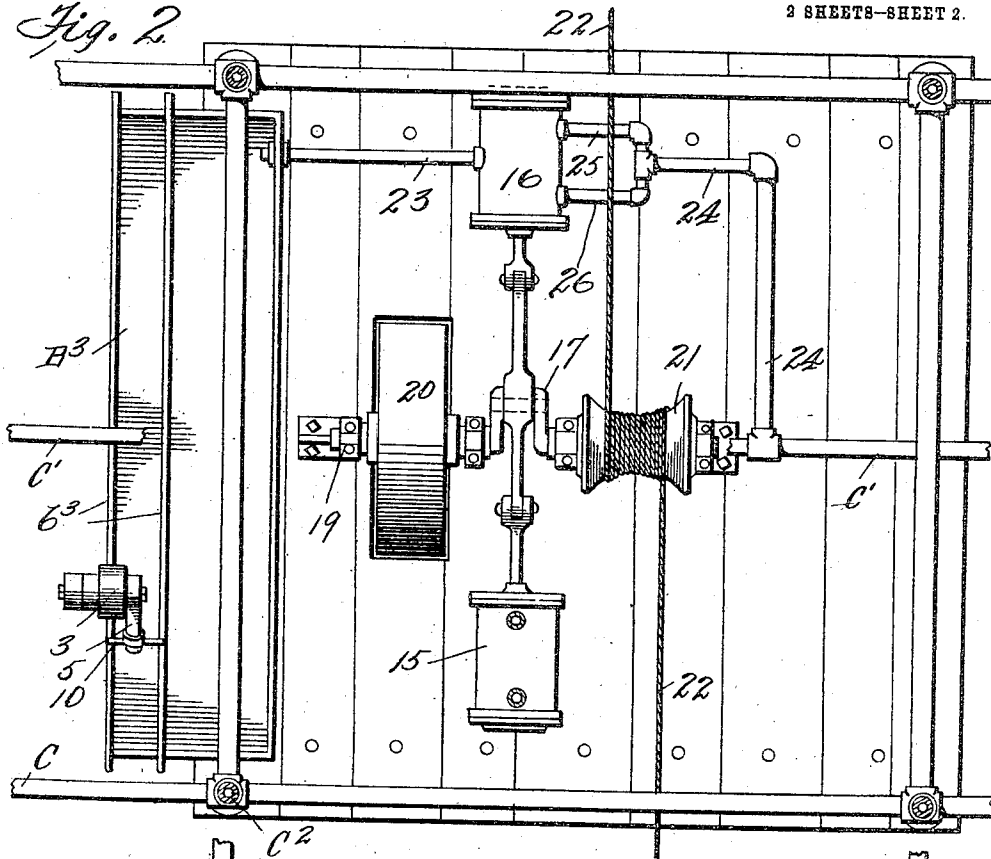


Fig. 3

Witnesses
 Chas. H. Davies

Harry D. Rueth

By

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UNITED STATES PATENT OFFICE.

EZRA A. MATHERS, OF GREENSBURG, PENNSYLVANIA.

SPRINKLING APPARATUS.

1,068,796.

Specification of Letters Patent.

Patented July 29, 1913.

Application filed January 19, 1907, Serial No. 353,163. Renewed February 18, 1912. Serial No. 749,281.

To all whom it may concern:

Be it known that I, EZRA A. MATHERS, a citizen of the United States, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Sprinkling Apparatus, of which the following is a specification.

My invention consists in certain improvements in the details of a traveling sprinkling apparatus for the purpose of irrigating arid lands, and it consists in certain improvements in the details of construction whereby an apparatus is provided which can be built and operated at comparatively small expense, all as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is an elevation of such apparatus as it appears when ready for use, Fig. 2, a top or plan view of the truck and mechanism carried thereby, Fig. 3, an end view of said truck, and Figs. 4, 5, 6, 7 and 8, detail views on an enlarged scale showing the construction of some of the parts more clearly.

In said drawings the portions marked A represent the rails of the track, B, the main bed or frame of the truck, and C the frame carrying the sprinkling pipe.

The track preferably consists of rails A which may be old railroad rails of a character serviceable for such use, laid in any suitable manner across the stretch of land which it is desired to irrigate.

The truck frame B is of any suitable construction to support the operating mechanism and is mounted upon wheels B' which are journaled on shafts b in housings B² on said frame B, and is preferably provided with a floor, as shown.

The frame C is composed of suitable tubes and rods connected by fittings, and braced and trussed to form a frame-work of the length required for the purpose. The sprinkling pipe C' is mounted thereon and extends longitudinally thereof and is provided with sprinkling heads c at suitable intervals. Said structure C is supported upon the truck B by means of posts C² secured at their lower ends to said truck-frame, and at their upper ends to said frame C. Said truck C carries upon one side a tank B³ adapted to

contain the water used in the operation of the apparatus. Said tank is filled from a water main 1 through stand pipes 2, which are located at intervals alongside the track, and are each provided with a head 3 formed with a horizontal outlet 4. A swinging nozzle 5 is secured on said head 3 over the outlet 4 on a pivot bolt 6. The head of said nozzle is formed with two holes 7 and 8, each of which leads to the discharge opening 9 therein. Each of said holes 7 and 8 is located a short distance to one side of the center and to one side of the outlet 4 in the head 3 so that when said nozzle hangs downwardly, in the position shown in Figs. 5 and 6, the outlet 4 will be covered and the water prevented from flowing into said discharge nozzle 5. When the sprinkling apparatus, however, passes by one of said stand pipes 2 the top of the tank B³ strikes the side of nozzle 5 and swings it from the vertical position shown in Figs. 5 and 6 to one of the positions indicated by dotted lines in Fig. 4. Transverse pins 10 projecting from the sides of said nozzle near its end are adapted to rest upon and slide along a track b³ formed on the top of tank B³. When said nozzle is in the position resting upon the top of said tank one of the openings 7 or 8 will register with the outlet 4 and permit the water to flow from main 1 through stand pipe 2, outlet 4, and nozzle 5 into tank B³. Said stand pipes are located at sufficiently close intervals along the line of the track to keep said tank supplied with water required for the sprinkling apparatus.

On the top of frame B, mounted on the floor or suitable supports provided on the frame-work, is an engine 15 and a pump 16, both connected to a crank 17 on a transverse shaft 19, which is journaled in suitable bearings on the top of standards B⁴ which are mounted on said bed B. On one end of said shaft 19 is a fly wheel 20, and on its opposite end a spool 21 around which is wound a cable 22, the ends of which extend in each direction from said spool to the end of the track where they are made fast to a post (not shown) or other suitable stationary part. A suction pipe 23 leads from near the bottom of tank B³ to the pump 16 and a pipe 24 is connected by branch pipes 25 and 26 to the pump cylinder on each side of the piston therein. Said pipe 24 leads to the sprinkling pipe C', and has a branch 27

which leads to a sprinkling pipe 28 mounted on brackets 6⁴ on the underside of the bed B and extending from one side of the truck frame to the other, providing for sprinkling the ground between the rails of the track.

The operation is as follows: The parts being in the position shown in Fig. 1 and the engine 15 being in operation, the water from tank B³ will be pumped by the pump 16 through the pipes as described to the sprinkling pipe C⁷ carried by the frame C and through said pipe C¹ and the sprinkling heads *c* over the ground covered by said frame C. The spool 21 will at the same time be rotated by said engine which will operate through the cable 22 to draw the truck and the apparatus carried thereby toward one end or the other of the track. When one end of the track has been reached the engine will be reversed and the apparatus will travel in the reverse direction to the other end of the track. By this arrangement a long travel for the apparatus may be arranged for and the pressure desired in the sprinkling pipes secured by the speed of the engine and pump, all as will be readily understood. It will be understood, of course that the sprinkling heads *c* may be any appropriate form, but the preferred arrangement is illustrated in Fig. 8.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a traveling sprinkling apparatus, the combination of a track, a water supply alongside said track, a truck adapted to travel on said track, a tank carried by said truck, means for automatically supplying said tank with water from said water supply while the apparatus is moving comprising a supply pipe, a swinging depending nozzle thereon arranged to register with the discharge opening of the supply pipe when swung at an angle and to cover said opening when hanging normally and located to be operated by contact with the moving apparatus, an engine and pump mounted on said truck, means for propelling said truck operated by said engine, a sprinkling pipe carried by said truck, a suction pipe leading from the tank to said pump, and a

pipe leading from said pump to said sprinkling pipe, all substantially as set forth.

2. In a traveling sprinkling apparatus, the combination of a track, a truck thereon, a frame on said truck, a sprinkler mounted on said frame, a tank on said frame, a pump on said frame, an engine for operating the pump and also propelling said truck, a water supply pipe alongside the track provided with a series of stand pipes, a swinging nozzle on each of said stand pipes, the lower end of which is in the path of the top of said tank, said swinging nozzle being adapted to open the discharge port of the stand pipe when swung to an angle, and to close said port when hanging vertically, substantially as set forth.

3. In a sprinkling apparatus, the combination of a traveling sprinkler comprising a tank mounted on a truck, a water pipe, a series of stand pipes connected with said water pipe, a swinging nozzle controlling a discharge port on each of said stand pipes and arranged in the path of the tank on said truck, the lower end of each nozzle being normally below the upper edge of said tank, whereby in passing said nozzle said tank will swing said nozzle to open the discharge port, substantially as set forth.

4. In a sprinkling apparatus, the combination, of a traveling sprinkler, a tank carried on the truck thereof, a water supply pipe alongside the path of said truck, a stand pipe extending up from said pipe with a swinging nozzle on its upper end, said stand pipe and nozzle being provided with discharge ports which register only when said nozzle is swung to an angle from its normal position, said nozzle being arranged in the path of a track on said truck, and said track, which as said truck passes will swing said nozzle to the angle required to open said ports, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Greensburg, Pa., this 27th day of December, A. D. nineteen hundred and six.

EZRA A. MATHERS. [L. s.]

Witnesses:

W. F. WESLEY,
EDW. P. DORAN.