

(No Model.)

2 Sheets—Sheet 1.

A. D. GOODWIN.
WATER CONVEYER.

No. 528,090.

Patented Oct. 23, 1894.

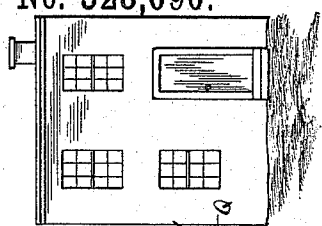


Fig. 1.

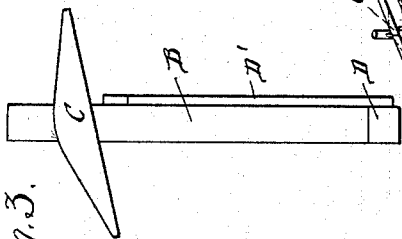


Fig. 3.

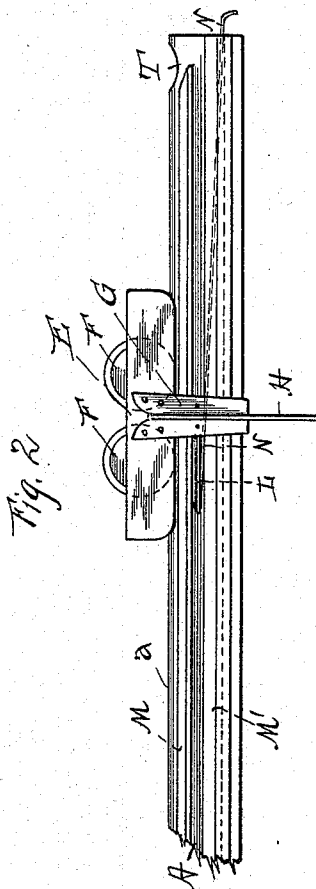


Fig. 2.

WITNESSES

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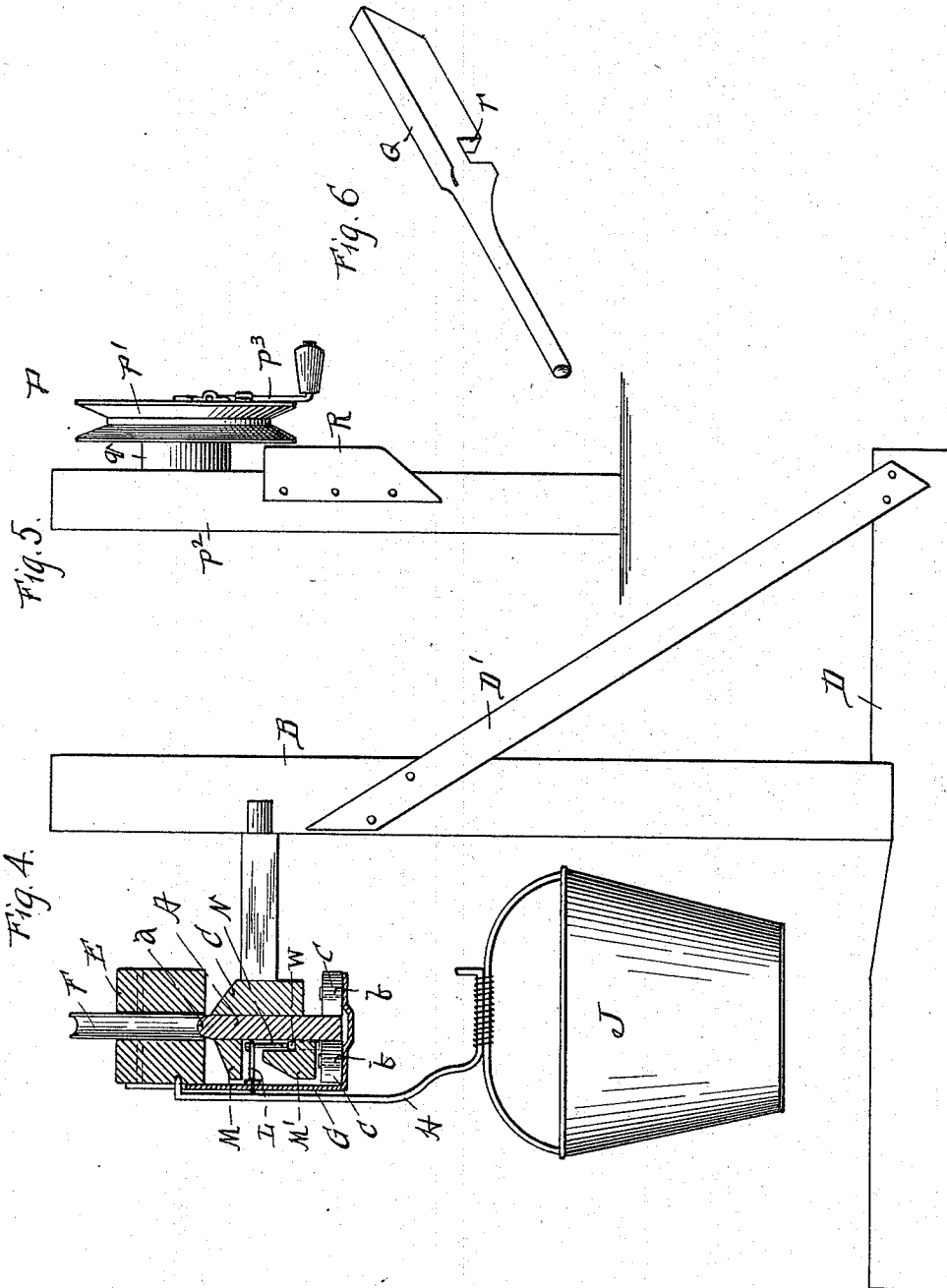
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UNITED STATES PATENT OFFICE.

ADOLPHUS D. GOODWIN, OF HARAN, VIRGINIA.

WATER-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 528,090, dated October 23, 1894.

Application filed May 16, 1894. Serial No. 511,449. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHUS D. GOODWIN, a citizen of the United States, and a resident of Haran, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Water-Conveyers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a general perspective view of the invention. Fig. 2 is a side elevation of a portion of the higher end of track showing notch, and the carriage thereon. Fig. 3 is a front view of post with supporting block, sill and brace. Fig. 4 is a transverse vertical section of track and carriage showing bucket and post, &c., in relation thereto. Fig. 5 is a front view of windlass with post, &c. Fig. 6 is a detail of friction brake lever.

This invention has relation to means for conveying water from springs or reservoirs to dwelling houses, or other points of consumption, my object being to provide a simple, practical, and convenient conveyer by means of which water may be easily and quickly brought from a distant reservoir or spring to the point of consumption without the aid of manual labor except that of the operator at the point to which the water is brought.

A further object is to so construct and arrange the track and carrier of the conveyer that it will be impossible for such carrier to leave or jump the track in its travel, and to so arrange the operating rope or cable that it will be protected from the weather.

A further object is to provide the carrier with an automatic or self-dipping and filling bucket, of such character and arrangement that the danger of spilling by the motion of the carrier, or by the action of the wind, is reduced to a minimum.

With these objects in view the invention consists in the novel construction and combination of parts all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings,

the letter A designates an elevated track supported at any suitable distance above the ground by means of posts B, said track extending from a spring or reservoir indicated at Z to the point of consumption which is at a higher level. This track is formed in sections jointed at each post, the sections being secured to supporting blocks C carried by arms projecting from said posts.

The posts may be set in the ground to give them the necessary stability, but I prefer to support them by means of sills D, and braces D', inasmuch as this arrangement provides greater security against the posts sagging or settling in different directions, and thereby throwing the track sections out of proper alignment.

The track sections each consists of an edge-wise disposed rail, having a rounded tread *a* for the car or carrier wheels, an overhanging sloping guard flange M secured to the outer lateral face of the rail near the tread, and a grooved rope or cable guiding strip M' secured to the same face of the rail near the lower edge thereof.

E designates the car or carrier which comprises a body portion or frame having a vertical slot or slots therethrough in which are journaled peripherally grooved wheels F which engage and travel upon the tread *a* of the rail. Attached to the said body or frame is a depending bracket G which has its lower portion bent inwardly underneath the track and carries axle studs *b* upon which are journaled two horizontal steadying or guide wheels *c, c*, which embrace the lower portion of the rail and bear against its opposite sides.

H designates the bucket-carrying arm which is journaled in the body or frame of the carrier in such a manner as to permit it a swinging movement in a direction parallel with the length of the track, but allows it no lateral movement whatever.

J is a bucket which is attached to the lower bent portion of the arm H by means of its bail, the attachment being made by means of wire wound around said bail and the bent portion of the arm H, or by other means which will permit said bucket a swinging movement in a direction parallel with the length of the track, but no lateral movement. Said bucket is weighted at K.

Projecting from the bracket G is an arm L the free portion of which is designed to travel in close relation to the rail in the opening between the guard flange M and the rope or cable-guiding strips M'. Attached to the said arm is the operating rope or cable N which runs in the groove of the strip M' and between said strip and the lateral face of the rail, being thus protected by the rail, strip M', and guard M from the weather.

The supporting blocks C which support the track are usually beveled and tapered in order to divert rain and snow from running onto the track.

P designates the windlass to which the operating rope or cable is connected and by means of which the conveyer is operated. Said windlass preferably consists of a pulley or wheel P' of comparatively large diameter, and having in its periphery a deep V-shaped groove in which the rope or cable is wound. Said wheel or pulley is journaled upon a post P² and is operated by means of a suitable crank P³.

Q designates a friction brake lever designed to be brought into contact with a hub or boss q upon said wheel or pulley. Said lever is supported removably upon a block R attached to the post P² by means of a notch r in said lever which engages the upper edge of said block, the contact arm of the lever being sufficiently weighty to normally hold it away from contact with the said hub or boss. The purpose of this lever is to retard the unwinding of the rope or cable from the wheel.

S designates a buffer stop for the carriage at the spring end of the track. This usually consists of a piece of yielding material placed transversely across the track in proper relation to the spring, and supported by posts S'. At the opposite end of the track a notch or depression T is formed in the rail, which upon being engaged by one of the carrier wheels, holds the carrier against descent.

The operation is as follows:—The carrier is released and runs down the track by gravity, being checked by the buffer S at the proper point, the track at this point being depressed sufficiently low to bring the bucket in the spring or reservoir. The weight causes the bucket to dip and fill, upon which the windlass is operated to return the carrier and bucket. It will be observed that the construction of the carrier and track as above set forth is such that it is impossible for the carrier to leave the track or to have any lateral sway. The bucket-carrying arm and bucket being also incapable of lateral motion from wind or other causes, the contents of the bucket are retained from spilling. The swing in the direction of the length of the track takes up any jerk resulting from irregular or unsteady operation of the windlass. Each track section should be provided with an anti-friction pulley W which supports the rope or cable.

In some instances it may be desirable to

employ this invention where the spring or reservoir is at a higher level than the point of consumption. In this case it is only necessary to make the rope or cable endless, so that the windlass may be operated to run the conveyer to the spring, the return trip being made by gravity.

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

1. The herein described self-filling appliance for obtaining and conveying water from a distant reservoir or spring, comprising a single elevated inclined track extending from the reservoir or spring to the point where the water is to be delivered, a carriage arranged to run on said track, a depending, swinging arm carried by said carriage, a self-filling bucket carried by said arm, a rope or cable attached to said carriage, and a windlass for operating said rope or cable, substantially as specified.

2. The herein described self-filling appliance for obtaining and conveying water from a distant spring or reservoir comprising an inclined track extending from the spring or reservoir to the point where the water is to be delivered, a carriage arranged to run on said track, a bracket depending from said carrier and carrying steadying devices embracing opposite sides of said track, a swinging arm journaled in said carriage and depending below the track, a self-filling bucket carried by said arm, means for stopping said carriage at the proper point at the spring or reservoir, a rope or cable attached to said carriage, and a suitable windlass for operating said rope or cable, substantially as specified.

3. A water conveyer comprising a cable, an elevated sectional inclined track having a protected guideway for said cable, its supporting posts and arms, a carrier attached to said cable adapted to run on said track, a steadying device depending from said carrier and embracing the lower portion of the track, a weighted bucket attached to said carrier and capable of a swinging movement in a direction parallel with the track only, a buffer stop at the lower end of said track, and a windlass, substantially as specified.

4. In a water conveyer, the combination of a track, having a tread portion, a lateral guard flange attached thereto, and a recessed guide strip below said flange, forming a ropeway, of a carrier having wheels adapted to run on said tread, a depending bracket having steadying pulleys embracing the lower portion of said track, and a rope attached to said carrier and running in said way, substantially as specified.

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

A. D. GOODWIN.

Witnesses:

PHILIP C. MASI,
GEORGE H. PARMELEE.