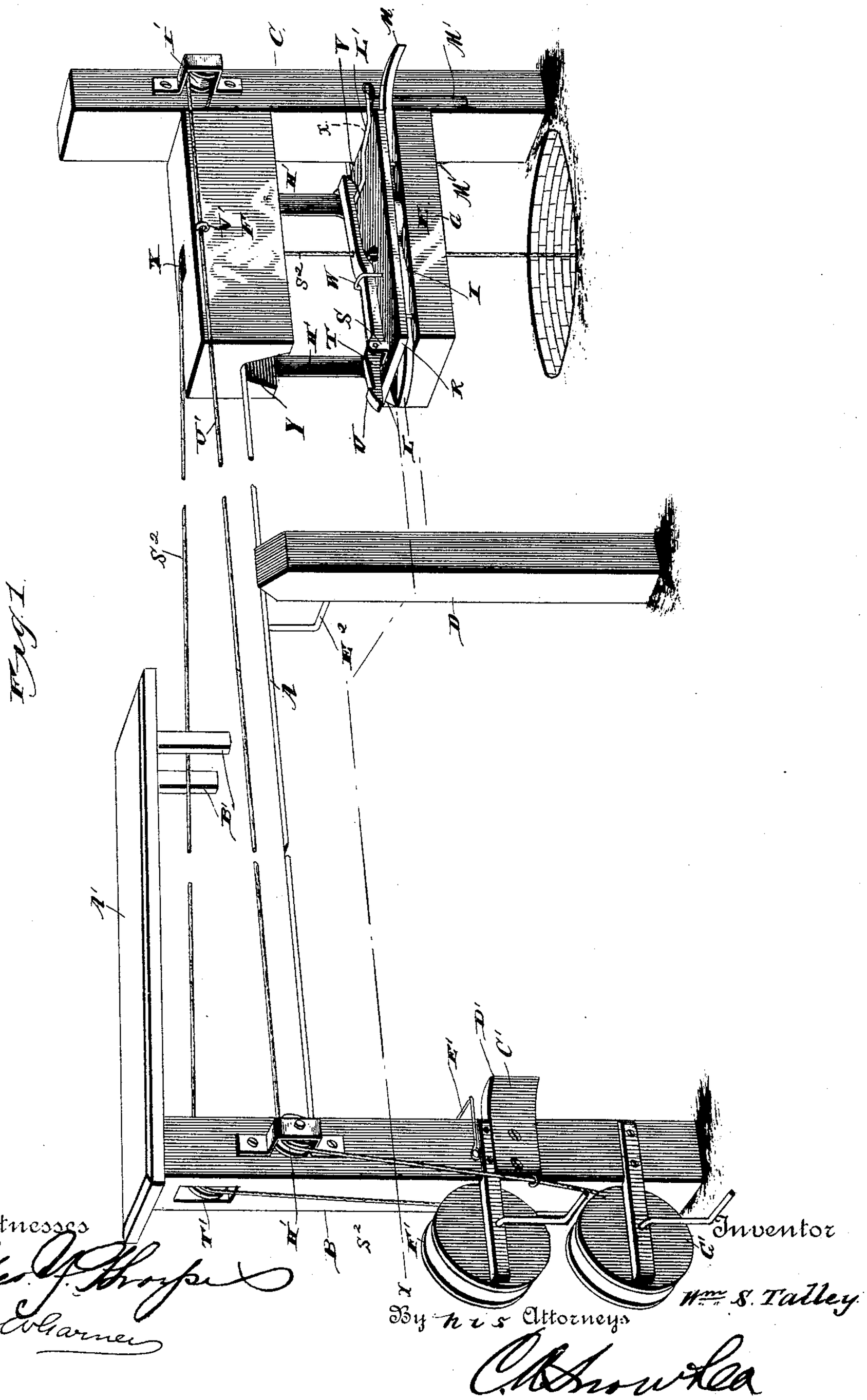
(No Model.) 2 Sheets—Sheet 1.

W. S. TALLEY.

WATER ELEVATOR AND CARRIER.

No. 406,967. Patented July 16, 1889.



Witnesses
Geo. J. Thorpe
J. E. Garner

Inventor
Wm. S. Talley
By his Attorneys
C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

W. S. TALLEY.

WATER ELEVATOR AND CARRIER.

No. 406,967. Patented July 16, 1889.

Fig. 2.

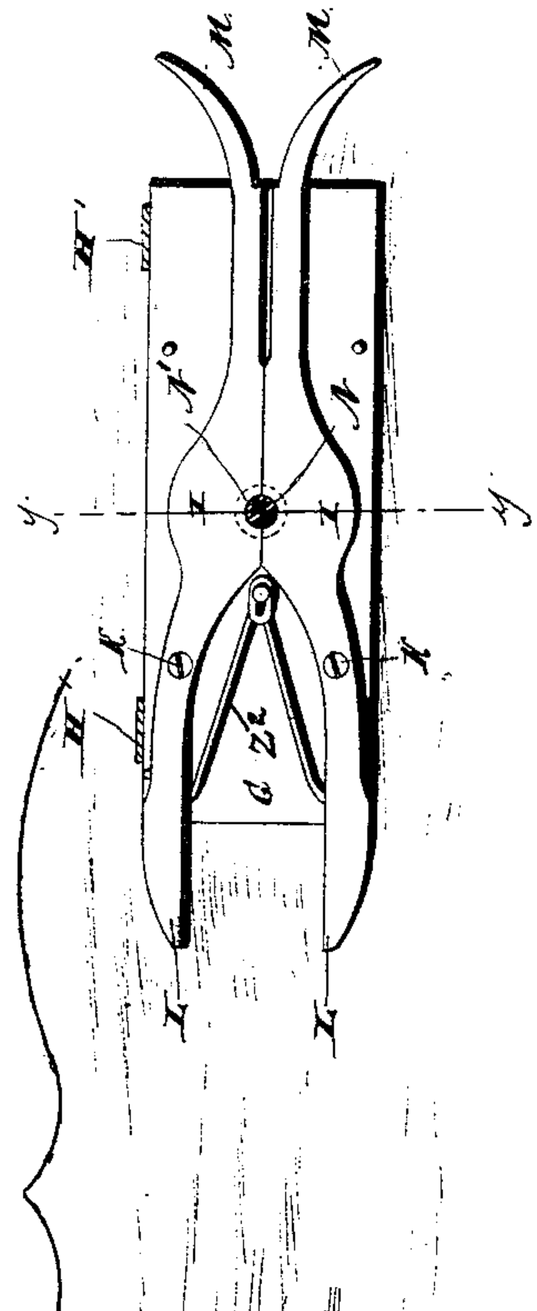


Fig. 4.

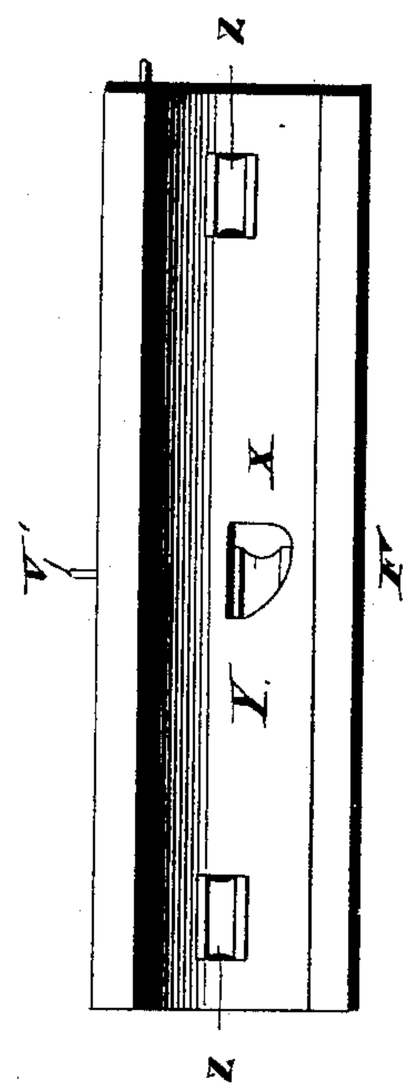
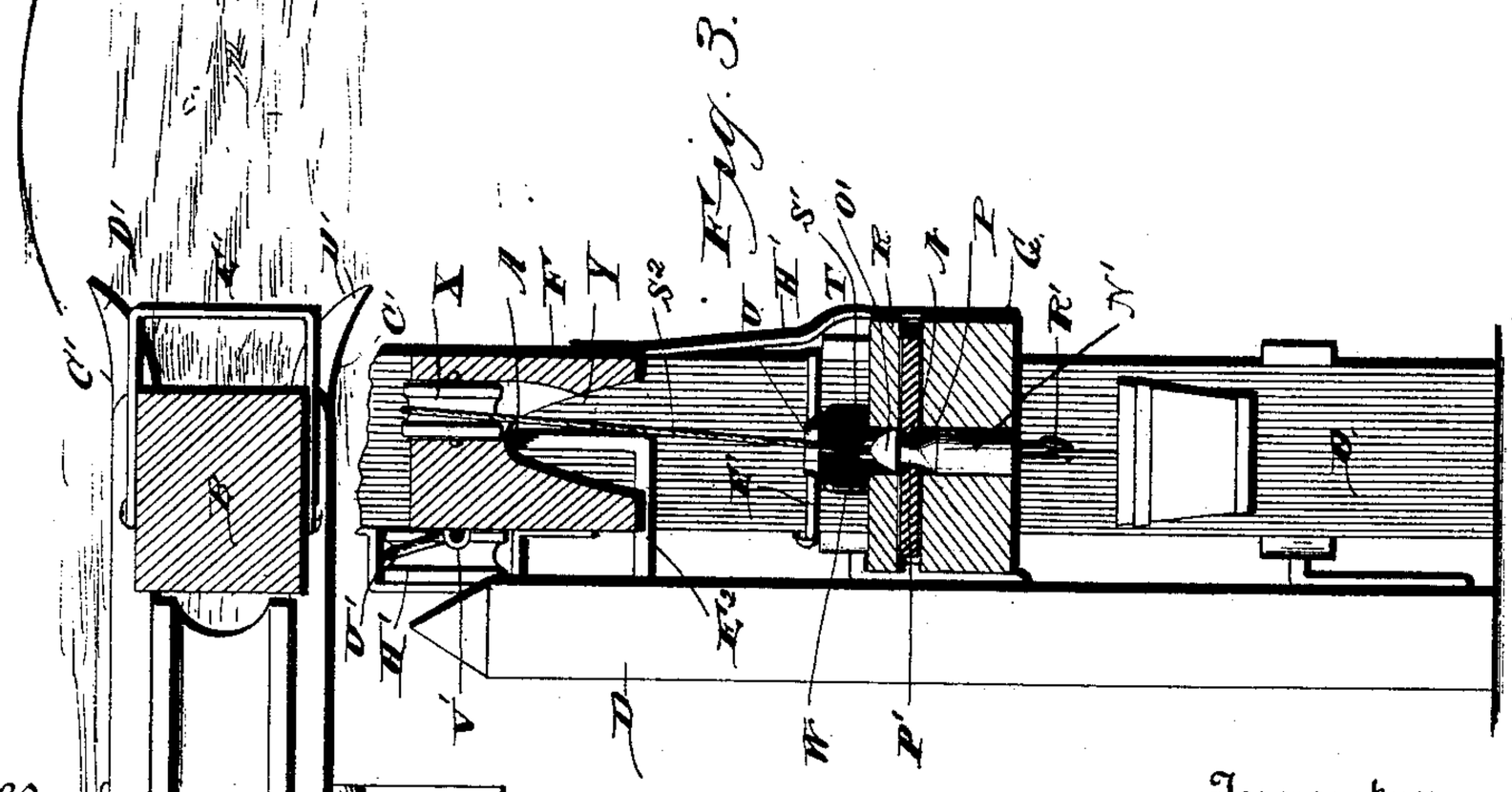


Fig. 3.



Witnesses
G. J. Grosse.
J. C. Garner

Inventor
Wm. S. Talley.

By Howson & Howson
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM SMITH TALLEY, OF MOUNTAIN HOME, ARKANSAS.

WATER ELEVATOR AND CARRIER.

SPECIFICATION forming part of Letters Patent No. 406,967, dated July 16, 1889.

Application filed November 21, 1888. Serial No. 291,440. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SMITH TALLEY, a citizen of the United States, residing at Mountain Home, in the county of Baxter and State of Arkansas, have invented a new and useful Improvement in Water Elevators and Carriers, of which the following is a specification.

My invention relates to an improvement in water elevators and carriers adapted to draw water from a well or cistern located at some distance from the house and to convey the same to the house; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved water elevator and carrier. Fig. 2 is a horizontal longitudinal sectional view taken on the line *x x* of Fig. 1, with the carrier in engagement with the keeper L′. Fig. 3 is a vertical transverse sectional view taken on the line *y y* of Fig. 2. Fig. 4 is a bottom plan view of the upper part F of the carrier E.

A represents a wire or cable, which is secured to a post B near the house and to a similar post C at the well or cistern. When the distance between the posts is great, the wire is supported by intermediate posts D, which have right-angular arms E^2 projecting from their inner sides, which arms bear under the wire, as shown.

E represents a traveling carriage, which comprises an upper section F, a lower section G, and a pair of straps or hangers H′, which depend from the upper section and suspend the lower section therefrom. On the upper side of the lower section G are arranged a pair of longitudinal clutch-levers I, which are pivoted at the points K, and are provided at one end with the inwardly-converging jaws L, and have the outwardly-extending diverging arms M at their opposite ends. In the central portions of the clutch-levers, in the opposing sides thereof, are made semicircular openings N, which are adapted to close together and form a complete circular opening, as shown in Fig. 2. A spring Z^2, inserted between the jaws L, keeps the clutch-levers normally closed. In the center of the lower section G is a vertical opening P, which registers with the opening N, and is of somewhat larger diameter than the same. Arranged on the upper sides of the clutch-levers and rigidly supported on the lower section G is a board R, which is also provided with a vertical central opening. A yoke S projects vertically from one end of the board, and in the said yoke is fulcrumed a catch T, which has a hook U on its upper side at its outer end and a hook V on its under side at its inner end, as shown. The catch works in a keeper W, which serves to limit the movement of the catch. In the central portion of the upper section F is a vertical opening, in which is journaled a pulley X. A longitudinal recess or groove Y is made in the under side of the upper section F, and the latter is provided at its ends with vertical openings, in which are journaled anti-friction rollers Z, having grooved peripheries, which bear on the wire or cable A, whereby the carriage is suspended from the said cable and is adapted to travel thereon.

On the upper end of the post B is a downwardly-inclined shield or board A′, which is provided at its outer end with a pair of downwardly-extending arms B′.

C′ represents a pair of arms which project from the inner side of the post B, are arranged in the same horizontal plane with the clutch-levers L, and have their inner sides curved outwardly, the said arms being thereby provided with cam-faces D′, which are arranged in the paths of the clutch-levers L, and are thereby adapted to engage the cam-heads of the clutch-levers L when the carriage reaches the post B and cause said clutch-levers to open, for the purpose to be hereinafter stated.

E′ represents a keeper which is arranged on the inner side of the post B, and is adapted to be engaged by the hook U of the catch T.

F′ G′ represent a pair of pulleys, which are provided with cranks and are journaled in arms that project from the outer side of post B. Secured to the said post, on one side and near its upper end, is a pulley H′. I′ represents a similar pulley, which is journaled on the corresponding side of the post C, near the upper end thereof. Said post C has a keeper L′ projecting from its inner side, which is

[redacted]

adapted to engage the hook V of the catch T, and on opposite sides of said post C are vertical cleats or battens M′, the edges of which are rounded, as shown.

N′ represents a cylindrical block, which is provided at its upper end with a conical head O′, and has a reduced neck portion P′ below said conical head. From the lower end of the block projects a spring snap-hook R′, which is adapted to engage the bail of a bucket, and on the upper end of the conical head is an eye S′, to which is attached an elevating cord or rope S^2. The same passes up through the central opening in the lower section G of the carriage, through an opening in the catch T, from thence passes over the pulley X, then outwardly through an opening in the upper end of the post B, over a pulley T′, which is journaled in the said post, and the free end of the said rope is secured to the crank-pulley F′.

U′ represents a cord or rope, which is attached to the outer end of the upper section F, passes around the pulley I′, and thence over the pulley H′, being guided through a loop or keeper V′ on one side of the section F. The free end of the said cord or rope is attached to the pulley G′.

The operation of my invention is as follows: We will assume that the carriage is in its initial position when the hook V is in engagement with the keeper L′ on post C, so as to range the central opening in the carriage over the well or cistern and cause the cleats M′ to open the spring-pressed clutch-levers and drop the bucket to the bottom of the well by releasing the block N′. The operator stationed at the post B turns the pulley F′, and thereby causes the elevating-rope to be wound on said pulley or drum and to raise the bucket from the well until the conical head O′ of the block N′ passes through the central opening in the lower section of carriage and strikes the catch T, and disengages the same from the keeper L′. As the elevating-rope continues to be wound on the drum or pulley F′, the carriage moves from the post C and the arms M of the clutch-levers I clear the cleats M′, and the spring then causes the clutch-arms to close together, so that the notches engage the neck of the block, and thereby firmly lock the latter to the carriage while the same is traveling on the cable or wire. When the carriage reaches the post B, the hook U of catch T engages the keeper E′, and thereby locks the carriage to the said post, and at the same instant the converging ends of the clutch-levers engage the cams D′, and thereby cause the clutch-levers to be opened and to release the block N′, and consequently permit the bucket to be lowered by turning the pulley F′ in such a direction as to slacken the elevating cord or rope. While the carriage is traveling toward the post B the rope U′ is being uncoiled from the pulley or drum E′, and hence when it is desired to return the carriage to the post C, after having re-engaged the block with the clutch-levers, the same may be accomplished by turning the pulley or drum G′ in such manner as to coil the rope on the said drum or pulley. At the instant that the carriage reaches the post C the hook V engages the keeper L′ and locks the carriage to said post, and the diverging arms of the clutch-levers I engage the cleats or battens M′ and cause the clutch-levers to open and release the bucket and permit the latter to drop to the bottom of the well, as before stated.

The function of the shield or board A′ is to prevent the carriage from rising on the cable or wire and becoming disengaged from the same. Said screen or board also serves a useful purpose in sheltering the carriage in falling weather.

Having thus described my invention, I claim—

1. The combination of the posts B C, the wire stretched between said posts, the carriage traveling on said wire and having the sheave X, the spring-actuated clutch-levers pivoted on the carriage, the catch T, having the hooks U V at opposite ends and pivoted also on the carriage, the keepers attached to the posts and adapted to engage the hooks, cams on said posts to automatically engage and open the clutch-levers, the elevating-cord guided through the carriage and on the sheave X, and the block attached to said cord and adapted to be engaged by the clutch-levers and to trip the catch T, substantially as described.

2. The combination, in a water elevator and carrier, of the post B, having the cams D′ on its inner side, the post C, having the cleats M′ on opposite sides, the wire stretched between said posts, the traveling carriage suspended from said wire, and the spring-pressed clutch-levers fulcrumed to the carriage, said clutch-levers having the cams L on one end adapted to engage the cams D′ and the diverging arms M at the opposite end to engage the cleats M′, for the purpose set forth, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM SMITH TALLEY.

Witnesses:

J. B. LANE,

JAS. A. HARRIS.