

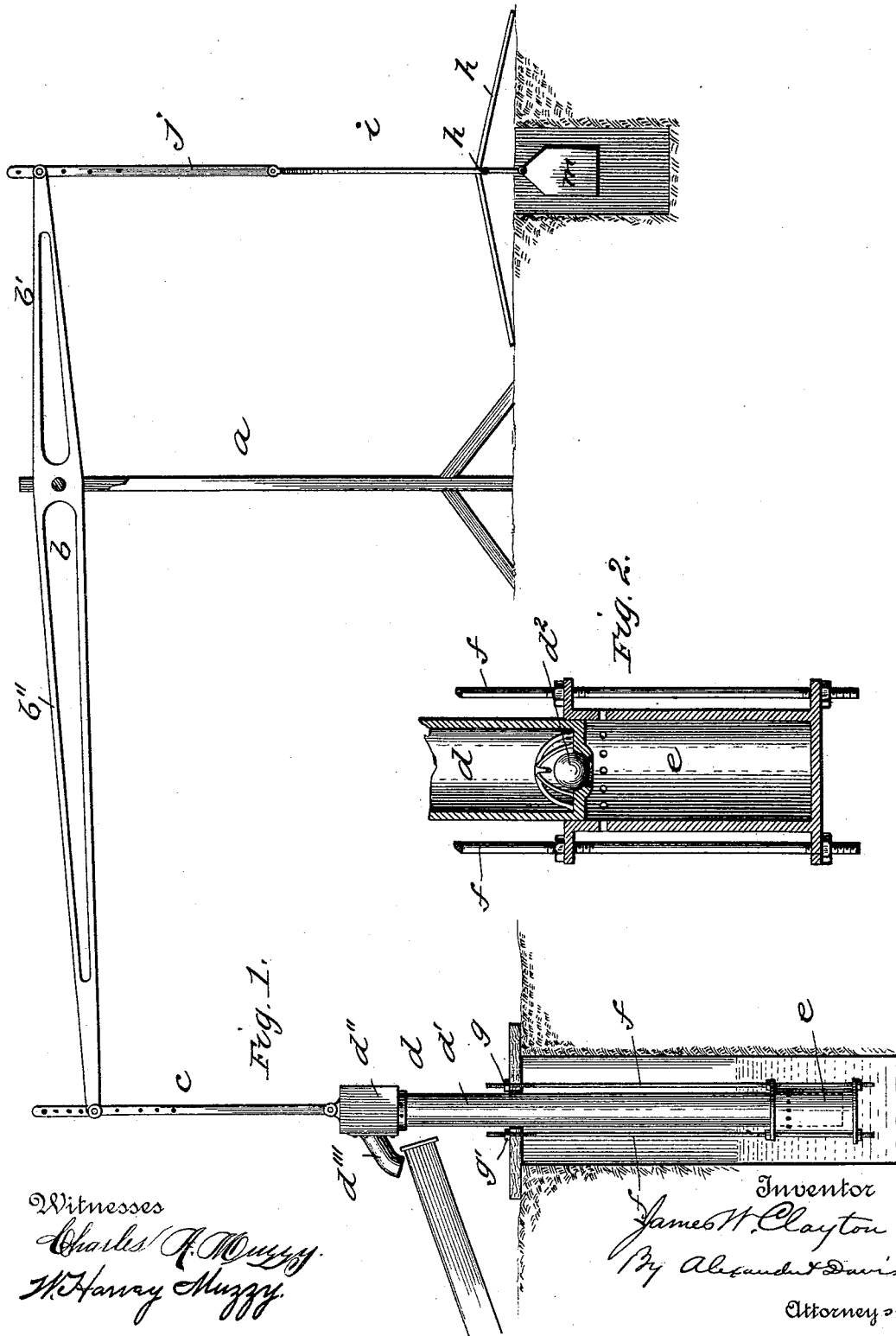
(No Model.)

J. W. CLAYTON.
PUMP.

2 Sheets—Sheet 1.

No. 495,878.

Patented Apr. 18, 1893.



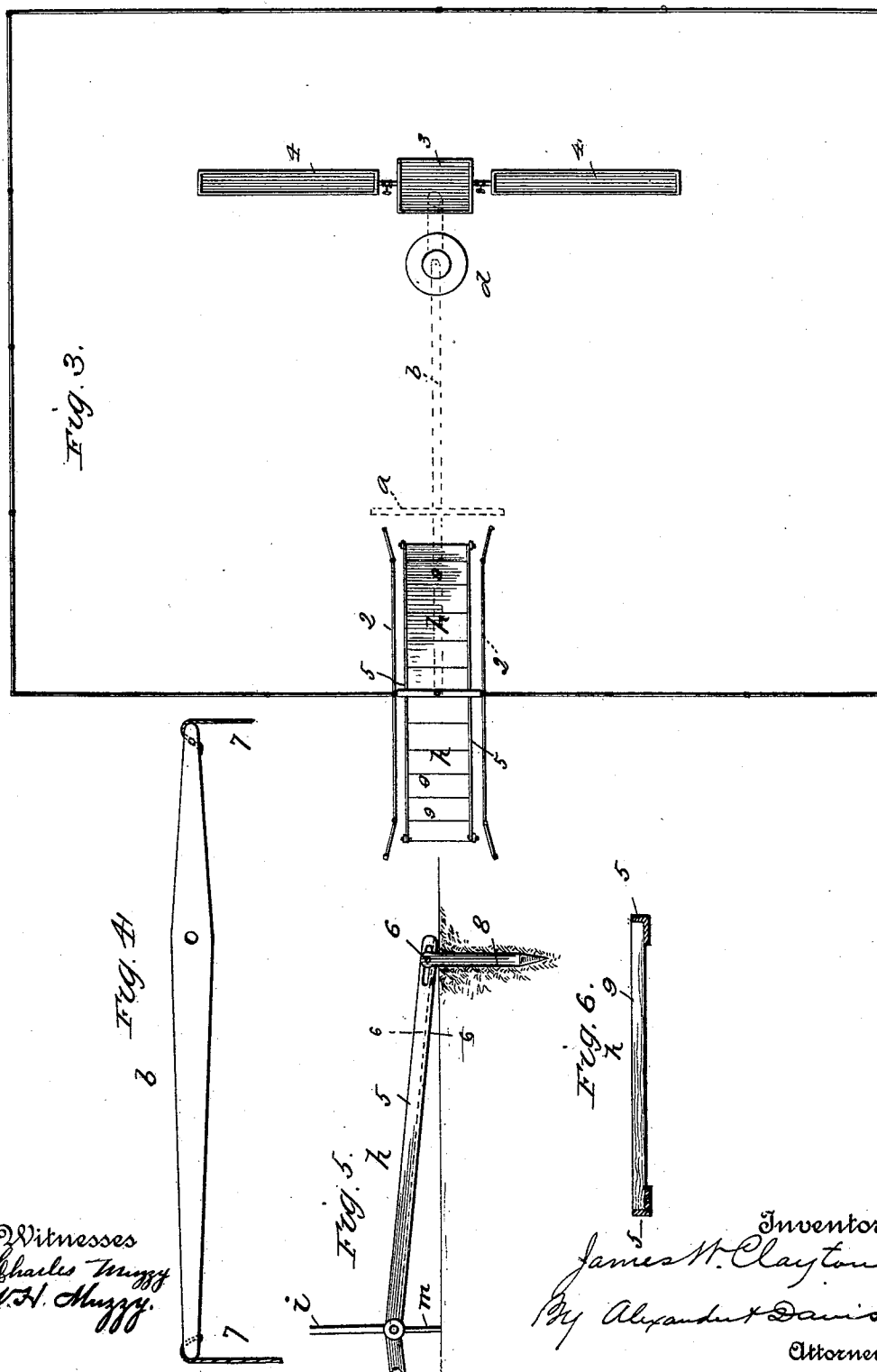
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JAMES W. CLAYTON, OF EL PASO, TEXAS.

PUMP.

SPECIFICATION forming part of Letters Patent No. 495,878, dated April 18, 1893.

Application filed November 11, 1892. Serial No. 451,836. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. CLAYTON, a citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented certain new and useful Improvements in Pumps, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and useful improvement in pumps, and it relates more particularly to that class of pumps which are operated by cattle as they pass into an inclosure or corral; and it has for its object to provide a simple and durable device which will be efficient in operation.

The invention consists in the novel combination and arrangement of parts hereinafter described.

In the drawings:—Figure 1 is a side elevation of my device, and Fig. 2 is a vertical section of the water receiving chamber and the lower end of the pump-piston. Fig. 4 is a side elevation of the walking beam.

Referring to the various parts by letters and figures, *a* designates a frame or support, in the upper end of which is pivoted the walking beam *b*; and this beam is pivoted on one side of its center, forming the short arm *b'* and long arm *b''*, as shown. On the end of the long arm of the beam *b* is pivoted a vertical rod *c*, which is provided with a series of perforations at its upper end by means of which its vertical adjustment may be varied, and on the lower end of this rod is pivoted the upper end of the pump piston *d*. This pump-piston consists of the long pipe or tube *d'* which is of the same diameter throughout its length and the box *d''* which is secured on the upper end of the pipe whose upper end opens into it, and is provided with a spout *d'''*, which projects outwardly from one of its sides, and a lug or projection is formed on the upper side of this box to which the lower end of the rod *c* is pivoted. The lower end of pipe *d'* is provided with an inwardly opening valve, preferably a ball-valve *d²*, and said lower end fits closely within a vertical water receiver *e*. This receiver is supported stationarily within the well, below the water therein, by means of vertical rods *f* which pass through flanges formed on the outer side of the receiver, and are secured thereto by suitable nuts. The

upper ends of the rods *f* pass through the covering of the well, and may be secured thereto in any suitable manner; as shown, their upper ends are threaded and provided with the nuts *g* which are screwed down to the covering of the well thereby securing the receiver in place, and by means of said nuts the rods *f* may be adjusted up or down in order to raise or lower the receiving chamber *e*. The receiving chamber is closed at its lower end, its upper end being open to receive the lower end of the pump barrel as before described. Near the upper end of the receiver a series of perforations is provided, through which the water passes into the receiving chamber when the lower end of the pump-barrel is raised above them as shown in Fig. 2 of the drawings.

The pump barrel is raised by means of devices connected to the short arm of the walking-beam *b*, said devices consisting of a bridge *h* formed of two parts hinged together at their adjoining ends *h'*. The outer ends of the sections of the bridge rest on the ground, and their adjoining hinged ends are supported above the ground by a frame *i* whose lower end is secured to the bridge at its hinged portion, its upper end being secured to the lower end of a rod *j*, and the upper end of this rod is pivoted to the end of the short arm of the walking beam. A series of perforations is formed in the upper end of said rod in order that its vertical adjustment may be varied. A weight box *m* is secured to the under side of the bridge at the hinge thereof, in which box suitable weights may be placed to counter-balance the weight of the pump-barrel in order that the weight of the cattle passing over the bridge will raise said pump-barrel, a suitable hole being provided in the ground beneath the bridge for the weight box to hang in.

The operation of my device is as follows: When the device is used as a cattle pump, the well is preferably located within an inclosure, in which the cattle are to be kept, and the bridge *h* is so located that they pass over it on their way into the inclosure. As they pass over the bridge they depress it, raising the pump-piston, by means of the walking beam, high enough to uncover the perforations near the upper edge of the water re-

ceiver, and allowing the water to pass into said receiving chamber through said perforations, almost instantly filling the receiver. As the cattle pass off the bridge the weight
 5 of the pump-piston carries it down into the receiver, and when its lower edge has passed the perforations therein, the water below said perforations must pass into the pump-piston through the ball-valve d^2 as is evident. This
 10 operation is repeated as the cattle pass over the bridge, until the desired quantity of water is drawn.

The pump may be used for house-hold purposes by having it so arranged that the person going to the well would pass over the
 15 bridge; or any other device may be provided for raising the pump-barrel.

In Fig. 3 of the drawings is shown the preferred manner of using and arranging my device. It will be seen by reference to this view that I may locate the bridge at any convenient point in the fence of the inclosure, one half of it being inside and the other half being outside thereof; and on each side of the
 25 bridge, close to and parallel therewith I construct the guiding fences 2—2, and these fences may flare outwardly at their ends in order to better guide the animals to the bridge.

A tank 3 is located within the inclosure and receives the water from the pump; and connected to this tank by suitable valved pipes, are tanks 4, from which the animals may drink. By providing the tank 3, all waste of
 30 water is prevented, as when the troughs become filled the valves in the pipes connecting them to the main tank are closed, and all water pumped into the tank thereafter is held in reserve to be used as desired.

The bridge h is preferably constructed as shown in Figs. 5 and 6, and consists of the angle-iron side-bars 5—5, which have a vertical member, and a horizontal member projecting inwardly from the lower end of the vertical member. The abutting ends of these
 45 angle-irons are hinged together in any suitable manner, and at their outer ends the vertical members thereof are slotted and bolts 6 pass through these slots and loosely secure the ends of the side bars of the bridge to stacks
 50 or posts 8 which are driven into the ground outside of the side-bars, and serve to securely anchor the bridge. The slots just described allow a perfectly free movement of the outer
 55 ends of the bridge as the center of the same is raised and depressed as herein described.

The planks 9 of the bridge are supported by the side bars thereof, as clearly shown in Fig. 6, said planks resting on the horizontal

members of the angle-irons, and are held from lateral movement thereon by the vertical members thereof. This arrangement obviates the necessity of nailing or bolting the planks in place.

The ends of the walking-beam b may be rounded, and instead of attaching thereto the bars hereinbefore described, ropes 7 may be employed, said ropes passing over the rounded ends of the beam, and being suitably secured thereto. This construction is desirable as
 70 very little friction is caused between the rope and the ends of the beam.

Having thus fully described my invention, what I claim is—

1. A pump consisting of a water receiving chamber formed with a series of inlet openings near its upper end, supporting rods connected to said chamber at their lower ends their upper ends being adjustably secured at the top of the well, a hollow pump piston, its lower end fitting within the water receiver, and its upper end projecting out of the well and being provided with a spout, an inwardly opening valve mounted in the lower end of the pump piston, a walking beam suitably supported, and adjustably connected at one of its ends to the pump-piston, a bridge h and an adjustable connection between the other end of the walking beam and the bridge, said bridge consisting of two parts hinged together, and held normally raised at their hinge-connection and a counter-balancing weight connected to said bridge, substantially as described.

2. In a cattle pump the combination of a water-receiver constructed as described, a pump-piston its lower end working in said receiver, an inwardly opening valve carried by said pump-piston, means for raising the pump-piston consisting of a rod c , walking beam suitably supported, rod k , and bridge h , said bridge consisting of angle-irons 5, hinged together at their adjoining ends and formed with a vertical member and an inwardly projecting horizontal member, boards placed on the horizontal member as described, the outer ends of the vertical members being slotted, stakes 8 and bolts 6, carried by said stakes and entering the slots in the angle irons, the bail i and weight m , substantially as described and for the purpose set forth.

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

JAMES W. CLAYTON.

Witnesses:

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 R. N. MARTINEZ.