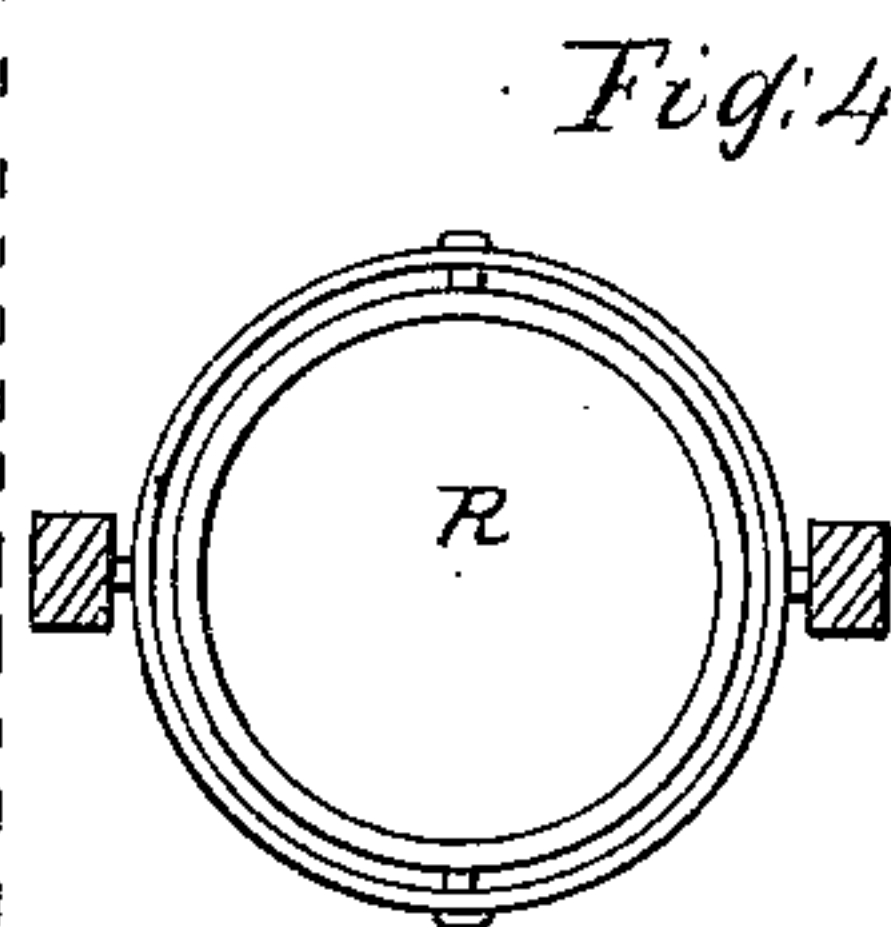
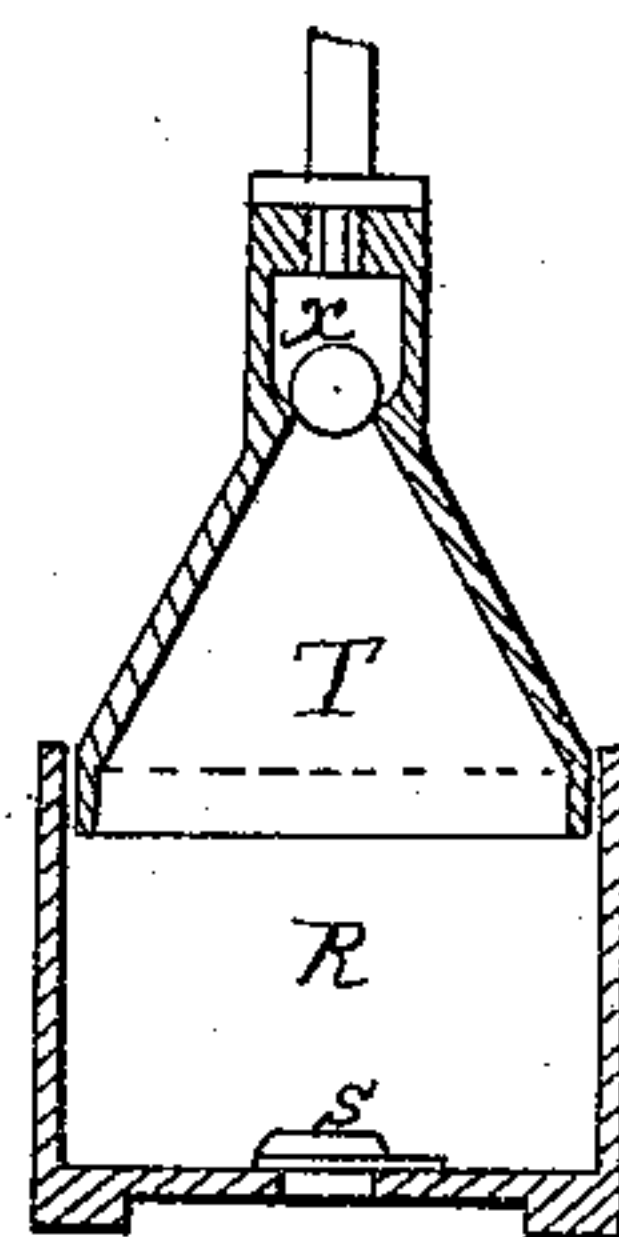
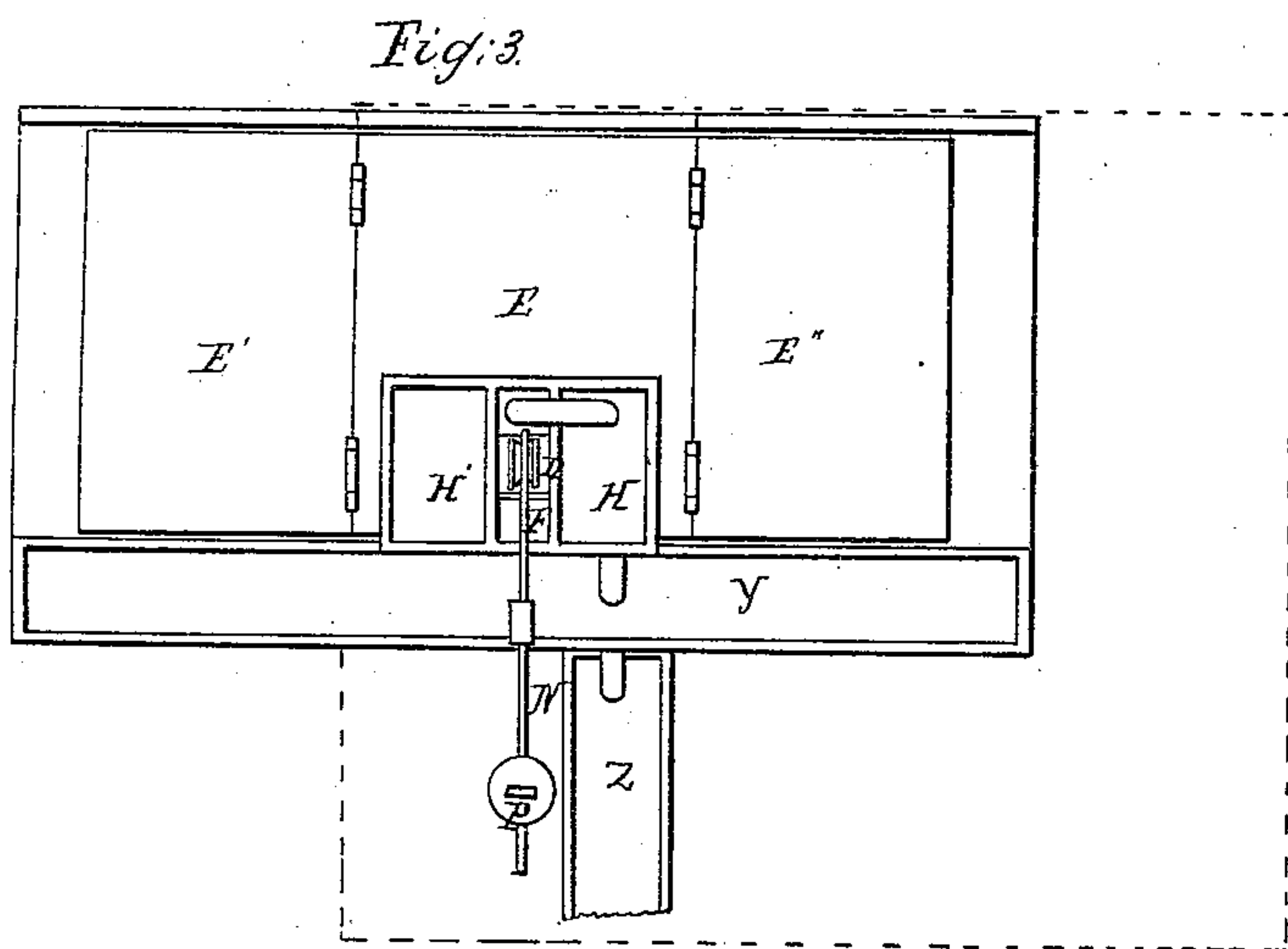
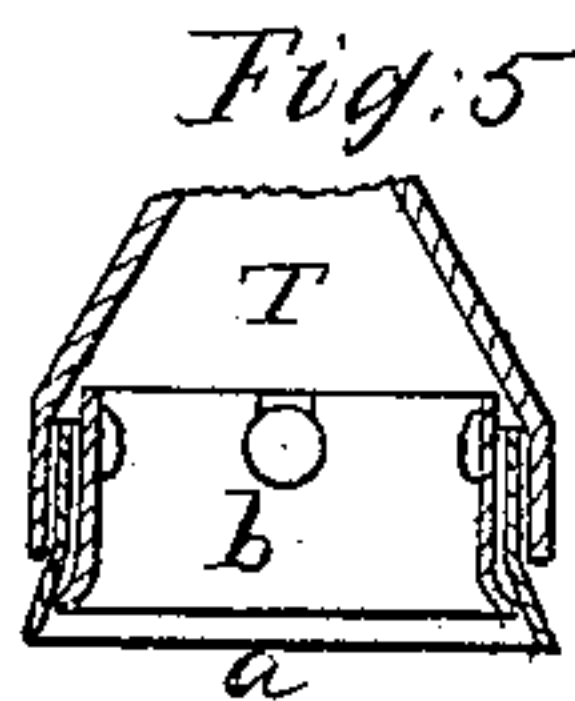
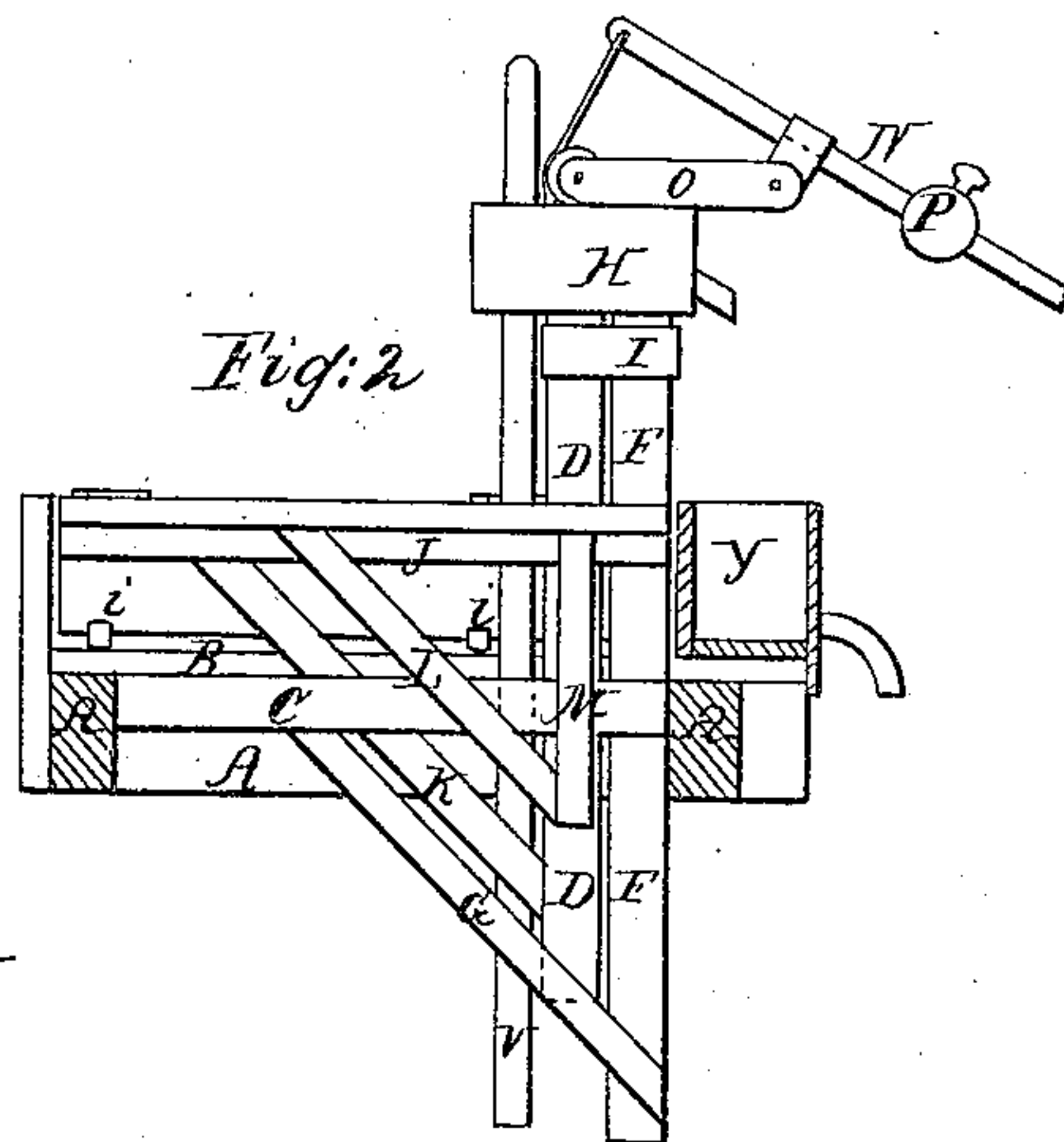
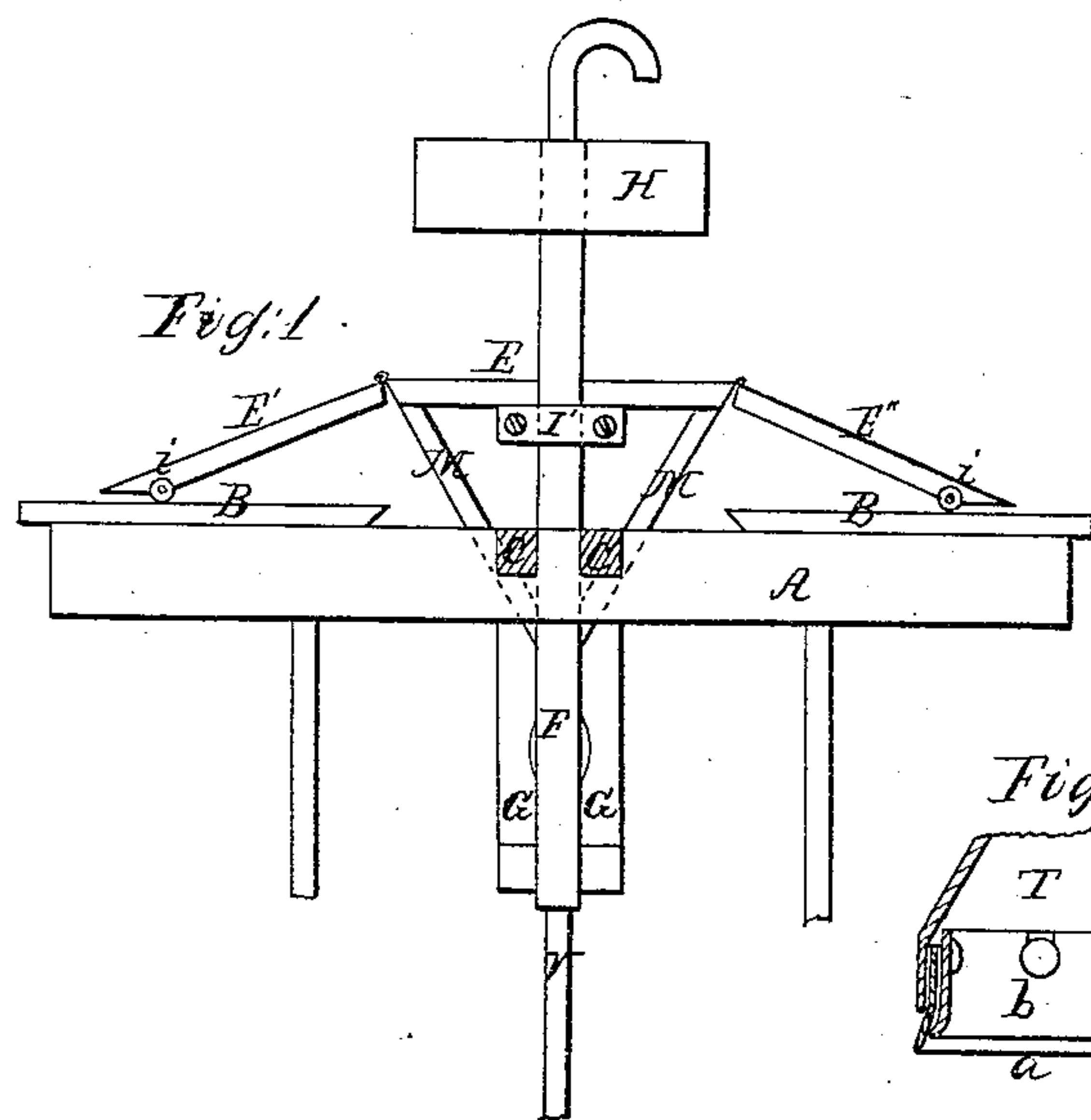


*Piland & Turner,*

*Cattle Pump.*

*N<sup>o</sup> 8,287.*

*Patented Aug. 18, 1868.*



*Witnesses*

*Sam<sup>l</sup> S. Keck  
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# United States Patent Office.

ANDERSON H. PILAND AND ANDREW H. TURNER, OF INDIANAPOLIS,  
INDIANA.

*Letters Patent No. 81,287, dated August 18, 1868.*

## IMPROVEMENT IN STOCK-PUMPS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, ANDERSON H. PILAND and ANDREW H. TURNER, of Indianapolis, in the county of Marion, and State of Indiana, have invented new and useful Improvements in Stock or Cattle-Pumps; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification.

Our invention relates to means by which cattle and other stock raise the water they drink, and consists in an improved construction and arrangement of the several devices employed to effect this purpose, combining simplicity and cheapness with requisite strength and efficiency.

Figure 1 is a vertical longitudinal section just at one edge of the platform.

Figure 2 is a transverse section.

Figure 3 is a top or plan view, showing the inclosure in dotted lines.

Figure 4 is a top view of the pump-barrel, hung as compasses sometimes are, so that it may adjust itself to any lateral movement of the piston.

Similar letters of reference indicate corresponding parts in the several figures.

The following description will enable those skilled in the art to make and use our invention.

A A are the end and side timbers of a rectangular framework, which are to be laid upon a substantial foundation, sunk so that the upper edge of the frame is but little above the level of the ground around the well. The outer ends of the framework are covered with boards B. C C are cross-timbers, that serve as ties across the middle of the frame, and also as guides to the upright piece D, fig. 2, which is a part of the platform that is raised and depressed to actuate the pump as hereafter described. A vertical post, F, is set between the cross-pieces C C, at one side of the frame, and extends above and below it as shown, and being a support and guide to the platform E, is firmly braced by the pieces of timber G G, which are bolted to the lower end of post F, and to the cross-pieces C C. The upper end of post F passes through the centre division of the water-receiving box H, and the latter is made fast to the top of the upright piece D, and moves up and down with the rising and sinking of the platform E. A strap, I, is attached to upright, D, and passes around post F, forming a loop that serves as a guide, and also assists in supporting upright, D, vertically, and especially when the platform is loaded with cattle.

The platform E is composed of the horizontal boarding, lettered E, laid upon cross-pieces J, and is supported by braces K L M, which strut from the lower end of upright piece D, the brace K running between the cross-timbers C C, toward the opposite side of the platform, and the braces L M extending out near its edges, as shown. The upright, D, to which all the other parts of the platform are hung, is kept in its vertical position, supporting the platform level, by the strap I, before mentioned, and the strap or plate I', fig. 1, which is screwed to the ends of cross-pieces J, across the outside of post F. The inclined aprons E' E'' are hinged to the central horizontal part E, as shown, and are furnished at their lower edges with small rollers or casters, *ii*, which facilitate the free extension of the aprons, as the central portion is depressed by the cattle in passing over it. The platform is raised by the weighted lever N, which is hung in an arm, O, attached to the top of post F, a cord or chain attached to upright, D, being connected to the end of lever N. The cord passes over a friction-pulley, as shown, and the weight P slides freely on the lever, and may be secured at any desired point thereon. It is not designed that the platform shall be raised with such force as to draw the water into the pump-barrel R, but that the weight P shall preponderate over the weight of the platform merely sufficient to insure its being raised, and at the same time so nearly balanced that a light animal will be sufficient to depress it.

The pump-barrel R is placed at the bottom of the well, and should be immersed in the water to near its top, and may be entirely under the water. It should also be raised a little off the bottom, in order to allow the water to enter freely through the valve S. The piston T is a hollow cone, as shown, and is made in this



form to facilitate the passage of the water into the induction-pipe V, and the upper part of the valve-chamber, in which the ball-valve is situated at the top of the cone-piston, should have been represented of the same form instead of the flat surface shown. The conical form of the piston T, and valve-chamber at the top, is considered essential to the perfect operation of the pump, when the eduction-pipe is attached to the piston, as here shown. The eduction-pipe is screwed into the top of the cone-piston, and passes through the brace K, and flooring E, and up through the centre division of box H, and is formed at the top into a goose-neck, to discharge the water into one of the end divisions of box H, from whence it flows into the long trough Y, or into trough Z, which is situated within an enclosure, indicated by the dotted lines in fig. 3, to which the cattle have access only by passing over the platform E; and thus it will be seen, the cattle must also pass over the platform in going out of the pen, by which they operate the pump twice every time they go for drink. The box H' may contain salt, and salt may be provided in the pen, as an additional incentive to the cattle going on to or over the platform.

The eduction-pipe V is made fast to the upright, D, or otherwise firmly secured to the framing of the platform, and serves as a piston-rod, by which the piston T is forced down with each depression of the platform, driving the water up the pipe V. The piston is raised with the platform, as the cattle pass off it, by means of the weighted lever N, and the water will flow in to refill the barrel R, through the valve S, merely by its property to seek a level.

The piston is packed water-tight, by means of a hoop of leather, fitted to the inside lower edge of the piston, as shown at *a*, Figure 5, and which is made to flare outward, by means of a flaring hoop, of metal, *b*, inside of the leather hoop. As the piston is forced down, the pressure against the water spreads the leather against the sides of the barrel with force proportioned to the pressure upon the piston.

The lever N may have its fulcrum in a separate post not attached to the platform.

This pump may be set in any public highway, and be operated by driving or riding over the platform, and it may also be applied on a smaller scale to wells and cisterns for domestic use, by dispensing with the aprons E' E'', and having the platform E a small step, upon which the person operating it may stand, to depress the piston.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The foundation-framework, consisting of the elements A B C F G, constructed and arranged substantially as and for the purpose set forth.
2. The hinged platform E E' E'', supported on the timbers J, and by braces K L M, strutting from the sliding post D, and attached to the post F by the straps I I', as set forth, in combination with the lever N, eduction-pipe V, and pump, all arranged and operating substantially as and for the purpose set forth.
3. The cone-shaped piston T, packed as described, in combination with the valve-chamber and valve X, and eduction-pipe V, attached to the vibrating-platform, all arranged and operating substantially as set forth.

ANDERSON H. PILAND,  
ANDREW H. TURNER.

Witnesses:

WM. H. WEEKS,  
O. F. MAYHEW.