

*Hudson & Minshall,*

*Barrel Filter.*

*No. 107,779.*

*Patented Sept. 27. 1870.*

FIG. 1

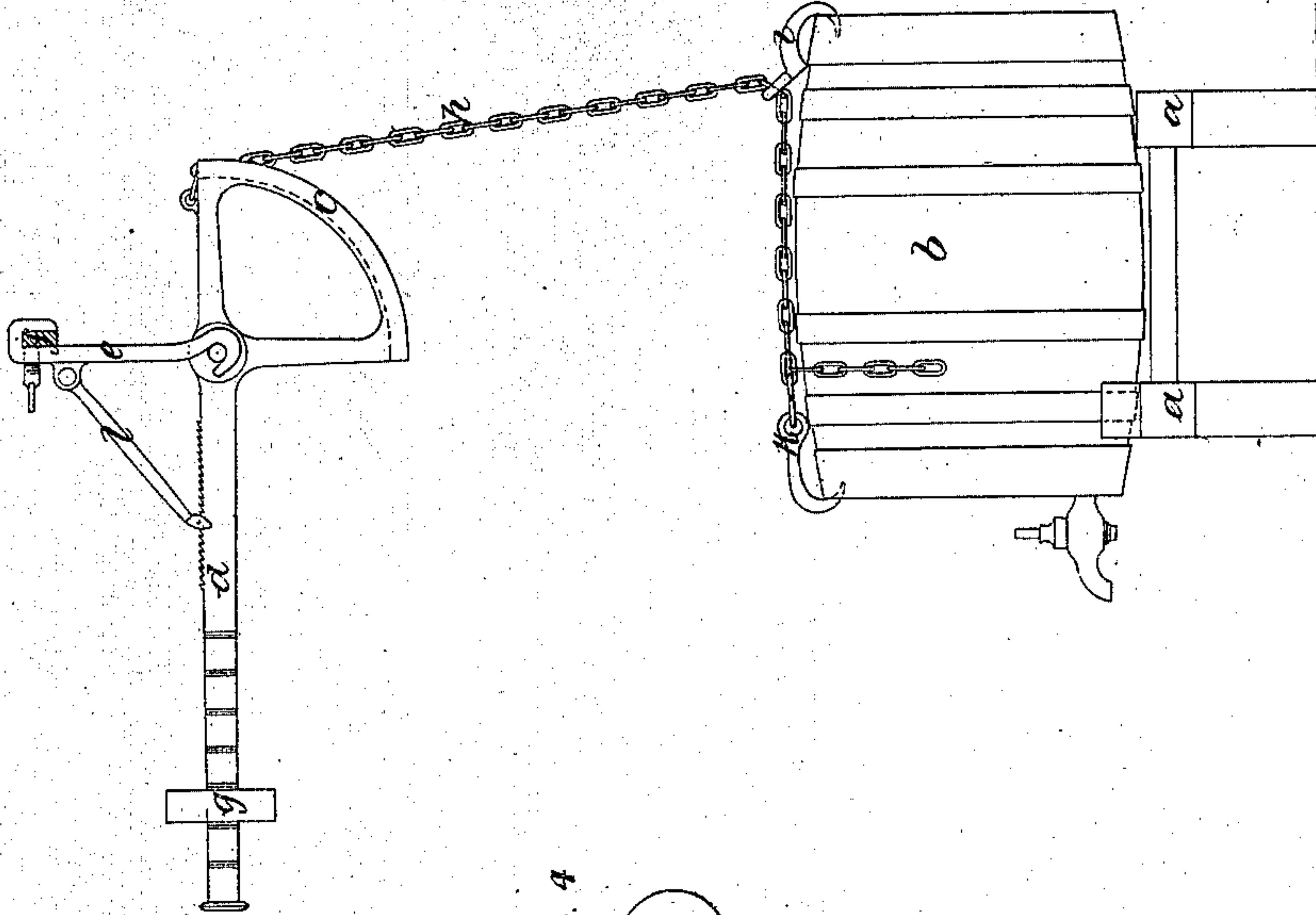


FIG. 4



FIG. 3.

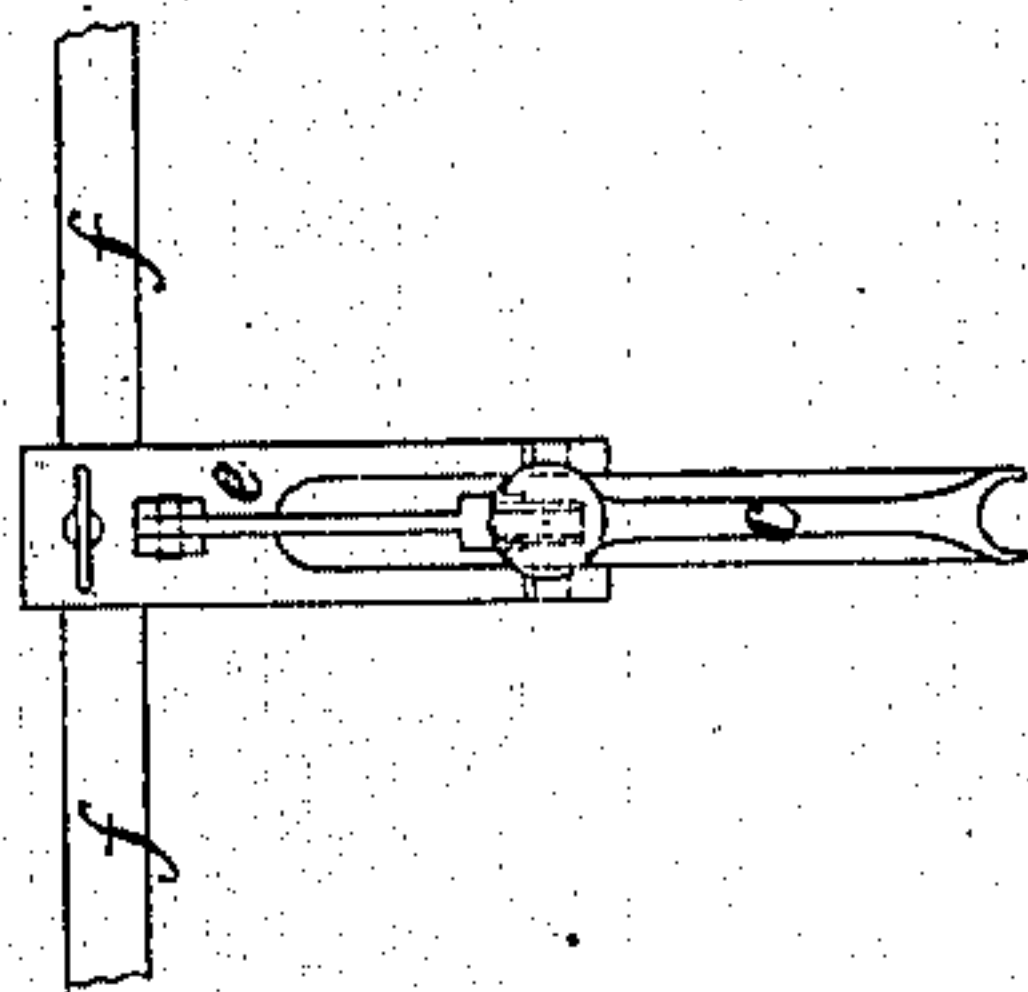
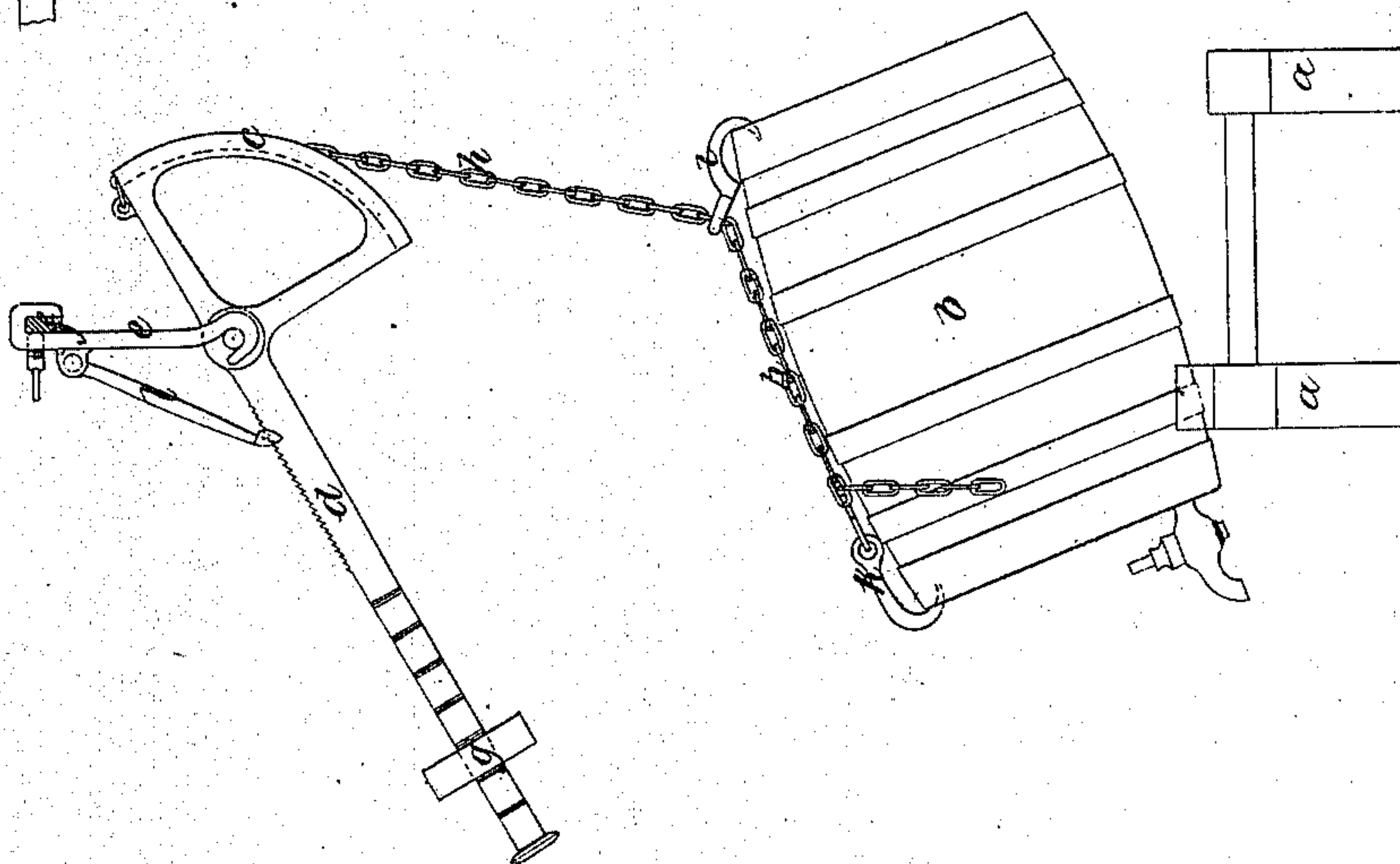


FIG. 2



Witnesses { *James Goodall*  
*John H. H. H.*

*Isaac Hudson*  
*William Minshall*



# United States Patent Office.

ISAAC HUDSON AND WILLIAM MINSHALL, OF STOCKPORT, GREAT BRITAIN.

Letters Patent No. 107,779, dated September 27, 1870.

## IMPROVEMENT IN SELF-ACTING TILTS FOR BARRELS.

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

We, ISAAC HUDSON and WILLIAM MINSHALL, both of Stockport, in the county of Chester, Kingdom of Great Britain and Ireland, have invented "Improvements in Self-acting 'Tilts' for Casks, Barrels, or other Receptacles," of which the following is a specification.

This invention consists in an improved self-acting apparatus for tilting casks, barrels, and other receptacles containing liquids, as the said liquids decrease in quantity, the motion being so gentle and effectual as to prevent any possibility of the liquid being disturbed.

The manner in which this invention is to be performed will be clearly understood by the following particular description thereof.

Figure 1 is a side view of our improved tilting apparatus, shown at rest, or in the position it assumes when the full barrel of liquid is first placed on the stillage;

Figure 2 shows the same, tilted;

Figure 3 is a front view of the apparatus; and

Figure 4 is a view of one of the weights detached.

The casks or barrels are placed on the ordinary stillages *a*, and above each cask or barrel, *b*, I employ a weighted quadrant-lever or steelyard, *c d*, suspended by a link, *e*, to a bar or rail, *f*, at the upper part of the cellar or other elevated position.

On the arm *d* there is a weight, *g*, which can be adjusted and held at any required position, and the other arm, *c*, is formed as a quadrant, to which is linked one end of a chain, *h*, which is passed through the eye of a hook, *i*, which is hooked to the rear end of the cask or barrel.

The chain *h* has at the other end a hook, *k*, which is hooked to the other or forward end of the cask or barrel.

It will be observed that the lever *c d* is serrated or

notched at the top, and provided with a catch-lever, *l*, the end of which falls into the notches or teeth as the weighted lever descends, in tilting the barrel, and prevents the swinging or oscillating of the barrel, which might otherwise take place.

The lever and weight are so calculated as not to lift the cask or barrel until the liquid gets down to the point where it is required to be tilted.

When the full cask or barrel is in its place on the stillage, with the hooks *i* and *k* on its ends, and the chain properly tightened and fastened, the lever *c d* is horizontal or thereabouts, as shown in fig. 1, and so remains until the cask requires to be tilted, and then, as the liquid decreases in quantity, the weighted arm *d* of the lever descends, and raises the quadrant-arm *c*, which pulls the chain *h*, and gently raises or tilts that end of the cask or barrel, as seen in fig. 2.

Instead of a chain, a cord or rope, with hooks, may be employed, or a combination of cords and chains or cords and rods, and the forms and dimensions of the various parts may be varied according to requirements.

Having now described the nature and object of our said invention, together with the manner in which the same is to be or may be performed or carried into practical effect, we wish it to be distinctly understood that

We claim as our invention—

The lever *d*, weight *g*, and retaining device *l*, in combination with the chain *h* and hooks *i k*, the whole being adjustable above a barrel, *b*, substantially as and for the purpose described.

ISAAC HUDSON.

WILLIAM MINSHALL.

Witnesses:

JNO. HUGHES,

JAMES GOODALL.