

(No Model.)

3 Sheets—Sheet 1.

G. W. L. SMITH & J. F. DRESBACH.
DUMPING APPARATUS.

No. 362,324.

Patented May 3, 1887.

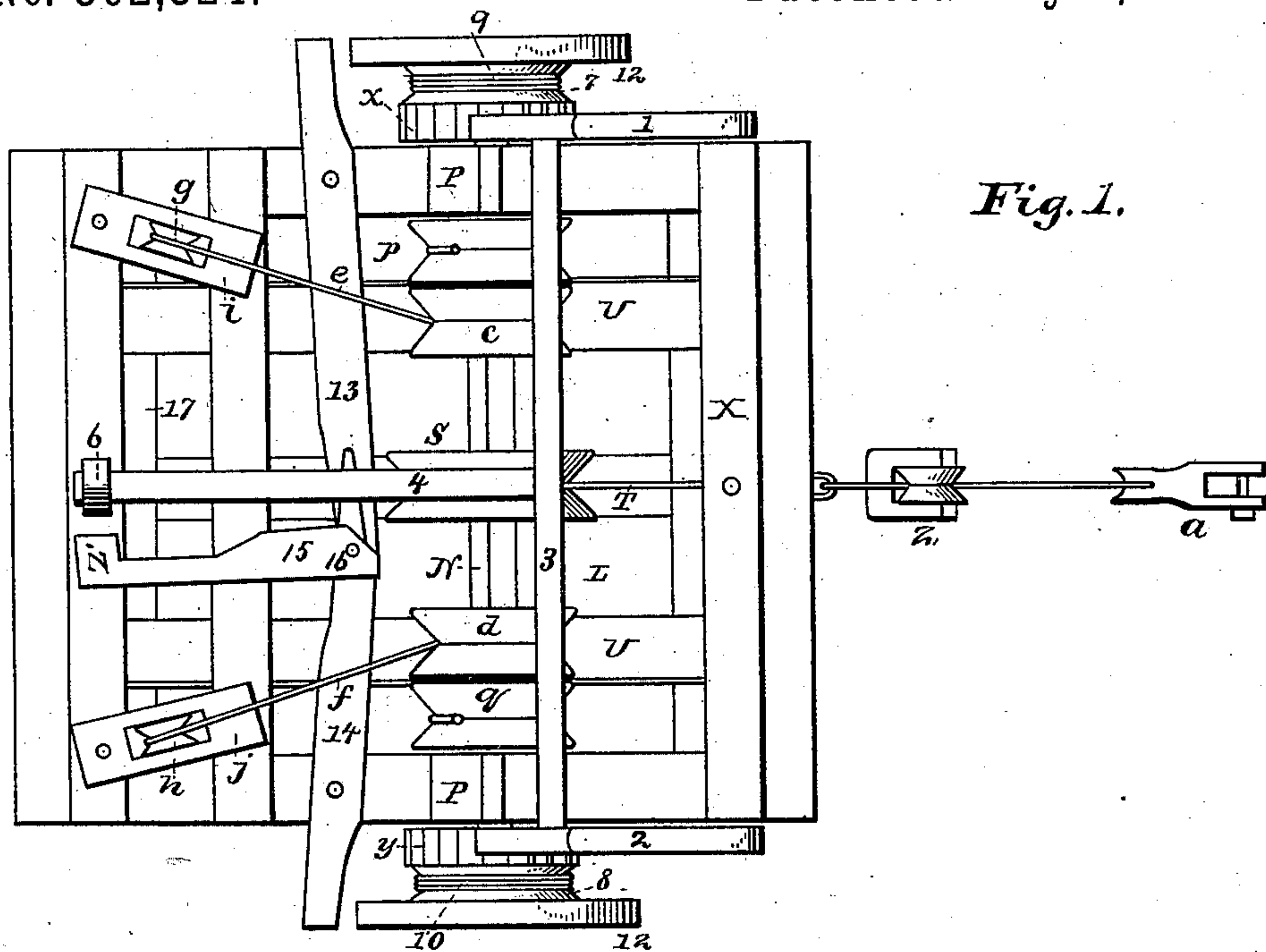


Fig. 1.

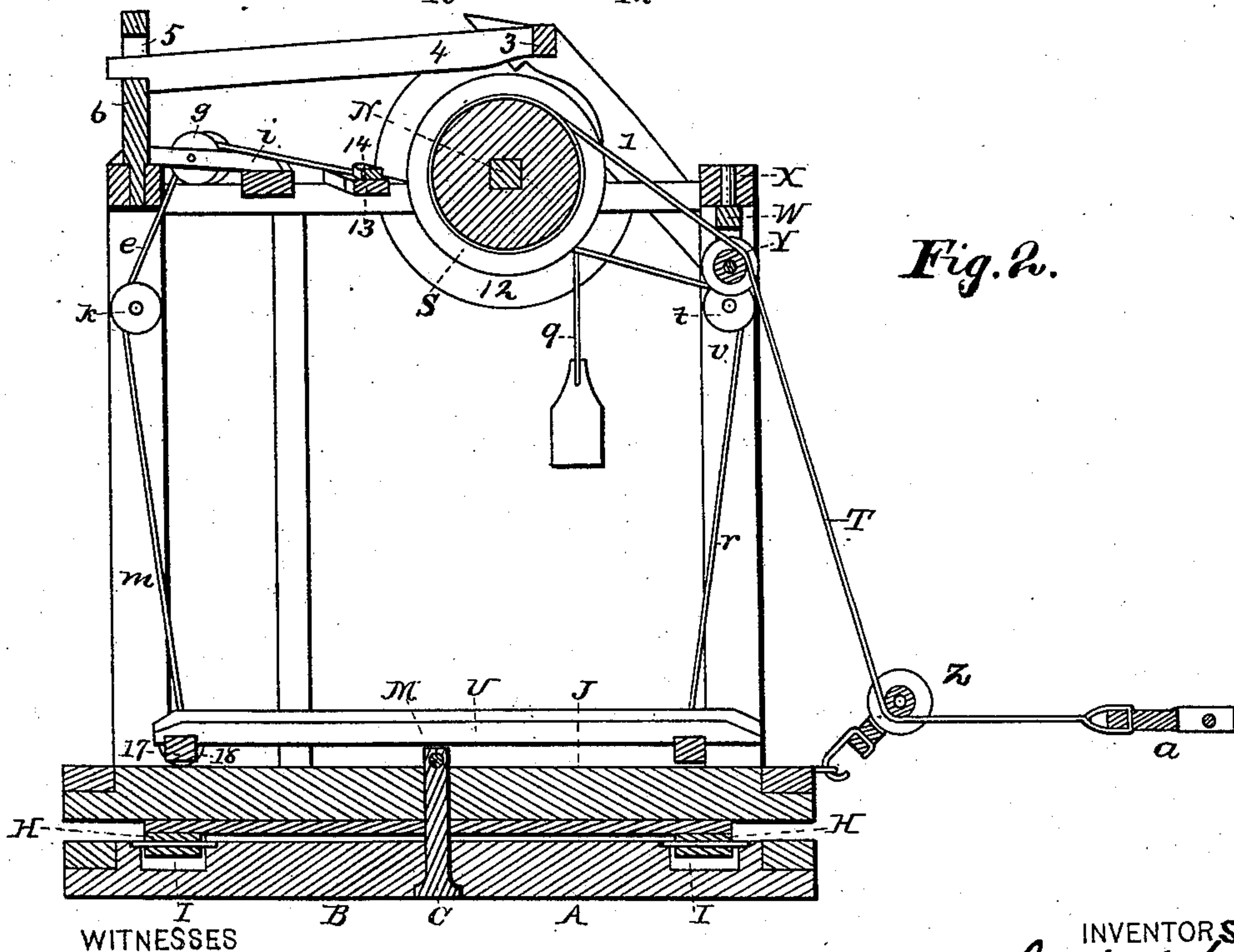


Fig. 2.

WITNESSES
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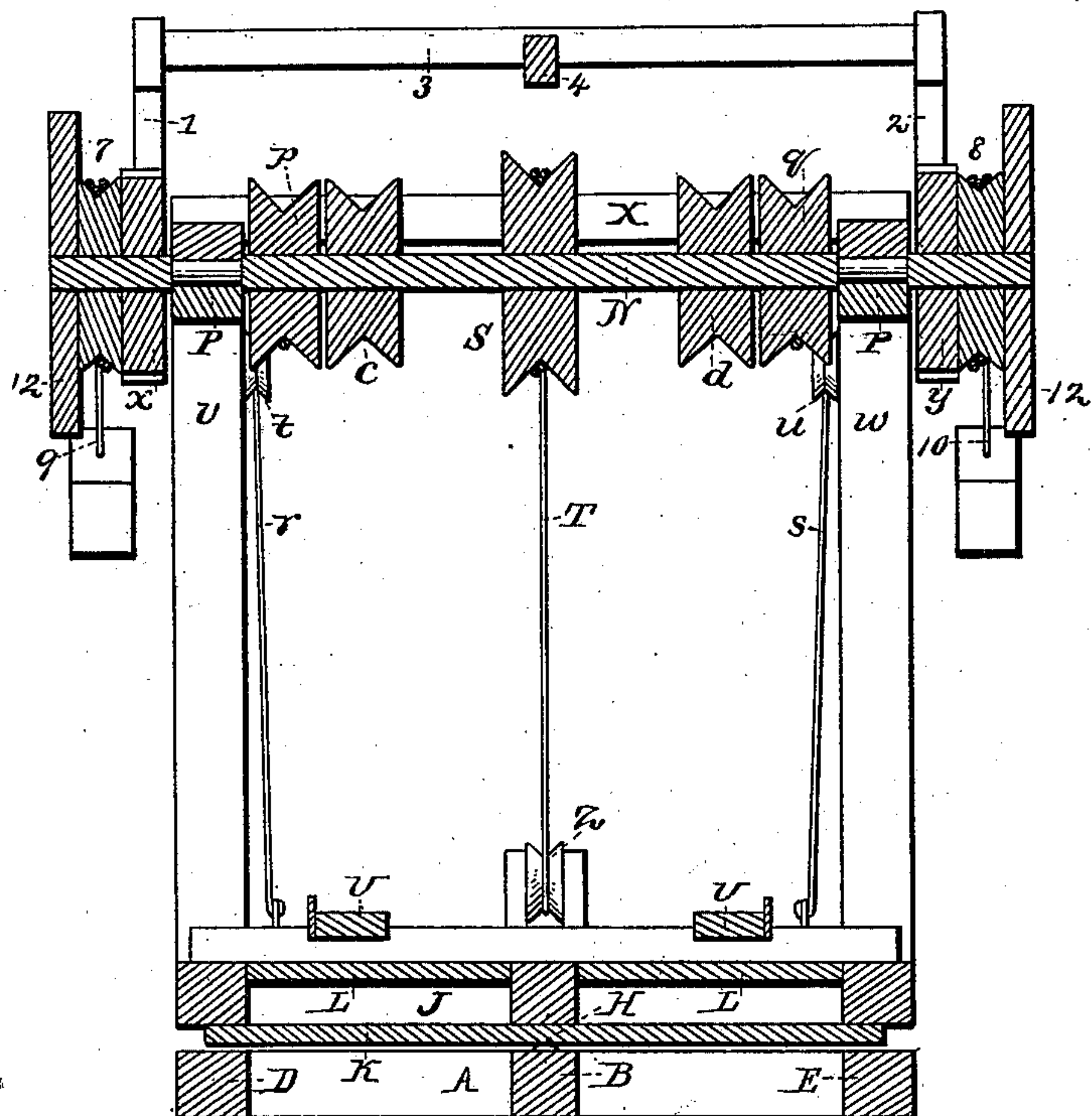


Fig. 3.

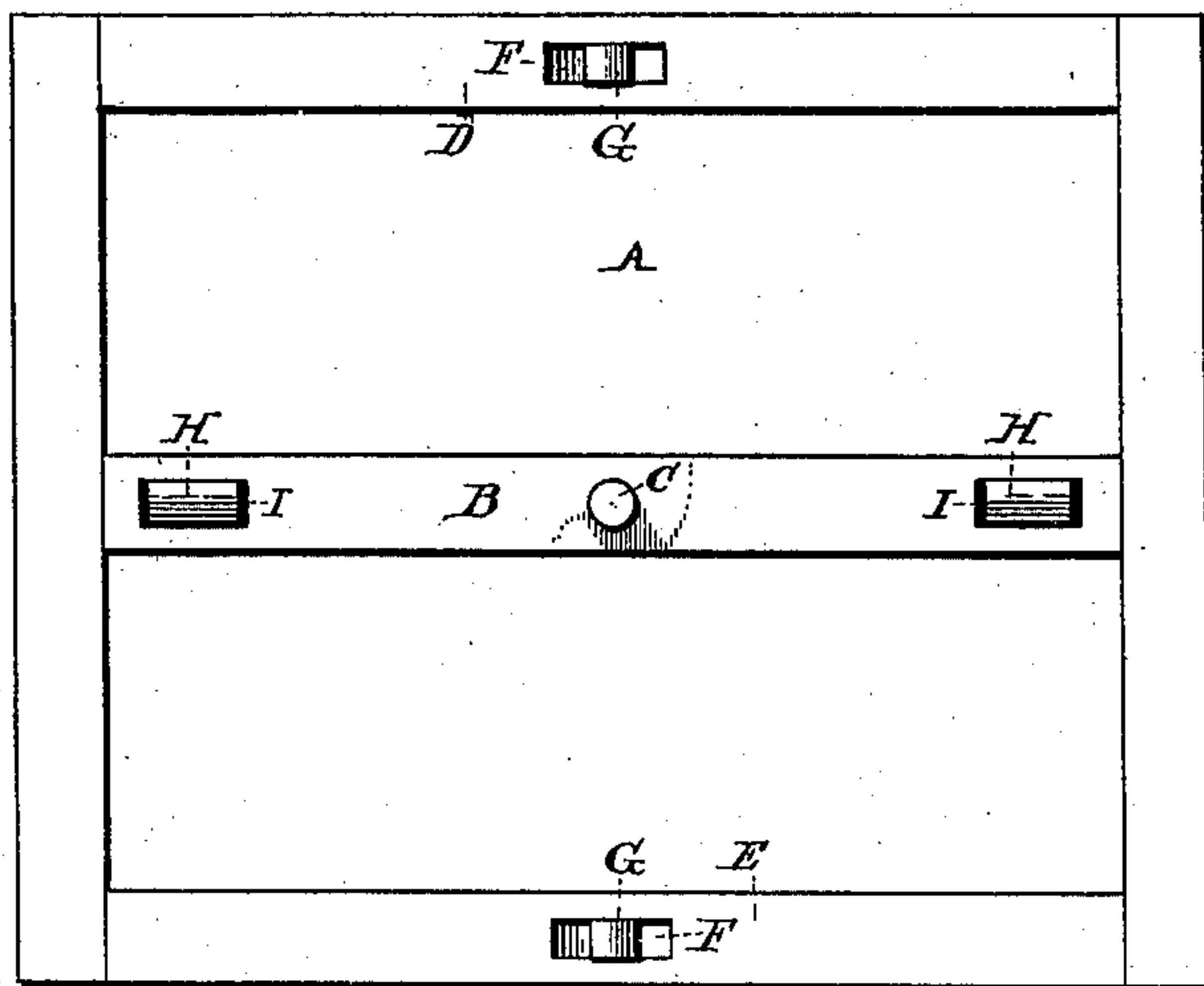


Fig. 4.

WITNESSES

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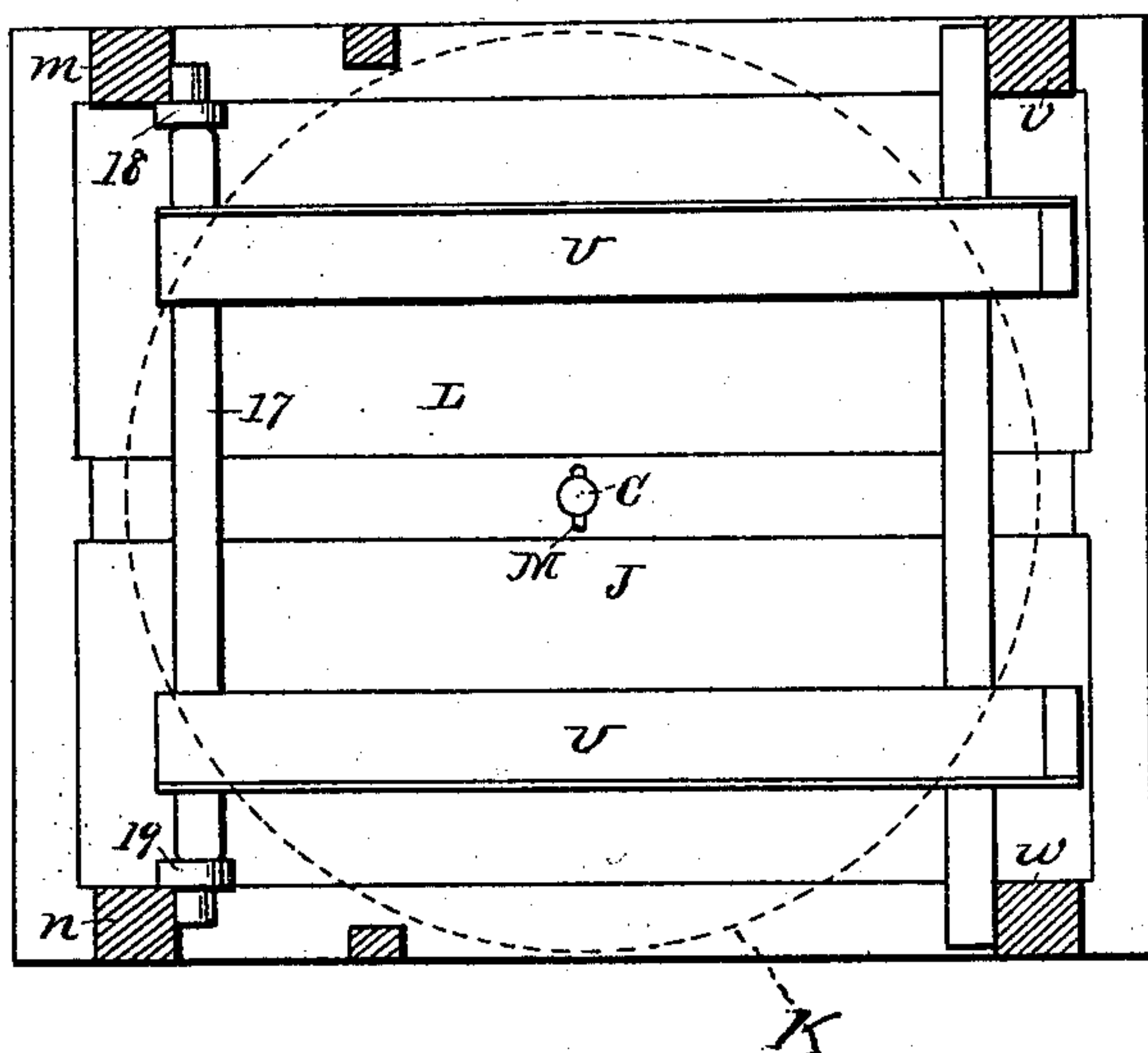
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Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE W. L. SMITH AND JOSEPH F. DRESBACH, OF HOMER, ILLINOIS.

DUMPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 362,324, dated May 3, 1887.

Application filed December 4, 1886. Serial No. 220,732. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. L. SMITH and JOSEPH F. DRESBACH, citizens of the United States, and residents of Homer, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Portable Dumping Apparatus; and we 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 or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a top view. Fig. 2 is a vertical section. Fig. 3 is a vertical section. Fig. 4 is a view of the bed-frame. Fig. 5 is a horizontal section.

Our invention relates to a portable dumping apparatus for emptying grain, &c., from loaded wagons into bins or cars; and it consists in the construction and novel combination of parts, as hereinafter described and claimed.

Referring by letter to the accompanying drawings, A designates a portable bed-frame which is rectangular in form, and is provided with a longitudinal middle sill, B, which is provided at its middle portion with a vertical spindle, C. The side sills, D and E, of the bed-frame are provided with recesses F at about their middle points. In the said recesses F are journaled friction-rolls G. The middle sill, B, is provided near each end with an elongated friction-roll, H. The friction-rolls H H are journaled in recesses I of the middle sill.

The base of the revolving frame J corresponds, so far as its main timbers are concerned, with the bed-frame A; but it is provided on its under face with a circular table, K, which travels on the friction-rolls G H when the frame is revolved. The base of the frame is also provided with a floor, L, which is laid between the side timbers, end timbers, and the middle sill of said frame, and is flush with the upper face of the said base.

The spindle C is provided near its upper

end with a key-seat, into which a key, M, is inserted to hold the revolving frame in place while it is being turned thereon to adjust it to the place at which it is to be used.

N is the operating-shaft, which is preferably rectangular in cross-section, and is journaled in bearings P P, either upon the end girders of the frame, as in Fig. 1, or in bearings P P, depending from the lower faces of said girders, as in Fig. 3.

S is a centrally-located pulley secured to the shaft N, to which the draw-rope T is secured. The draw-rope T is wound upon the pulley S when the suspension-track U is in the lowered position, and said rope T runs down over a pulley, Y, journaled in bearings W, secured to the top rail, X, of the revolving frame and passes under a pulley, Z, supported in a block connected by links to the base of the revolving frame. The lower end of the rope T is provided with a clevis-block, a, to which the double-trees are connected and to these latter the team is hitched when it is desired to operate the dumping apparatus.

On each side of the pulley S, and at proper distances therefrom, the shaft N is provided with pulleys c and d, which are connected by ropes e f to the track U. The ropes e f run over pulleys g h, journaled in pulley-blocks i j, secured to the upper portion of the revolving frame, and thence over pulleys k (there being but one shown) on journals projecting inwardly from the opposing faces of the uprights m n of the said frame.

Immediately at the outer sides of the pulleys c and d the shaft N is provided with two pulleys, p q, which are connected by suspension-ropes r s to the rear end of the suspension-track U, said ropes r s running over pulleys t u, journaled on bearings projecting inwardly from the opposing faces of the uprights v w of the revolving frame J.

The shaft N is provided just outside of its bearings with ratchet-wheels x y, which are engaged by pivoted detents 1 2, secured to the revolving frame and connected near their upper end by a transverse bar, 3, journaled in said detents 1 2. The transverse pivot-bar 3 is provided with an arm, 4, which extends forwardly from the middle of said transverse

bar 3, and is shouldered at its front end, said shouldered end resting in a slot, 5, in a vertical arm, 6, projecting from the top of the revolving frame at the front end thereof. When it is desired to hold the detents out of engagement with the ratchet-wheels $x y$ to permit the descent of the track U, the arm 4 is pushed back until the shoulder drops and engages the rear face of the vertical arm 6.

Immediately outside of the ratchet-wheels $x y$ the shaft N is provided with the fixed pulleys 7 and 8, which pulleys are provided with weighted cords 9 10, which operate to counterbalance the weight of the descending wagon on the suspension-track after the contents of the wagon have been dumped into the bin or car, as the case may be. At each end the shaft N is provided with a brake-wheel, 12. Brake-levers 13 and 14 are fulcrumed upon the revolving frame and project out in front of the brake-wheels 12 12. These brake-levers are connected at their inner ends to each other and to a locking lever, 15, by a vertical pin, 16, passed through aligned holes in said brake-levers and locking-lever. The locking-lever 15 is provided with a hook-shoulder, Z, at its front end, which engages the vertical arm 6 when it is desired to apply the brake-levers to the brake-wheels to control the descent of the emptied wagon on the suspension-track U.

The ropes $e f$, which connect the pulleys $c d$ with the track U, are secured to the peripheries of said pulleys $c d$ about fifteen degrees below their horizontal diametrical lines when said pulleys are in their normal positions—that is, when the track rests on its platform—so that the ropes $e f$ do not commence to lift their end of the track as soon as the ropes $r s$ do, the latter ropes being connected to the pulleys $p q$ at distances of ninety degrees from the points where the ropes $e f$ are connected. By this arrangement of the ropes the rear end of the suspended track will commence to rise before the front end of said track, so that the proper inclination to insure the dumping of the contents of the wagon-bed will be given. The front cross-bar, 17, of the track U is pro-

vided with friction-rolls 18 and 19, which travel up and down the two uprights of the revolving frame, with which they come in contact and thereby lessen the friction and render the apparatus easier to operate than it would otherwise be.

In order to move the machine about the farm or along the railroad-track, we provide a suitable wagon or running-gear, upon which we mount the machine and draw it to where we desire to use it. The apparatus is therefore portable, and may be used where it may be found useful.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with the bed-frame provided with the spindle and friction-rolls and the revolving frame, of the transverse operating shaft provided with the central pulley, the pulleys $c d k$ and 7 8, the weighted cords and ratchet-wheels, the pivoted connected detents, the shouldered arm 4 and slotted arm 6, the suspended track, and the draw-rope, substantially as specified.

2. The combination, with the bed-frame provided with the spindle and friction-rolls and the revolving frame, of the transverse operating-shaft provided with the central pulley, the pulleys $c d k$ and 7 8, the weighted cords and ratchet-wheels, the pivoted connected detents, the shouldered arm 4, vertical arm 6, the pivoted brakes, the locking-lever, the suspended track, and the draw-rope, substantially as specified.

3. The combination, with the bed-frame and the revolving frame, of the hinged bridge and the supporting-spring, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE W. L. SMITH.
JOSEPH F. DRESBACH.

Witnesses:

J. M. VANDERVEER,
L. A. McLEAN.