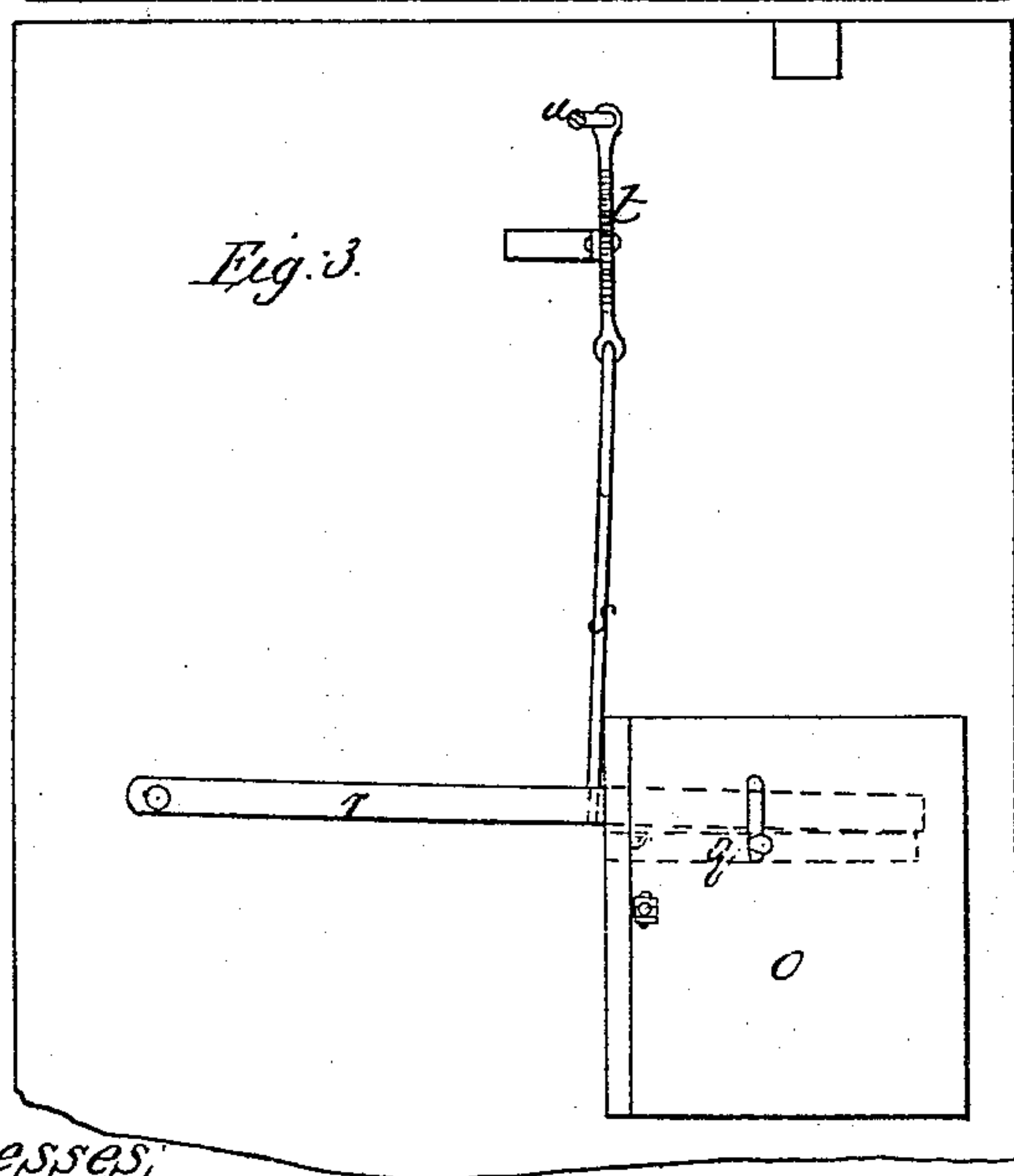
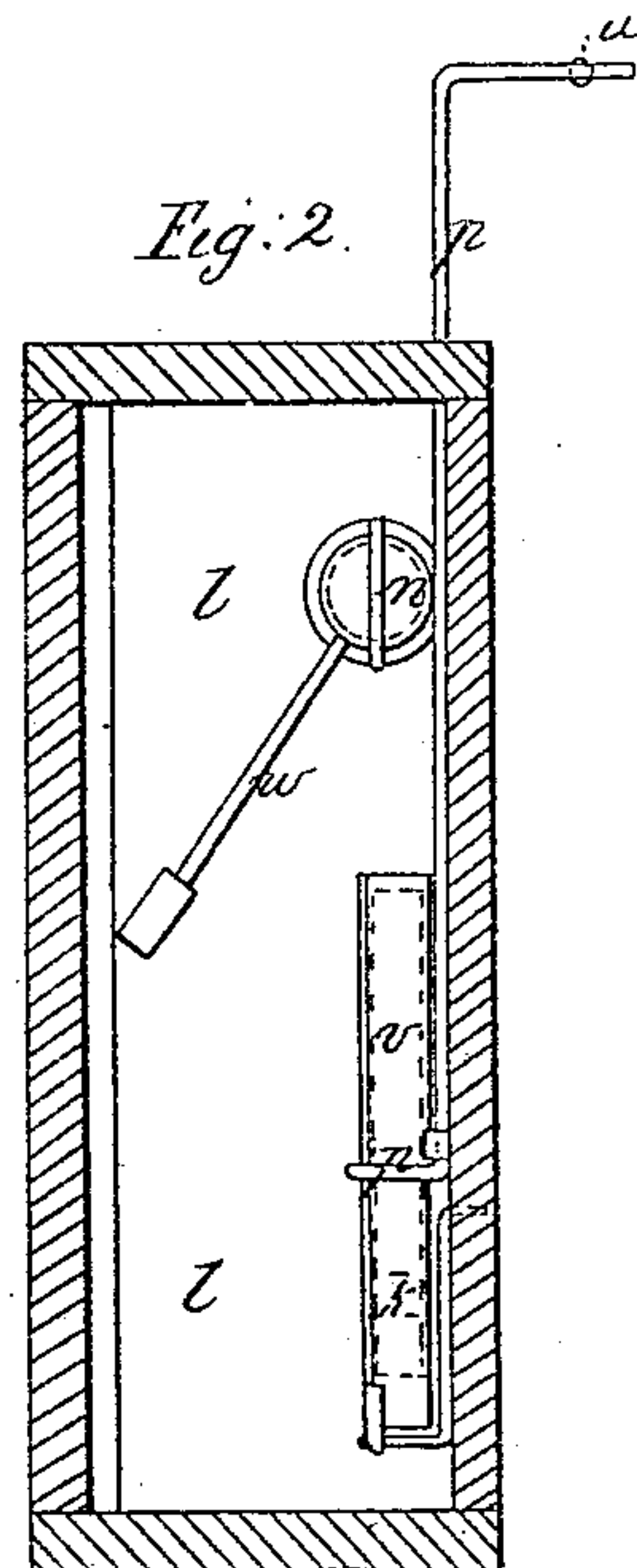
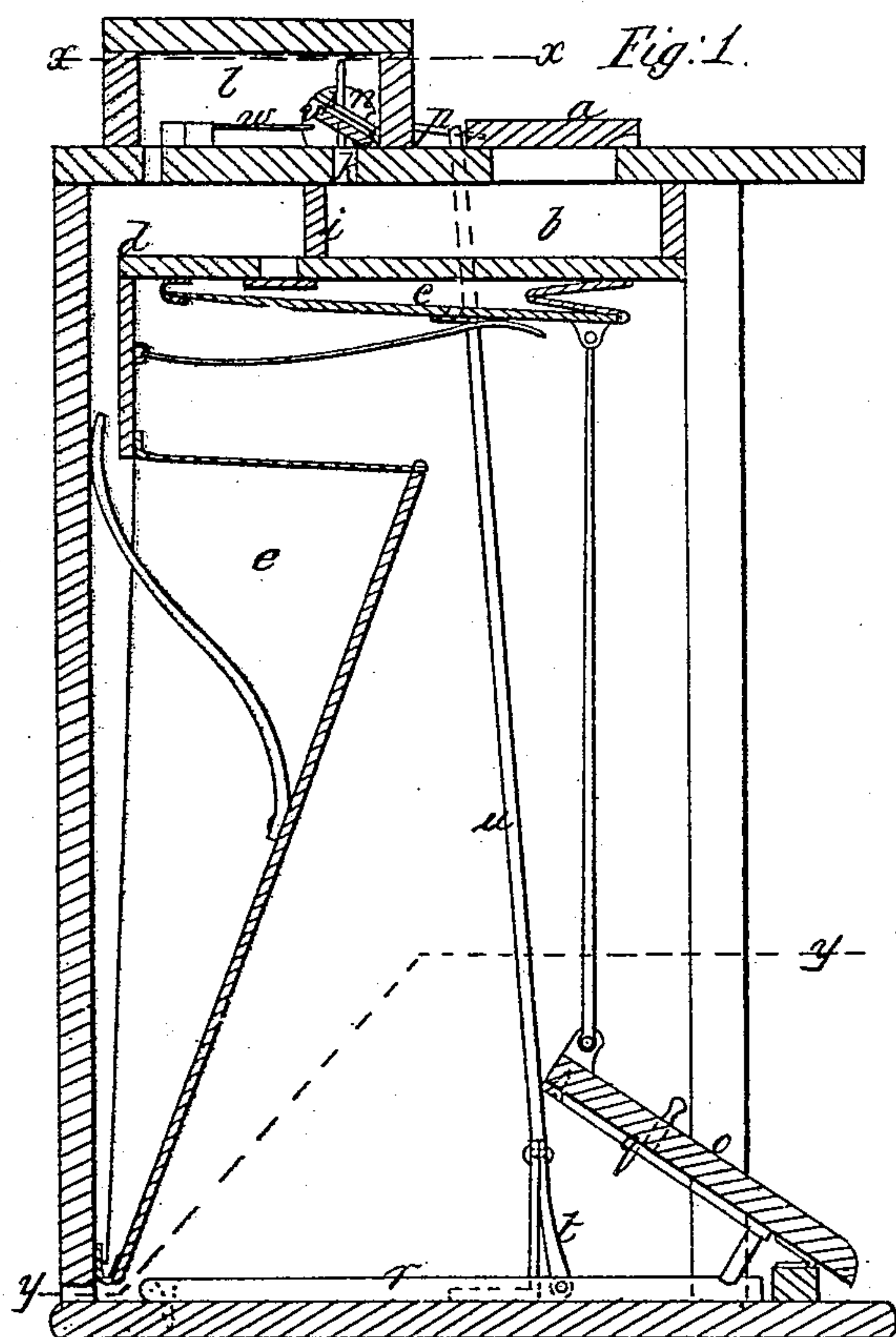


R. W. Paine,

Melodeon.

No. 87,427.

Patented Mar. 2. 1869.



Witnesses;
Chas. H. Smith
Geo. S. Walker

Inventor;
Robert W. Paine



ROBERT W. PAIN, OF NEW YORK, N. Y., ASSIGNOR TO BRAINARD
AND WING OF THE SAME PLACE.

Letters Patent No. 87,427, dated March 2, 1869.

IMPROVEMENT IN TREMOLOS FOR WIND-INSTRUMENTS.

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

To all whom it may concern:

Be it known that I, ROBERT W. PAIN, of the city and State of New York, have invented and made a certain new and useful Improvement in Melodeons, and similar instruments; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a cross-section of said improved melodeon;

Figure 2 is a sectional plan at the line *x x*; and

Figure 3 is a sectional plan below the line *y y*, showing the treadle, and parts that operate the valves.

Similar marks of reference denote the same parts.

Melodeons have heretofore been made with a tremolo-attachment, consisting of a hinged valve, placed in the air-passages, so as to produce a vibration and tremulous action in the wind. Manufacturers, and dealers in musical instruments, are conversant with the fact that the tremolo-attachment is frequently out of repair, and that this arises mainly from the valve being hinged.

The nature of my said invention consists in a tremolo-attachment, formed of a valve that is held to its place over a seat, without the use of a hinge, so that the air can escape all around the valve with uniformity, or nearly so, said valve being either globular, and confined by a cage, or set upon a spring, so that there is no hinge to wear out by the rapid vibration, or become obstructed by dust or other matter floating in the air.

In the drawing—

a a are the reeds or notes, over the usual wind-chest *b*.

c is the exhausting-bellows, operated by a treadle, *o*, to draw the air through the passage *d*, that leads to the main bellows *e*.

In the air-passage, between the wind-chest *b* and bellows *e*, is a division, *i*, on one side of which is an opening, *k*, up into the air-chamber *l*, and over this opening *k* is a valve, *v*, that is kept constantly open by a spring, except when shut by the action of a lever, *p*.

Beneath the treadle *o* is a lever, *q*, having a stud that passes through a slot in the treadle, so that it can be operated by the foot while playing, and act upon the lever *r*, rod *s*, bent lever *t*, and rod *u*, or similar connections to the lever *p*, that acts to close the valve *v* upon the passage-way *k*, so that the air shall pass through the tremolo instead of through the opening *k*, as is the case when the valve over the opening *k* is in a normal position.

In the chamber *l* is a valve, *n*, over an opening in the bottom of said chamber. This valve should be a ball or disk, of sufficient weight to be moved by the pressure of the air, and it is confined to a limited amount of vibration by a cage over it, or by a spring, *u*, to which it is connected, so that when the valve *v* closes the opening *k*, the air will be drawn from the reeds up beneath the valve *n*, thence to the bellows *e*.

The weight of the valve *n* causes it to fall upon its seat with a rapid, tremulous motion, as the air escapes through beneath it. Hence, the sound produced by the reeds will be tremulous, and, by the instant opening or closing of the valve *v*, (at *k*), so the tremolo will be stopped or brought into action.

By this construction, the air escapes all around the valve *n* with uniformity, keeping the seat free and clear. The valve lifts bodily off the seat, and is parallel, or nearly so, to the same, and there is no hinge to become injured or obstructed. Hence, my valve is not as liable to injury as the swinging valves.

What I claim, and desire to secure by Letters Patent, is—

A valve for the tremolo-attachment of a melodeon, or similar instrument, formed in the manner specified, so that when the valve opens, the air can escape freely all around said valve, for the purposes specified.

In witness whereof, I have hereunto set my signature, this 27th day of June, A. D. 1868.

ROBERT W. PAIN.

Witnesses:

THAS. H. SMITH,

GEO. T. PINCKNEY.