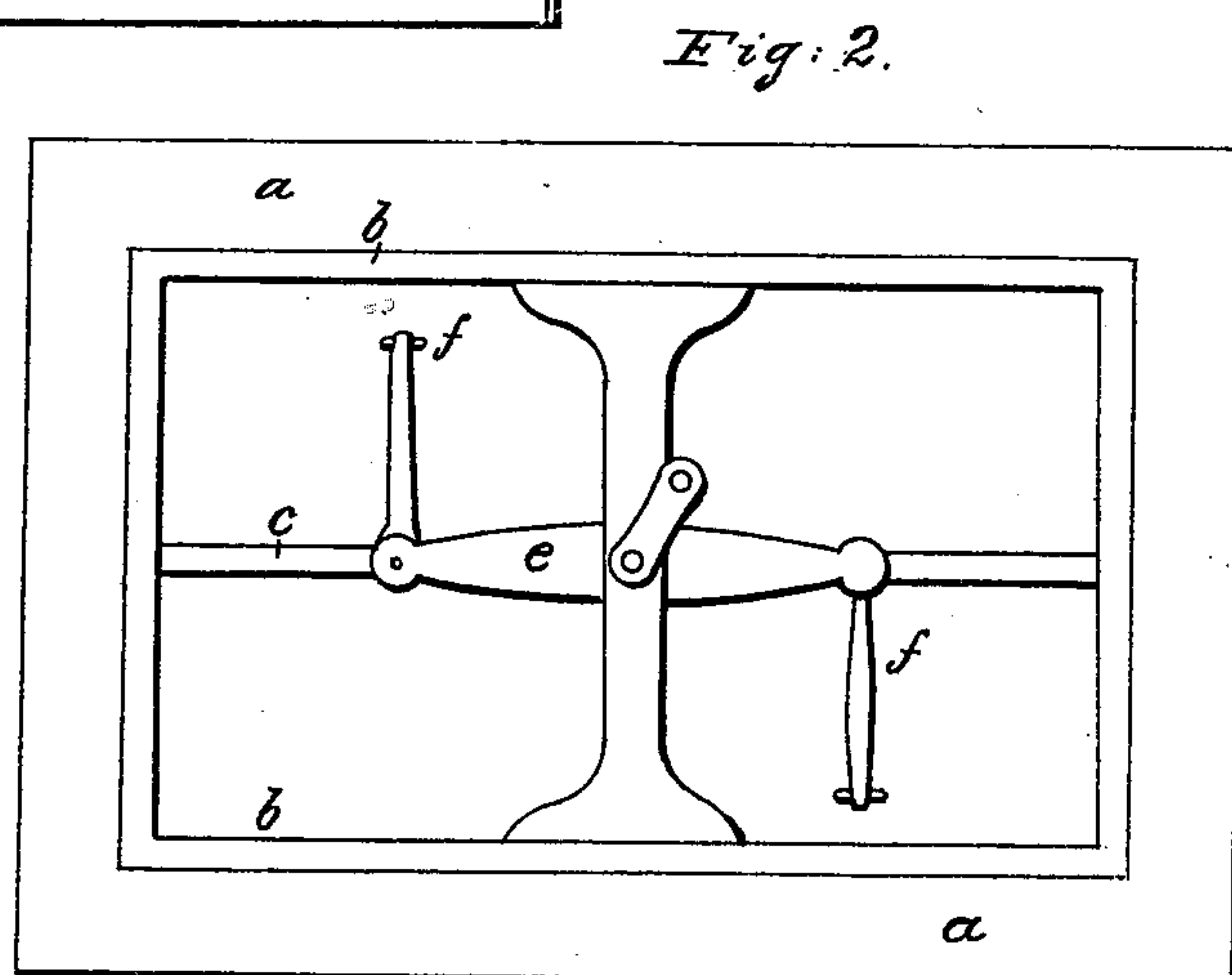
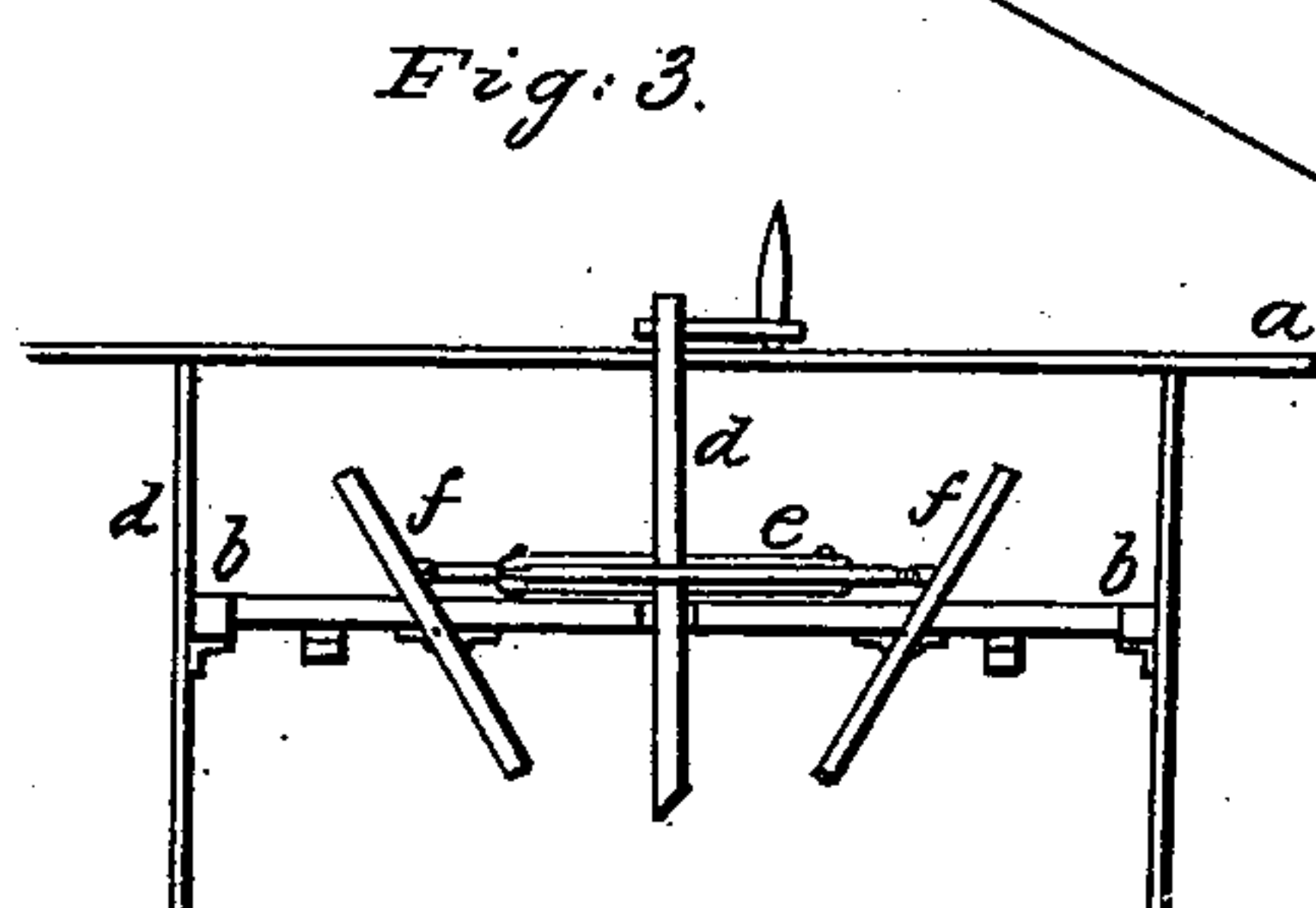
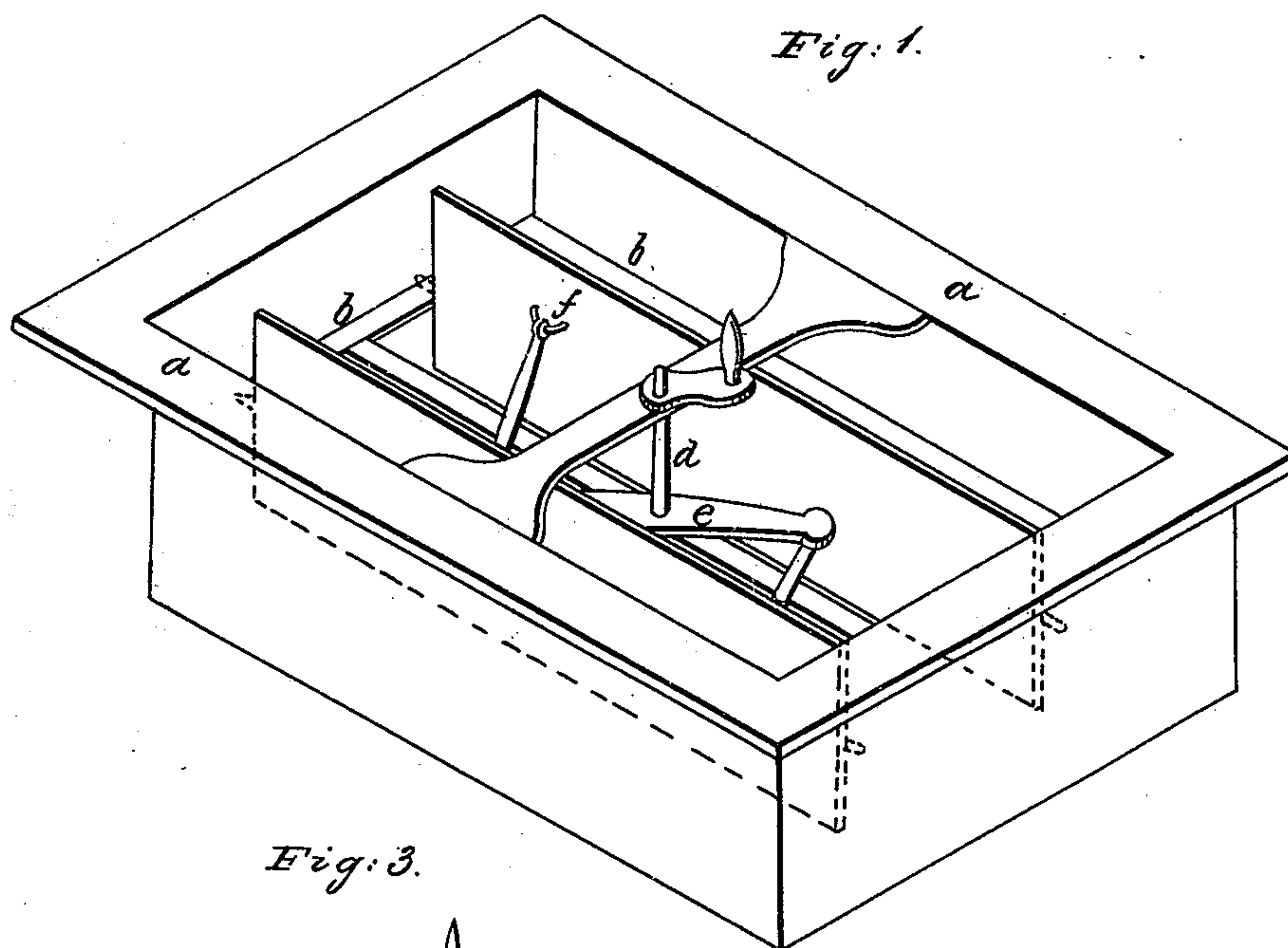


D. CULVER.
Hot Air Register.

No. 5,698.

Patented Aug. 10, 1848.



UNITED STATES PATENT OFFICE.

DAVID CULVER, OF NEW YORK, N. Y.

REGISTER FOR HOT-AIR FURNACES.

Specification of Letters Patent No. 5,698, dated August 10, 1848.

To all whom it may concern:

Be it known that I, DAVID CULVER, of New York, in the county of New York and State of New York, have invented an Improved Register for Hot-Air Furnaces or for Ventilating Buildings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure I is a perspective view. Fig. II is a plan. Fig. III is a cross section.

Similar letters refer to similar parts in all the figures.

The nature of my invention consists in an improved mode of hanging and operating the leaves of the register by which they can be opened, closed, and adjusted to any required aperture.

In a suitable frame or box (*a*) which can be cast in iron or other metal I place the several parts for holding the leaves, and the mechanism for operating them, as follows:

Around the inside of the box and near its underside I secure a narrow rim (*b*), near the center of this rim a bar extends across the box longitudinally dividing it into two parts, next two leaves, are placed within the box of sufficient length and breadth to fill the space formed by the framing (*b*) (*c*). The leaves are suspended on pivots placed in their ends and midway from side to side so that they are perfectly balanced and thereby not liable to swing either way, from any angle they may be placed in. The holes to receive their pivots are made in the frame (*b*). A vertical shaft (*d*) is next inserted in the center of the box, the lower point resting upon the cross piece (*e*) while the

upper end is held by a bar extending across the box. It is intended to inclose the box at the top by a fancy plate of fret work or castings made from a carved pattern, in which case a hole in the center to pass the shaft through supersedes the use of the cross bar before named for the upper bearing, the shaft has a lever (*e*) attached from the ends of which two connecting rods extend to the leaves at (*f*) where they are fastened in a loop placed above the center. On the top of the shaft (*d*) there is a handle to operate the leaves. Thus the construction is complete. The register is then placed over the openings leading from, the hot air flues, either on the floor wall or ceiling as the situation may require.

In operating, a very small movement is required to produce a full opening of the leaves. The leaves as hung are completely counterbalanced every way so that they require very little power to operate even on a large scale, where the leaves are very heavy, as in a register for churches, public buildings, &c. They will also remain at any angle they may be placed at without screws, catches or fastenings of any kind.

What I claim as my invention and improvement and desire to secure by Letters Patent, is—

The combination of the lever (*e*) by connecting rods with the leaves (*d*) of the register, the said lever being placed within and beneath the top of the box containing the same substantially as herein described.

DAVID CULVER.

Witnesses:

JOSEPH P. PIRSSON,
J. L. KINGSLEY.