

M. Keller.

Kaleidoscope.

N^o 105,218.

Patented Jul. 12, 1870.

Fig. 1.

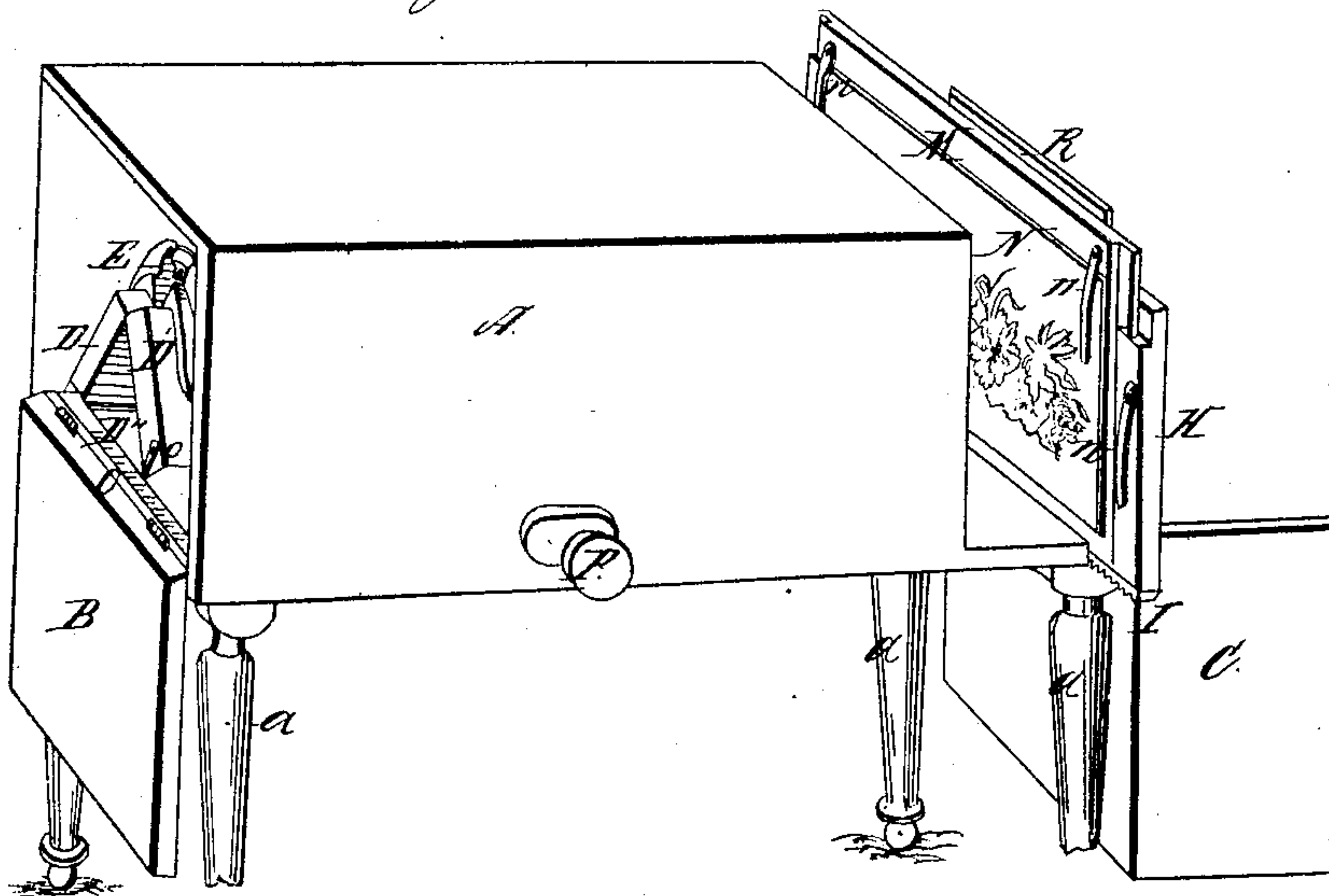


Fig. 2.

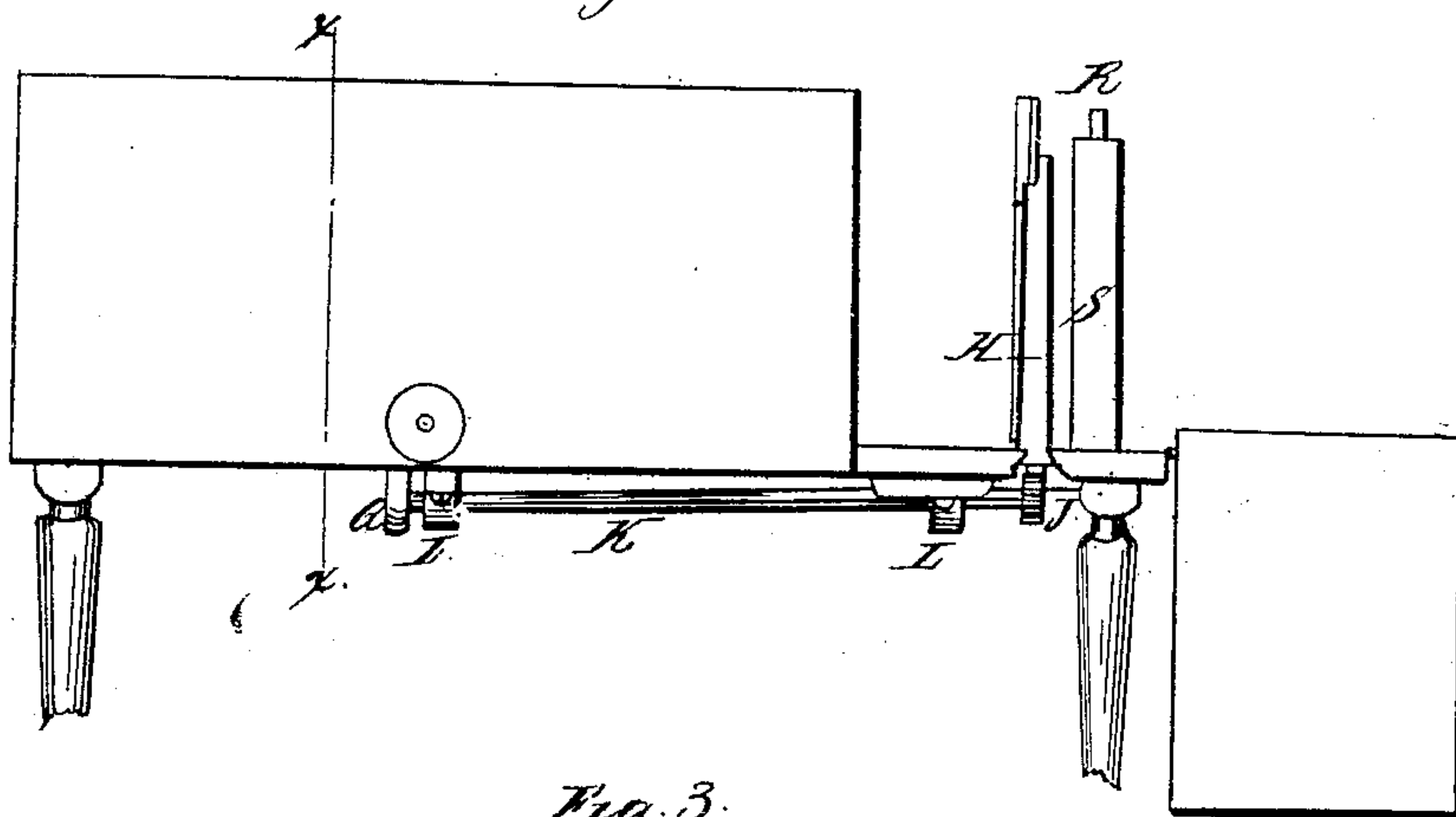
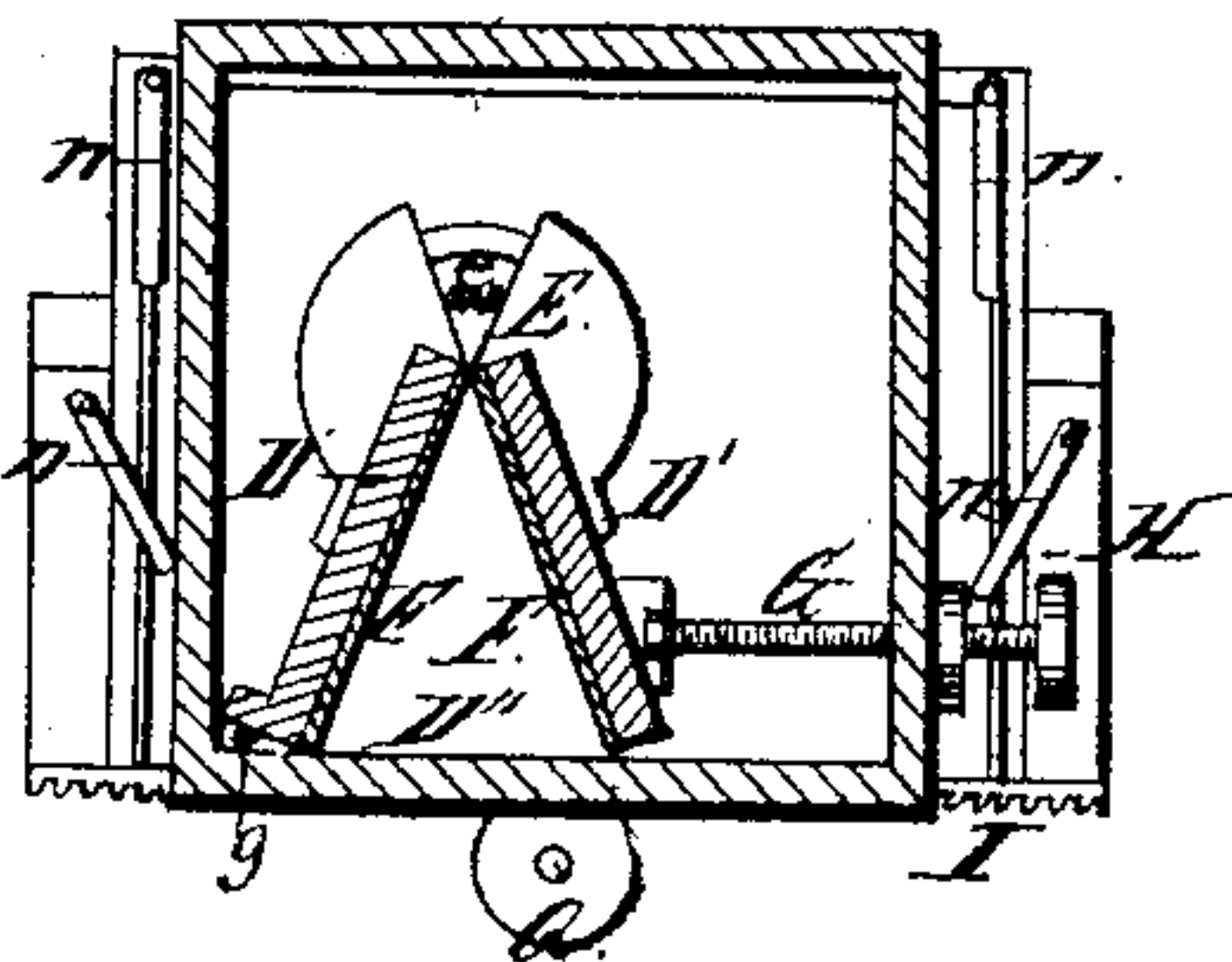


Fig. 3.



Witnesses:
Cornell D. Wright
Charles F. Brown

Inventor:
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MATTHIAS KELLER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF,
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Letters Patent No. 105,218, dated July 12, 1870.

IMPROVEMENT IN KALEIDOSCOPES.

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, MATTHIAS KELLER, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Machine for Producing Designs; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing and letters of reference marked thereon making a part of this specification, in which—

Figure 1 is a perspective view of my invention;

Figure 2 is a side elevation of the same; and

Figure 3, a transverse section through line *x x*, fig. 2.

This invention has for its object the production of ornamental configurations and designs, and consists, mainly, of a suitable case containing reflecting surfaces arranged like a kaleidoscope, and having certain appliances for holding various objects before said reflectors, and adjusting such objects in any desired position, as will hereinafter more fully appear.

In the drawing—

A represents a horizontal box, resting on the legs *a*, and having hinged ends B C.

D D' represent longitudinal strips within the box A, which strips are connected at their upper edges by the hinges E, while their lower edges rest upon the bottom of the box A, and form a triangle in connection with the same.

The inner sides of the strips D D' are blackened and covered with glass plates F F, which constitute reflectors, and the bottom of the box A is covered with black velvet or other material D''.

The hinge E is the invention of one Timothy Smith, and is provided with a spiral spring, *e*, which tends to keep the hinged parts D D' at right angles with each other.

G represents a screw, which passes through the side of the box A and impinges upon the outer side of the piece D', the piece D being secured to the box A by spiral springs *g*.

H is a transverse sliding frame, situated at one end of the box A, and provided with a rack, I, with which meshes the pinion J, on the longitudinal shaft K, which shaft rests in bearings L L, beneath the box A.

M represents an auxiliary frame, sliding vertically in ways *m* in the frame H.

Both frames are provided with clamps, *n*, for holding a card or other object, N.

O represents a gauge on the bottom of the box A, and

o is an index or pointer attached to the piece D',

which serves, in connection with the screw G, to regulate the angles of the pieces D D'.

P is a thumb-piece on the end of the screw G, and Q, a similar piece on the shaft K, for the purpose of operating the same.

R is a piece of ground glass or other translucent material, held by the frame S, and situated at the extreme end of the box A.

The operation of my invention is as follows:

The object, which, for convenience, is printed or otherwise affixed on a card, N, is placed in the frame M and secured by the clamps *n*. The pieces D D' being adjusted to the proper angle by the screw G, the observer looks through the triangular opening at the opposite end. The object, being duplicated and reduplicated by the reflecting sides of the pieces D D', forms a regular design, which varies with the slightest motion of the frames M and H, which is effected by turning the shaft K in either direction or sliding the frame M up or down.

If desired, a solid frame may be substituted for the open frame M, in case an object not affixed to a card is used, in which case the light falls directly on the same on the side nearest the beholder.

In case a transparent object is viewed, the light comes from beyond, passes through the glass R, and becomes softened and toned down.

It will be readily seen that, as the different combinations and duplications which may be produced by this device are endless, it may be rendered especially valuable to carpet-manufacturers and others who have occasion to produce new designs.

The reflected images can readily be photographed and preserved.

A disk or wheel may be substituted for the frame H, having cogs on the periphery thereof, with which the pinion J might engage, said disk being pivoted transversely of the box A.

Having thus fully described my invention,

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

The case A, provided with the kaleidoscopic reflectors D D', frames N and H, rack I, and pinion J, all arranged and operated substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MATTHIAS KELLER.

Witnesses:

CARROLL D. WRIGHT,
CHARLES F. BROWN.