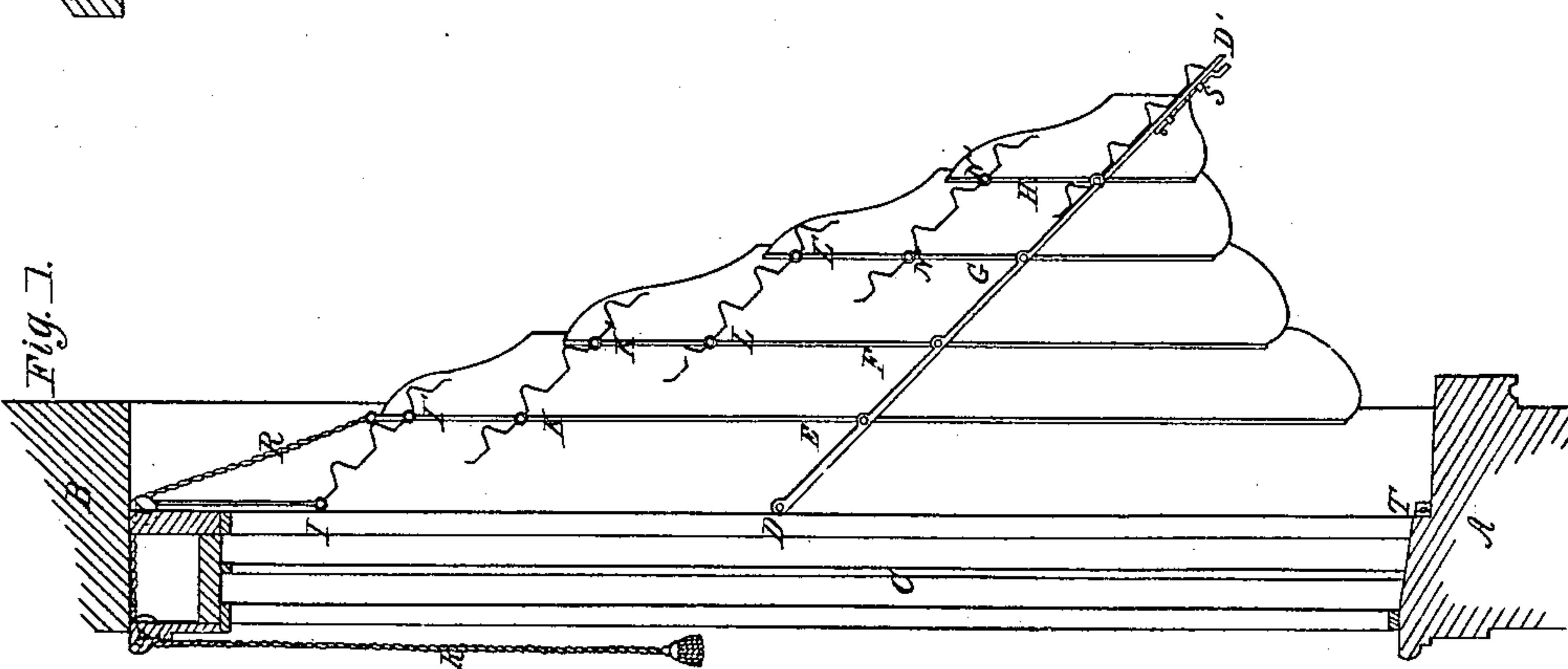
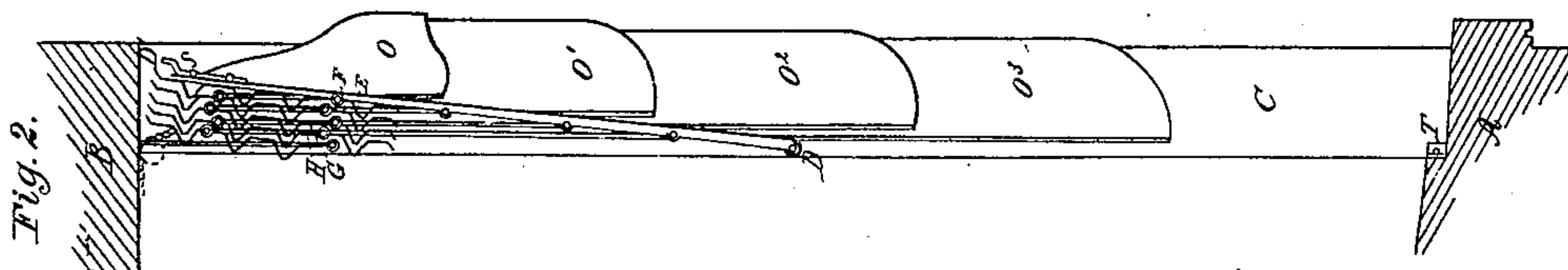
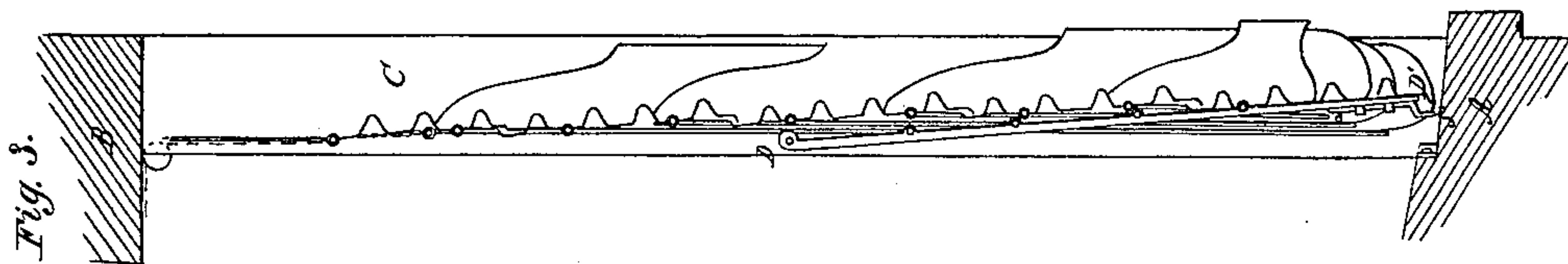
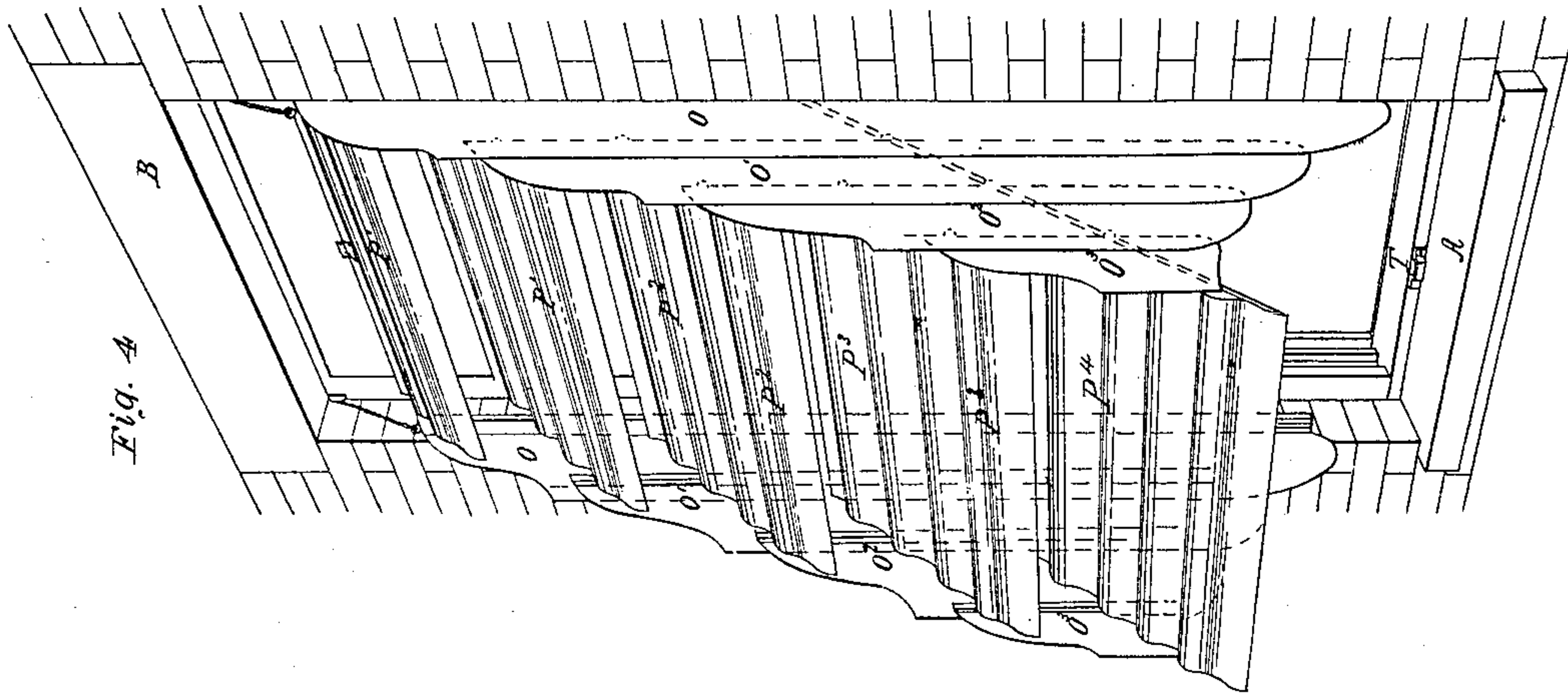


H. HOFFMAN.
BLIND FOR WINDOWS, &c.

No. 40,795.

Patented Dec. 1, 1863



Witnesses:
Chas. F. Hall
a. F. Hall

Inventor:
Henry Hoffman

UNITED STATES PATENT OFFICE.

HENRY HOFFMANN, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES WEHLE,
OF SAME PLACE.

IMPROVEMENT IN BLINDS FOR WINDOWS, &c.

Specification forming part of Letters Patent No. 40,795, dated December 8, 1863.

To all whom it may concern:

Be it known that I, HENRY HOFFMAN, of the city, county, and State of New York, have invented a new and useful Improvement in Blinds and Shutters; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a section of my improved blind and shutter when partly opened. Fig. 2 is a section of the same entirely opened. Fig. 3 is a section of the same when nearly shut; Fig. 4, a perspective view of the same when partly opened.

Similar letters of reference indicate corresponding parts in all these figures.

The nature of my invention consists in constructing a blind which, when shut, will be as firm as a shutter, and when partly opened will admit air simultaneously with excluding light, and thus possess all the requisites of a blind, shutter, and awning combined.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the annexed drawings, A represents the window-sill; B, the window-lintel; C, the window-frame.

D D' is the principal lever, movable on the pivot D on the window-frame. The said lever contains pivots E F G H, for the vertical parallel levers E I' F K' G L' H N', which said vertical levers are united on the top by levers parallel with D D' I I' K K' L L' N N', each of which is pivoted on two vertical levers. Thereby a series of movable parallelograms is formed, the position of which is dependent on the position of the principal lever D D'. Thus, when said principal lever is horizontal, the other levers, I I' K K', &c., will also be in a horizontal position. When said principal lever inclines upward, these other levers will do the same, while all the levers parallel with E I' will always maintain a vertical position, but will be farthest apart when the principle lever is in a

horizontal position, and nearest when said principal lever is in a position nearly vertical.

A system of parallelogrammic levers, like the one described, or two or more of such systems, constitute the frame-work of my improved blind; shutter, or awning. Usually I employ two such systems, one on each side of the window-frame.

Plain or corrugated plates P, P', P², P³, and P⁴ are permanently fixed to the levers, parallel with D D', in such a manner as to project over their respective pivots, and side pieces, O, O', O², and O³, consisting of vertical planes, may be placed on both ends of the said frame parallel with the window-jamb or perpendicular to the window. These side pieces are so arranged as to overlap one over the other when D D' is in an inclined position, and to open and close like a fan.

S is a bolt attached to the lowest plate, P⁴, fitting into a corresponding aperture, T, of the window-sill.

R R' represent strings attached to one or more of the levers of the blind-frame, running over rollers V V, near the lintel or upper part of the window-frame, by means of which the blind may be raised or lowered at pleasure. When corrugated plates are used, the corrugations on all the plates must be corresponding. When it is desired, two or more such blinds may be used for one window, in which case each plate P P', &c., will have the appearance of being cut.

The improved blind herein described may be applied to doors as well as windows, and may be constructed of any suitable material. If made of tin or other shining material, it may be used as a reflector.

I do not confine myself to any particular method of raising and lowering the improved blind.

When it is desired to shut the blind, the same is lowered and fastened by the bolt T to the sill. When it is desired to admit the light fully, it is raised, as in Fig. 2. When it is desired to shade the window, it is partly raised, as in Figs. 1 and 4, or still further,

until D D' is horizontal. In either case the air will freely pass through the spaces between P P', &c.

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

The construction of blinds, shutters, awnings, or reflectors, consisting of a series of plates, P P' P² P³ P⁴, combined with the levers D D', E I', F K', G L', and H N', with

their several pivots and connecting-levers intended to be attached to a door or window by an arrangement for raising or lowering the same, substantially as described.

HENRY HOFFMANN.

Witnesses:

CHS. WEHLE,
A. WEHLE.