

(No Model.)

2 Sheets—Sheet 1.

B. E. KIPP.
DESK LID SUPPORT.

No. 575,961.

Patented Jan. 26, 1897.

Fig. 1.

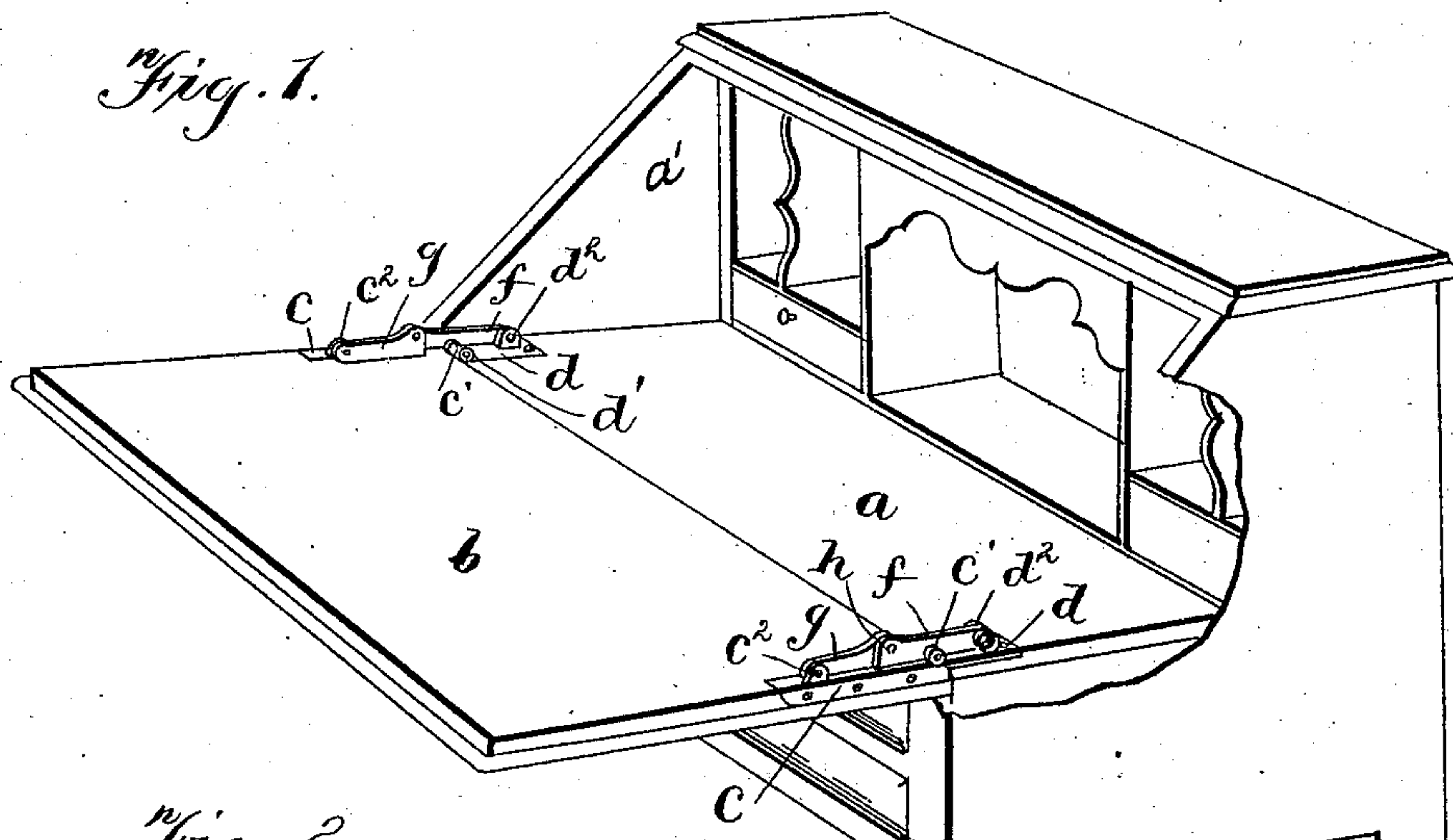


Fig. 2.

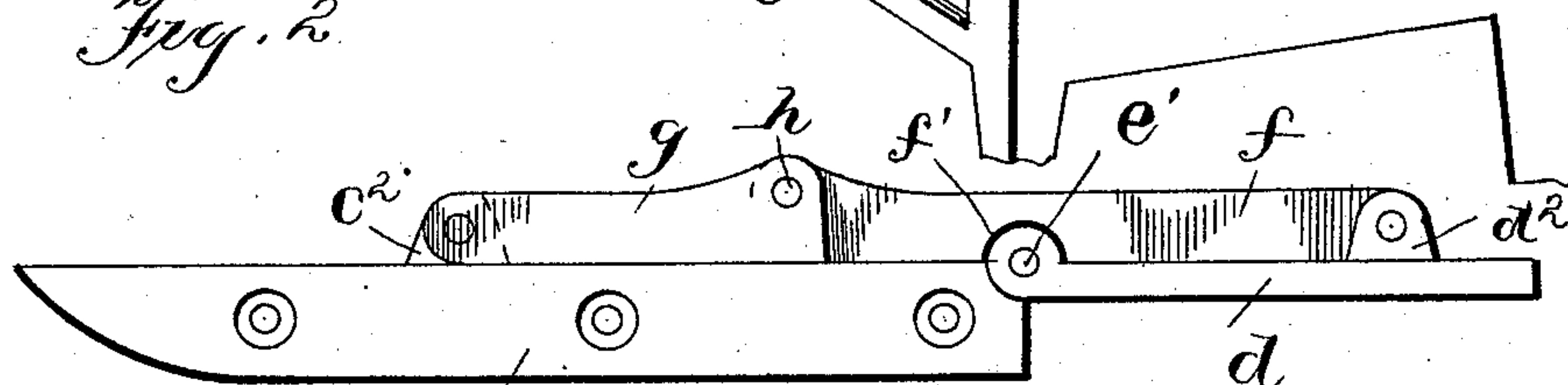


Fig. 4.

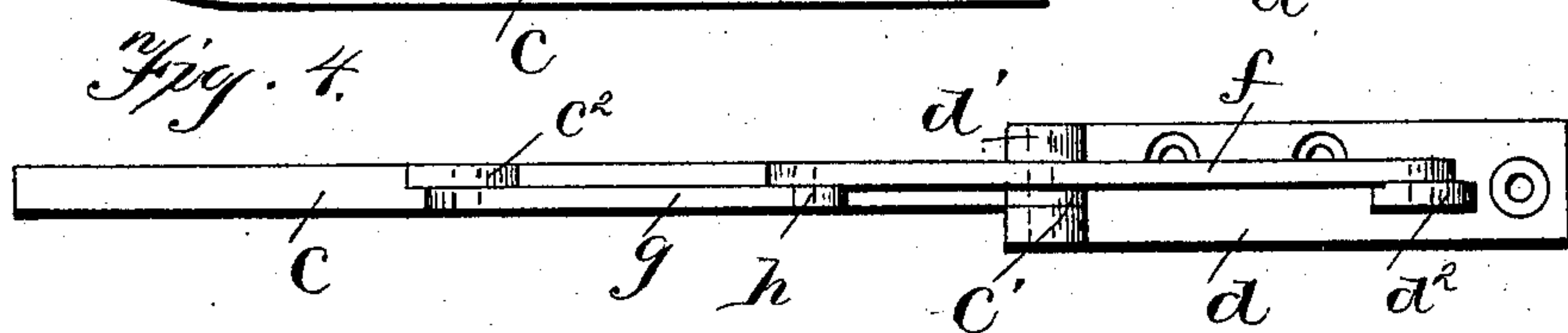
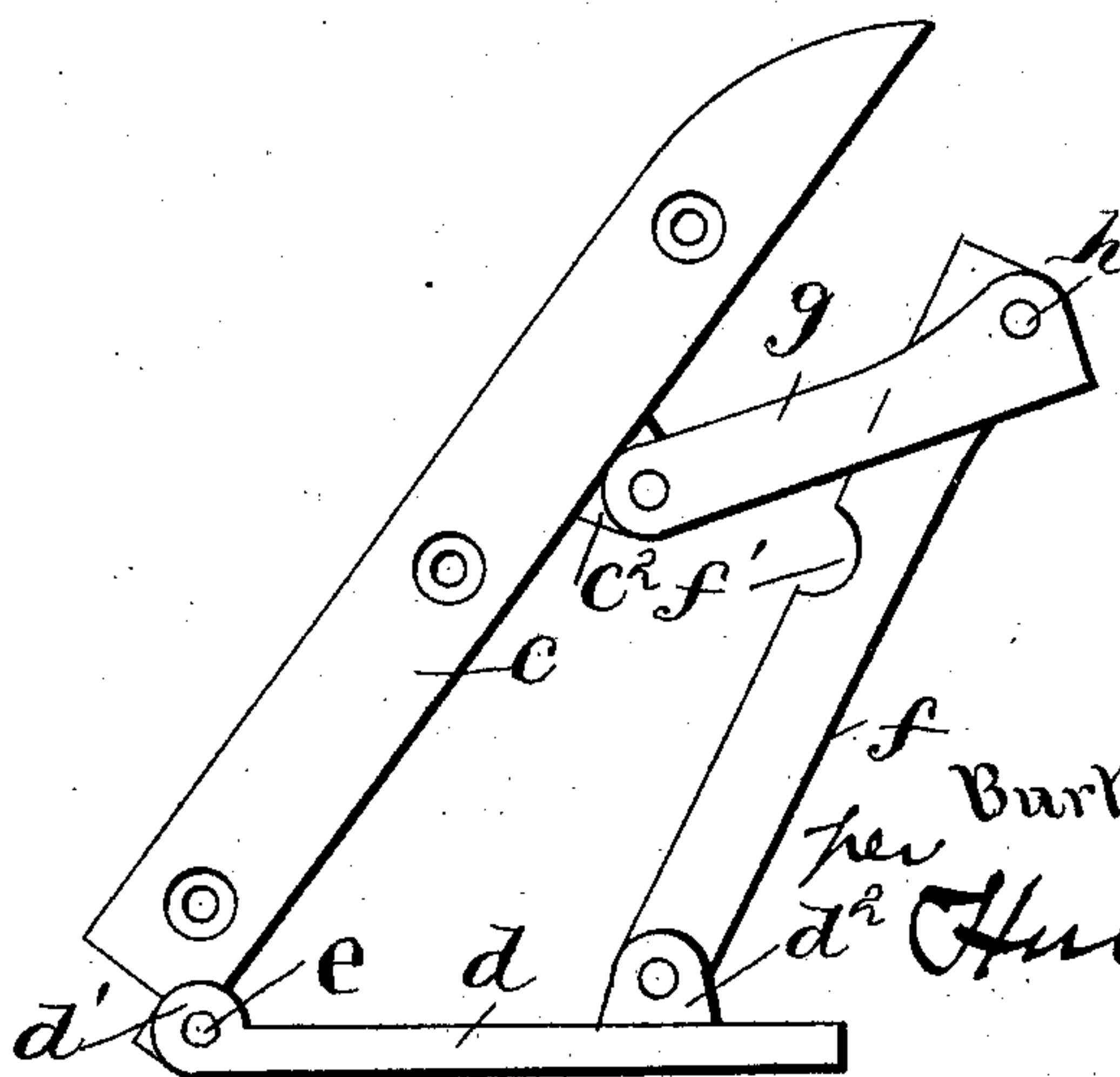


Fig. 3.



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2 Sheets—Sheet 2.

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Fig. 5.

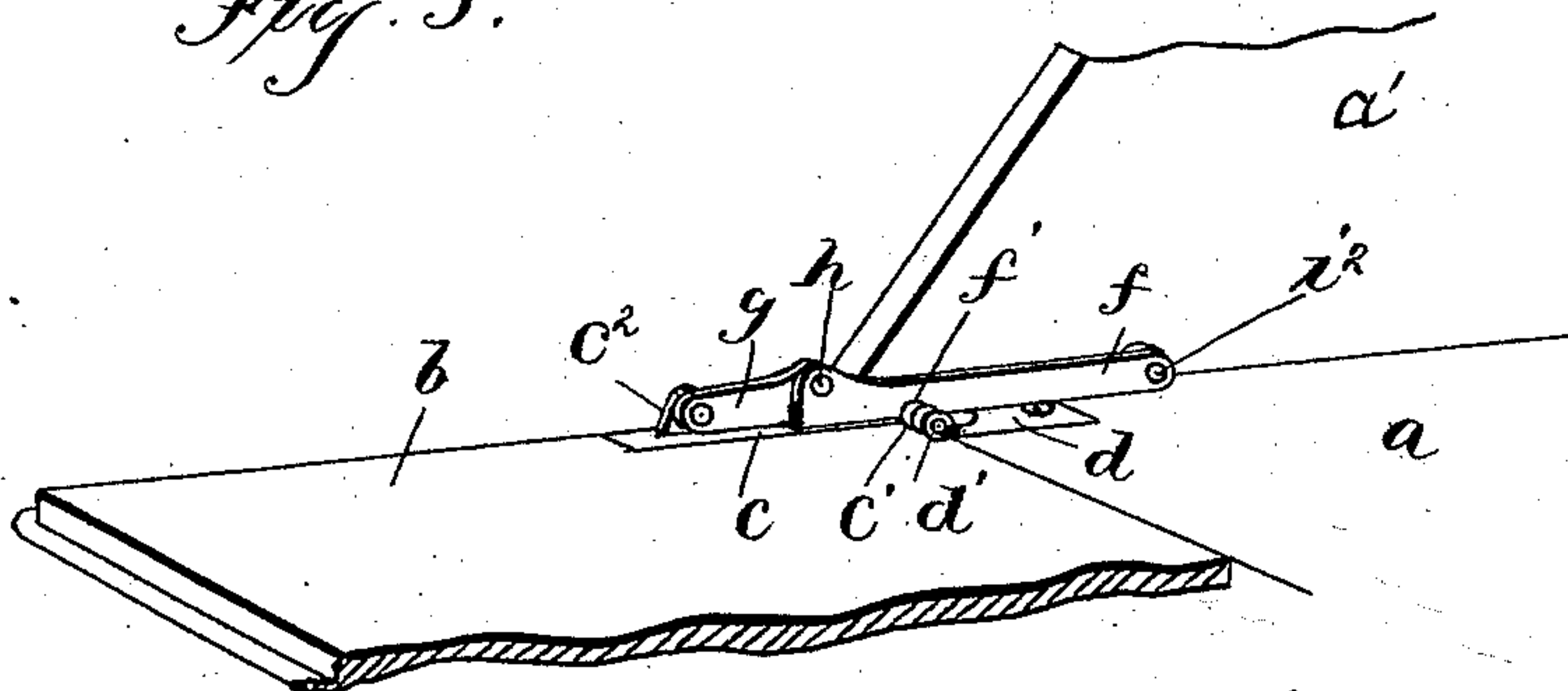


Fig. 6.

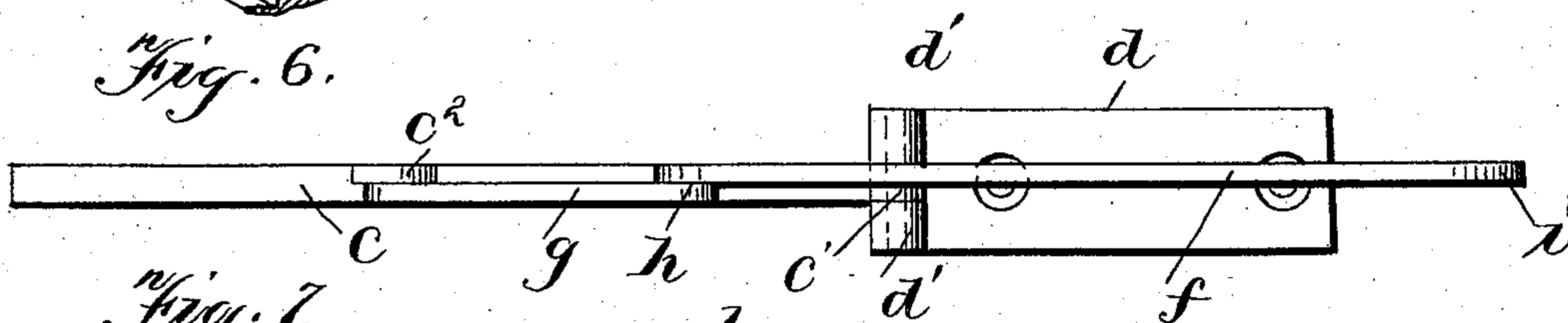


Fig. 7.

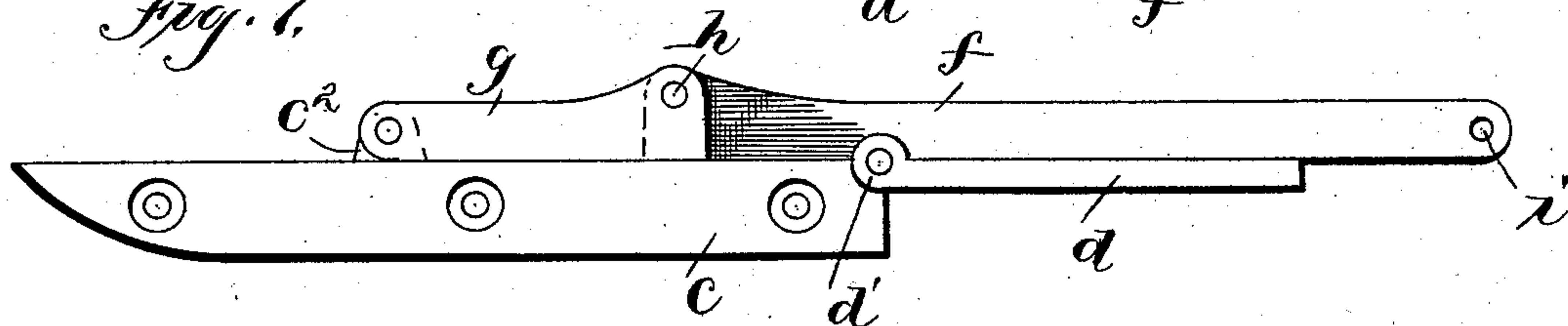


Fig. 8.

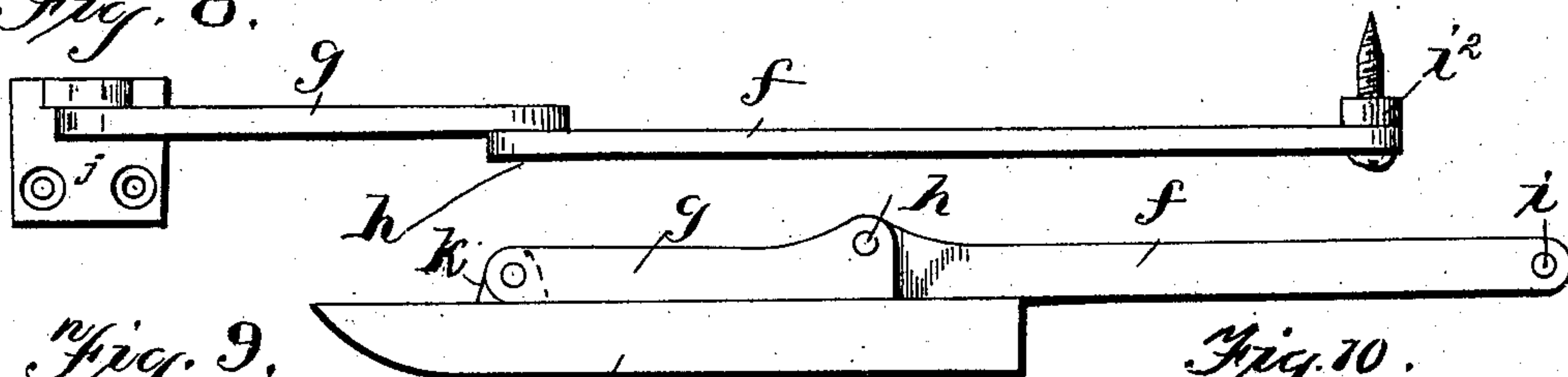


Fig. 9.

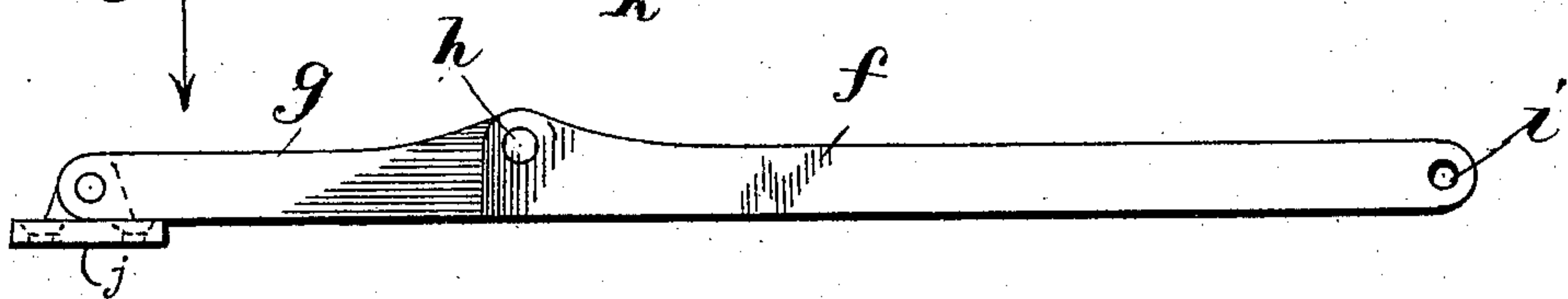


Fig. 10.

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UNITED STATES PATENT OFFICE.

BURTON E. KIPP, OF PHILADELPHIA, PENNSYLVANIA.

DESK-LID SUPPORT.

SPECIFICATION forming part of Letters Patent No. 575,961, dated January 26, 1897.

Application filed August 10, 1896. Serial No. 602,311. (No model.)

To all whom it may concern:

Be it known that I, BURTON E. KIPP, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Desk-Lid Supports; and I do hereby 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.

This invention relates to certain improvements in desk-lid supports, and more particularly to improvements in combined hinges and braces for desk-lids.

An object of the invention is to provide an improved desk-lid support wherein a hinge is braced and supported in an improved and advantageous manner.

A further object of the invention is to provide improvements in details and arrangements of parts whereby a highly efficient and improved desk-lid support is produced.

The invention consists in certain novel features of construction and in combinations and in arrangements of parts more fully and particularly pointed out and described hereinafter.

Referring to the accompanying drawings, Figure 1 is a perspective view of a desk with the lid lowered, showing my invention applied thereto. Fig. 2 is a detail side elevation of the hinge in its normal straightened position. Fig. 3 is a corresponding view with one member raised. Fig. 4 is a detail top plan of the hinge. Fig. 5 is a detail perspective of a portion of a desk, showing the invention applied thereto with the long inner link extended inwardly beyond the hinge and pivotally joined to the end of the desk. Figs. 6 and 7 are top and side views of the hinge and links of the arrangement of Fig. 5. Figs. 8 and 9 show the arrangement of bracing-links adapted for use as a desk-lid support independently of the hinge by pivoting directly to the lid and desk end so as to lie and press down on the lid and desk-shelf, the links being longer in proportion to the lid and shelf than where attached to both members of the hinge. Fig. 10 shows the links of the foregoing figures attached to a metal piece which can be se-

cured to the edge of the lid, but which forms no part of the hinge.

In the drawings, *a* is the shelf of a desk of any ordinary or suitable construction having the vertically-swinging lid *b*, hinged at its inner edge to the front edge of the shelf.

Two hinges are usually employed to unite the lid and shelf, arranged, respectively, at the opposite end edges of the lid and upper surface or face of the shelf.

As here specifically shown, each hinge consists of a leaf or member *c*, secured at the edge of the lid with its flat side against the same, and a leaf or member *d*, secured horizontally with its flat side down on the shelf.

The lid member *c* consists of an elongated plate arranged on edge with the transverse holes for the securing-screws passed into the edge of the lid, so that the upper edge of the member is flush or approximately flush with the top surface of the lid. At the upper corner of its inner end the member *c* has the upwardly and inwardly projecting eye *c'*.

The shelf member *d* consists of a plate having the vertical holes for the securing-screws, which are passed down through the same into the desk-shelf and at its front end provided with the projecting eyes *d'*, arranged concentrically with and on opposite sides of the eye *c'* of the lid member, so that the hinge-pivot *e* can be passed through the three eyes, which are shown projecting above the plane of the upper edges of the hinge members.

I have thus shown and described a specific form of hinge for the sake of clearness; but my invention is not limited to any specific form of hinge uniting the lid and shelf.

In the form of hinge shown the lid member is provided with an upwardly-projecting eye *c'* from an intermediate portion of its upper edge and which eye is preferably considerably thinner than the thickness of the plate forming the lid member. The shelf member also has an upwardly-projecting eye *d'* from its upper face.

f g are two links pivotally joined together above the hinge and at their outer ends joined to said eyes *d'* *c'*, so as to connect the two members of the hinge and rest and bear down on the upper faces of the hinge when the same is straightened out and so as to

break where joined together and swing and fold upwardly and inwardly when the lid member of the hinge is raised.

One link is arranged at one side of its eye, while the other link is arranged at the correspondingly opposite face of its eye, and the ends of the two links overlap where pivoted together over the hinge. Hence the two eyes d^2 c^2 can be arranged in the same vertical plane with the longitudinal axis of the hinge.

The link f at its inner end pivotally joined to the shelf member of the hinge is formed of such length as to extend outwardly a distance beyond the shelf member and over the hinge-joint to a point above an intermediate portion of the lid member and at its under edge formed to rest down flat on the upper surfaces of the shelf and lid hinge members and with the notch or recess f' to pass over and receive the hinge-joint.

The short link g is arranged and extends over an intermediate portion of the length of the lid-hinge member and is formed at its under edge to bear down on the upper edge of said lid-hinge member and at its inner end is pivoted to the outer end of the long link at h , so that said joint h , between the two links, is arranged above the lid-hinge member and outwardly beyond the hinge-joint.

The pivot or joint h between the two links is arranged a distance above the horizontal line or plane in which the pivots uniting the opposite ends of the links to the ears are arranged, so that the links will readily and easily break or fold upwardly when the lid-hinge member is raised.

When the desk-lid is lowered and the hinge is in its straightened position, the links constitute a most effective brace and support in upholding the lid and in bracing the hinge by uniting the two members thereof independently of the hinge-pivot and by bearing and bracing down on the upper faces of the hinge members and by having a rigid member, as the long link, passing over and beyond the hinge-joint. The strain is thus distributed throughout the various pivotal joints and securing-points, thereby relieving the hinge-pivot of excessive strain and most effectively bracing the lid against downward strain.

The invention hereinbefore so fully and specifically set forth is by no means limited to employment in desks or in connection with the hinge shown, but can be employed in many other connections; also, my improved lid-support is not limited to connection with both members of a hinge, nor, in fact, to connection with any part of a hinge, as it can be arranged on the desk at different points from and independent of a hinge. For instance, in Figs. 5, 6, and 7 the inner long link f is shown extended inwardly beyond the shelf member of the hinge and pivoted to the desk end e' at i , so that the link will be held down on the shelf-hinge member, as in the con-

struction previously described, and will thereby firmly brace said member and its fastenings and hold the same to the shelf. In this construction the shelf-hinge member does not have the upwardly-extended ear, and a washer i^2 can be interposed between the long link and end of the desk.

In Figs. 8, 9, and 10 the lid-support is shown entirely independent of the hinge by pivoting the inner end of the long link to the desk end just above the surface of the desk-shelf, as in Fig. 5, and by pivotally joining the outer end of the short link to the lid through the medium of the metal ear j , Figs. 8 and 9, secured on the top surface of the lid, or by pivoting said short link to the ear k from the metal strip k' , secured to the end edge of the lid, as shown in Fig. 10.

In all the constructions shown in the case it should be noted that both links are so pivoted as to be held firmly down to the plane of the lid and shelf against a rigid support, whether the hinge members are rigid with the lid and shelf or the surfaces of the lid and shelf, and that the long link, pivotally joined to the desk either through the medium of the shelf-hinge member or direct by the screw-pivot, is held down to the shelf and extends outwardly beyond the shelf a distance onto the lid and is held down thereon by the short link pivotally joined to the lid in any suitable manner, as by either of the means shown, and that said short link is also shown held down to the lid, whether onto the hinge or metal strip or direct surface of the lid.

When employed without the hinges, the jointed links form a most strong and efficient lid-support with the rigid member extending over the meeting edges of the lid and shelf and the links bracing down on the lid and shelf, which, in fact, form fulcrums or bearings therefor under down strain on the lid.

It is evident that various changes might be made in the forms, constructions, and arrangements of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact constructions shown.

Having thus described my invention, what I claim is—

1. A hinge having the two links jointed together and of different lengths, and pivoted respectively to the members of the hinge so that the joint between the links is arranged to one side of the hinge-joint, substantially as described.

2. A hinge having a link pivoted to one member and arranged to rest on the same and over the hinge-joint upon the other member, and a link pivoted to the opposite member, and arranged to rest on the same, said two links pivoted together at adjoining ends to brace the hinge when its two members are in continuation of each other, substantially as described.

3. A hinge having the two links at opposite

ends pivoted to the opposite hinge members, respectively, and pivoted together at adjoining ends so that the links bear down longitudinally on the members when the members are in continuation of each other, the joint between the links being arranged in a plane above the plane of the pivotal points of the links with the members, substantially as described.

4. A hinge having a link pivoted to one hinge member and extending over the hinge-joint upon the other hinge member and formed with a recess to receive the hinge-joint, and a short link pivoted to said first-mentioned link and to the opposite hinge member, substantially as described.

5. In a lid-desk, the combination of a shelf, a swinging lid, hinges uniting the shelf and lid, the shelf member of each hinge having an upwardly-projecting eye, a link pivoted to said eye and extending above the plane of the hinge, and another link at one end pivoted to the outer end of said first-mentioned link, and at its opposite end pivoted to the lid-hinge member, substantially as described.

6. In a lid-desk, the combination of the desk-shelf, the swinging lid, a hinge uniting the lid and shelf, a lid-brace comprising a link at its inner end pivotally joined to the desk so as to be held down approximately to and parallel with the plane of the shelf and lid and extend longitudinally over the hinge and its joint, and the short link lapping the outer end of and pivotally joined to said first-mentioned link, the lid-hinge member having an upright eye with the outer end of the short link arranged beside and pivoted thereto, substantially as described.

7. In a lid-desk, the combination of a shelf, a swinging lid hinged thereto, and a lid-brace comprising a swinging link at its inner portion pivotally joined to the desk so as to be held down approximately to the plane of and parallel with both the shelf and lid and extend over and beyond the meeting edges of the shelf and lid, and a short link pivotally joined to the first-mentioned link and in continua-

tion of the first-mentioned link and held down to the lid, substantially as described.

8. In a lid-desk the combination of a shelf, a lid pivotally joined thereto, a member rigid within itself and at its inner end pivotally confined to the desk so as to be held down to the plane of and parallel with both the shelf and lid and extend over and beyond the meeting edges of the shelf and lid, and a short loose link connecting the outer end of the said member and the lid and holding the outer end of said member down parallel with the lid and being itself held down in continuation of said member, substantially as described.

9. In a lid-desk, the combination of the desk ends, the shelf, the vertically-swinging lid, a long link at its inner end pivotally confined to the desk, and a short link at its inner end pivotally joined to the outer end of the long link and at its outer end pivotally joined to the lid, said links so arranged as to lie horizontally in continuation of each other and just above the plane of the shelf and lid when the lid is down, with the long link extending over and beyond the meeting edges of the shelf and lid and the pivot between the links in a higher plane than that in which the pivots at the opposite ends of the links are arranged, substantially as described.

10. A two-leaf hinge wherein the leaves are pivoted together, in combination with a long link at one end pivoted to one leaf and extending over the joint between the leaves onto the other leaf, and a short link pivoted to the other leaf and to said long link so that when the hinge is opened with the leaves in continuation of each other, said links will lie down against the upper faces of the leaves with the pivot between them above the plane of the pivots uniting their ends to the leaves, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BURTON E. KIPP.

Witnesses:

CHARLES W. KIPP,
F. T. CLARK.