

(No Model.)

E. S. GLOVER.
ALBUM OR PICTURE EXHIBITOR.

No. 421,266.

Patented Feb. 11, 1890.

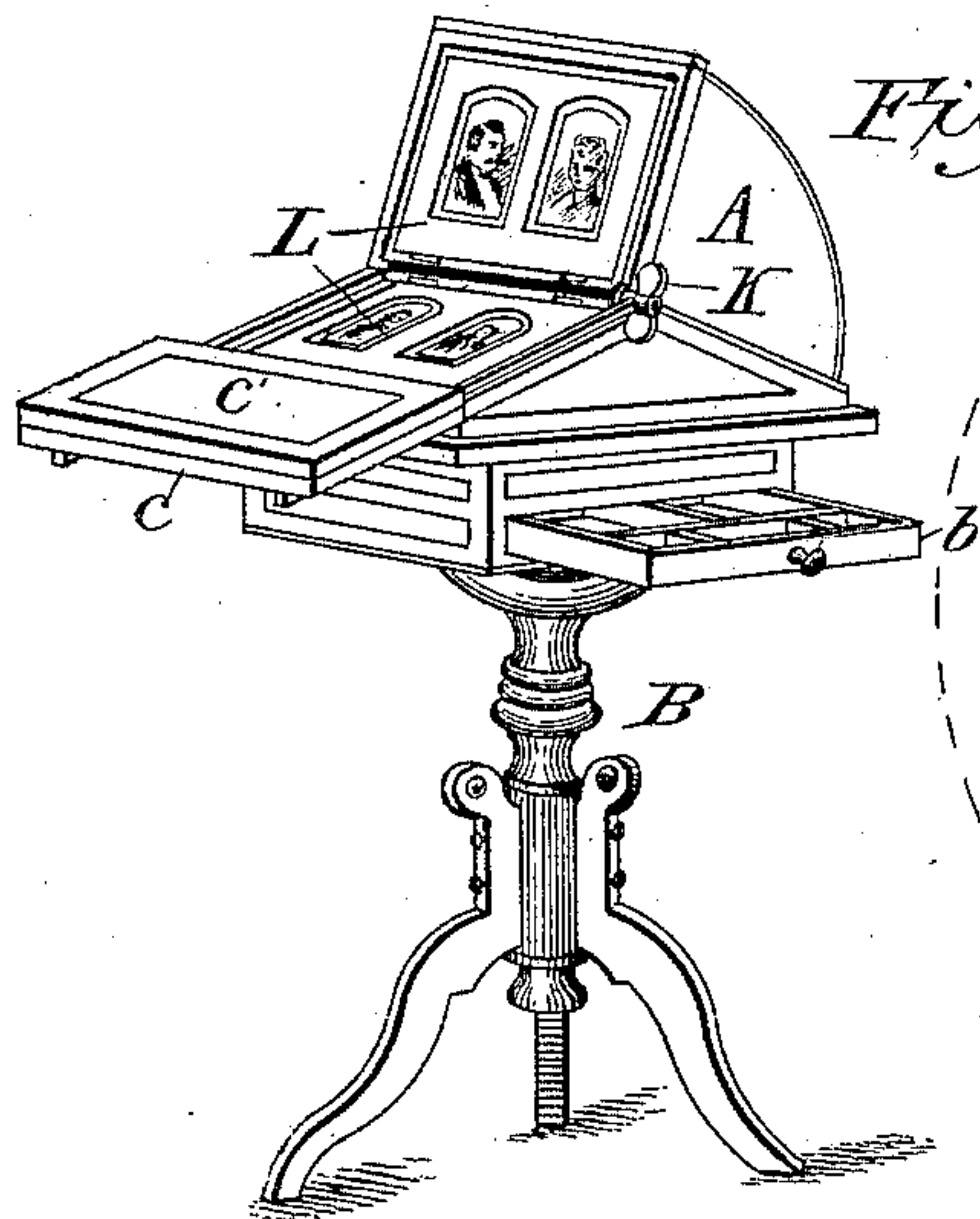


Fig. 1.

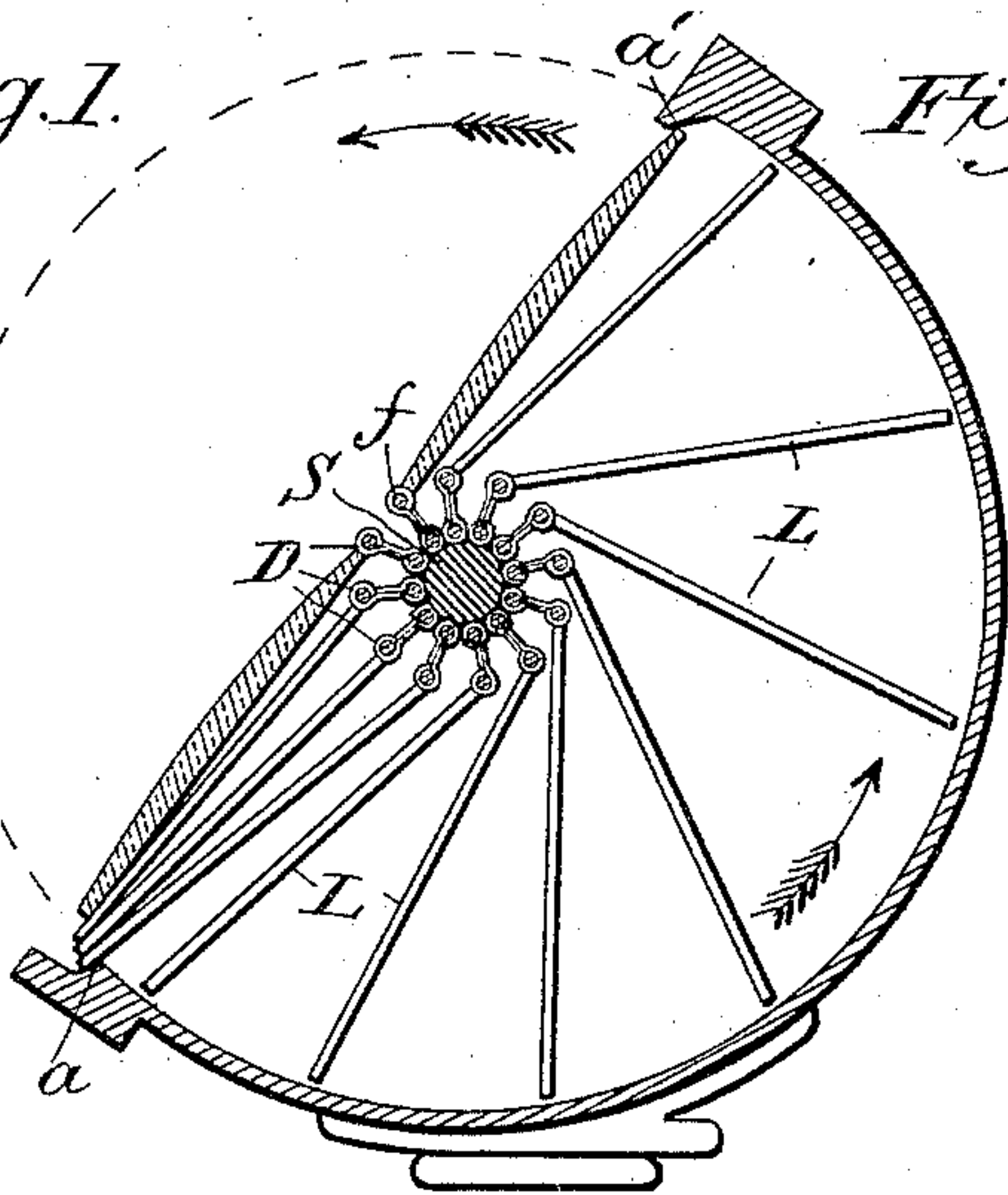


Fig. 2.

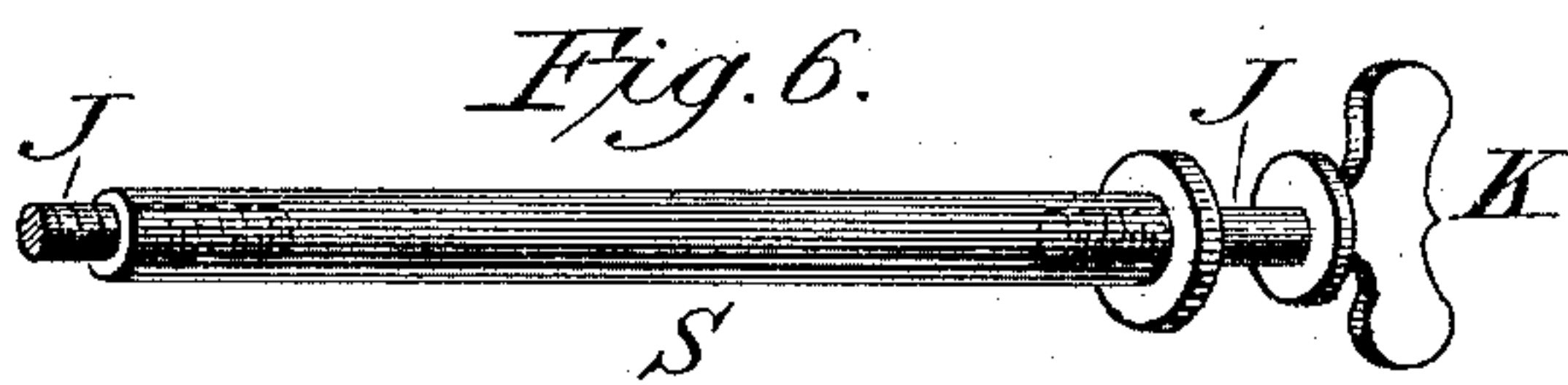


Fig. 6.

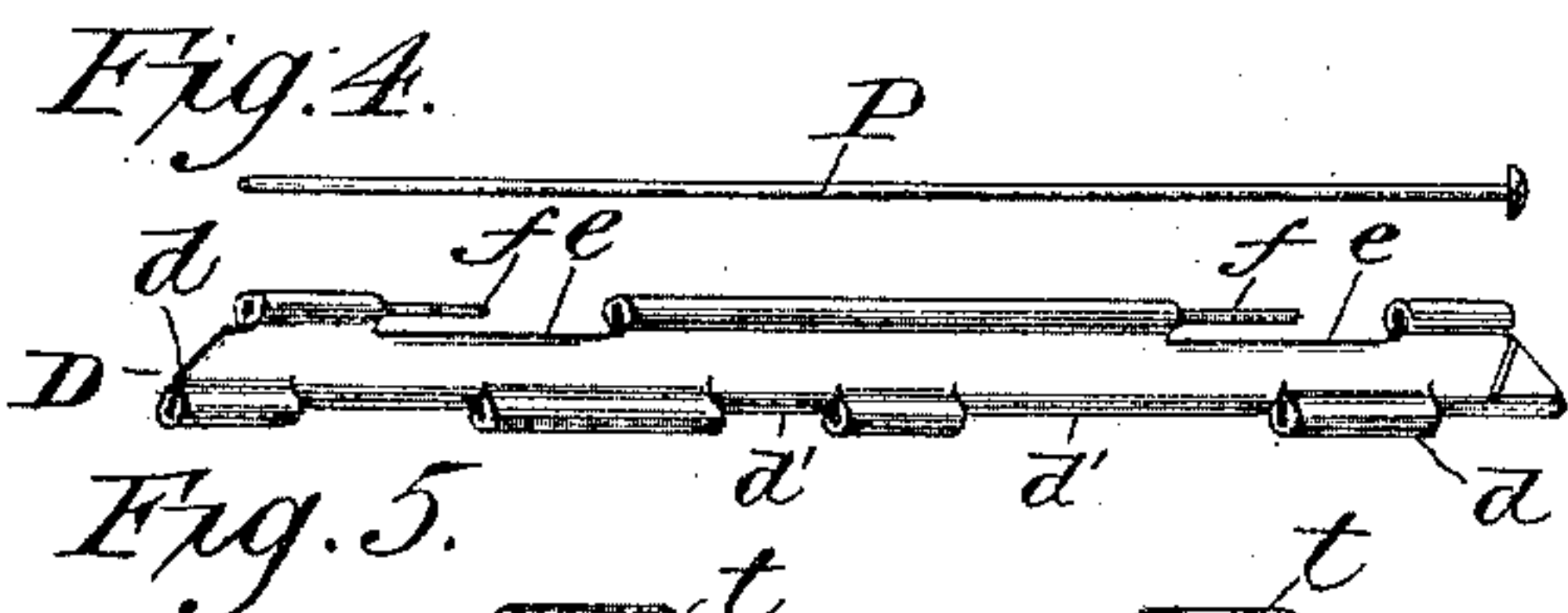


Fig. 4.

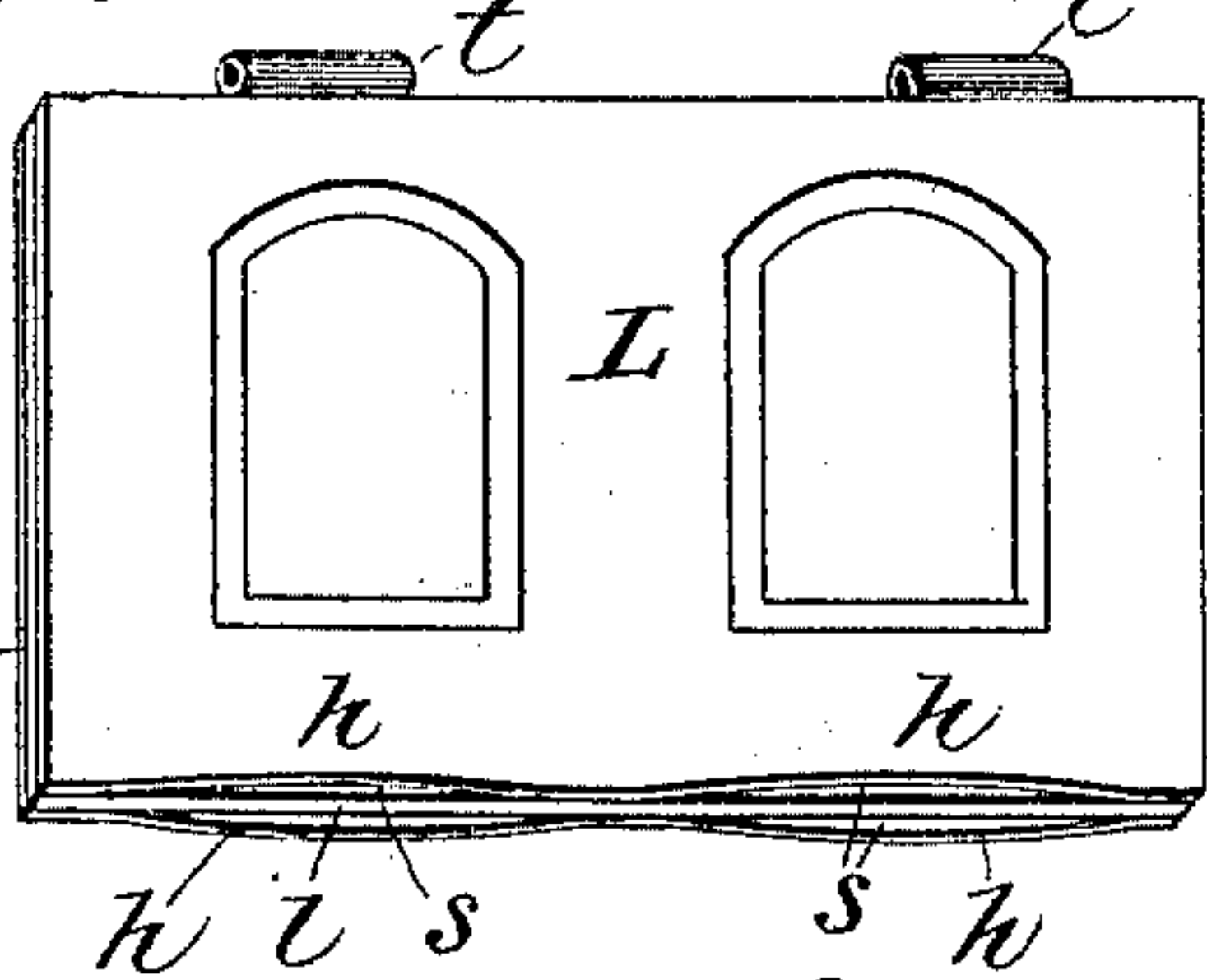


Fig. 5.

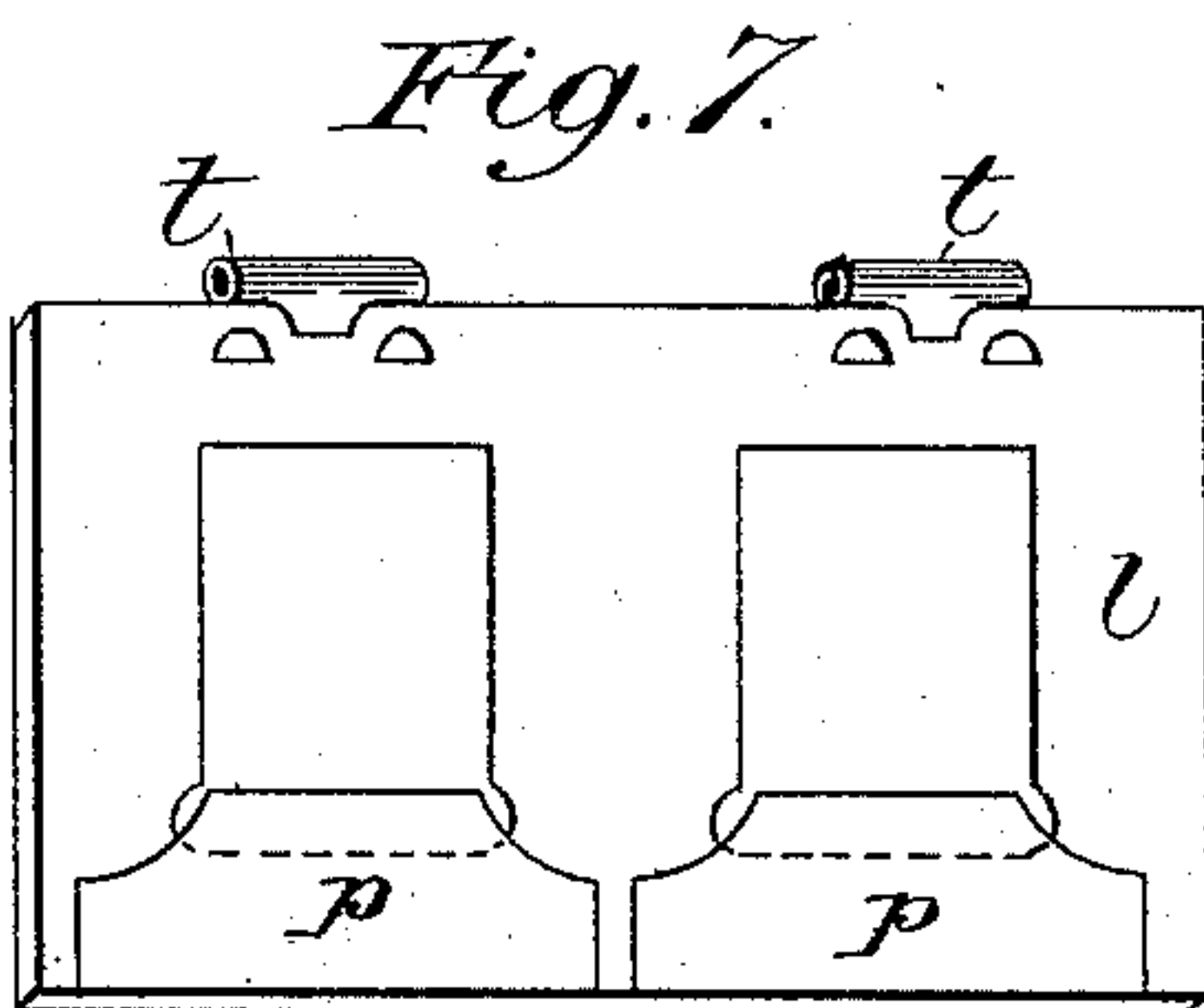


Fig. 7.

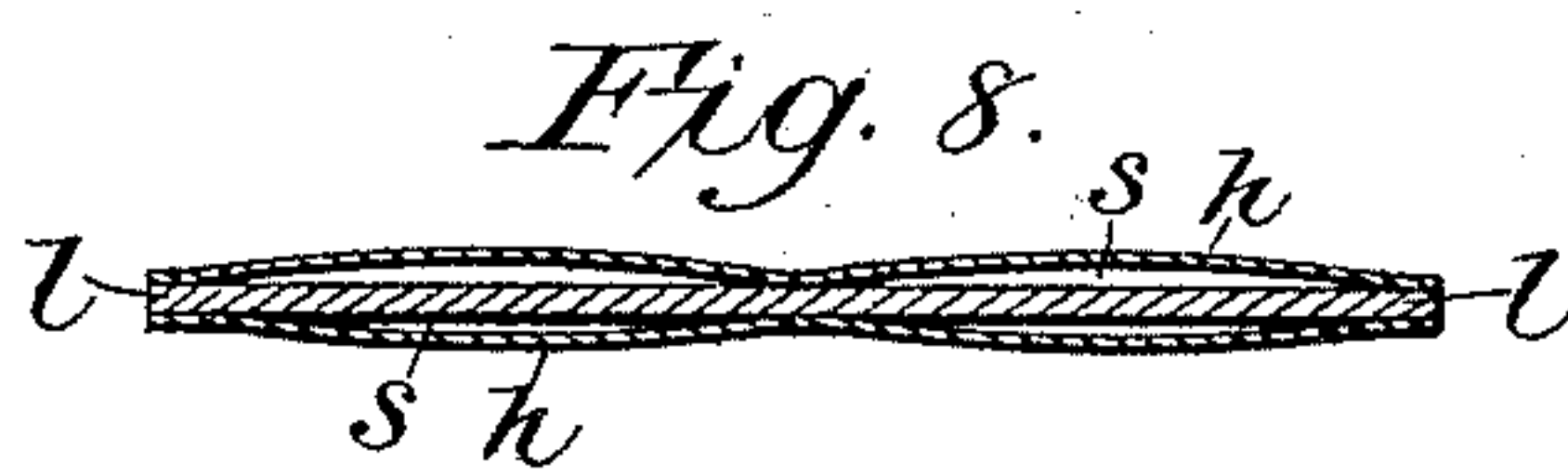


Fig. 8.

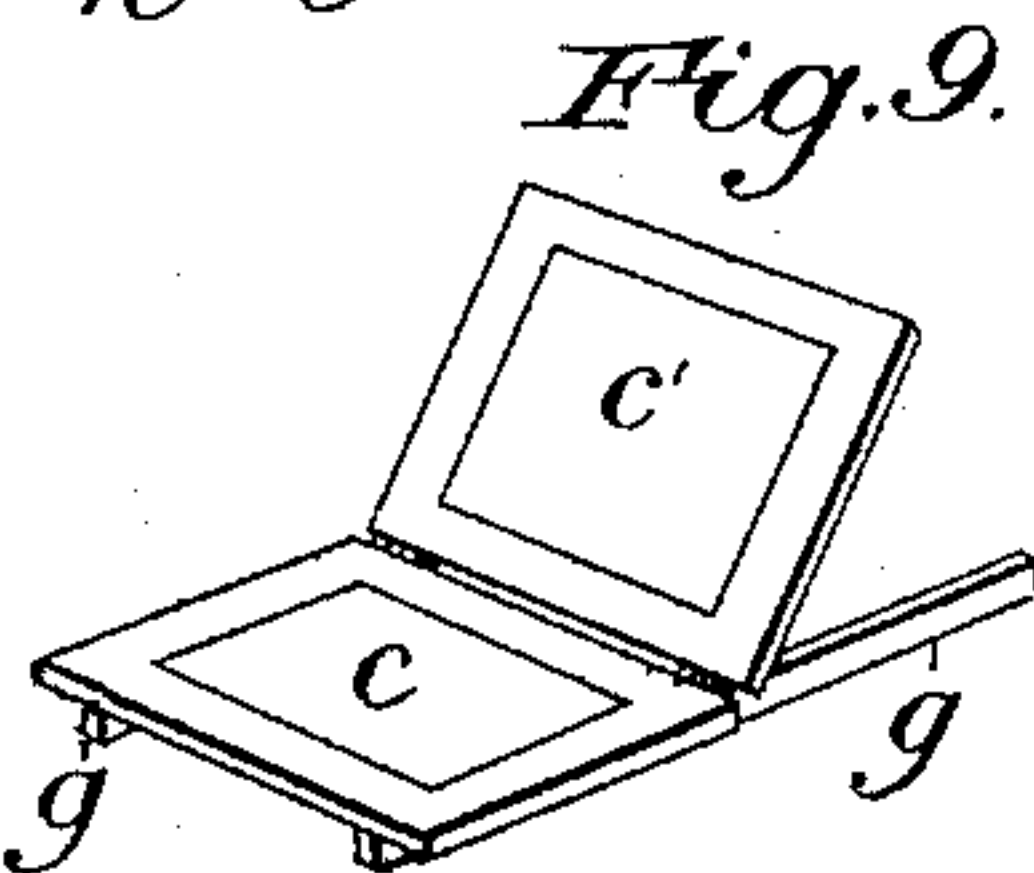


Fig. 9.

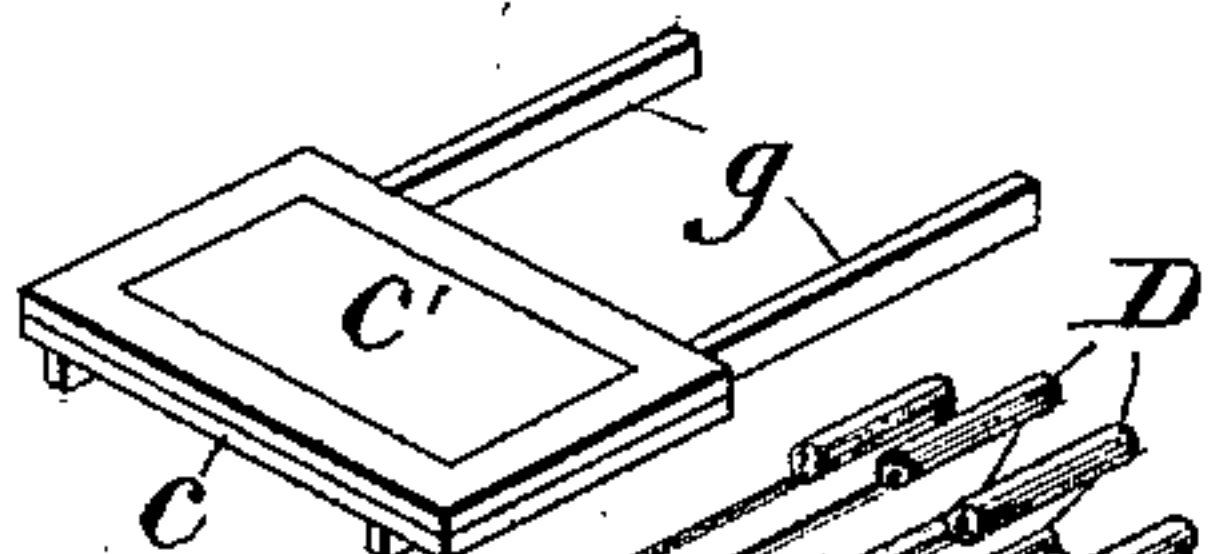


Fig. 10.

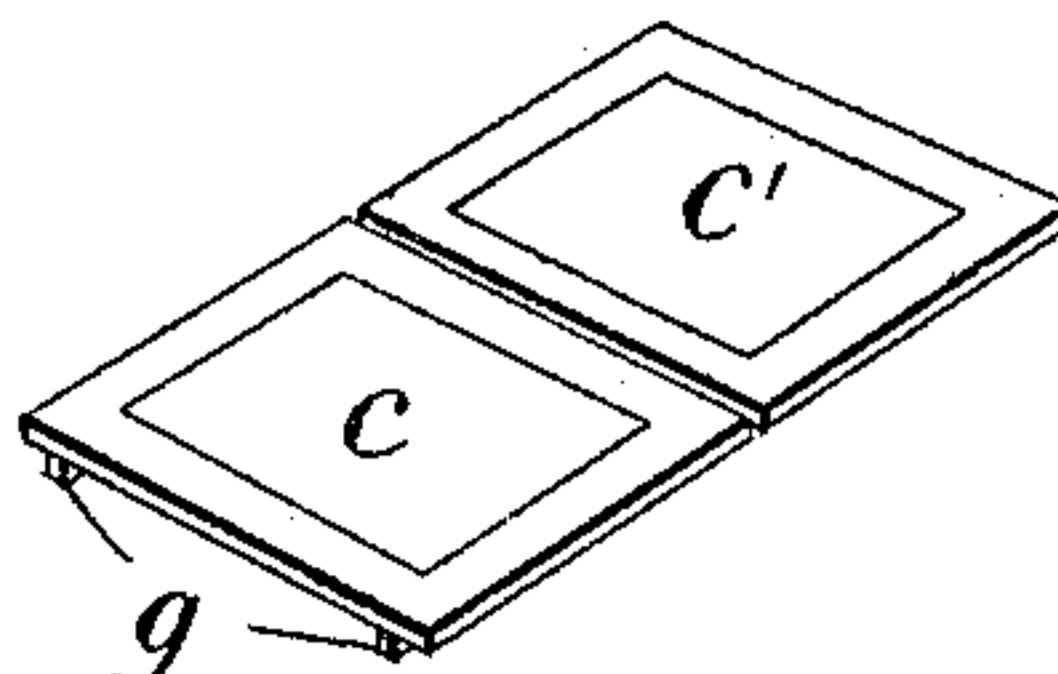


Fig. 11.

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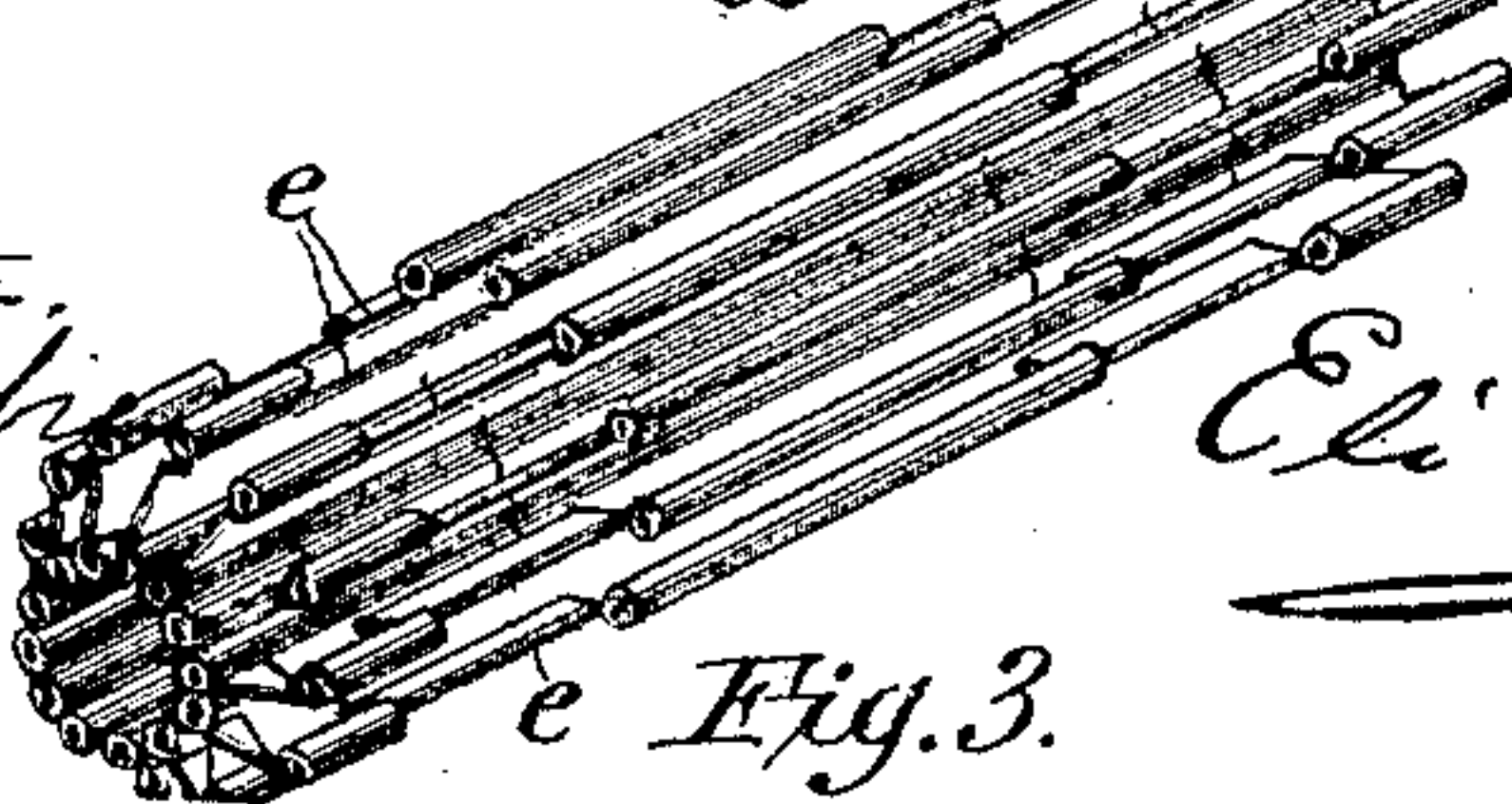


Fig. 3.

UNITED STATES PATENT OFFICE.

ELI SHELDON GLOVER, OF BATTLE CREEK, MICHIGAN.

ALBUM OR PICTURE-EXHIBITOR.

SPECIFICATION forming part of Letters Patent No. 421,266, dated February 11, 1890.

Application filed January 12, 1889. Serial No. 296,217. (No model.)

To all whom it may concern:

Be it known that I, ELI SHELDON GLOVER, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Albums or Picture-Exhibitors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which similar letters of reference indicate like parts, and which form a part of this specification.

My invention relates to an improvement in photograph-albums generally, and particularly to that class of albums or picture-exhibitors where the leaves or frames for holding the photographs are attached to an endless belt or chain, or where the leaves or frames are secured to a shaft, disk, or cylinder adapted to revolve within a case or cabinet provided for the purpose.

It relates, also, to that class of album-leaves in general use which are made from paper in three parts.

My invention consists in an improvement in the form of the case, and in the means provided for attaching the leaves or frames to the shaft, disk, belt, or chain.

It also consists in an improvement in the construction of the album-leaf to hold and display the photographs and in rendering them removable from a book-album to a revolving exhibiting-case, and vice versa.

It consists, also, in the novel arrangement of the cover for closing the case, and in the adaptation of certain parts to purposes other than the display of pictures, and in the construction and combination of the different parts to produce the desired result.

The object of my invention is to secure a more satisfactory means of displaying and preserving photographs than has heretofore been attained; to produce an exhibitor by means of which the pictures can be almost instantly displayed in succession without the necessity of lifting or handling the album or touching the album-leaves, and which is easily operated by a knob at the side of the case, and where the photographs can be preserved from dust and light, and from which the leaves or frames can be readily detached, interchanged, or others substituted, and where

the capacity of the album can be increased or diminished at will, and to which leaves or frames can be transferred from a book-album, or vice versa; to produce a light album-leaf made from pasteboard and thinner paper, from which the photographs can be quickly withdrawn without danger of damage to the leaf, and in which the thin paper covering of the leaf will be less liable to cockle and wrinkle about the margin of the display-openings, and to produce a photograph-exhibitor which shall have greater capacity compared to its bulk, and which shall be light, durable, and ornamental as a piece of parlor or office furniture.

My object is also to render the photograph exhibitor and stand more useful than it has been heretofore by combining with it a writing-desk, book-rest, and a receptacle for loose photographs, writing material, or for a lady's work-box or music-rack.

Figure 1 represents a perspective view of my picture-exhibitor, showing the desk in combination with secretary and stand. Fig. 2 is a vertical section transversely of the album-leaves. Fig. 3 shows a series of hinge-stubs connected together, forming an endless circular belt or band adapted to carry the album leaves or frames. Fig. 4 represents one of the hinge-stubs singly and one of pins used to connect the hinges together. Fig. 5 shows an album-leaf with tubes attached for connecting it to the hinge-stub. Fig. 6 shows the shaft with knob designed to revolve the album. Figs. 7 and 8 show the construction of the album-leaf. Figs. 9, 10, and 11 show the cover of the exhibitor in different positions.

A is a case or cabinet constructed of wood or sheet metal, or of other suitable material, open at one side, designed to contain the album.

L L L are the album-leaves with display openings on either side, designed to hold photographs or other pictures. These leaves are flexibly and detachably connected to the hinge-stubs D D D by the pintles *f f* in the recesses *e e*, supported in the case A by the shaft S, which revolves on a horizontal axis by means of the knob K to bring the leaves successively to a convenient position for ex-

hibition. The hinge-stub D is made from a strip of sheet metal, with a tube d on its back edge, which tube is cut in sections and turned to the right and left, alternately forming a double line of tubes and spaces $d d$ and $d' d'$, one on each side of the stub. Two or more of these stubs can be joined together by bringing their sides parallel to each other. The tubes $d d$ on one stub engage with and fill the spaces $d' d'$ on the next adjoining stub. The tubes $d d$ coming in line, a pin can be passed through the length of the stub, forming a hinge-joint flexible in only one direction. As many of these stubs as may be desired can be joined together, and the ends of the series can be united by bending them backward and connecting the two end stubs by the pin P. A belt or band is thus formed, through which the shaft S can be passed and secured. This form of hinge-stub was patented to me in the construction of book-albums, (Patent No. 222,033, November 25, 1879;) but it has not been used to form an endless belt or band for the purpose of carrying the album leaves or frames in a revolving picture-exhibitor.

On the outer edge of the hinge-stub D a tube is formed having the recesses $e e$, and the album-leaf L is provided with tubes $t t$, of metal or other suitable material, on its back edge, these tubes being of the requisite length to fill the recesses $e e$. To connect the leaf to the stub, the back edge of the leaf must be held parallel with the stub and a pin passed through the tube the length of the leaf; or fixed pins $f f$ can be attached to the stub in the recesses $e e$, one of these pins being longer than the other. The leaf-tube t at one end of the leaf can be passed over the longest pin f . Then the leaf is bent slightly to unite the second tube t with the shorter pin f , and by sliding the leaf downward on the pins $f f$ parallel with the stub the tubes $t t$ will fall into the recesses $e e$ and a hinge-joint be formed. By springing the leaf so as to bring the free ends of the tubes $t t$ out of the recesses $e e$ the leaf can be slipped off the pins and removed.

It is in the construction of the case A for the purpose hereinafter described that an important feature of my invention consists. It is evident that if the album were allowed to swing freely on the journals J J in the case A it would assume when at rest a position with the uppermost leaves in a horizontal plane balanced on the said journals and would not be in a convenient position for inspection; that it would require a quarter-turn of the shaft to bring a portion of the leaves to an upright position, and that the uppermost leaf would require to be raised to pass the vertical point before it would fall by gravitation to the opposite side of the shaft, and that when liberated the album would again assume the horizontal position, and the process would require to be repeated with each leaf. As heretofore made the revolving holder has been turned by gearing at one end

of the shaft, having a spring resting against the teeth of a star-wheel to hold it in position. This form is objectionable on account of the expense of construction and the liability of its getting out of repair.

I construct the case in a circular shape open at one side, having a diameter in one or more directions less than the diameter of the album when its leaves are extended on either side of the shaft, so that when the shaft is revolved the leaves or frames will be turned upon the hinges $f f$, thus shortening the radius of the album, so that the leaves are drawn from the recess and ledge or detent a at the bottom of the display-opening, whereby the leaves L are free to fall downward within the case, and then, following the rotary movement of the shaft S, rise up, until at a suitable situation and angle for inspection of the pictures presented before the exhibitor-opening the uppermost edges of the leaves engage with and are alternately held and released by the ledge a' at the top and inside the case-opening, as clearly shown in Fig. 2.

The recess between the display-front and the detent a at the bottom should be of depth proportional to the thickness and number of leaves L, alternately resting and released at this point without allowing any of them to project outside of the case, while the detent a' on the opposite side of the display-opening may be close to or flush with the display-front, its office being to forcibly hold the outermost leaf L at this point until released by the operator, when the elasticity of the parts composing the said leaves will instantly bring the released leaf in its reversed position in the recess at the case-bottom, as shown by the arrow and dotted line, Fig. 2.

The outer edge of the leaves L L, pressing against the inside of the case A on a line opposite to the direction in which the album is revolved, holds it in an inclined position favorable for the inspection of the pictures through the open side of the case, and prevents it from swinging back when the knob is liberated.

As already seen, the shaft S may be turned by means of a knob at either side of the exhibitor-case, or both ends of the shaft may be provided with operating-knobs, which should be turned in the direction indicated by the arrow and dotted line, Fig. 2. In order to guard against possible injury to the leaves L, should the careless operator happen to turn the knob in the opposite direction, they are connected to the shaft by means of loosely-running screw-threads of opposite lead—that is, the knob at the right hand has a left-hand thread, and the left-hand-side knob is provided with a right-hand thread, whereby the knob will in such contingency simply unscrew without turning the shaft.

At the top of the case, on the inside surface, I have the projection a' , with which the outer edge of the leaf L comes in contact before it reaches the vertical point. As the knob is

turned, the upper leaf is held by this projection until by the further turning of the leaf upon its hinges *ff* and by the spring of the leaf it is sufficiently shortened in radius to allow it to pass the obstruction when it is liberated, and by the spring of the leaf instantly thrown to the position on the ledge *a* at the bottom of the case, where the pictures on the opposite side of the leaf are exhibited, and the next leaf in succession takes its place at the top against the projection *a'*. I prefer the circular shape of the case swiveled on the base or stand, though it is not essential to the operation of my invention. If the ledge *a* is at the right distance from the shaft *S* and has sufficient width to catch one or more leaves, the album will be held in the required position; but a bearing of more leaves against the ledge or side of the case will hold the album more firmly and is preferable.

The open side of the case may be closed with covers hinged in the usual manner; or the cover may be of circular shape to swing on the journals *J J* outside and backward over the top of the case. With this form of cover the album may be revolved without opening the case, and by having a glass in the cover the pictures can be inspected; or two of the album-leaves can be covered with suitable material, making a solid leaf, and, revolving with the album, form covers to close the case when turned to a position in front of the cabinet; but I prefer to construct the covers in the manner shown in the drawings, Figs. 9, 10, and 11.

C and *C'* are the two parts of the cover hinged together at *c*. The part *C'* can be turned down upon its hinges to rest upon the part *C* when the case is to be opened. The lower part *C* is adapted to slide downward and outward by means of the bars *gg*. These bars are securely fixed to the under side of the lower part of the cover *C* and slide into the case along either side of the opening between the ends of the album-leaves and the side of the case, and are held in position by lugs or other suitable device. When the case is open, the lower part of the cover *C* is supported by the bars *gg* in a line parallel to the lower half of the opening in a position convenient to serve as a book-rest or writing-desk. The upper part of the cover *C'* may rest over the lower part of the opening in the case, thus forming a desk in length equal to the whole cover.

A drawer may be introduced at the side of the stand below the case, as shown in Fig. 1, *b*, having compartments for writing material or to be used for other purposes.

For a larger secretary the case *A* can be extended parallel with the shaft, having a partition separating the album from the secretary, thus furnishing a space of the full diameter of the album-case, which may be partitioned off to form the secretary to be covered by the sliding and hinged desk when not in

use. For very large albums an oblong case may be used with two shafts having a belt of hinge-stubs of sufficient length to pass over both, which can be operated by a knob or crank attached to one or both shafts.

Since the hinge-stubs are made of about the same thickness as the album-leaf, and a leaf may be attached to each stub, no space is lost and the greatest possible number of leaves can be used to accommodate the greatest possible number of photographs—a great advantage over exhibitors heretofore known or used.

I prefer to use an album-leaf made in a manner similar to those in general use, except that I dispense with the opening or slit in the face of the leaf for introducing the photograph. For this purpose I leave the base of the leaf unpasted on one or both sides *ss* for a space of sufficient length to introduce the photograph between the outer leaf covering *h h* and the middle album-board *l*, and to facilitate the withdrawal of the photograph from the holding-frames I paste the strip of thin paper *P* along the lower part of the album-board *l*, covering the edge of the photograph frame or pocket. When in use, the end of the photograph rests upon this thin paper, which makes an inclined plane over the edge of the frame. This arrangement obviates the objectionable liability to tear the narrow strip of thin paper between the slit and bottom of the display-opening on the face of the leaf and the tendency of the loose paper to stretch and cockle and disfigure the leaf, as heretofore used. I also use solid photograph cards or mounts of the same size of the album-leaf provided with the tubes *tt* for attaching them to the stubs, upon which the photographs or other pictures can be mounted direct. This form of leaf is desirable for photographs of large size, engravings, lithographs, paintings, and drawings, and for the exhibition of samples, wall-paper, and textile fabrics.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A photograph and picture exhibitor comprising a series of leaves hinged to a shaft revolving within a case having a display-opening provided with an inner recess and detent, whereby said leaves are alternately detained and released, substantially in the manner and for purpose set forth.

2. A photograph and picture exhibitor comprising a series of leaves hinged to a shaft revolving within the case and having a display-opening, one side of which is provided with a recess and detent, and the opposite side of said opening having a detent, substantially as shown, and for the purpose set forth.

3. A photograph-exhibitor comprising a series of leaves hinged to a shaft revolving within the case having an opening provided with a folding cover, and said case having a

detent on one side and a recess and detent for said leaves on the opposite inside of said case-opening, arranged and operating substantially in the manner and for the purposes
5 set forth.

4. A photograph-exhibitor comprising a series of leaves hinged to a shaft revolving within the case, the right and left threaded operating-knobs loosely attached to said
10 shaft, the display-opening provided with the cover, the detent and recess *a* on the one side and the detent *a'* on the opposite inside of said case-opening, all arranged and operating in the manner and for the purposes specified.
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5. A photograph-exhibitor comprising a

series of removable leaves traveling in a case A, provided with a display-opening, the recess and detent *a* on one side and the detent *a'* on the opposite inside and the cover to
20 said opening, and the shaft S, carrying the leaves L, said leaves provided with guides *p p*, said shaft and leaves flexibly connected by the hinges *f f*, and the whole operated by means of the suitably-threaded knobs K,
25 substantially in the manner and for the purposes shown and described.

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Witnesses:

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