

No. 635,502.

Patented Oct. 24, 1899.

C. E. MOUNTFORD.
PAPER FILE.

(Application filed Aug. 6, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

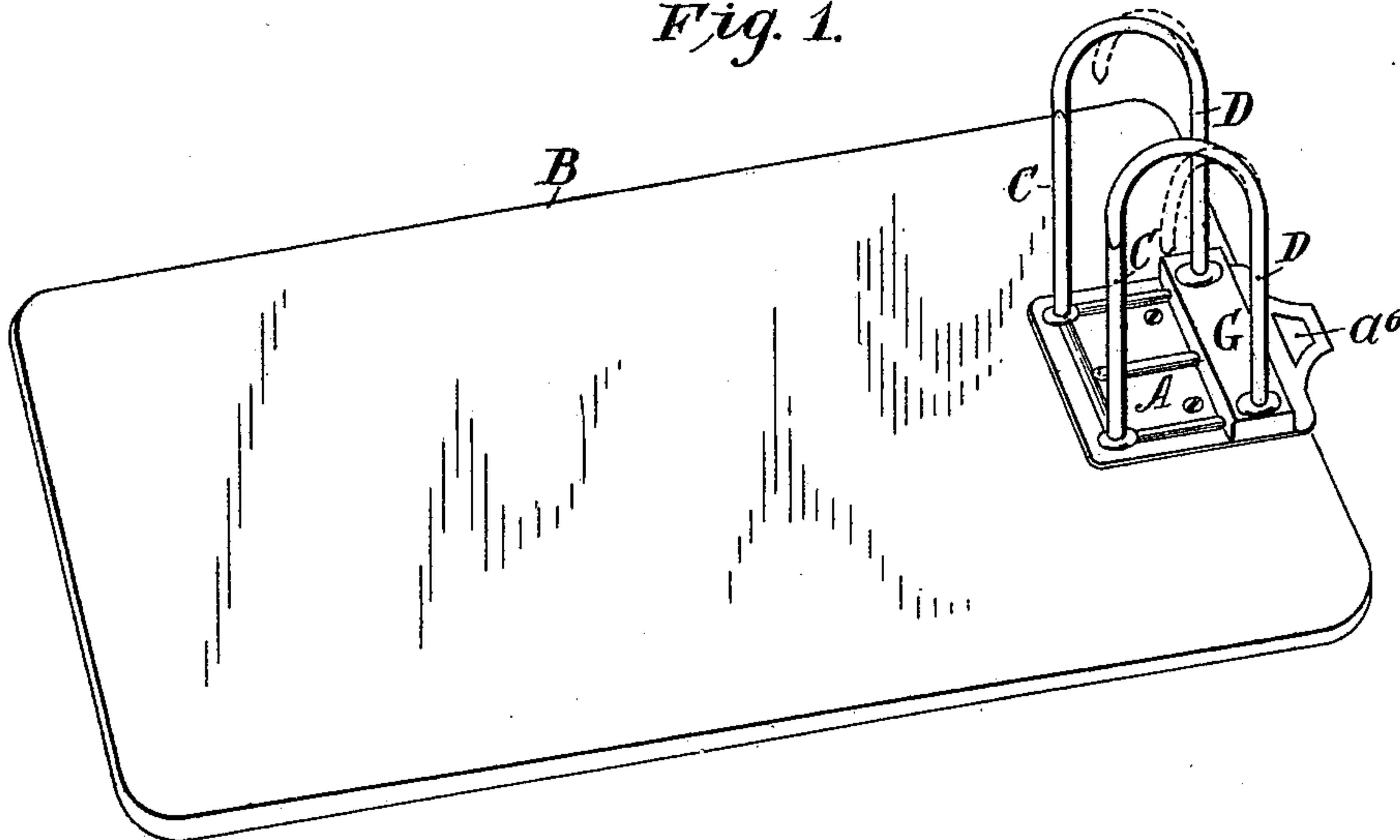


Fig. 2.

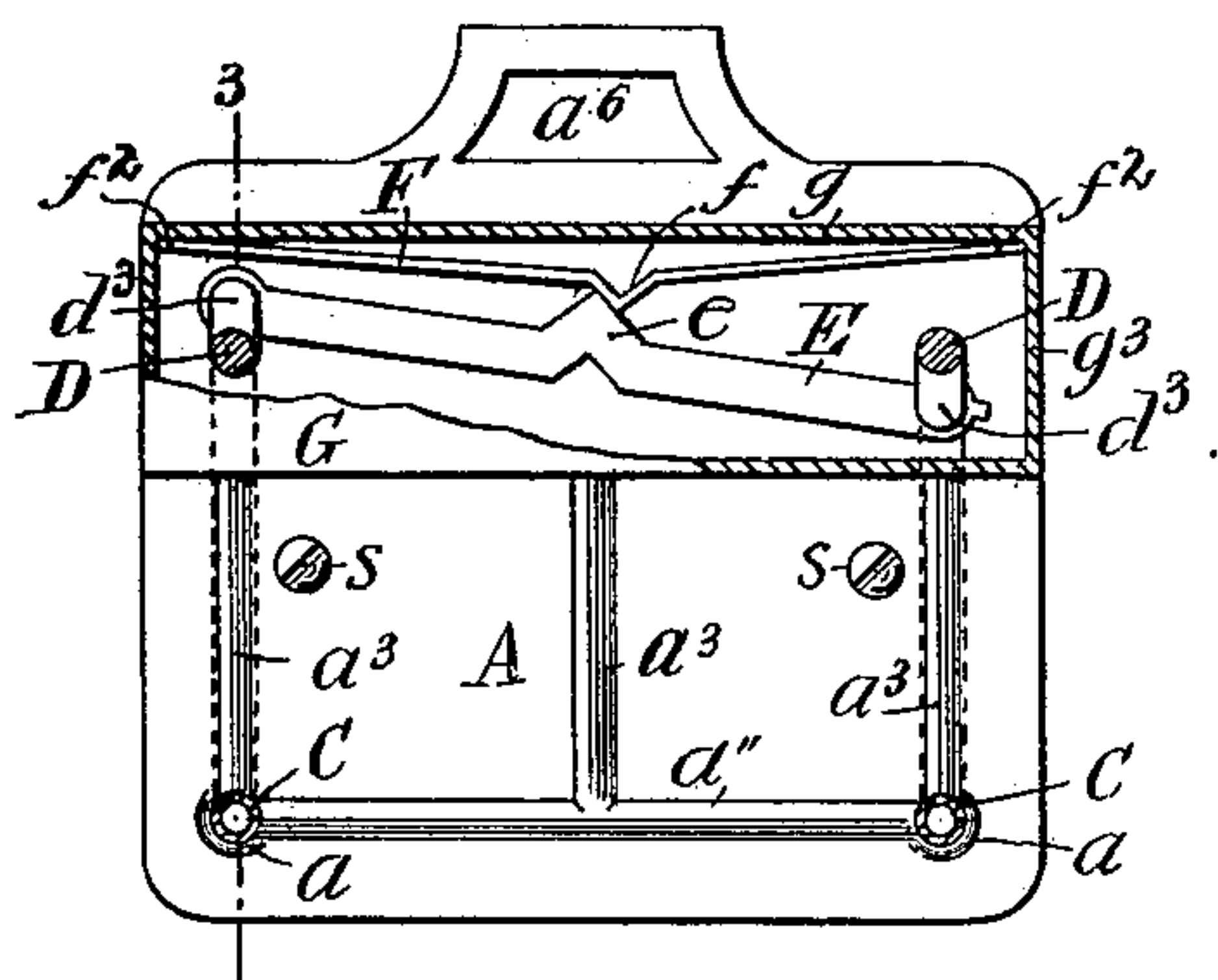
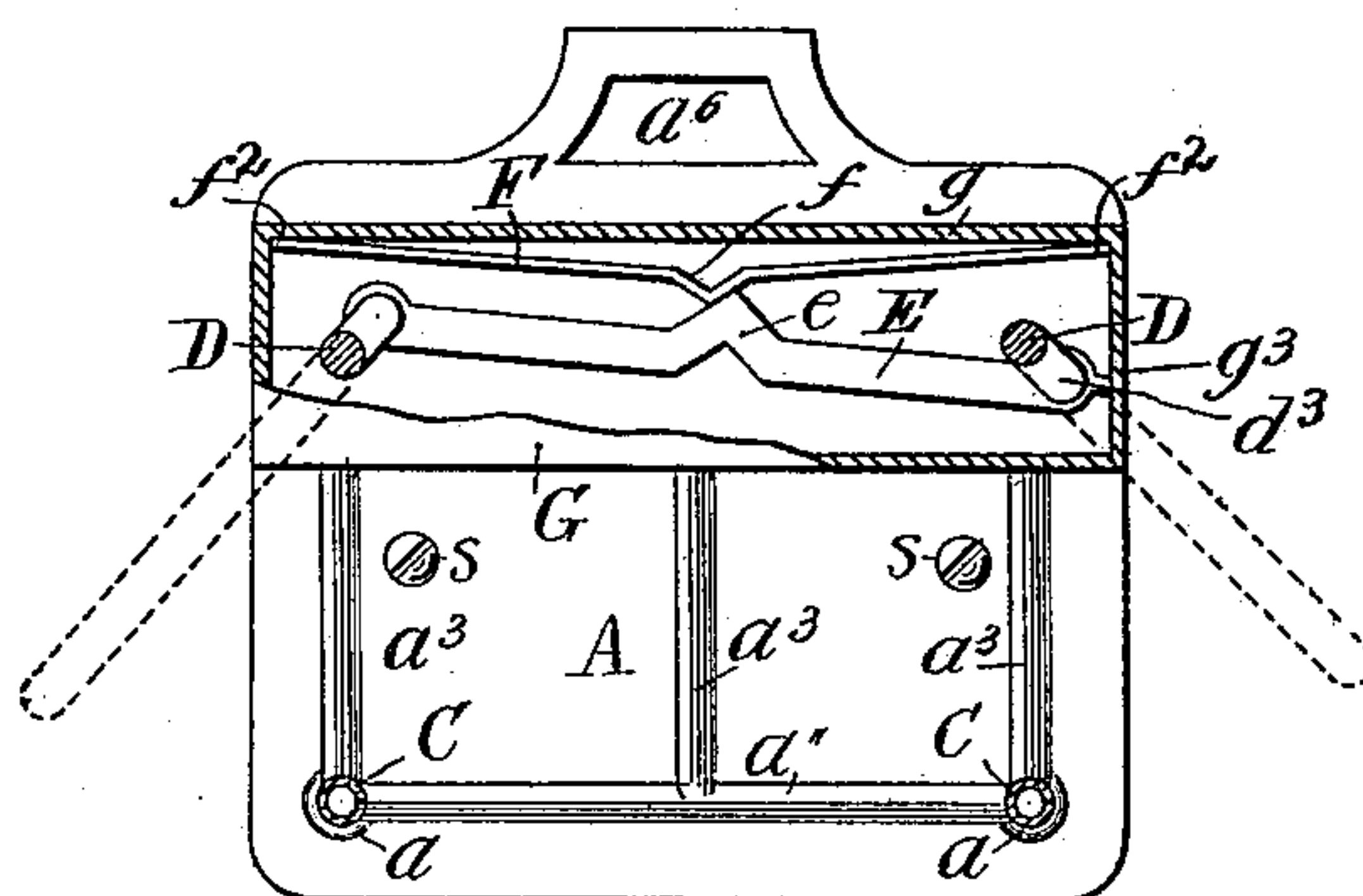


Fig. 3.



Witnesses:

C. L. Belcher

Chas. E. Peters

Inventor

Clarence E. Mountford

By W. H. H. H. H. H.

Attorney

No. 635,502.

Patented Oct. 24, 1899.

C. E. MOUNTFORD.
PAPER FILE.

(Application filed Aug. 6, 1898.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 4.

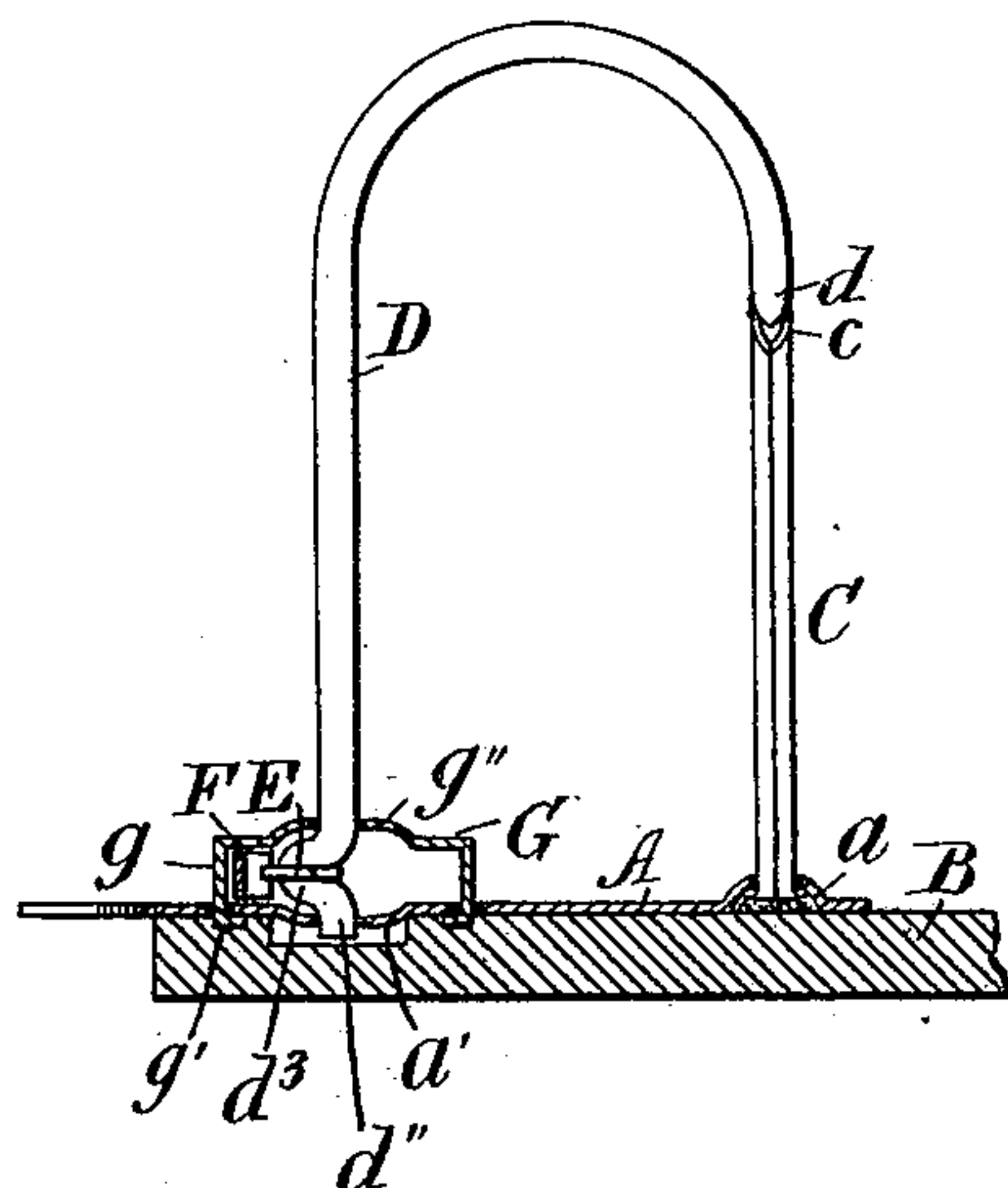


Fig. 5.

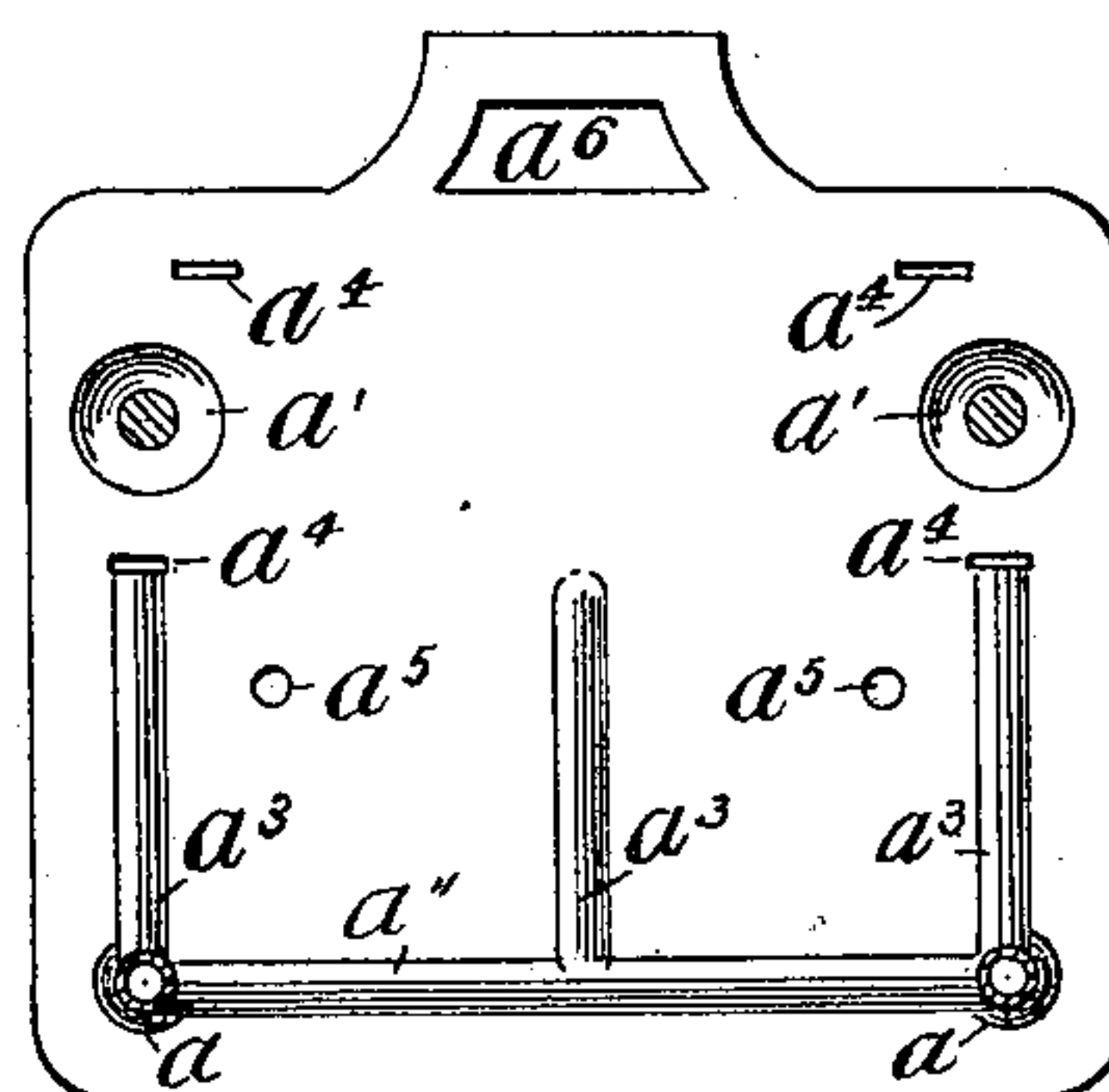


Fig. 6.

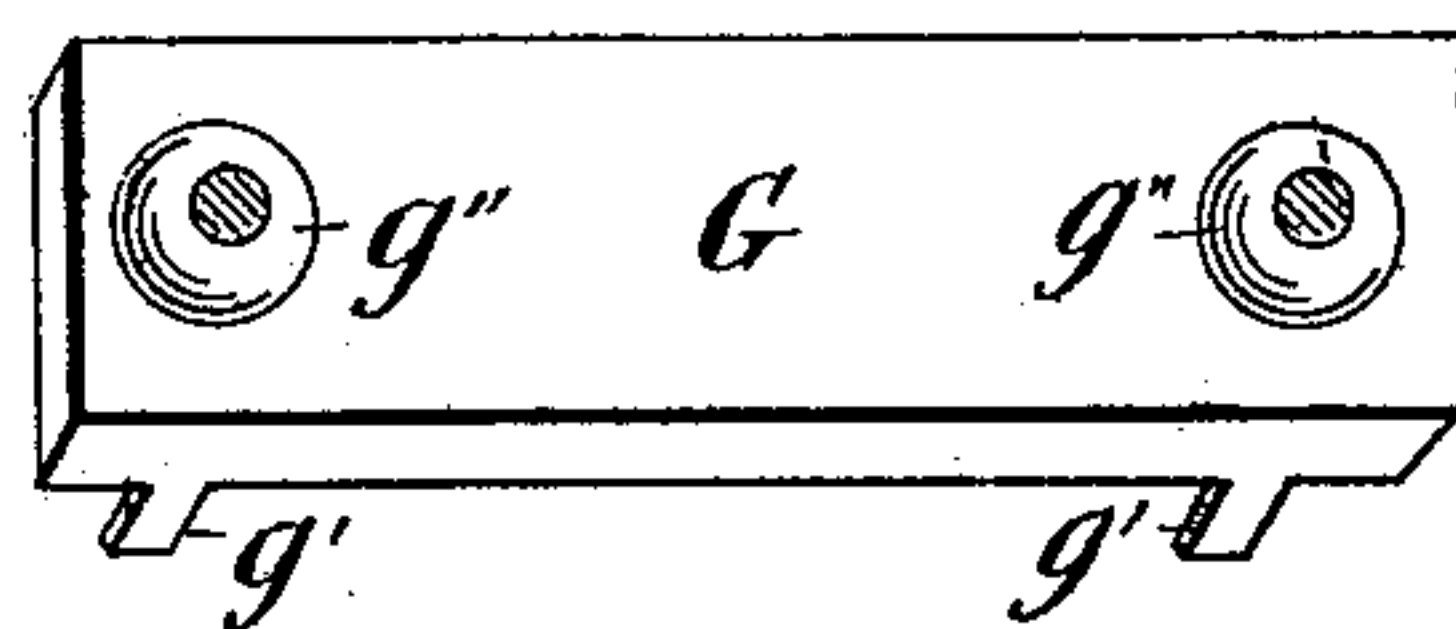


Fig. 7.

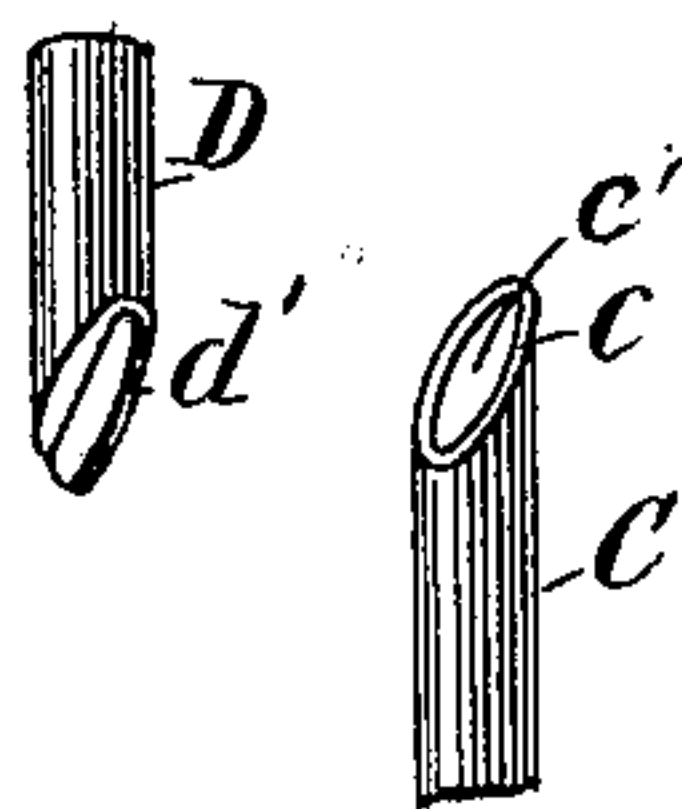
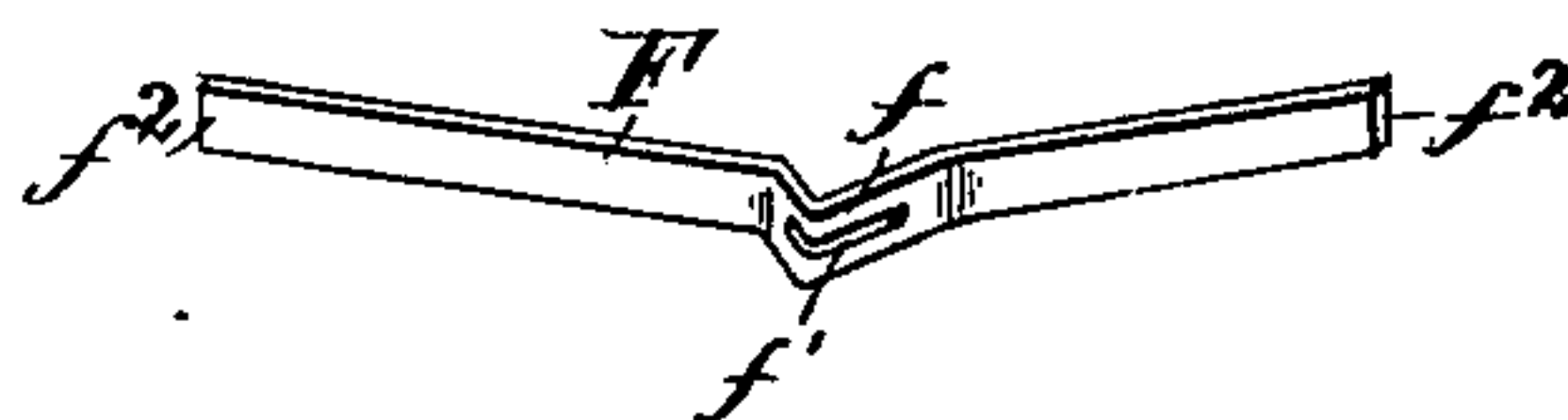


Fig. 8.



Witnesses:
C. L. Belcher
Chas E. Peters

Inventor
Clarence E. Mountford
By
Wilton C. Jones
Attorney

UNITED STATES PATENT OFFICE.

CLARENCE ERNEST MOUNTFORD, OF OTTAWA, CANADA, ASSIGNOR TO
WILLIAM A. COOK, JR., OF NEW YORK, N. Y.

PAPER-FILE.

SPECIFICATION forming part of Letters Patent No. 635,502, dated October 24, 1899.

Application filed August 6, 1898. Serial No. 687,884. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE ERNEST MOUNTFORD, a subject of the Queen of Great Britain, residing at Ottawa, in the county of Carleton, Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Paper-Files; 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.

My invention relates to devices for filing letters and other papers of that character, in which a fixed wire (or wires) is combined with a movable wire (or wires) that coacts with the fixed wire to form an arch which is opened to permit the papers to be impaled on the fixed wire and closed to admit of some of the papers being transferred from the fixed wire to the movable wire for the removal or inspection of another paper or papers underneath those transferred.

The object of the invention is to provide a paper-filing device of the character described which shall be of simple construction, efficient, and capable of being cheaply produced.

In the accompanying drawings, Figure 1 represents a perspective view of my improved file mounted on a file-board. Fig. 2 is a top view of my improved file, partly in section, the file-board not being shown, and showing the arches closed and part of the casing broken away. Fig. 3 is a similar top view showing the arches open. Fig. 4 is a longitudinal section of the same on line 3 3, Fig. 2, showing part of the file-board. Fig. 5 is a top view of the base-plate. Fig. 6 is a perspective of the casing containing the mechanism. Fig. 7 is perspective view of the arch-joint, and Fig. 8 is a perspective view of the spring.

Referring to the drawings, a base-plate A, of sheet metal, as seen in Figs. 4 and 5, is stamped with two bosses *a*, perforated for the fixed impaling-pins in front and with more spacious bosses *a'*, perforated to form bearings for the movable arch-wires, also with a ridge *a''*, extending between the bosses *a*, and ridges *a³ a³*, extending from said bosses rearwardly toward the bosses *a'*. Slots or perforations *a⁴* are also stamped to receive lugs provided on the casing, perforations *a⁵* to re-

ceive screws *s s*, Figs. 2 and 3, for securing the plate on a file-board B, Figs. 1 and 4, and at the upper or rear edge a large perforation *a⁶* is made in an extension or projection of the plate to serve as a hanger.

The impaling-pins C C are tubular, secured at the foot in the recesses of the bosses *a* by solder and made rigid with the base-plate. The upper end *c* of each is beveled off from the top outwardly and laterally, thus practically forming a point, and the opening *c'* in the bevel cut presenting a groove adapted to receive the tongue of the arch-wire point.

D D are the movable arch-wires, their upper parts curved in a semicircle with points *d* directed downwardly to meet the points *c* of the impaling-pins, and said points *d* are each formed with a tongue *d'*, which is adapted to enter the opening *c'* of the tubular pin, thus forming a tongue-and-groove joint when closed, as shown in Fig. 7. The lower end *d''*, Fig. 4, of the main shank of each is finished off in a suitable way to bear upon the file-board B, countersunk for the purpose, projecting slightly through the perforation in the boss *a'* of the base. Immediately above the bearing in the boss each wire is bent to form a return-crank *d³*, the crank being preferably in the plane of the arch, but directed rearwardly on one wire and forwardly on the other—i. e., in opposite directions—as shown in Figs. 2 and 3. A link E connects the two cranks, its bearings having the same distance between its centers as the distance between the centers of the wires and adapted, while pushing one crank and drawing the other, to press the points of the arches against the points of the impaling-pins. This link about midway of its length has a rearwardly-projecting tooth *e*, which bears against a similar tooth *f*, forming part of a spring F, pressing against it. The spring F is formed of a flat strip with the tooth *f* bent in it and a groove *f'* on its face to receive the edges of the tooth *e* of the link and the shanks diverging from each side of the tooth, so as to form a bow with its ends *f²* abutting on the rear side *g* of the casing G.

The casing G, Fig. 6, is a flat box-covering in the spring F, link E, and cranks *d³*, the front and rear sides being formed with lugs

g' , adapted to be inserted in the slots a^4 of the plate A and clenched on the back, as shown in Fig. 4. This casing is also formed on its upper face with raised and perforated
 5 bosses g'' , registering with the bosses a' , adapted to form bearings for the arch-wires just above the cranks d^3 . One of the sides g^3 of this casing also forms a stop for the end of the link E to limit its traverse and the ac-
 10 tion of the arch-wires.

It will be noted that the arch-wires D, adapted to make a partial rotation on their center, always move in opposite directions, owing to the opposite position of their cranks
 15 d^3 , and that they move in unison, owing to their cranks being linked together. Thus, supposing the arch to be closed, as shown in Fig. 2, if one of the arch-wires is pressed side-
 wise at or near the points d its crank d^3
 20 causes the link E to be drawn or pushed, according to which arch is being manipulated, so that its tooth e presses against the side of the tooth f of the spring, thus depressing the
 latter until the point of the tooth e passes the
 25 point of the tooth f , when the action is reversed, and the spring by its reaction propels the link in its course until its end abuts against the side g^3 of the casing. The link in its traverse was bound to turn the other
 30 arch-wire in the opposite direction by moving its crank in the same direction as the other, and when the link was at the end of its traverse both arches were open, as shown in Fig. 3. When open or closed, the spring,
 35 acting on one side or the other of the tooth of the link, maintains those positions until sufficient initial movement is imparted to one of the arch-wires to cause the points of the teeth to pass each other.

40 I claim as my invention—

1. In a paper-file the combination of a sheet-metal base-plate provided near the rear side with downwardly-stamped perforated bosses, upwardly-stamped perforated bosses near the
 45 front side, stiffening-ribs stamped between the bosses, and slots in front and rear of the bosses at the rear side, a casing provided with upwardly-stamped perforated bosses on the top and prongs on the bottom edges of the
 50 front and back, the said casing mounted on

the plate over the bosses at the rear thereof, with the perforations in the bosses of the casing and plate alined with one another, and with its prongs passed through the slots and clenched against the under side of the plate,
 55 impaling-wires secured in the bosses at the front of the plate and pivoted arch-wires having the lower ends of their stems stepped into the perforations of the rear bosses of the plate and casing, each arch-wire having a crank
 60 formed in its stem between the upper and lower bosses, the two cranks being turned in opposite directions, a link that connects the cranks of the two arch-wires, which when one wire is rotated turns the other wire in
 65 the opposite direction, and a spring that coacts with the said link to lock the arch-wires in position when opened or closed, substantially as specified.

2. In a paper-file the combination of a base-
 70 plate, impaling-wires fixed at the front thereof—a case mounted on the plate at the rear, bosses struck up in the plate and casing, and having perforations formed in them, rotary arch-wires stepped in the perforations in the
 75 said bosses, oppositely-turned cranks formed in the stems of the arch-wires between the bosses in the plate and casing, a link inclosed in the casing provided with a V-shaped tooth that connects the cranks of the arch-wires,
 80 and a bar-spring provided with a V-shaped tooth, that coacts with the tooth of the link inclosed in the casing with its ends in contact with the ends thereof and its tooth bearing against the tooth of the crank-link, where-
 85 by, when one of the arch-wires is rotated, the link causes the other wire to rotate in the opposite direction and open or close the arches and the movement of the link causes its tooth to retract the bar-spring and pass the tooth
 90 of the said spring and thereby lock the arch-wires in position, substantially as specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

CLARENCE ERNEST MOUNTFORD.

Witnesses:

A. HARVEY,
 E. SYBOLD.