

(Model.)

W. KEENAN.

Binder for the Filing and Protection of Papers.
No. 230,135.

Patented July 20, 1880.

Fig. 2.

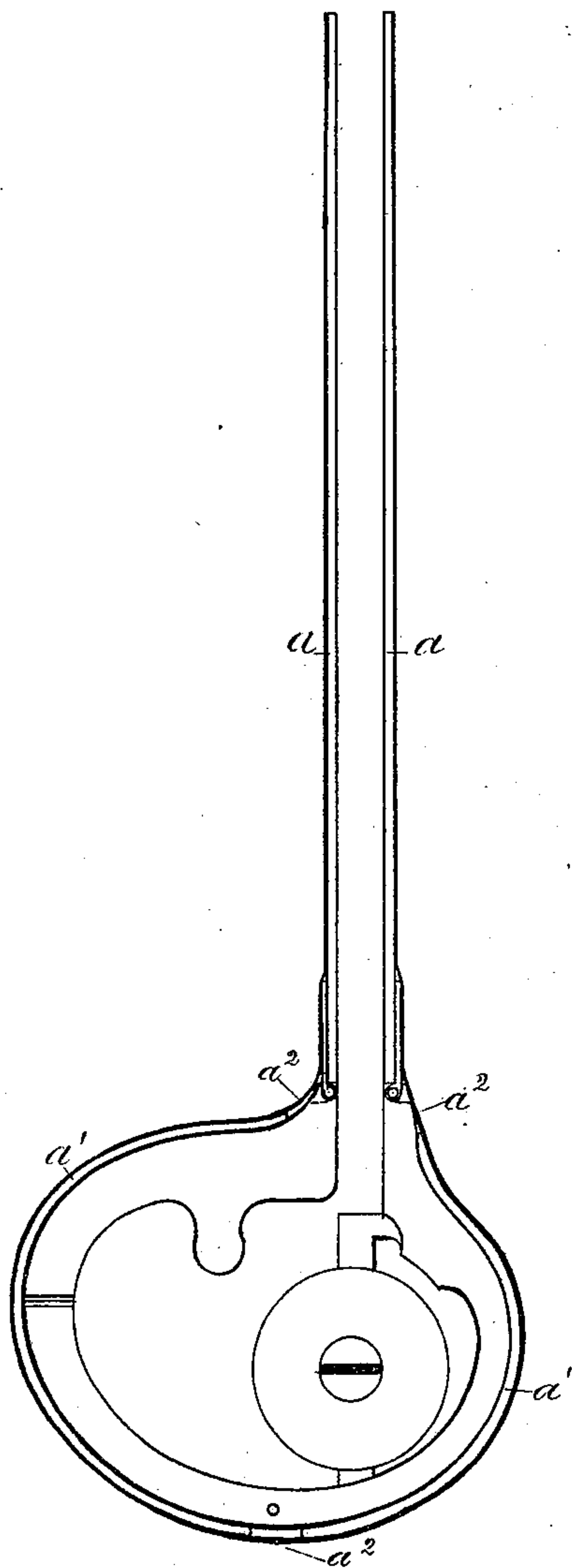


Fig. 1.

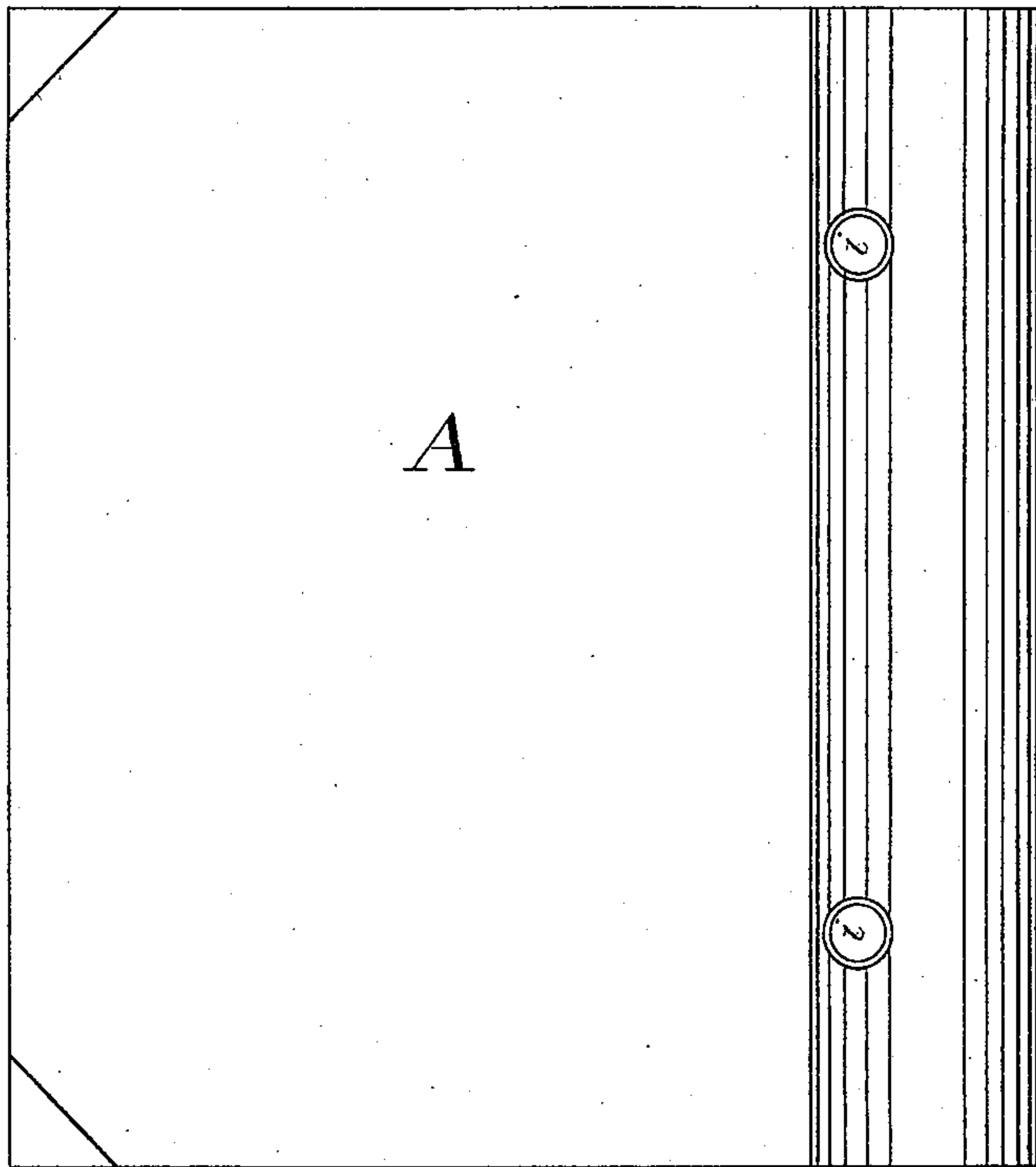


Fig. 3.

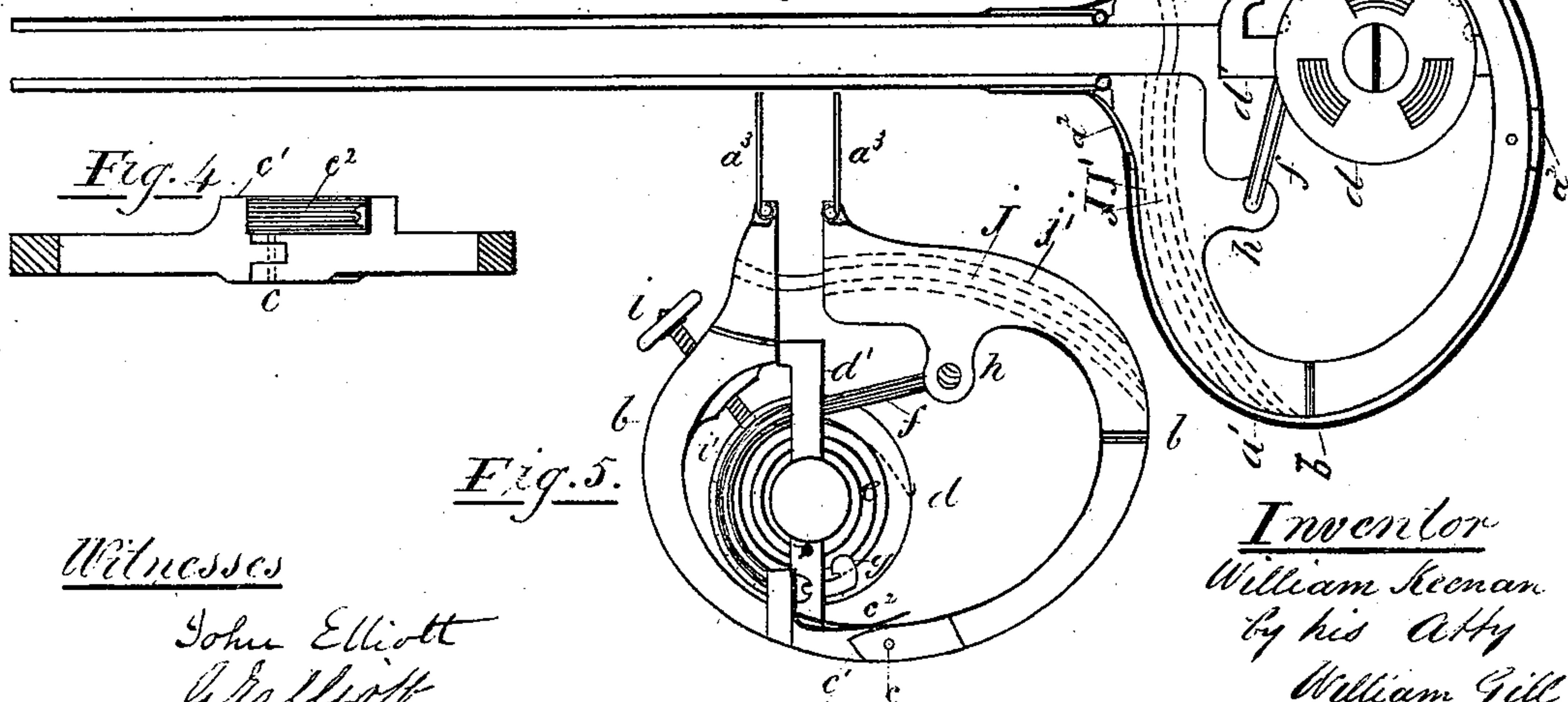
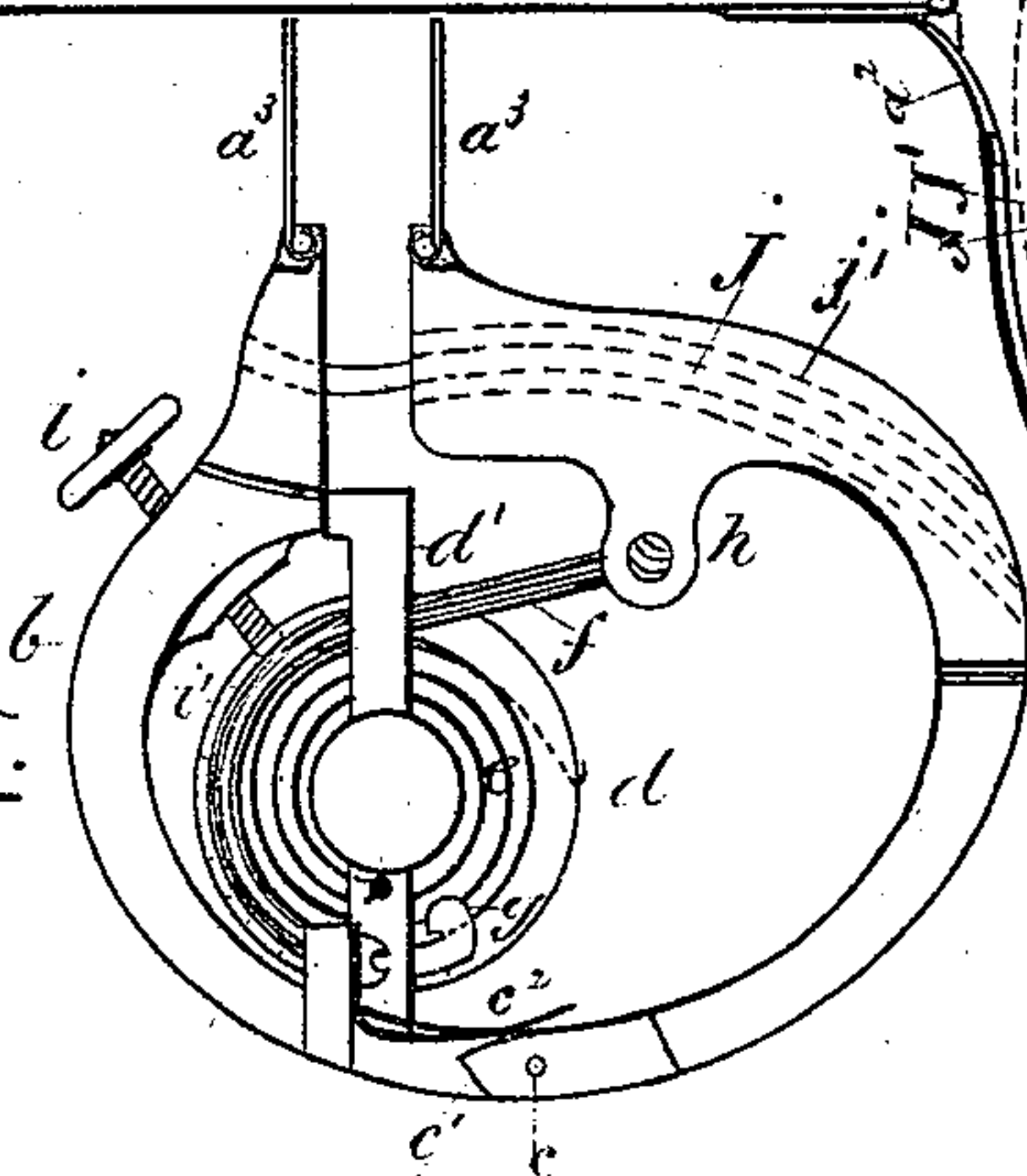


Fig. 4.



Fig. 5.



Witnesses

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BINDER FOR THE FILING AND PROTECTION OF PAPERS.

SPECIFICATION forming part of Letters Patent No. 230,135, dated July 20, 1880.

Application filed April 8, 1880. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM KEENAN, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Binders for the Filing and Protection of Papers; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to that class of binders having two flaps or leaves connected with a back, and adapted to receive, hold, and retain letters, papers, pamphlets, newspapers, or other similar materials which are to be filed in and held and protected thereby.

My improvements consist in certain novel devices, hereinafter more particularly described, which are placed within the back of such a binder or cover and connected to the leaves or flaps hereinbefore referred to.

In the accompanying drawings, Figure 1 is a side view of my binder drawn to a scale somewhat smaller than that of the other figures, showing finger-screws *i i*. Fig. 2 is an end view, showing the side leaves or boards, *a a*, the longitudinal back pieces, *a' a'*, and flexible cover *a²*. Fig. 3 is an end view, showing one of the elliptical metallic jointed frames *b*, which are placed within such back, the leaves being shown attached thereto, showing also screw *i*, wheel *d*, standard *d'*, spring *e*, band *f*, and prong *J*, also flexible cover *a²*. Fig. 4 is a fragmentary plan, showing the joint *c* and spring *c²* of one of the metallic frames *b*. Fig. 5 is a view of the opposite side of the elliptical metallic frame *b*, showing more clearly the joint *c*, cam *c'*, and spring *c²*, also wheel *d*, standard *d'*, band *f*, spring *e*, and prong *J*, also the hinges *a³*.

A is the exterior of the binder, composed of the two leaves or boards *a a* and back pieces, *a' a'*, connected to the leaves by a flexible cover of leather or other suitable material, *a²*, as in an ordinary book. The back is formed of two longitudinal parts, which are also connected by the flexible cover *a²*, which permits the spreading apart of these parts when the jointed metallic frames are opened to receive or remove papers, or for any other purpose. Two or more of these frames *b* are used for a binder, and they should be placed one near each end of the cover and back, and when re-

quired one or more additional ones may be used and placed at proper distances apart.

Each frame *b* is made of two parts hinged together, as shown at *c*, one part having a cam, *c'*, and the other a spring, *c²*, which bears upon such cam when the two parts or members of the frame are pulled in a direction from each other in spreading open the binder. The function of the cam *c* and spring *c²* is to keep the binder open when drawn apart without the aid of the screws *i i*, and with the spring *c²* properly made it answers this purpose.

A wheel, *d*, is provided with an internal spiral spring, *e*, which is attached at one end to the rim of the wheel and at the other end to the standard *d'*. This standard forms part of the frame *b*, and on it is the bearing for the wheel. A band, *f*, (or, if preferred, a watch-spring,) is attached to the rim of the wheel at *g*, and to a lug, *h*, on the other part of the frame *b*. Each frame *b* is provided with a finger-screw, *i*, the object of which is to lock the wheel by causing its point, as may be desired, to lodge in any one of the small cavities *i'*, Fig. 3, in the periphery of the wheel *d*, and thus, after the binder has been opened for the purpose of placing articles therein and these articles have been so placed therein, the tightening of these screws in the appropriate one of the cavities locks or fastens the binder shut to the extent desired, and upon releasing the several screws from such cavities the coiled springs are again free to act and to operate automatically to close the binder upon any other papers which may be inserted therein.

A principal object of the wheel *d* and spring *e* and screw *i* is the function of locking the binder when shut by setting the points of the screws *i i* into the appropriate cavities.

A curved needle-pointed prong, *J*, is affixed, as shown, to one of the parts of each frame *b*, and the other member of such frame has a corresponding cavity (shown in dotted lines at *J'*) to receive and protect such prong. The papers to be filed are punctured and held and secured upon these prongs, the frame being first opened against the force of the springs sufficiently to withdraw the prongs from the cavities *J'*, and it will be evident that as many papers may be filed as the length of the prongs will permit, and that the elliptical form of the

frames allows of long prongs, and with but a slight curvature.

Each member of the frames *b b* has a hinged piece, *a³*, by which it is secured to the leaves
5 or flaps of the cover.

By my construction it will be seen that no thread is used nor threading of needles required, the flaps fit closely down on the papers, thus excluding dust and keeping the papers
10 clean, and the flaps will open wide and lie flat, while the filed papers can be easily referred to and read.

I claim—

1. A hinged metallic frame for file-binders,
15 one member of which is provided with a curved sharp-pointed prong entering, when the binder

is being closed, a curved cavity in the other part or member, and also with a wheel having an internal spiral spring and an adjusting-screw to lock the binder when it is closed, also a cam
20 and spring to keep the binder open when filing papers therein.

2. The elliptical metallic hinged frame *b*, wheel *d*, spring *e*, standard *d'*, band *f*, screw *i*, cam *c'*, spring *c²*, and prong *J*, in combination
25 with the boards or flaps of the cover, and for the purposes set forth.

WILLIAM KEENAN.

Witnesses:

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