

R. J. NICHOLSON.  
RING OR LOOP.  
APPLICATION FILED JUNE 6, 1908.

924,492.

Patented June 8, 1909.

Fig. 1.

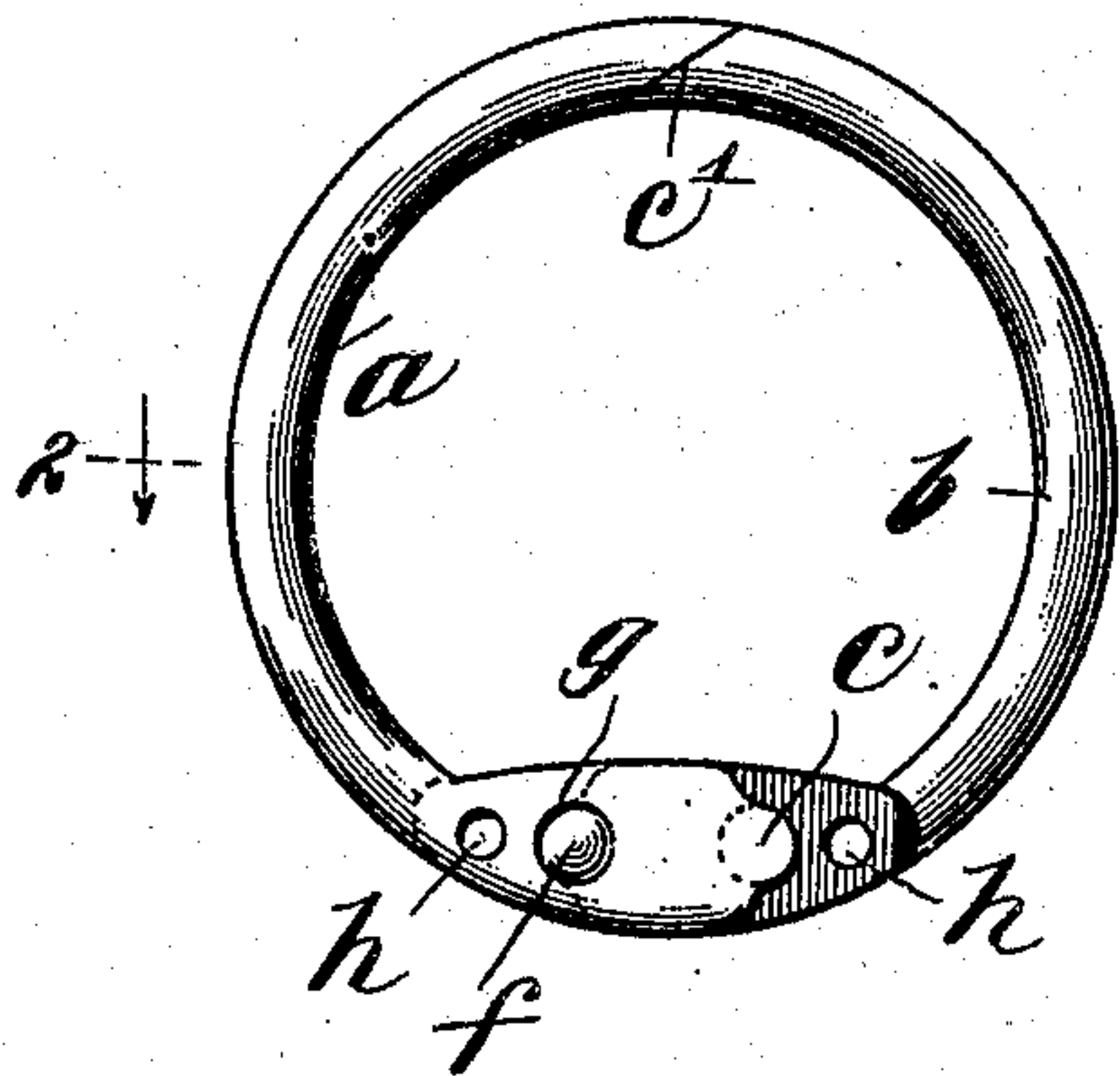


Fig. 5.

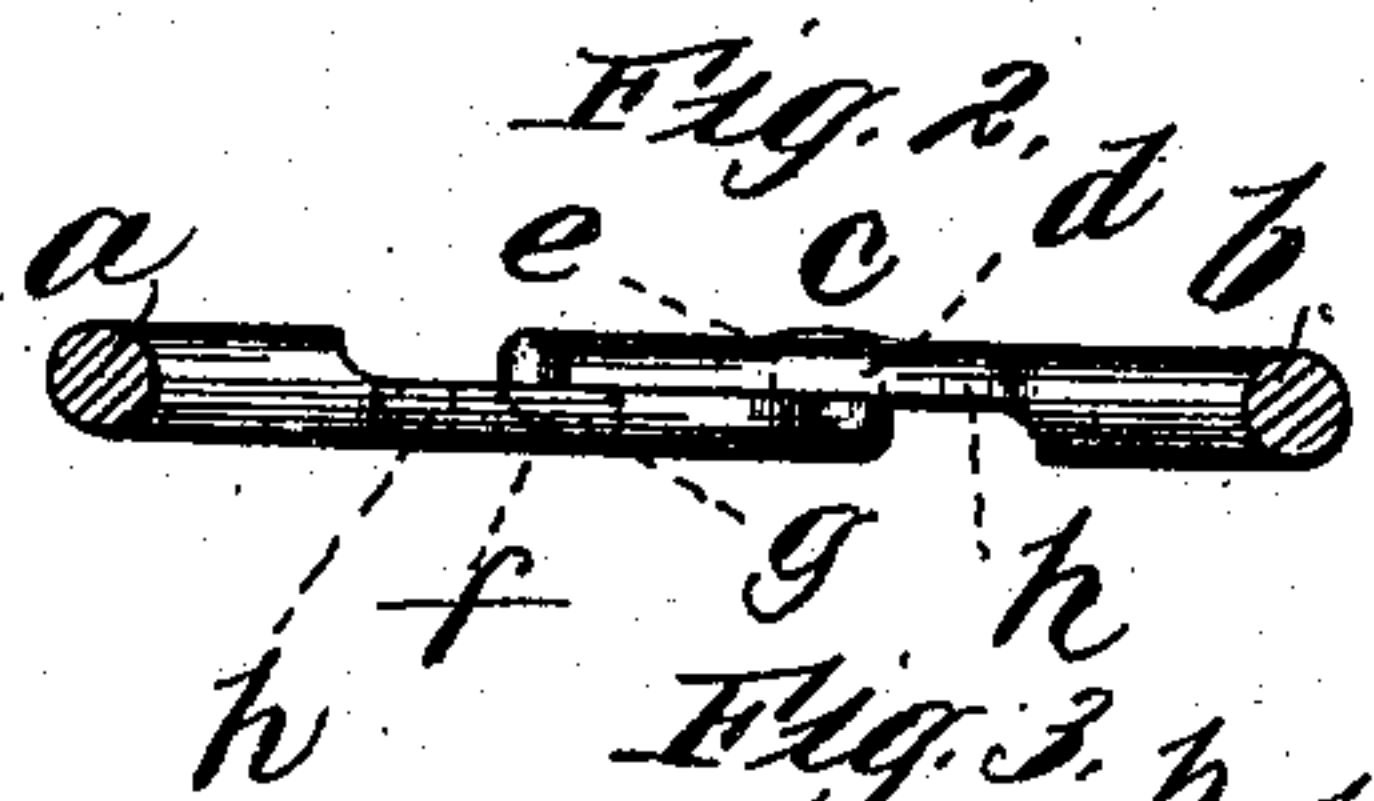
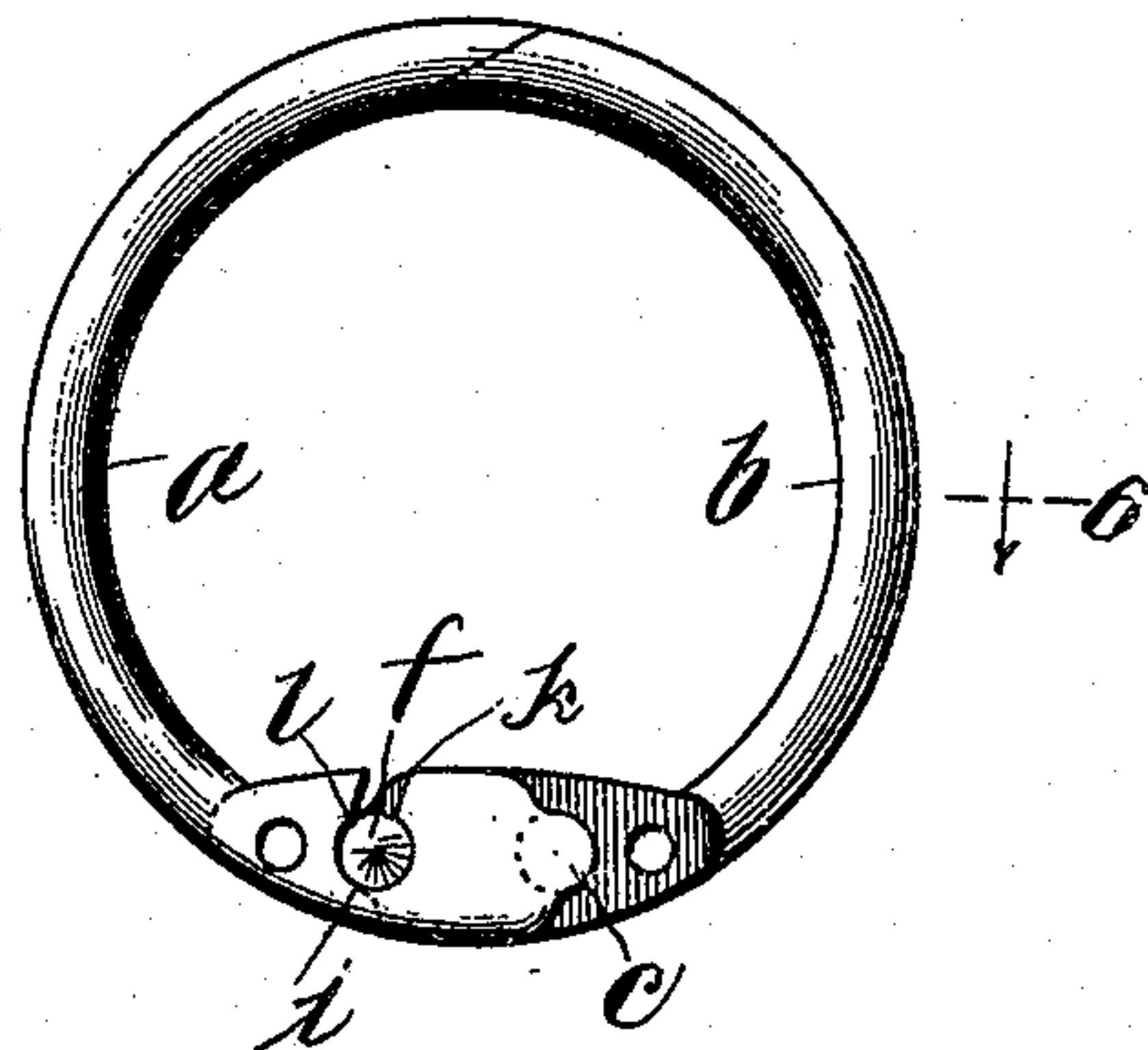


Fig. 6.

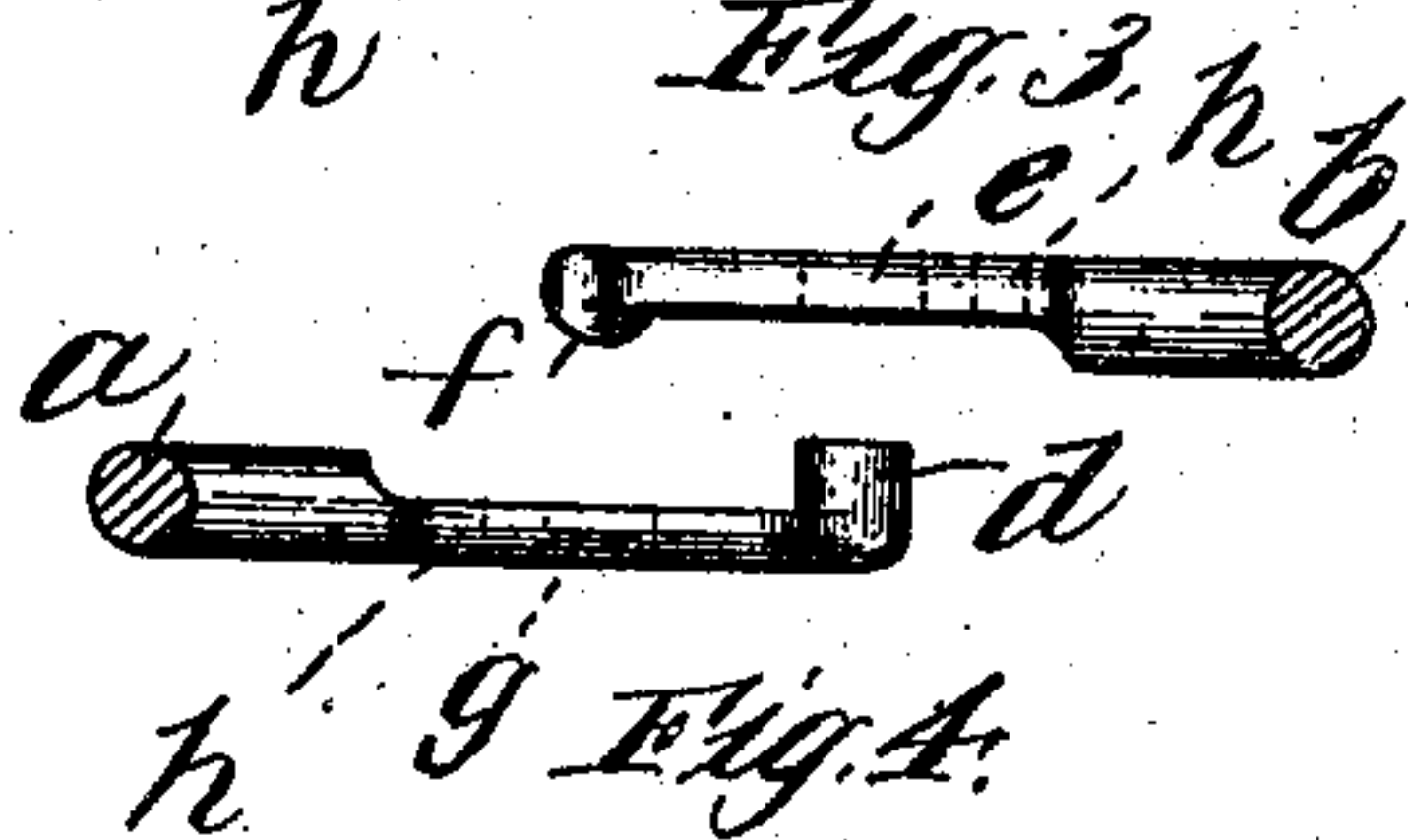
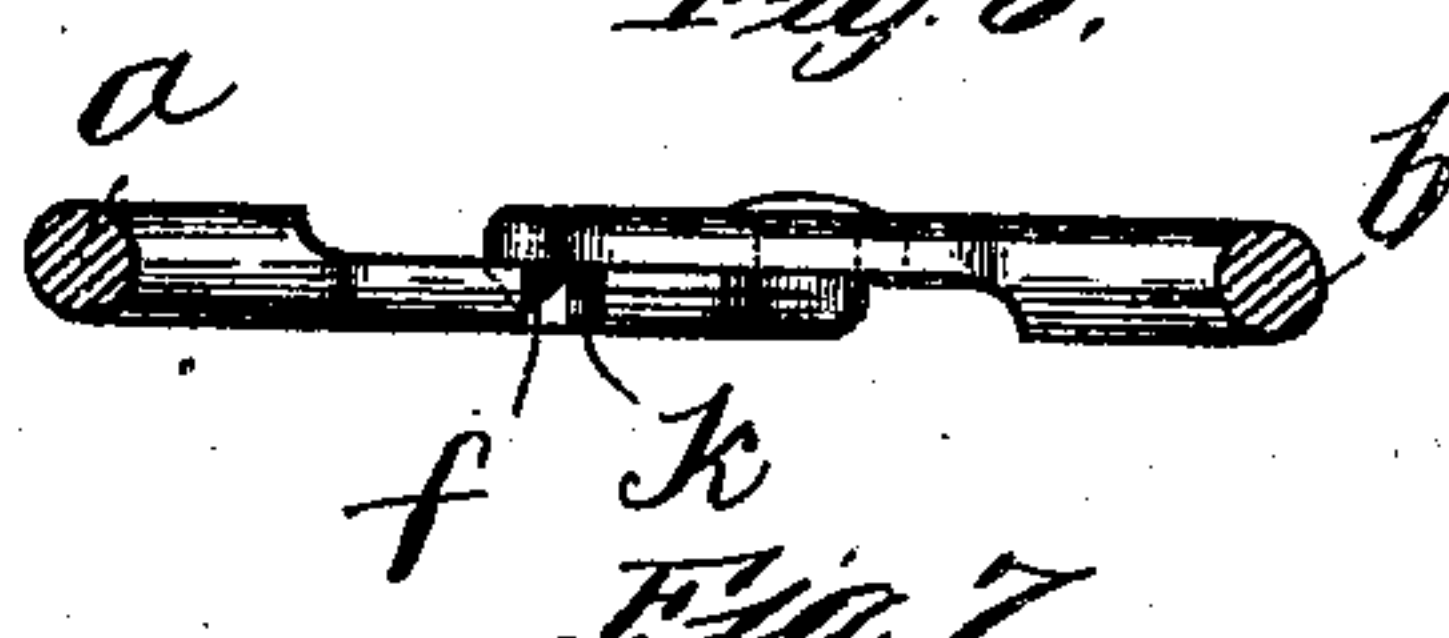


Fig. 7.

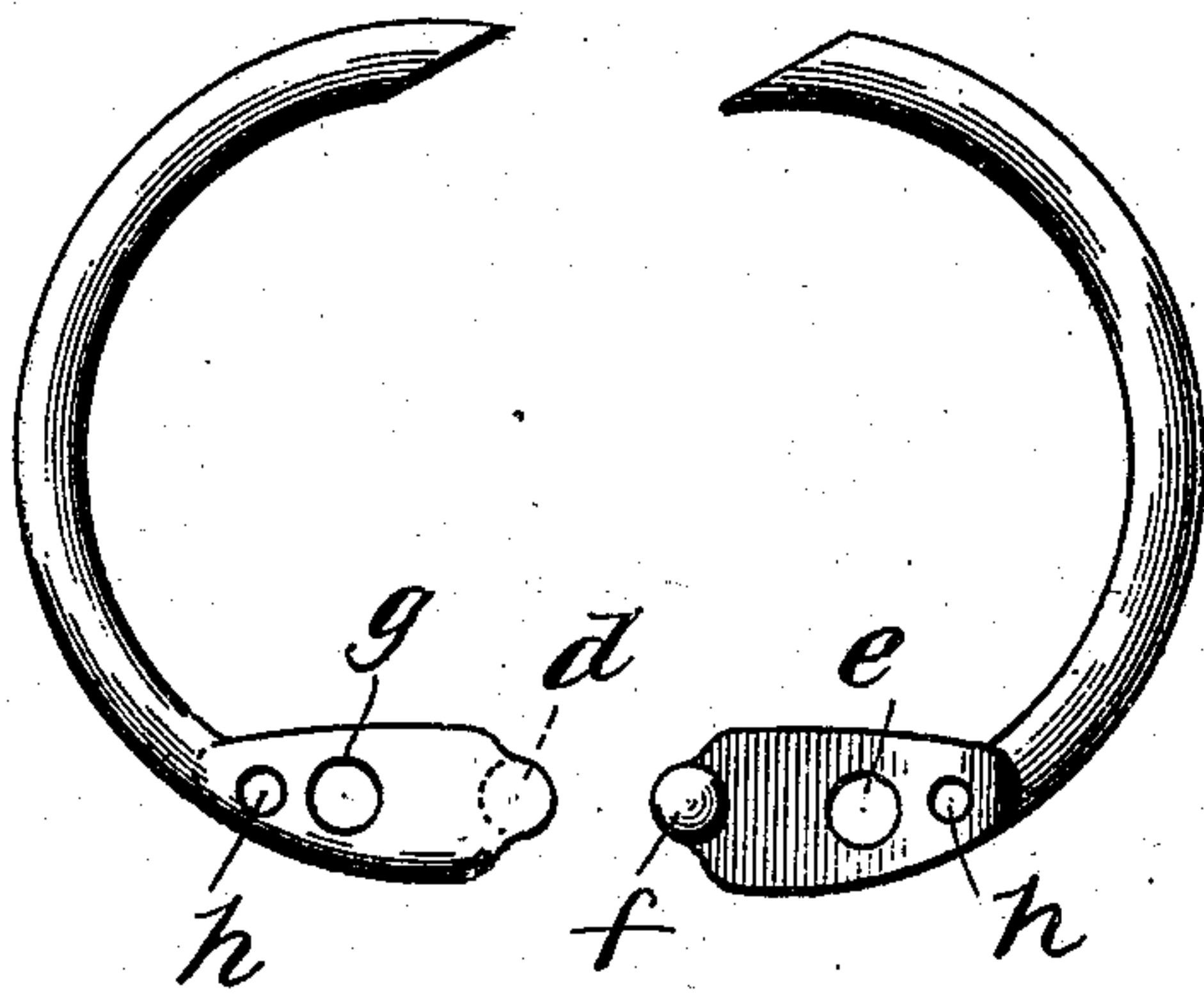
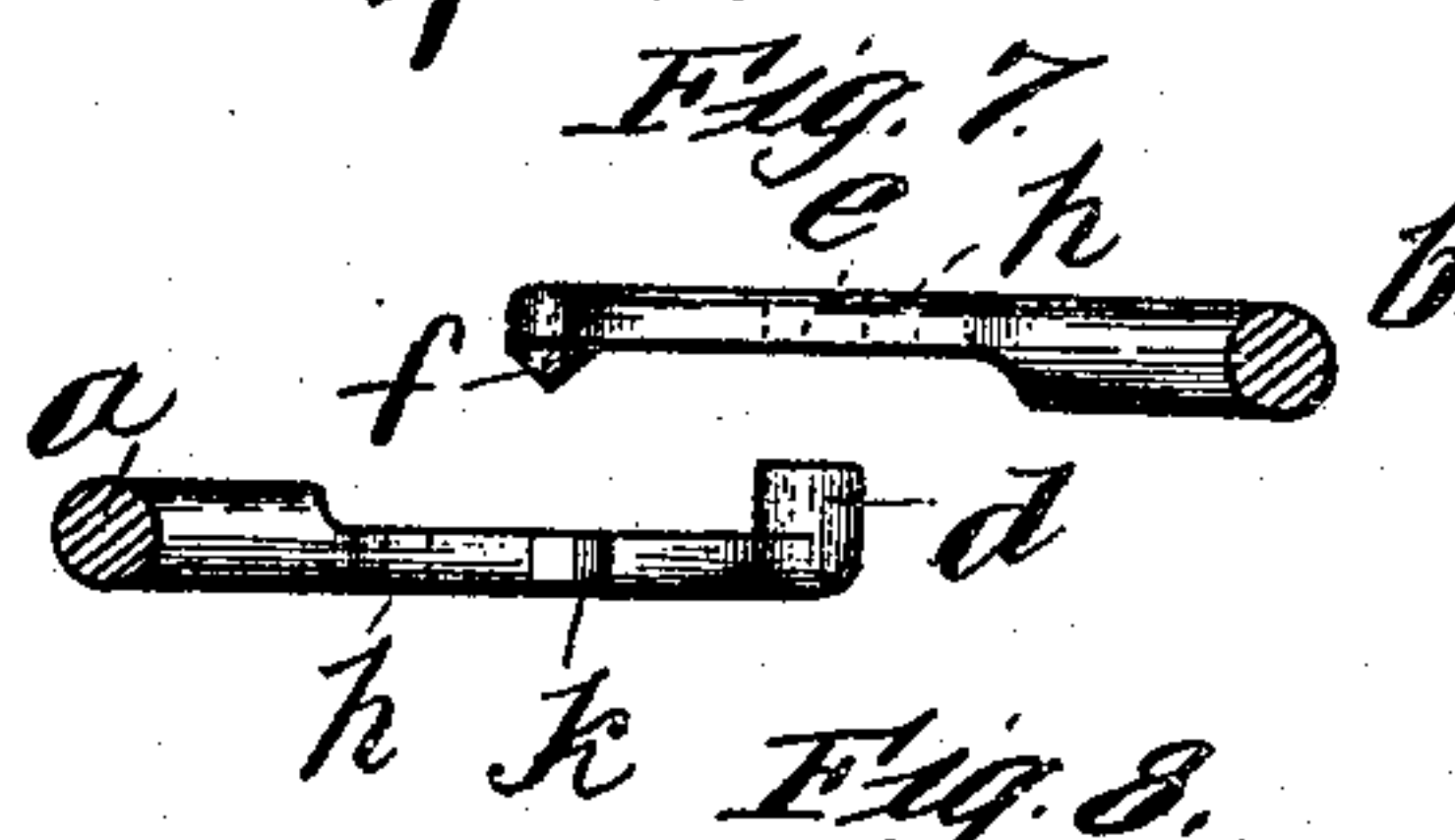
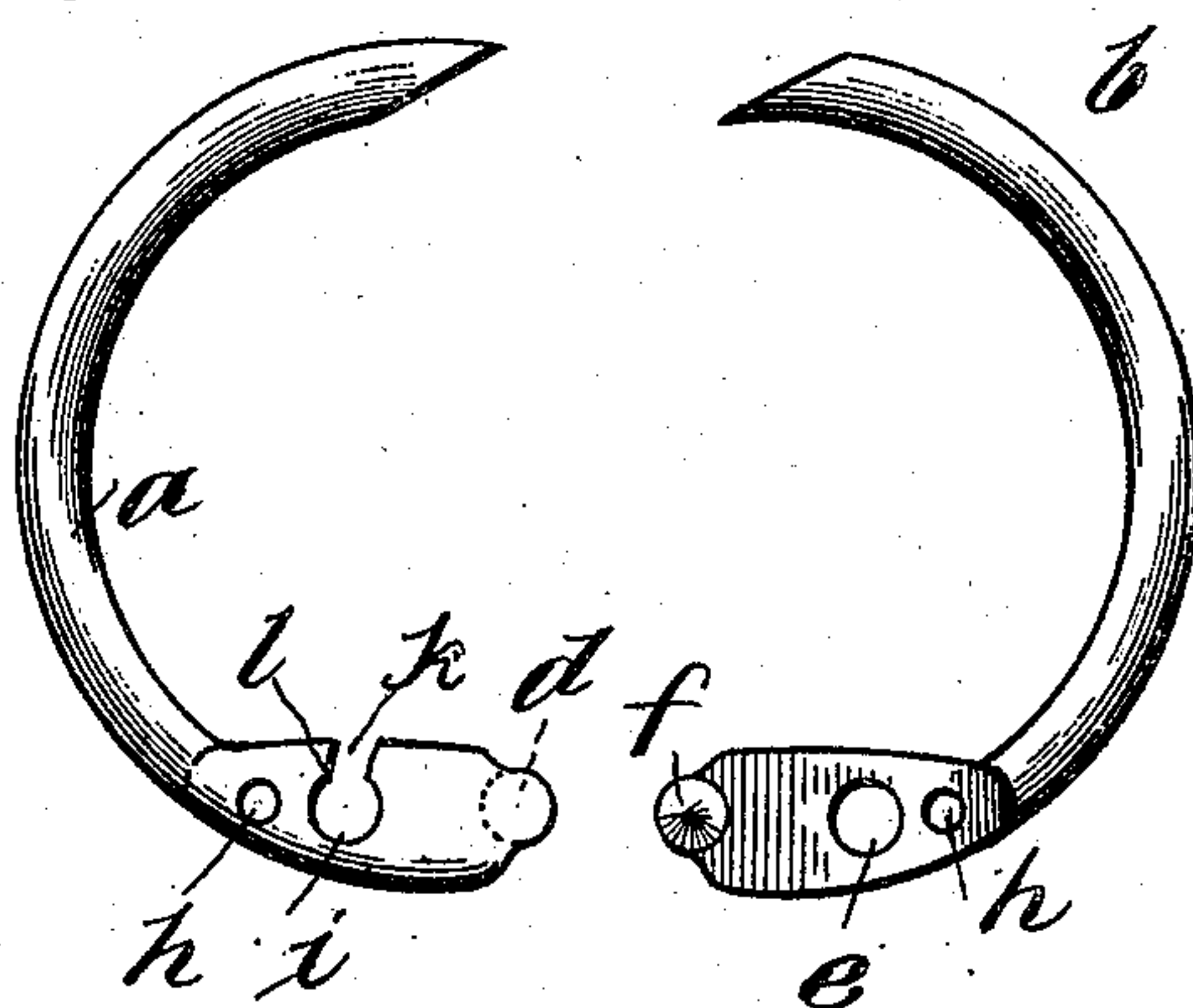


Fig. 8.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

ROBERT J. NICHOLSON, OF CHICAGO, ILLINOIS.

## RING OR LOOP.

No. 924,492.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed June 6, 1908. Serial No. 437,088.

*To all whom it may concern:*

Be it known that I, ROBERT J. NICHOLSON, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Rings or Loops, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to rings or loops that may be opened and closed, the loop of my invention being adapted to a wide variety of uses, as will be apparent.

In one embodiment of my invention, the loop is circular, but the shape of the loop depends upon the use to which it is to be put, and I, therefore, do not desire to limit myself to the shape of the loop.

In practicing my invention, I divide the loop or ring into two sections hinged or pivoted together, and provide locking elements upon each of these sections contiguous to the pivotal or hinge connection thereof, these locking elements being within the same circles of rotation, so that when the ring sections are moved in one direction relatively, the locking elements may be disengaged to permit of the separation of the ring sections, and when they are moved in the other direction of rotation, said locking elements may be engaged to hold the ring sections in closed relation.

I will explain my invention more fully by reference to the accompanying drawing, showing two embodiments thereof, in which—

Figure 1 is an elevation of a ring or loop with its sections in closed relation. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 shows the parts that enter into the construction of Fig. 2 as they will appear before these parts are assembled. Fig. 4 shows, in elevation, the parts illustrated in Fig. 3. Fig. 5 is an elevation of another embodiment of the invention. Fig. 6 is a sectional view on line 6 6 of Fig. 5. Fig. 7 shows the parts illustrated in Fig. 6 in an un-united relation. Fig. 8 shows, in elevation, the parts as illustrated in Fig. 7.

Like parts are indicated by similar characters of reference throughout the different figures.

In each of the figures I have shown a ring or loop having two parts *a b* that are hinged or pivotally united at *c*, the free ends (those

ends opposite the hinge) of the sections *a* and *b* of the ring being shown as beveled to make a lap-joint *c'* when said ring sections are in closed relation, though, obviously, I do not wish to be limited to such a formation. In the embodiments of the invention shown, the hinge connection at *c* is effected by means of a pivotal extension *d* integrally formed with the ring section *a*, the pivotal extension, in process of assembling, being passed through an aperture *e* in the ring section *b*, whereafter the free end of the pivot *d* is upset, as indicated, whereby the location of the ring section *b* upon its pivot *d* is rendered permanent. While this is the way of uniting the ring sections *a* and *b* shown in the embodiments of the invention illustrated, I do not wish to be limited to this method of uniting said sections.

The pivoted end of the ring section *b* is extended beyond the pivot *d* to afford or permit the location or formation of an element of a locking device, a complementary element of the locking device being carried by the ring section *a*. The element of the locking device carried by the ring section *b* is preferably a lateral extension *f* integrally formed with, and therefore rigid with respect to the ring section *b* and extending substantially parallel with the pivotal axis at *c*. In the structure illustrated in Figs. 1 to 4, inclusive, the locking element provided upon the ring section *a* is afforded by means of an opening or recess *g* adapted to receive the extension *f* when the ring sections are in closed relation, and permitting of movement apart between the ring sections when sufficient effort is exerted to overcome the binding action effected by the upper portion of the border of the opening *g* and the head of the pivot pin *d*. The locking element upon the ring section *a* is, therefore, the portion of the border of the opening *g* that lies above the locking element *f*. The distance between the nether face of the head of pin *d* and the contiguous flat surface of the ring section *a* is such, in the embodiment of the invention illustrated in Figs. 1 to 4, inclusive, that the ring section *b* is slightly out of the normal plane of the ring when the locking element *f* is not contained within the recess *g*, the locking element *f*, therefore, swinging into place as soon as it is in register with the recess *g*. As the ring is preferably circular in cross-section throughout its ma-



for portion, I flatten the hinged ends thereof so that the hinge and locking mechanism above described may be provided.

Where the ring is to be employed as an element of a binder for holding loose sheets, apertures *h* may be provided in the ring sections, in order that they may be sewed or otherwise attached to a suitable cover, as is well understood by those acquainted with the art.

The construction shown in Figs. 5 to 8, inclusive, is generally similar to that shown in Figs. 1 to 4, inclusive, with the exception that the locking element provided upon the ring section *a* is of the nature shown most clearly in Fig. 8, where the opening *i* has an inlet *k* lying in the arc of travel of the locking element *f*, a hump or inwardly extending projection *l* being provided upon a border portion of the inlet *k* over which the locking element *f* must ride before the ring sections are in closed relation, whereafter the locking element *l* holds the ring sections in closed relation, though permitting the separation of the ring sections when sufficient effort is exerted. The locking element *l* upon the ring section *a* causes a reaction upon the pivot pin *d* when said locking element is engaged by the locking element *f*, there being a spring-like action when the element *f* escapes the element *l* and is received within the opening *i*.

In the claims I speak of a locking element being provided upon the section of the ring, which locking element is in the form of a projection extending laterally to the section that supports it and rigid with respect thereto, this portion of the claims being readable upon the structure illustrated.

It will be seen that I have provided a ring or loop having two hinged sections, the location of the hinge connection between said sections being substantially within the line of the ring or loop, said sections being flattened where hinged, and a locking device for holding said sections in closed relation, the flattened portion of each of said sections having a member of said locking device which is located adjacent to the point of hinge connection between said sections, the locking element upon one section being formed by a recess therein, while the locking element upon the companion section is formed by a projection extending laterally of the latter section and adapted to be brought into register with said recess, one of the locking elements coöperating with the pivotal connection and the section having the companion locking element to resist closing action of the ring or loop sections, whereby when the locking elements are brought to register, the separation thereof is prevented, except upon the exercise of considerable force.

In the embodiments of the invention shown, there are but two parts to the struc-

ture, as the various elements carried by each ring section are integrally formed therewith, but I do not wish to be limited to this characteristic, nor to the precise construction of the locking elements that enter into the invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent the following:—

1. A ring or loop having two hinged sections, and a locking device for holding said sections in closed relation, each of said sections having a member of said locking device which is located adjacent to the point of hinge connection between said sections, the locking element upon one section being formed by a recess therein, while the locking element upon the companion section is formed by a projection extending laterally to the latter section and rigid with respect thereto and adapted to be brought into register with said recess, one of the locking elements coöperating with the pivotal connection and the section having the companion locking element to resist closing action of the ring or loop sections, whereby when the locking elements are brought to register, the separation thereof is prevented, except upon the exercise of considerable force.

2. A ring or loop having two hinged sections, said sections being flattened where hinged, and a locking device for holding said sections in closed relation, the flattened portion of each of said sections having a member of said locking device which is located adjacent to the point of hinge connection between said sections, the locking element upon one section being formed by a recess therein, while the locking element upon the companion section is formed by a projection extending laterally of the latter section and rigid with respect thereto and adapted to be brought into register with said recess, one of the locking elements coöperating with the pivotal connection and the section having the companion locking element to resist closing action of the ring or loop sections, whereby when the locking elements are brought to register, the separation thereof is prevented, except upon the exercise of considerable force.

3. A ring or loop having two hinged sections, the location of the hinge connection between said sections being substantially within the line of the ring or loop, and a locking device for holding said sections in closed relation, each of said sections having a member of said locking device which is located adjacent to the point of hinge connection between said sections, the locking element upon one section being formed by a recess therein, while the locking element upon the companion section is formed by a projection extending laterally to the latter section and rigid with respect thereto and



adapted to be brought into register with said recess, one of the locking elements co-operating with the pivotal connection and the section having the companion locking element to resist closing action of the ring or loop sections, whereby when the locking elements are brought to register, the separation thereof is prevented, except upon the exercise of considerable force.

10 4. A ring or loop having two hinged sections, the location of the hinge connection between said sections being substantially within the line of the ring or loop, said sections being flattened where hinged, and a  
15 locking device for holding said sections in closed relation, the flattened portion of each of said sections having a member of said locking device which is located adjacent to the point of hinge connection between said  
20 sections, the locking element upon one section being formed by a recess therein, while the locking element upon the companion section is formed by a projection extending laterally of the latter section and rigid with  
25 respect thereto and adapted to be brought into register with said recess, one of the locking elements coöperating with the pivotal connection and the section having the companion locking element to resist closing  
30 action of the ring or loop sections, whereby when the locking elements are brought to register, the separation thereof is prevented, except upon the exercise of considerable force.

35 5. A ring or loop having two hinged sections, the location of the hinge connection between said sections being substantially

within the line of the ring or loop, and a locking device for holding said sections in closed relation, each of said sections having  
40 a member of said locking device which is located adjacent to the point of hinge connection between said sections, the locking element upon one section being formed by a recess therein, while the locking element  
45 upon the companion section is formed by a projection extending laterally to the latter section and rigid with respect thereto and adapted to be brought into register with said recess.

50 6. A ring or loop having two hinged sections, the location of the hinge connection between said sections being substantially within the line of the ring or loop, said sections being flattened where hinged, and a  
55 locking device for holding said sections in closed relation, the flattened portion of each of said sections having a member of said locking device which is located adjacent to the point of hinge connection between said  
60 sections, the locking element upon one section being formed by a recess therein, while the locking element upon the companion section is formed by a projection extending laterally of the latter section and rigid with  
65 respect thereto and adapted to be brought into register with said recess.

In witness whereof, I hereunto subscribe my name this 3d day of June A. D., 1908.

ROBERT J. NICHOLSON.

Witnesses:

Z. G. STROH,  
A. JOSY.