

No. 819,461.

PATENTED MAY 1, 1906.

J. SCHADE, JR.
LOOSE LEAF BINDER.

APPLICATION FILED JAN. 17, 1905.

Fig. 1.

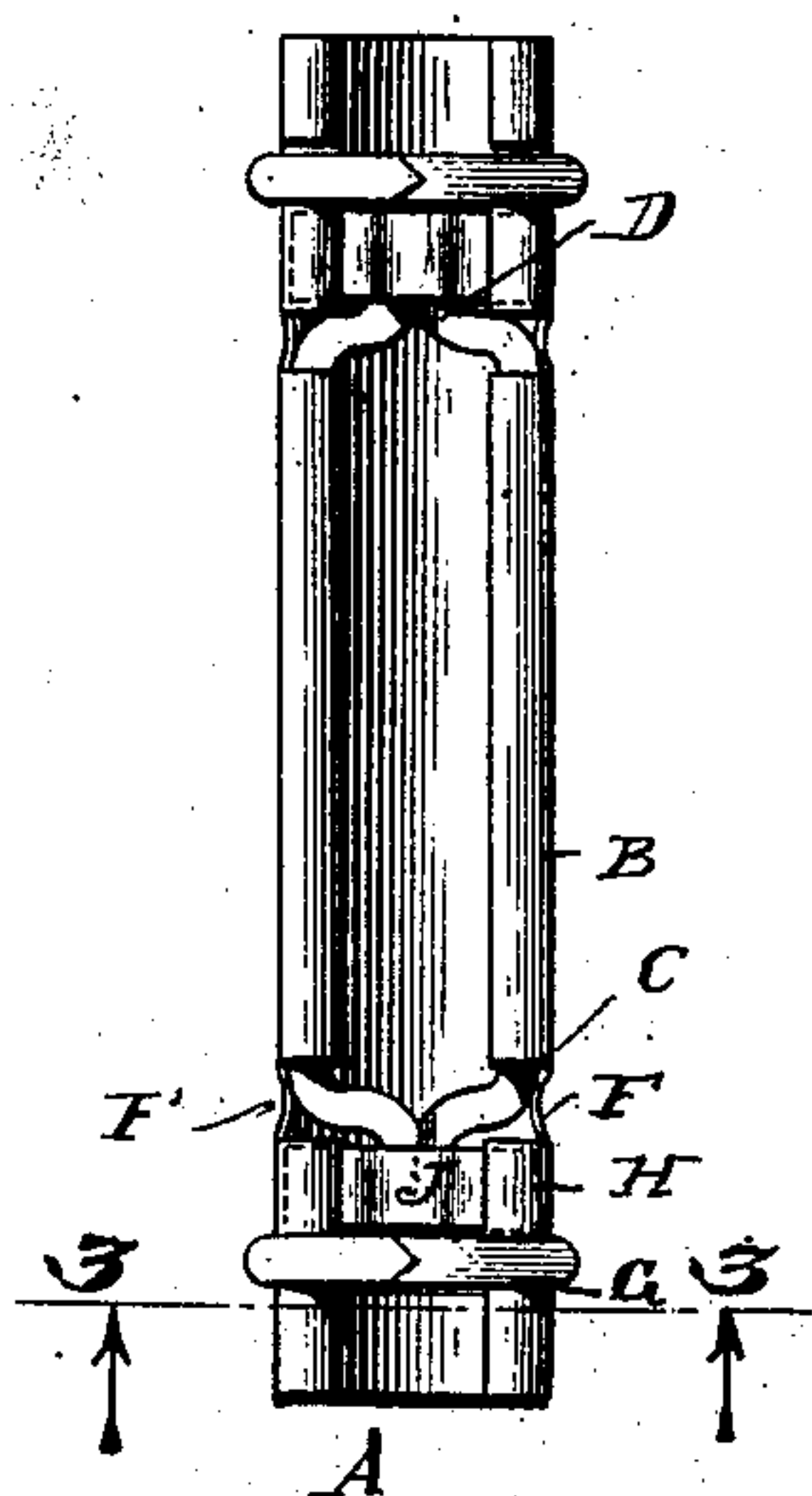


Fig. 2.

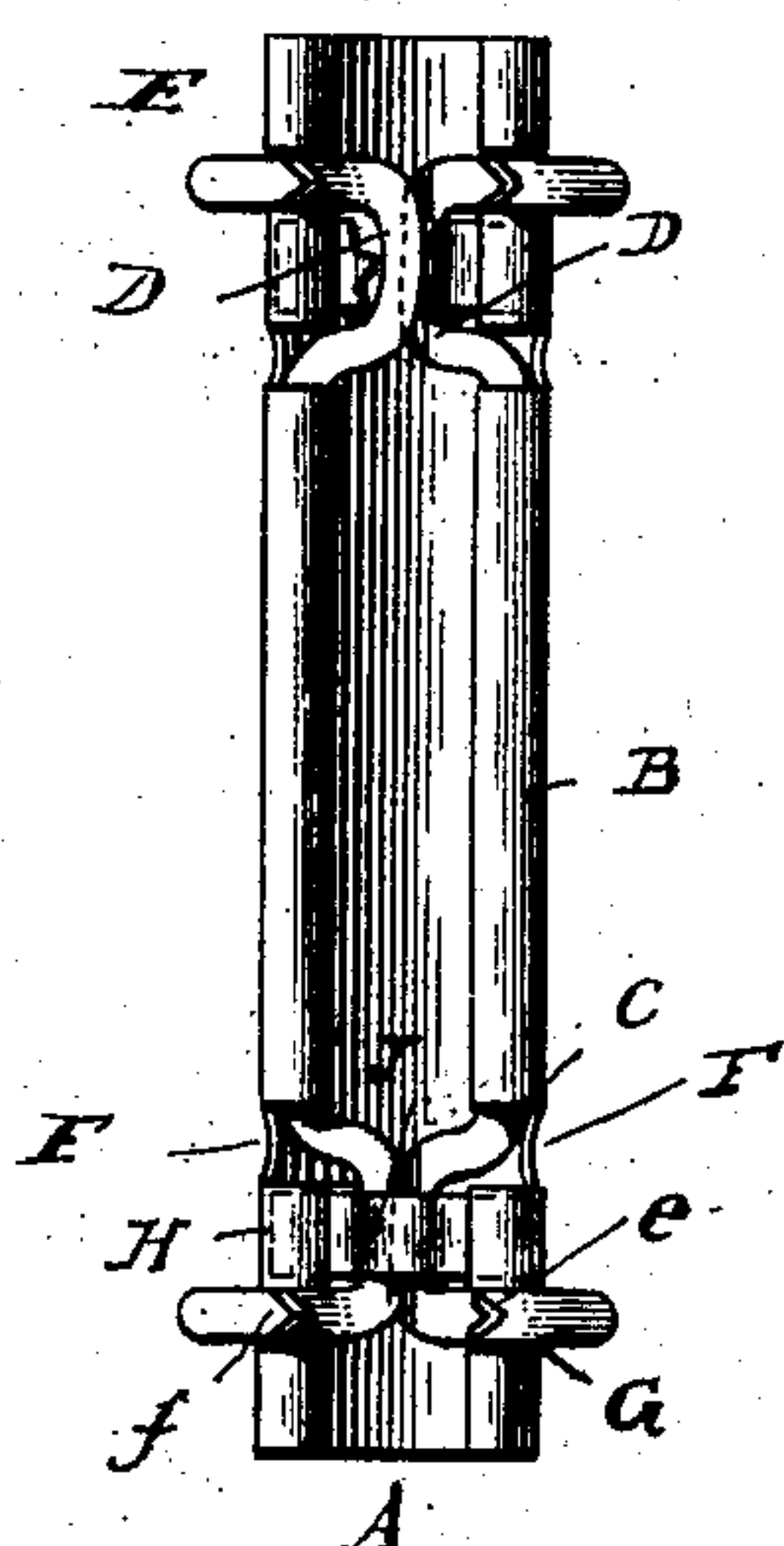


Fig. 3.

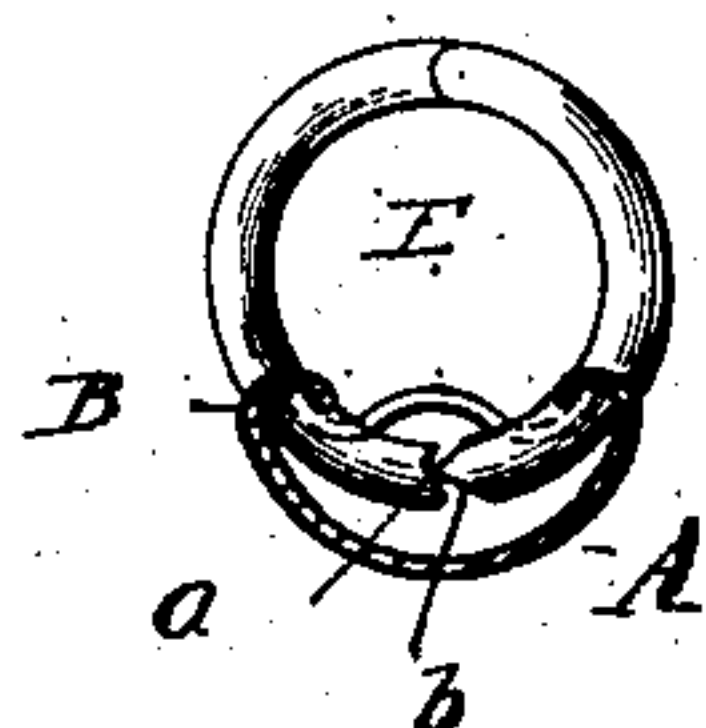
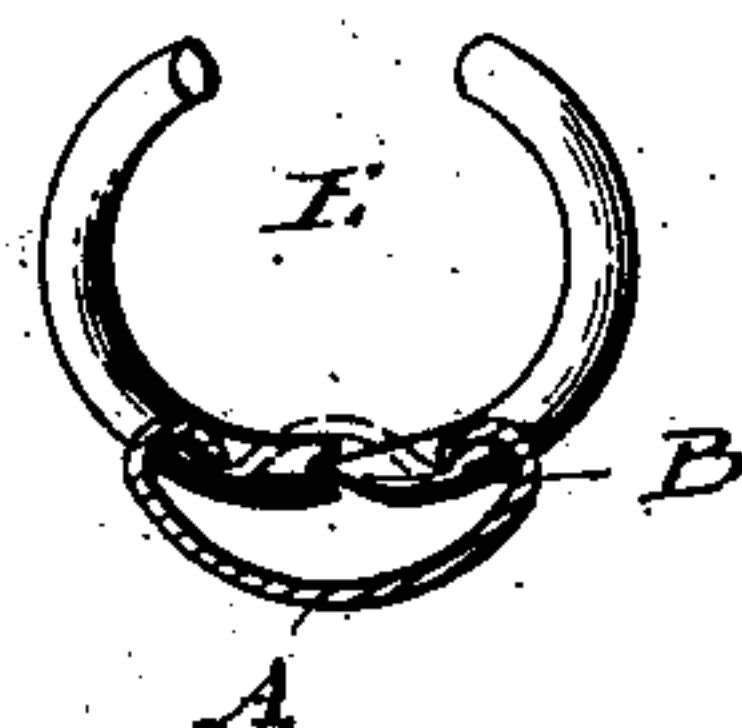


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

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LOOSE-LEAF BINDER.

No. 819,461.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed January 17, 1905. Serial No. 241,452.

To all whom it may concern:

Be it known that I, JOHN SCHADE, Jr., a citizen of the United States, residing at New York city, borough of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to improvements in temporary binders, commonly known as "loose-leaf" binders.

The object of my invention is to provide a binder of this kind which is simple in construction, strong and durable, composed of few parts, is cheap, effective, and reliable in use and can be easily manipulated for the purpose of opening and closing it.

In the accompanying drawings, in which like letters of reference indicate like parts in all the figures, Figure 1 is a plan view of part of my improved loose binder closed. Fig. 2 is a similar view open. Fig. 3 is a transverse sectional view on the line 3 3 of Fig. 1. Fig. 4 is a transverse sectional view open.

My improved device consists ordinarily of two covers united by a back and a holding device which is secured to the inner surface of the back, uniting the covers. Likewise this holding device may be secured in a filing-box or may be used without any backing or cover, if so desired.

The holding device is constructed with a base-plate A, made of spring sheet metal—for example, spring-steel—which is substantially U-shaped in cross-section, but flattened, more or less, along the base and has its two side edges turned inward and downward to form tubular sockets B. In said sockets wires C are placed lengthwise, so that they can turn axially in the sockets. Near each end the wire is bent toward the central longitudinal plane of the base-plate in U-shaped manner to form an arm D, which arms are of such length that the said arms of the two opposite wires C are in contact along the central longitudinal plane of the base-plate. One arm is grooved, as at *a*, and the other provided with a knife-edge or similar edge *b*, which fits into the groove *a*, so that the arms will at all times remain engaged. At the outer ends of the U-shaped arms D the wire C is bent upward, so as to form hooks, each being one-half of a separable eye E, the free end of one hook being notched, as at *e*, and the end of the opposite hook of the eye being

beveled, as at *f*, so as to fit therein. The tubular sockets B, formed by the inwardly-turned edges of the base-plate, are provided with notches F where the bends of the wires for forming the arms D begin and are provided with notches G for receiving the lower parts of the separable eyes, and between said notches F and G the socket H remains. Transverse pieces of sheet metal J are placed over the meeting ends of the arms D, and their free ends are held in the sockets H, so as to cover and hold the meeting arm ends and prevent them from jumping out of engagement.

When the spring-eyes are separated, the meeting arm ends are forced upward and in the manner of a toggle-lever thus force from each other the sides of the base-plate, and the spring tension of the base-plate serves to keep the spring-eyes in the open position for the reason that when said arms are forced upward they are forced slightly beyond the straight line between their centers, and thus cannot snap back into the original position. When the spring-eyes are closed, the base-plate contracts, and the spring tension of the base-plate holds the arms D in their closed position below the horizontal line, and they cannot be opened accidentally, as the spring-pressure of the base-plate prevents this. The spring-eyes can only be opened or closed by forcibly overcoming the tension of the spring base-plate.

I have shown only two spring-eyes in one base-section; but it is evident that a number of such spring-eyes may be provided on a single base-plate of greater length.

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

1. In a temporary or loose-leaf binder, the combination with a base-plate made of spring sheet metal, of separable eyes mounted pivotally directly on the edges of said base-plate and having bent wire arms, the arms of the two opposite separable eyes being engaged to form toggle-levers between the sides of the spring base-plate, substantially as set forth.

2. The combination with a spring base-plate having its outer edges turned inward and downward to form sockets, of wires mounted to turn axially in said sockets, which wires are provided with inwardly-projecting arms and with curved hooks at the

ends of said wires, the arms of the two opposite wires being in contact, substantially as set forth.

3. The combination with a spring base-plate having its outer edges turned inward and downward to form tubular sockets, wires mounted to turn in said sockets, which wires are provided with inwardly-extending arms, the arms of two opposite wires being in contact, hooks formed on the outer ends of the wires, notches being formed in the tubular sockets for the lower ends of the hooks, substantially as set forth.

4. The combination with a spring base-plate having its outer edges turned inward and downward to form longitudinal sockets, wires mounted to turn axially in said sockets, which wires are bent inward to form arms, the arms of the two opposite wires being in contact and one arm recessed and the other provided with a corresponding projec-

tion and hooks formed on the outer ends of said wires, substantially as set forth.

5. The combination with a spring-metal base-plate having its outer edges turned inward and downward to form tubular sockets, wires mounted to turn axially in said sockets, which wires are provided with inwardly-extending arms, the arms of two opposite wires being in contact and the outer ends of said wires being bent to form hooks, and transverse sheet-metal plates placed over the engaging arms and held in place by the inwardly and downwardly bent edges of the base-plate, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN SCHADE, JR.

Witnesses:

OSCAR F. GUNZ;

SOPHIE M. BAEDER.