No. 827,299. PATENTED JULY 31, 1906.

F. EGGE.

LOOSE LEAF BINDER.

APPLICATION FILED MAR. 14, 1906.

Fig. 1.

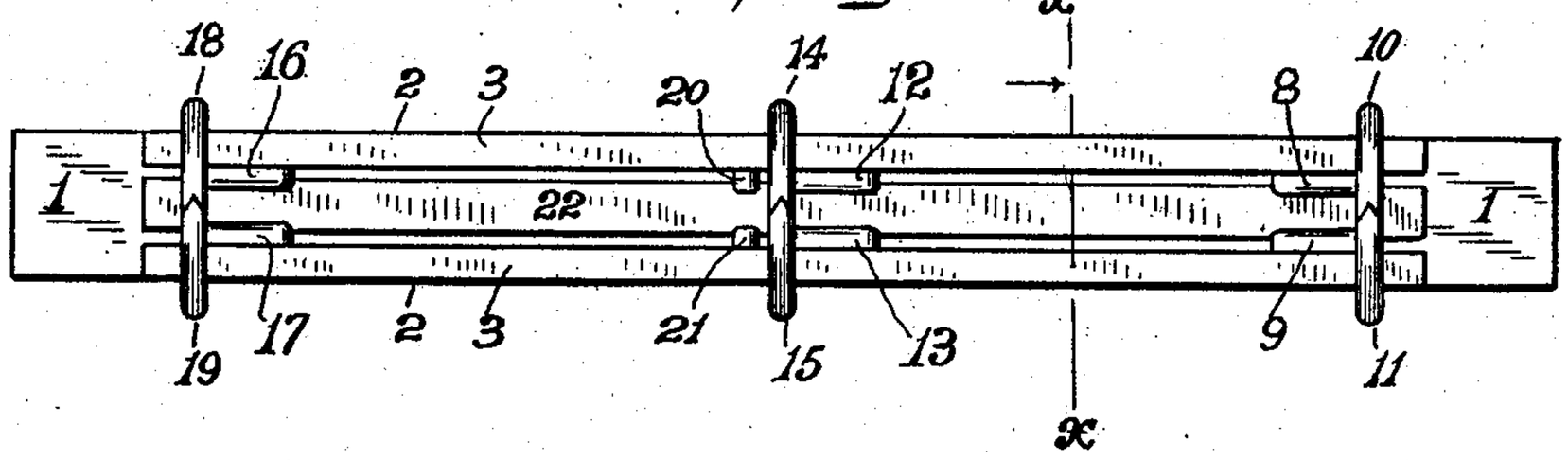


Fig. 2.

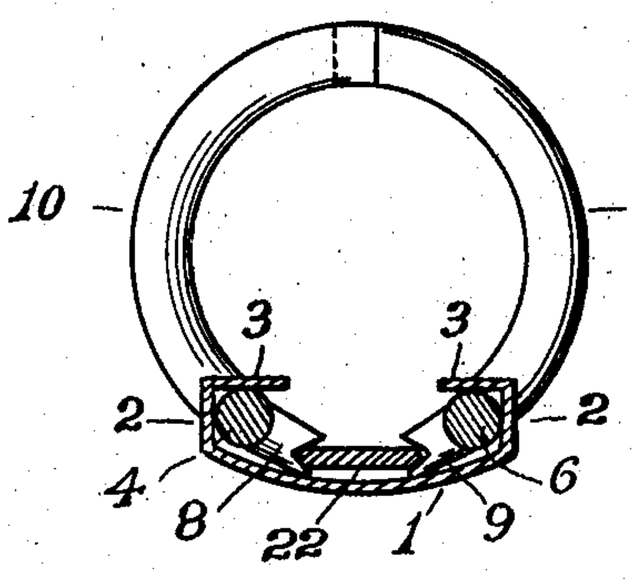


Fig. 3.

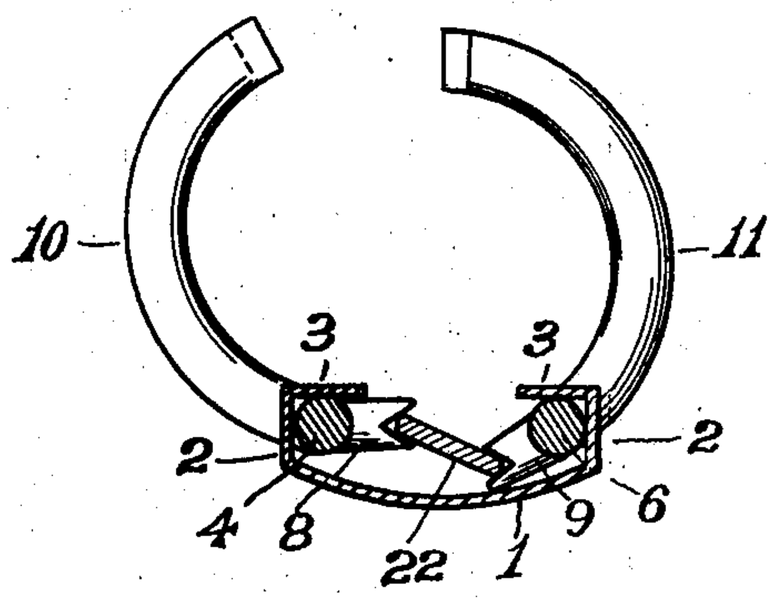
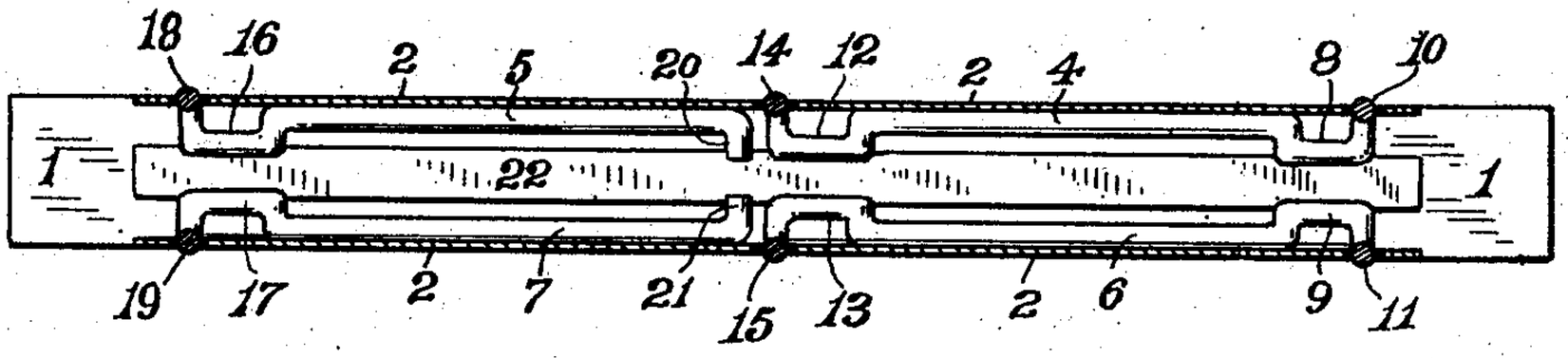


Fig. 4.



WITNESSES

H. A. Lamb.

M. T. Longden

INVENTOR

F. Egge

BY

P. W. Smith Jr.

ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERICK EGGE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE NATIONAL BLANK BOOK COMPANY, OF HOLYOKE, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

LOOSE-LEAF BINDER.

No. 827,299. Specification of Letters Patent. Patented July 31, 1906.

Application filed March 14, 1906. Serial No. 305,977.

To all whom it may concern:

Be it known that I, FREDERICK EGGE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Loose-Leaf Binders; 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 loose-leaf binders; and it consists of certain arrangements of parts, which latter will be hereinafter fully described and then particularly pointed out in the claim which concludes this application.

The object of my invention is to provide a loose-leaf binder of the kind which employs separable arched arms which are complementary parts of a ring in which only one side of the various separable rings can be thrown open at the same time, while the device as a whole can be assembled and put together without the aid of any special tools.

In the accompanying drawings, Figure 1 is a plan view of my improvement, showing the separable arched arms closed; Fig. 2, a cross-section with the arms closed; Fig. 3, a view similar to Fig. 2, but showing one of the arms open; and Fig. 4 a horizontal sectional view.

Similar numerals of reference denote like parts in the several figures of the drawings.

1 is a casing made from spring-steel, the sides 2 of which are upstanding and are turned over to form ledges 3, which overhang the bottom of the casing.

4 5 are separate rock-rods which are confined in alinement at one side of the casing, and 6 7 are also separate rock-rods which are confined in alinement within the opposite side of the casing. The rods 4 6 are bent inwardly at their outer ends so as to form lugs 8 9, which are grooved in their inner faces, the extreme outer ends of these rods terminating in arched arms 10 11, which are complementary portions of a ring. The inner portions of these rods 4 6 are likewise bent to form inwardly-extending lugs 12 13, whose inner faces are grooved, and the inner extremities of these rods terminate in arched arms 14 15, which are complementary parts of a ring. The rods 5 7 at their outer portions are bent to form inwardly-extending lugs 16 17, whose inner faces are grooved, and the extreme outer ends of these rods terminate in arched arms 18 19, which are complementary parts of a ring. The inner extremities of the rods 5 7 terminate in inwardly-extending lugs 20 21, which are grooved in their inner faces.

The lugs 8, 12, 20, and 16 are respectively opposite the lugs 9, 13, 21, and 17, and these oppositely-disposed lugs are separated by quite a little distance—say about one-quarter of an inch. 22 is a flat sheet-metal plate which bridges the space between these oppositely-arranged lugs and whose side edges extend within the grooved faces of said lugs. In normal position this plate 22 is in a horizontal plane, as shown at Fig. 2, and it will be clear that oppositely-disposed arched arms cannot both be thrown open at the same time, since such movements would be resisted by the plate; but all the arms on one side of the device may be swung open by operating any one of said arms, and the position of parts would then be as is shown at Fig. 3. In swinging one set of arms to open position the casing will be sprung outwardly, but will recover by its resiliency when said arms are fully opened and will tend to hold these arms in their opened position, and in closing these arms the casing will again yield until said arms are fully closed, whereupon said casing will recover by its resiliency and tend to hold these arms in their closed condition.

The various lugs are immediately beneath the overhanging ledges 3, and said ledges act as a stop against which the lugs abut when a set of arms is opened, so that it will be clear that the arms will all open uniformly and cannot be disarranged by any abnormal upward throw of these lugs.

As above stated, the arms on either side of the device may be thrown open, and while at Fig. 3 I have shown the arms at the left side open it will be clear that when the arms are closed, as shown at Fig. 2, either one may be opened, but not both.

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

In a loose-leaf binder, the combination of the resilient casing having upstanding sides which terminate in inwardly-extending ledges that overhang the bottom of the casing, rock-rods confined within opposite sides of said

casing and having integral therewith inwardly-extending grooved lugs and complementary arched arms, said lugs being immediately below said ledges, and a flat metal plate whose side edges extend within the grooves in said lugs said plate bridging the space between said lugs.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK EGGE.

Witnesses:
F. W. SMITH, Jr.,
M. T. LOUGDEN.