

No. 764,665.

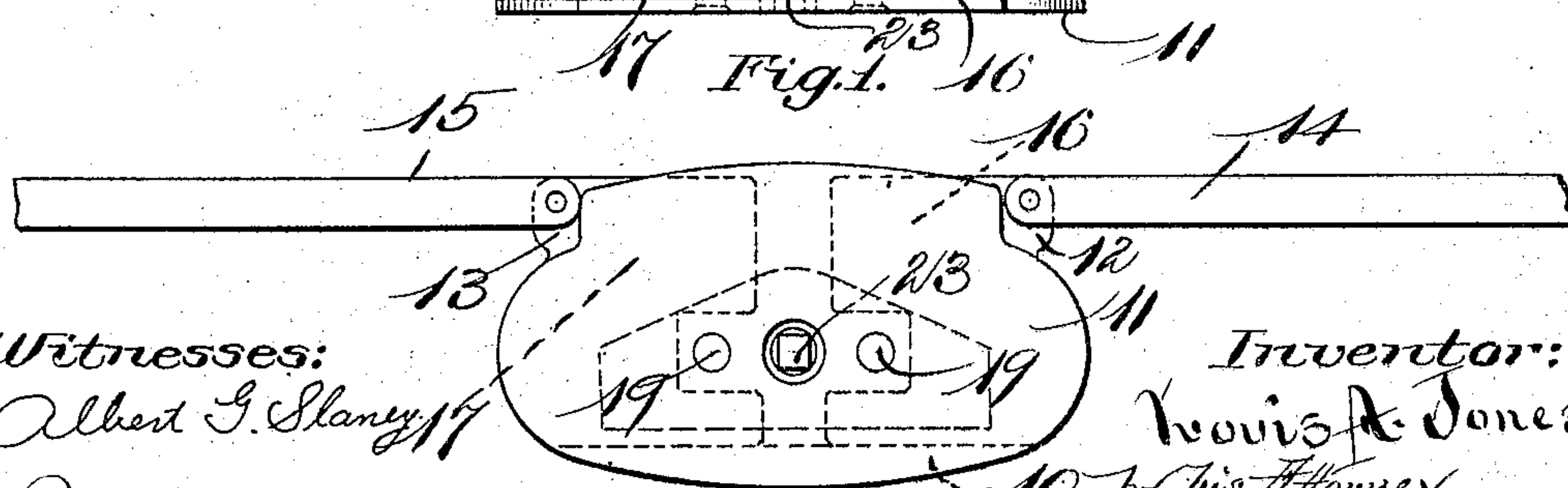
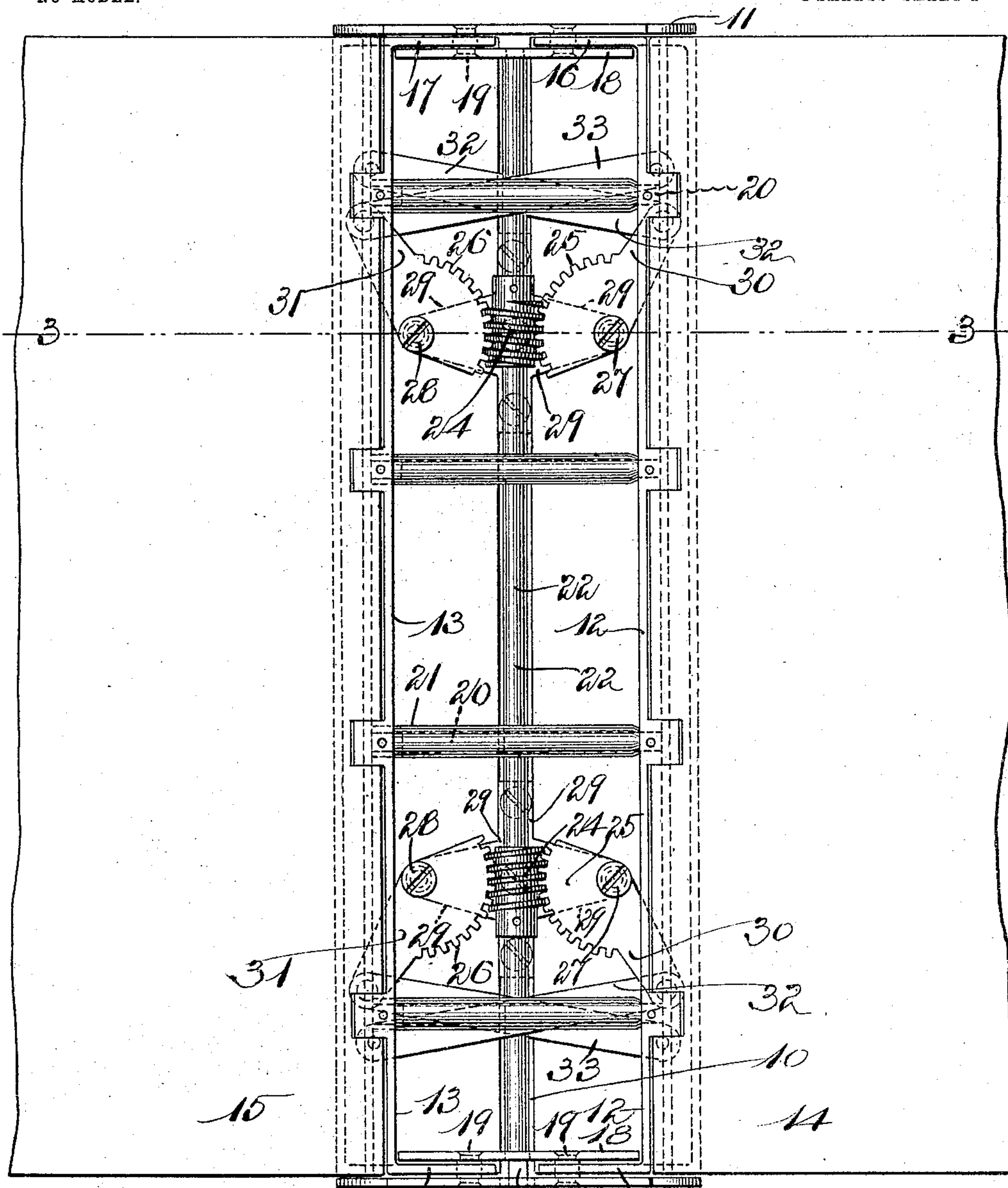
PATENTED JULY 12, 1904.

L. A. JONES.
LOOSE LEAF BINDER.

APPLICATION FILED SEPT. 28, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

Albert G. Slaney 17

Franklin & Low

Fig.2.

Inventor:

Thomas A. Jones,

10 by his Attorney,
Charles S. Gooding.

No. 764,665.

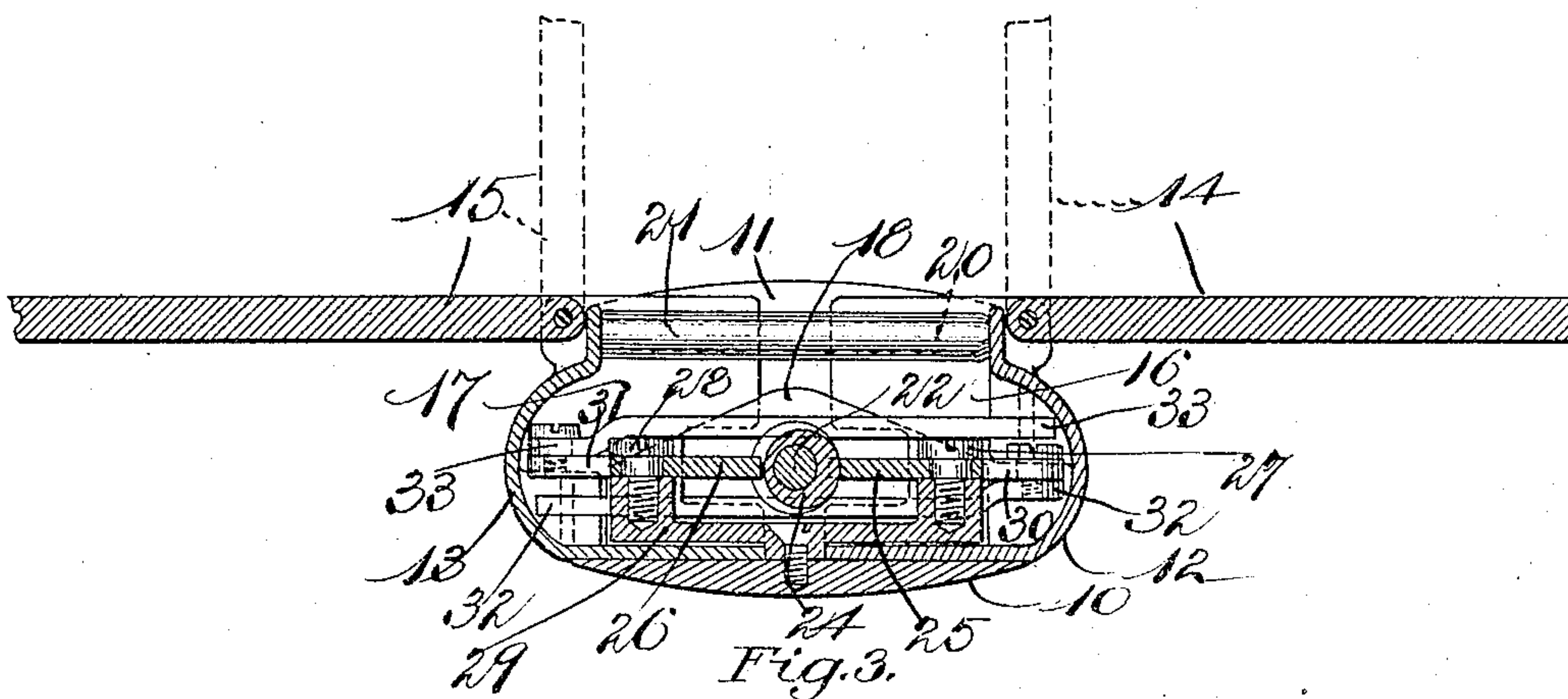
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Witnesses:

Albert G. Slaney.

Franklin E. Low.

Inventor:

Louis A. Jones.

by his Attorney,

Charles V. Gooding.

UNITED STATES PATENT OFFICE.

LOUIS A. JONES, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO HARRY ALFRED BROWN, OF PHILADELPHIA, PENNSYLVANIA.

LOOSE-LEAF BINDER.

SPECIFICATION forming part of Letters Patent No. 764,665, dated July 12, 1904.

Application filed September 28, 1903. Serial No. 174,868. (No model.)

To all whom it may concern:

Be it known that I, LOUIS A. JONES, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to a device for holding together the loose leaves of ledgers or account-books and the like, the object of the invention being to provide a binder-frame which is strong, durable, and adjustable to different numbers and thicknesses of leaves for said ledgers or account-books.

The invention consists in the combination and arrangement of parts set forth in the following specification, and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a front elevation of my improved binder-frame with a portion of two of the covers attached thereto, said covers being shown open. Fig. 2 is an end elevation of the parts illustrated in Fig. 1. Fig. 3 is a section taken on line 3 of Fig. 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, Figs. 1 to 3, I have illustrated one form of my invention in which two cover-plates and a back plate are used to form the frame of the binder.

Referring to Figs. 1, 2, and 3, 10 is a back plate provided with end flanges 11 11. The cover-plates 12 and 13, to which the covers 14 and 15 are respectively pivoted, are provided with end flanges 16 16 and 17 17, respectively. These end flanges slide between the end flanges 11 11 upon the back plate 10 and the auxiliary guide-plates 18 18, said auxiliary guide-plates being fastened to the end flanges 11 11 by studs 19 19. The cover-plates 12 and 13 are further guided by and connected to each other by rods 20 20, which are fastened to the cover-plate 12 and slide in tubes 21 21 fast to the cover-plate 13. The cover-plates 12 and 13 are moved toward or away from each other by means of a rod 22, which extends longitudinally of the back plate 10 and is journaled to rotate in bear-

ings provided in the auxiliary guide-plates 18. Said rod 22 has a square end 23, by means of which it may be conveniently rotated with a properly-shaped key or handle. The rod 22 has fastened thereto worms 24 24, which mesh into worm-gears 25 25 and 26 26. The worm-gears 25 and 26 are pivoted upon studs 27 and 28, respectively, said studs being fast to brackets 29 29, which are in turn rigidly fastened to the back plate 10. The worm-gears 25 25 and 26 26 are provided with arms 30 30 and 31 31, respectively. The arms 30 are connected by links 32 32 to the cover-plate 13, and the arms 31 31 are connected by links 33 33 to the cover-plate 12.

The operation of the device hereinbefore described is as follows: The rod 22 is rotated by means of a handle or key applied to the square end 23, thus rotating the worms 24 24 and the worm-gears 25 and 26. As said worm-gears are rotated, together with the arms 30 and 31, the links 32 and 33, connected to the cover-plates, cause said cover-plates to approach each other or to be moved away from each other, according to the direction in which the rod 22 is rotated. It will be seen that by the construction hereinbefore described the cover-plates will be held locked in a fixed position when the rotation of the rod 22 is stopped, the worm-gears and worm constituting a positive locking means to prevent the rotation of said gears by pressure laterally upon the cover-sections.

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

1. A binder-frame comprising a back plate, cover-plates constructed to slide laterally thereon, gears journaled to rotate upon said back plate, a worm meshing into said gears, and links each pivotally connected at opposite ends thereof, respectively, to its respective gear and to its respective cover-plate.

2. A binder-frame comprising a back plate, cover-plates constructed to slide laterally thereon, a rod extending longitudinally of said back plate and journaled to rotate thereon, a worm fast to said rod, gears journaled to rotate upon said back plate upon opposite sides,

respectively, of said rod and meshing into said worm, and links, each pivotally connected at opposite ends thereof, respectively, to its respective gear and to its respective cover-plate.

- 5 3. A binder-frame comprising a back plate, cover-plates constructed to slide laterally thereon, a rod extending longitudinally of said back plate and journaled to rotate thereon, a worm fast to said rod, gears journaled to rotate upon said back plate upon opposite sides,
10 respectively, of said rod and meshing into said

worm, and links, each pivotally connected, respectively, at one end to one of said gears and at the other end to one of said cover-plates at the opposite side of said rod therefrom. 15

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS A. JONES.

Witnesses:

CHARLES S. GOODING,
ANNIE J. DAILEY.