No. 751,499. PATENTED FEB. 9, 1904.

G. H. GRESHAM.

TEMPORARY BINDER.

APPLICATION FILED MAY 23, 1903.

NO MODEL.

FIG. 1.

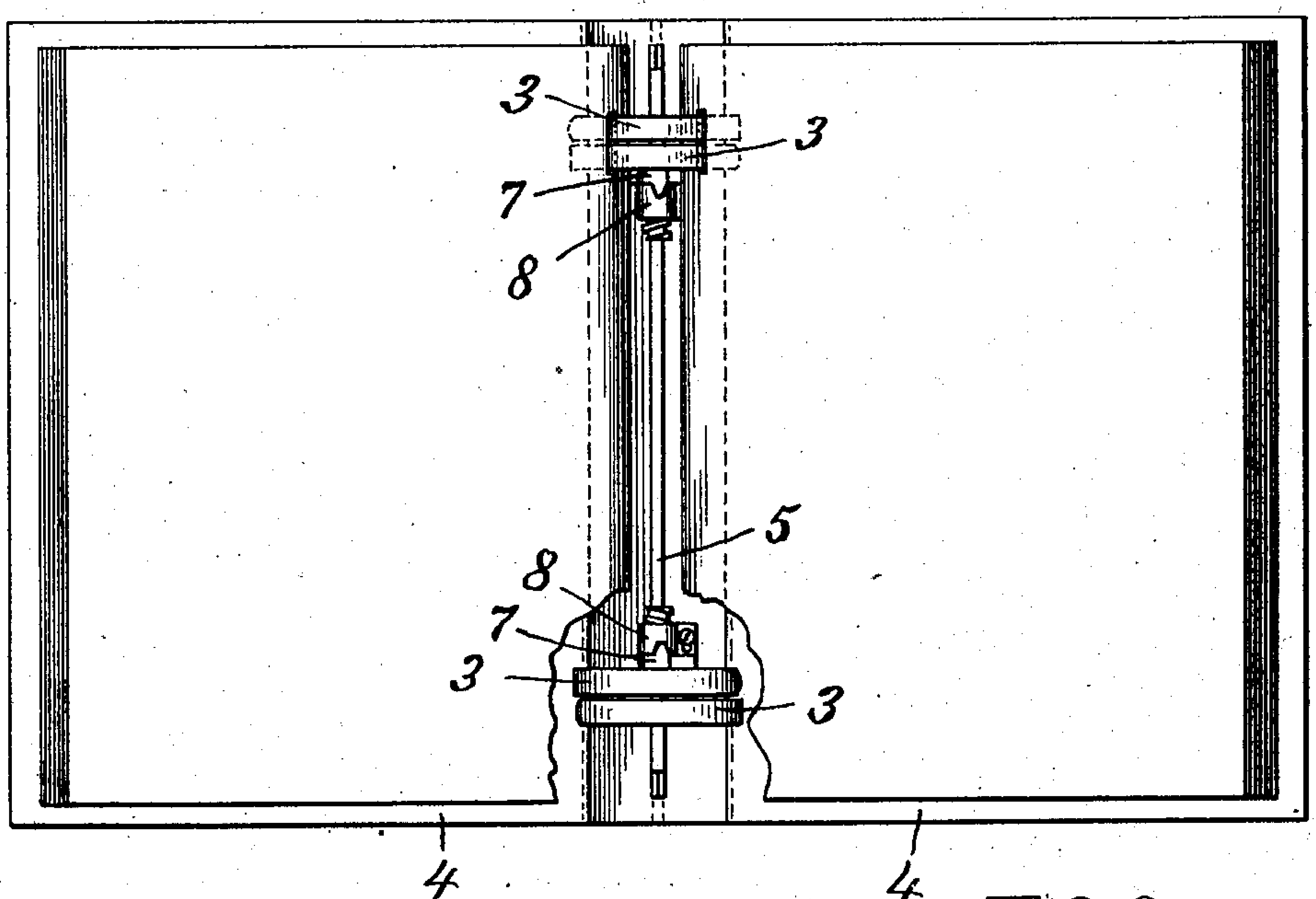


FIG. 2.

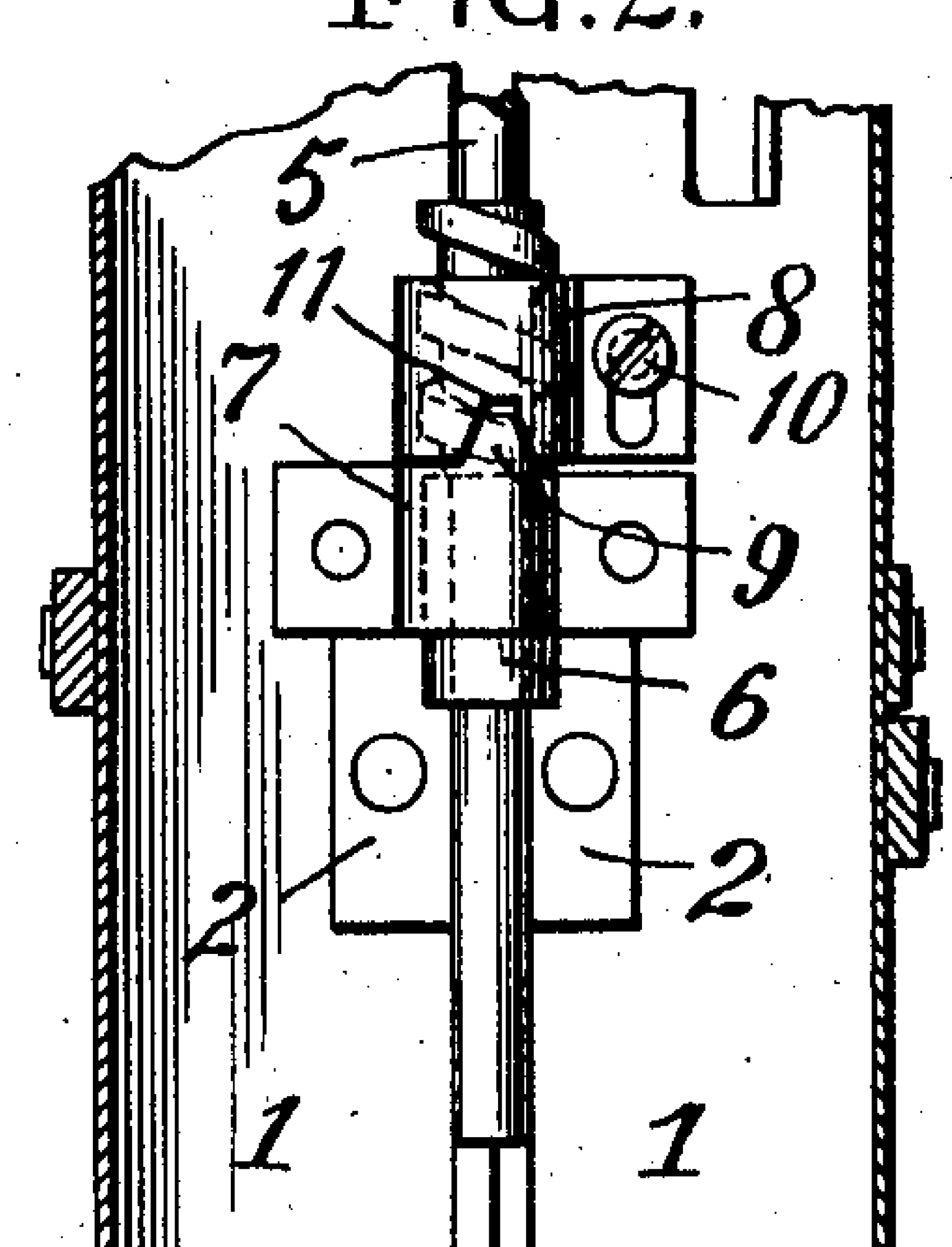


FIG. 3.

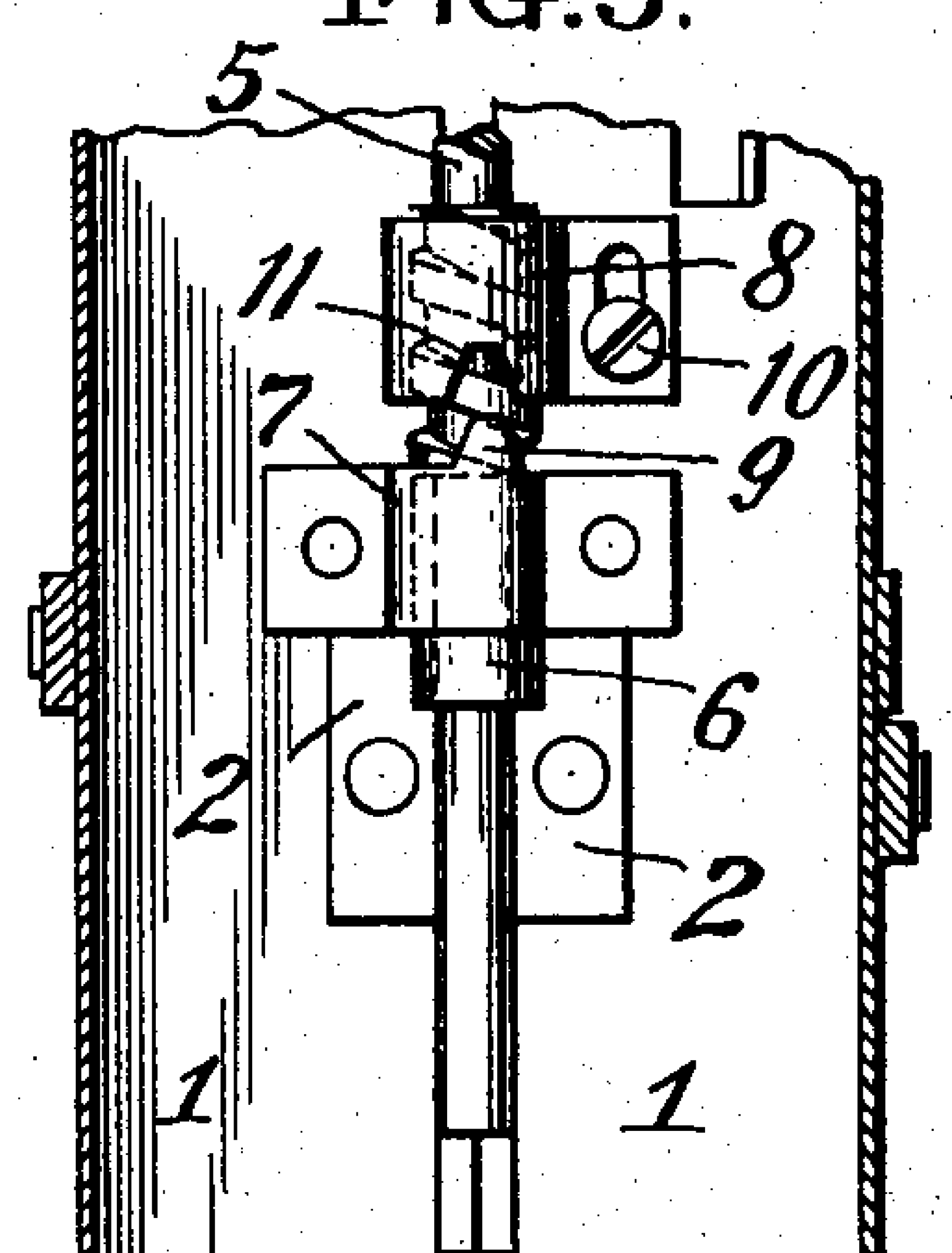
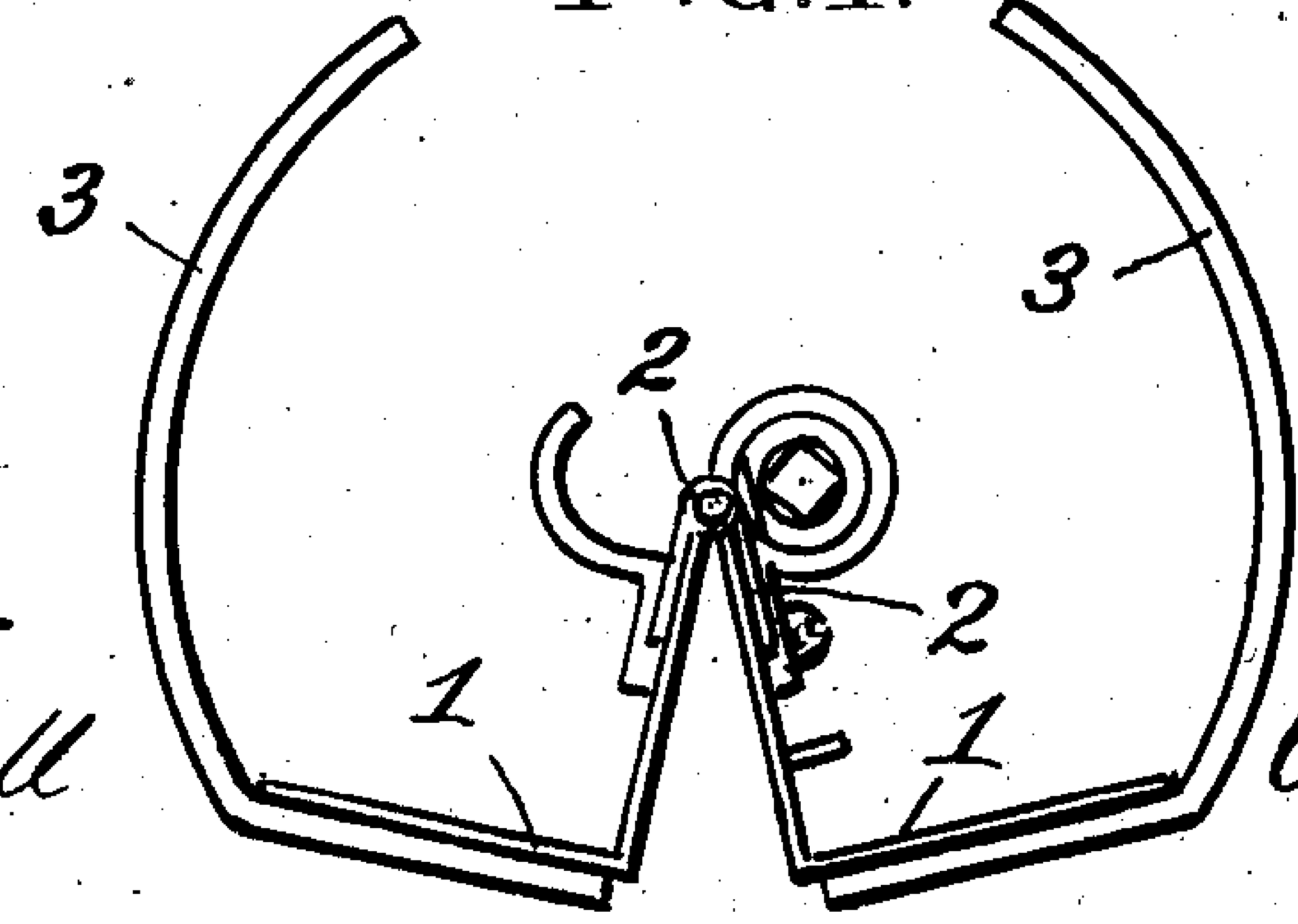


FIG. 4.



WITNESSES:

J. E. Pearson

Donn Twitchell

INVENTOR

George H. Gresham

BY

A. Parker Smith

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 751,499. Patented February 9, 1904.

UNITED STATES PATENT OFFICE.

GEORGE H. GRESHAM, OF NEW YORK, N. Y., ASSIGNOR TO BOORUM AND PEASE COMPANY, A CORPORATION OF NEW YORK.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 751,499, dated February 9, 1904.

Application filed May 23, 1903. Serial No. 158,394. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. GRESHAM, a citizen of the United States of America, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Temporary Binders, of which the following is a specification.

My invention relates generally to temporary binders, and more particularly to the class of loose-leaf books employing a split or divided back formed of twin sections hinged together and having covers flexibly or otherwise connected thereto. Ordinarily in books of this class the back-sections carry sheet-retaining devices in the form of oppositely-disposed prongs which normally—that is, when the back-sections are locked together—coöperate in pairs by entering perforations in the sheets, and thereby secure the same in position between the covers.

The present invention is designed specifically to produce a novel and improved form of locking device for the back-sections, the object being to simplify the construction of such a device and increase its effectiveness in operation.

A further object is to embody the invention in such form that it may be readily and conveniently applied to any loose-leaf book of the class having a split or divided back without requiring either alteration or rearrangement in the general construction and which, furthermore, in addition to being entirely independent of the form, &c., of the sheet-retaining prongs will at the same time permit the hinged back-sections to fold freely without interference or being otherwise limited in adjustment.

The invention in its preferred form is illustrated in the accompanying sheet of drawings, throughout the several views of which like numerals of reference indicate corresponding parts.

In the drawings, Figure 1 is a view in plan of a loose-leaf book open as in ordinary use, a portion of the sheets or leaves being broken away to show the device by which the hinged back-sections are locked together. Fig. 2 is a detail view showing the members of the locking device in engagement. Fig. 3 is a similar view showing them disengaged, and Fig. 4 is a view showing the hinged back-sections adjusted to permit the insertion or removal of one or more sheets or leaves.

Referring now to the drawings, 1 1 represent the back-sections of the book, which are hinged together, as indicated at 2 2, and provided with coöperating pairs of sheet-engaging prongs 3 3. Covers 4 4, forming continuations of the upturned portions of the back-sections, are flexibly secured thereto in the usual manner to permit the book to be opened and closed as in ordinary use when the back-sections are locked together.

The construction as above described forms no part of the present invention and is employed merely for the purpose of completing an operative illustration. It will therefore be understood that I do not wish to limit myself to the particular form of split or divided back book shown, as other forms may be used, if desired.

The present invention consists, essentially, in a device for detachably locking the hinged sections of the back together, and in its preferred form comprises a screw-shaft 5, swiveled in fixed bearings 6 6, and engaging members 7 and 8, mounted upon the back-sections and so relatively disposed as to interlock on rotation of the shaft in one direction and become disengaged when the rotation of the shaft is reversed. The members 7 of the locking device are fixed to one of the back-sections and are provided with one or more engaging projections, which are shown as approximately V-shaped teeth or lugs 9; but the form thereof may be varied, if desired. The members 8 coöperating therewith are movably mounted upon the other back-section by being slotted to receive headed screws or studs 10, by which they are guided and their movement limited. These members are provided with one or more notches 11, shaped to coact with the engaging teeth or projections of the members 7. The screw-shaft is threaded through the members 8, and as the shaft is swiveled in fixed bearings it serves when ro-

tated to adjust the notched members into locking relation with the toothed members, as shown in Figs. 1 and 2, and upon reversing the rotation to disengage the same, as in Fig. 3.

Two complete locking devices are shown in connection with the loose-leaf book illustrated in the drawings; but obviously this number may be increased, if desired, and all operated simultaneously by means of a single screw-shaft in the manner described.

The relative arrangement of the members of the locking devices as illustrated is such as to require movement of the notched members in opposite directions to effect an engagement, and in consequence the screw-shaft must therefore be provided with right and left threads. It will be apparent, however, that by suitably rearranging these members a screw-shaft having either right or left threads may be employed.

In order to prevent the locking devices from being operated by unauthorized persons, I shape the ends of the screw-shaft to be engaged by a suitable key.

The operation and advantages will be apparent from the foregoing description, and I shall therefore describe the same briefly. When it is desired to insert or remove one or more leaves or sheets, the book is opened at the point where such removal or insertion is to be made, and after fitting the key to either end of the screw-shaft the latter is rotated by giving the key a turn, which results in disengaging the locking members in the manner above described, and the hinged sections may then be folded back to back to separate the sheet-engaging prongs, as shown in Fig. 4. After the removal or insertion of sheets has been effected the book is closed in the usual manner to readjust the back-sections, and by turning the key in the opposite direction the rotation of the shaft will be reversed and the members caused to reëngage and interlock.

I do not wish to be understood as limiting myself to the exact details of construction of the locking device herein shown and described, as various changes may be made without departing from the spirit and scope of my invention.

Having therefore described my invention, I claim—

1. In a temporary binder, the combination of the hinge-connected back-sections and a locking device therefor, comprising fixed and movable engaging members and a screw-shaft for adjusting the members.

2. In a temporary binder, the combination of the hinge-connected back-sections and a locking device therefor, comprising fixed and movable engaging members, the fixed members being mounted on one back-section, a screw-shaft carrying the movable members mounted on the other back-section, and means for rotating the shaft to adjust the movable members relatively to the fixed members.

3. In a temporary binder, the combination of the hinge-connected back-sections and a locking device therefor, comprising fixed and movable engaging members, the fixed members being mounted on one back-section and the movable members on the other back-section and a screw-shaft threaded through the movable members for adjusting the same relatively to the fixed members.

4. In a temporary binder, the combination of the hinge-connected back-sections and a locking device therefor, comprising fixed and movable engaging members, the fixed members being mounted on one back-section and the movable members on the other back-section and a shaft swiveled in fixed bearings and threaded through the movable members, the threads on the shaft being right and left to adjust the members in opposite directions.

Signed at New York, N. Y., this 21st day of May, 1903.

GEORGE H. GRESHAM.

Witnesses:
J. E. Pearson,
W. H. Pumphrey.