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C. D. RUBEL.

BINDER.

APPLICATION FILED MAR. 28, 1906.

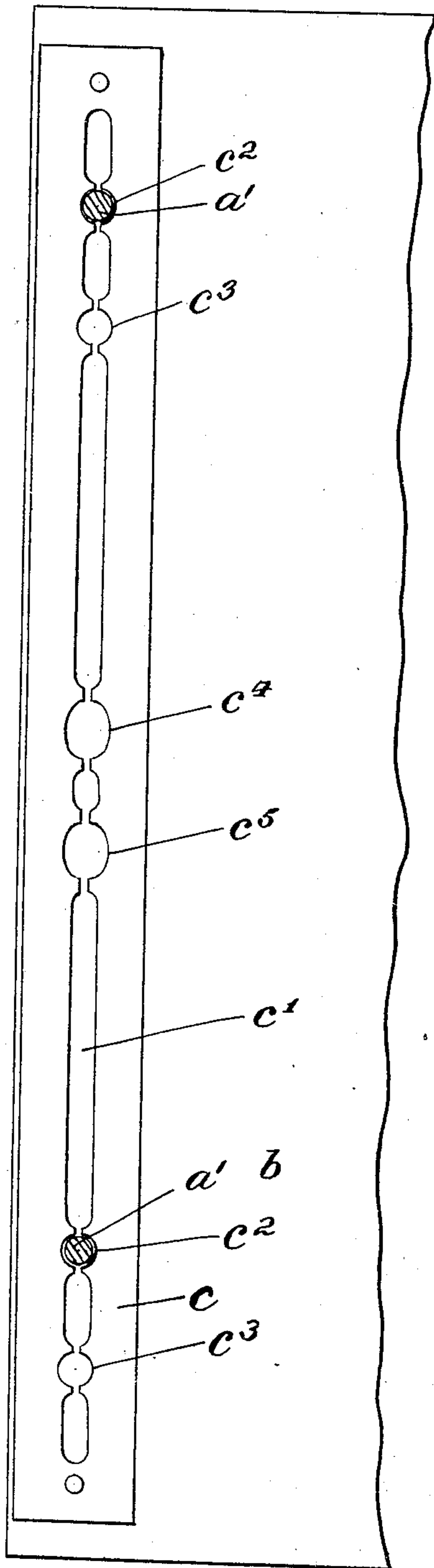


Fig. 1.

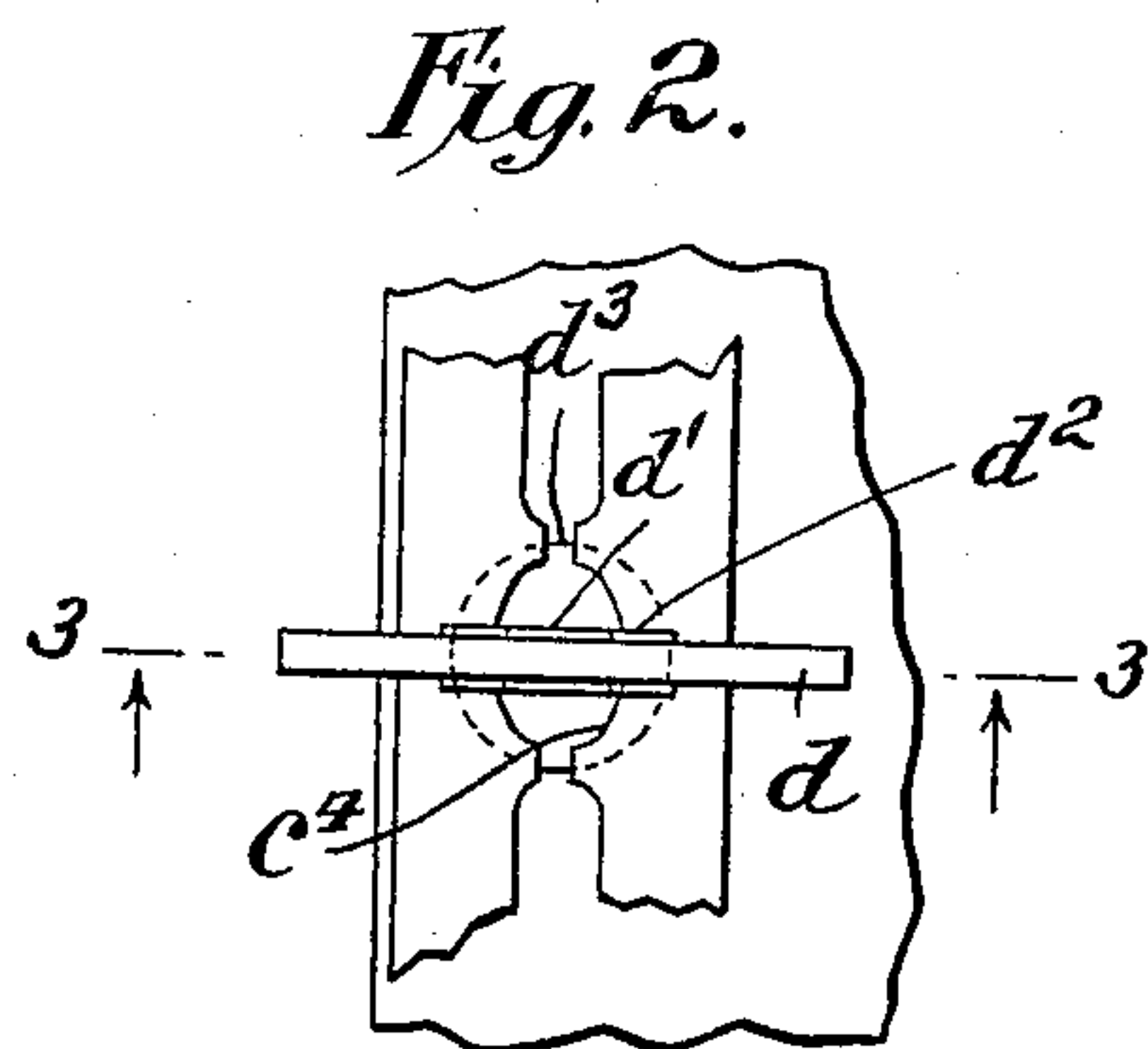


Fig. 3.

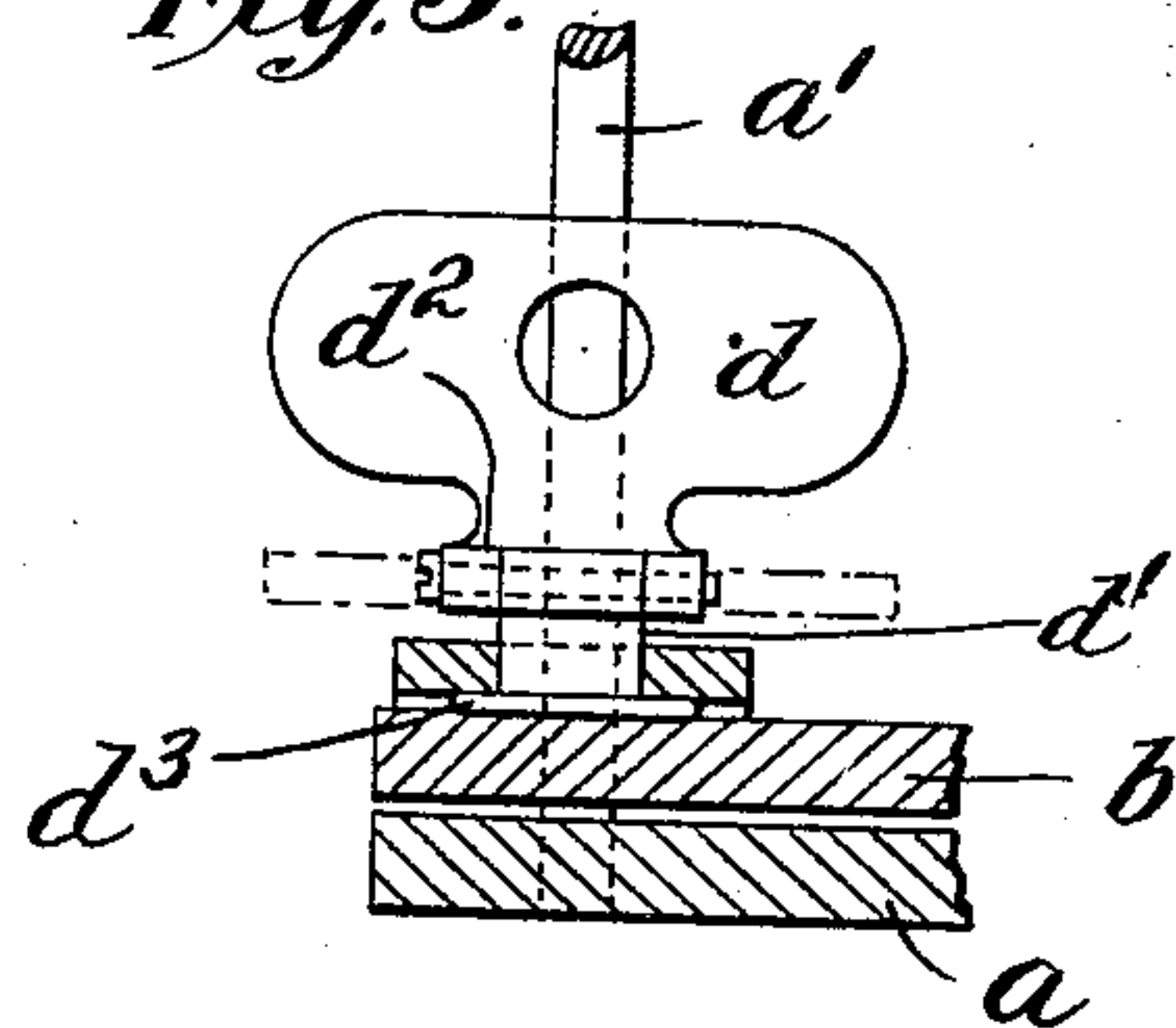
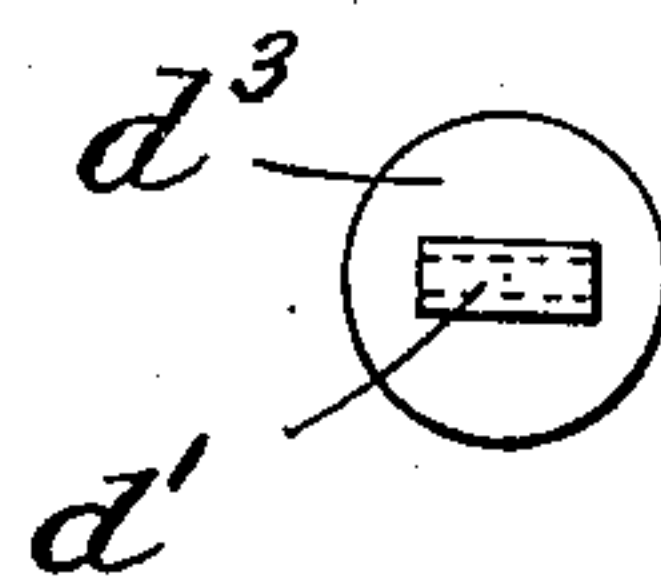


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## BINDER.

No. 835,257.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed March 28, 1906. Serial No. 308,427.

*To all whom it may concern:*

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

This invention relates to binders for loose sheets wherein one cover is provided near its rear edge with two upstanding posts and a separate cover is provided with holes adapted to fit over said posts and is removably held thereon by a tensional plate, said covers inclosing between them loose sheets that have been speared upon the posts.

In the drawings accompanying this application, Figure 1 is a plan view of my improved binder, partly broken away. Fig. 2 is a partial plan view of my improved binder, enlarged, showing a permanent key therein adapted to spread the tensional plate or strip. Fig. 3 is a section on the line 3 3 of Fig. 2. Fig. 4 is a plan view of the lower portion of a hinged key.

The binder which is the subject of my improvements is composed of the back-cover member *a* and front-cover member *b*. Attached to the back-cover member *a* and upstanding therefrom are the posts *a'* *a'*, they being spaced apart near the rear edge of said back cover. The front cover *b* is provided with holes near its rear edge adapted to fit slidably over the posts *a'* *a'*, whereby said front cover is located above said back cover and is rendered adjustable as to its height thereabove, according to the bulk of the pile of loose sheets contained between said covers.

Attached to the front cover *b* and extending along its rear edge is a strip of spring metal *c*, which is provided with a continuous longitudinal slot *c'*. Said slot has the two pairs of circular enlargements *c<sup>2</sup> c<sup>2</sup>* and *c<sup>3</sup> c<sup>3</sup>*, spaced, respectively, to pass over the posts *a'* *a'*, but said circular enlargements being of slightly less diameter than that of the posts, whereby when fitted thereover by spreading the slot *c'* the posts become tightly gripped within said enlargements with the subsequent contraction of the slot.

The purpose of providing the two pairs of enlargements *c<sup>2</sup> c<sup>2</sup>* and *c<sup>3</sup> c<sup>3</sup>* is because continuous usage of these devices will by frictional wear between them and the posts *a'* *a'* after a lapse of time increase the diameter of the enlargements to such an extent as to affect

their ability to tensionally hold the cover *b* securely upon the posts. By this improvement, however, it will be readily seen that when one pair of enlargements become so worn the posts may be transferred to the other pair. The life of the binder is thus doubled in this respect. In order to spread the slot *c'* for the purpose aforesaid, I provide a key entered in the slot in a keyway *c<sup>4</sup>* therein. Said keyway comprises an oval enlargement in the slot situated centrally between the tensional enlargements *c<sup>2</sup> c<sup>2</sup>*, and a similar keyway *c<sup>5</sup>* is provided between the tensional enlargements *c<sup>3</sup> c<sup>3</sup>*.

The key is composed of two parts *d d'*, hinged together, as at *d<sup>2</sup>*, whereby the handle part *d* may lie flat upon the binder when not being handled. The lower or operative part *d'* of the key, which is entered in keyway *c<sup>4</sup>* or *c<sup>5</sup>*, may have a base-plate *d*, of greater area than the keyway and lying between the strip *c* and cover *b* to thereby engage the key permanently with the binder by preventing its withdrawal, or other means of engagement may be employed. The width of key part *d'* is slightly greater than the width of the oval enlargement *c<sup>4</sup>* or *c<sup>5</sup>*, though less than the oval length. Hence under normal conditions, with the tensional enlargements *c<sup>2</sup> c<sup>2</sup>* or *c<sup>3</sup> c<sup>3</sup>* gripping the posts *a'* *a'*, the key is turned to lie longitudinally within the oval keyway; but when desired to spread the slot to release the posts then the key is turned to a transverse position in the oval keyway, in which act the slot *c'* is spread open sufficiently to release the tensional grip of enlargements *c<sup>2</sup> c<sup>2</sup>* or *c<sup>3</sup> c<sup>3</sup>* upon the posts, enabling the cover *b* to be removed therefrom and replaced thereon.

The degree to which the slot *c'* may be spread is necessarily slight to avoid weakening its tension. Hence as these binders are made in different sizes, employing strips *c* of varying lengths, whose slots *c'* vary correspondingly, keys of different sizes are required to spread them to release the posts.

In Figs. 2 and 3 a key is shown as turned transversely within the slot to spread the latter.

I claim—

1. In a binder, a back cover having two upstanding posts, a front cover having holes to pass over said posts, a spring-strip secured to said cover and having a longitudinal slot, a pair of post-gripping enlargements in said slot, a keyway centrally disposed between said pair of post-gripping enlargements, and a

hinged key adapted to be located and positively retained in said keyway.

2. In a binder, a back cover having two upstanding posts, a front cover having holes  
5 to pass over said posts, a spring-strip secured to said front cover and having a longitudinal slot, two, interchangeable pairs of post-gripping enlargements in said slot, a keyway centrally disposed between each pair of post-

gripping enlargements, and a hinged key adapted to be located and positively retained in either keyway.

Signed at New York this 27th day of March, 1906.

CHARLES D. RUBEL.

Witnesses:

F. W. BARKER,  
FREDERICK C. BONNY.