J. GRAVES.
LOOSE LEAF LEDGER BINDER.
APPLICATION FILED NOV. 18, 1904.

INVENTOR
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BY Cunningham & Thompson
ATTORNEY.
To all whom it may concern:

Be it known that I, John Graves, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Loose-Leaf-Ledger Binders; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in loose-leaf-ledger binders; and it consists of certain peculiarities of construction and combination of parts hereinafter set forth and subsequently claimed.

One of the essential features of my invention consists of a binder that may be locked, if desired, or left with a free motion to be readily adjusted manually at the will of the operator.

Another essential feature of my device is that by mechanical means the binder may be closed with a vise-like clasp upon the leaves of the binder, the leverage being so great that the leaves may be held in this manner without any other fastenings.

Another essential feature of my invention consists of equalizers placed at each end of the binder to cause it to open and close freely and without binding at the ends.

Referring to the drawings, Figure 1 is a top view. Fig. 2 is a side sectional view of the operating mechanism with parts attached. Fig. 3 is a cross-sectional view on lines X X of Fig. 4, and Fig. 4 is a top view of the operating mechanism of my device.

Referring by letters to the figures, A is a casing constructed of iron or other suitable material and having ends e, said casing being adapted to telescope an opposing casing B, the latter having similar ends b. Permanently secured to the inner face of casings A and B are opposing frames D. Permanently secured to frames D are two longitudinal strips C. Also secured to frames D are alternating posts E and F, the latter being smaller in diameter and adapted to telescope the former, which is in the form of a tube. Extending longitudinally of said binder is a bar G, which is pivotally attached to straps H through fastenings I and J, thus forming an equalizer to the covers or casings of the binder. Pivotally attached to bar G is an arm K, the latter having its free end pivotally attached to a rod N. Rod N is provided with bearings in a block P and adapted to have a longitudinal motion.

Ratchet-teeth O are provided in the side of rod N for engagement with a point S' of dog S, the latter having an opposing point t and being pivotally secured to a sliding member R by means of a pin T. Secured to sliding member R is a spring U, which exerts pressure on dog S, normally holding point S' in contact with teeth O.

The opposing end of sliding member R is provided with threads for engagement with a threaded shaft Q, by means of which the former may be reciprocated longitudinally of the binder. Said shaft is provided with bearings in block P at one end and bearings in block P' at the opposing end, extending through the latter and being provided at said end with suitable lugs W for engagement with a key V, used in operating my device. In block P, I provide a cut-out portion t', which is always in the line of travel of point t and which serves to trip the dog S when coming in contact with said point.

The operation of my device is as follows, to wit: When desiring to insert or extract a leaf from the ledger, turn the key V to the left, thus revolving shaft Q and forcing sliding member R in direction of block P, bringing point t in contact with cut-out portion t', releasing dog S, and permitting casings A and B to be actuated laterally at will. The ledger is now in such condition that leaves may be added or abstracted therefrom at will. When it is desired to close the ledger mechanically or to close the same more firmly than could be done manually, turn the key V to the right, which will cause sliding member R to retrace its course, release dog S from cut-out portion t', and cause point S' to contact with teeth O, holding rod N securely, actuating the latter longitudinally, together with arm K, bar G, and straps H, thus closing the ledger.

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

1. In a loose-leaf-ledger binder, having telescoping casings and posts, equalizers to govern the lateral movement of the former, a rod pivotally connected to said equalizers, and having ratchet-teeth, a threaded shaft, a sliding member for engagement with the latter and carrying a dog which engages with said ratchet-teeth, and means for tripping said dog.

2. In combination a loose-leaf-ledger binder having telescoping casings and posts,
equalizers that govern the lateral movement of the former, a shaft, a rod, and having ratchet-teeth and means for actuating said equalizers through said rod, a sliding member coacting with said shaft and carrying a dog which engages with said ratchet-teeth and means for tripping the latter.

3. In a loose-leaf-ledger binder the combination with casings movable toward and from each other, of equalizers attached to the latter and a ratchet engagement between the casings coacting with said equalizers, the said ratchet engagement including a threaded shaft member, the said threaded shaft member adapted to give lateral movement to the casings.

4. In a loose-leaf-ledger binder, casings actuated laterally, equalizers, a bar pivotally attached to the latter, an arm for engagement with said bar, a ratchet engagement between said casings coacting with said arm, the said ratchet engagement including a threaded shaft, the latter adapted to actuate said casings.

5. In a loose-leaf ledger, the combination of casings movable toward and from each other, equalizers engaging said casings, an arm actuating said equalizers, a rod, and having ratchet-teeth, a movable member and carrying a dog which engages with said ratchet-teeth, a threaded shaft coacting with said movable member and means for releasing said dog from engagement with said rod whereby said casings may be moved independently of said threaded shaft.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JOHN GRAVES.

Witnesses:
LIVINGSTON A. THOMPSON,
JOSEPH G. HIRSCHBERG.