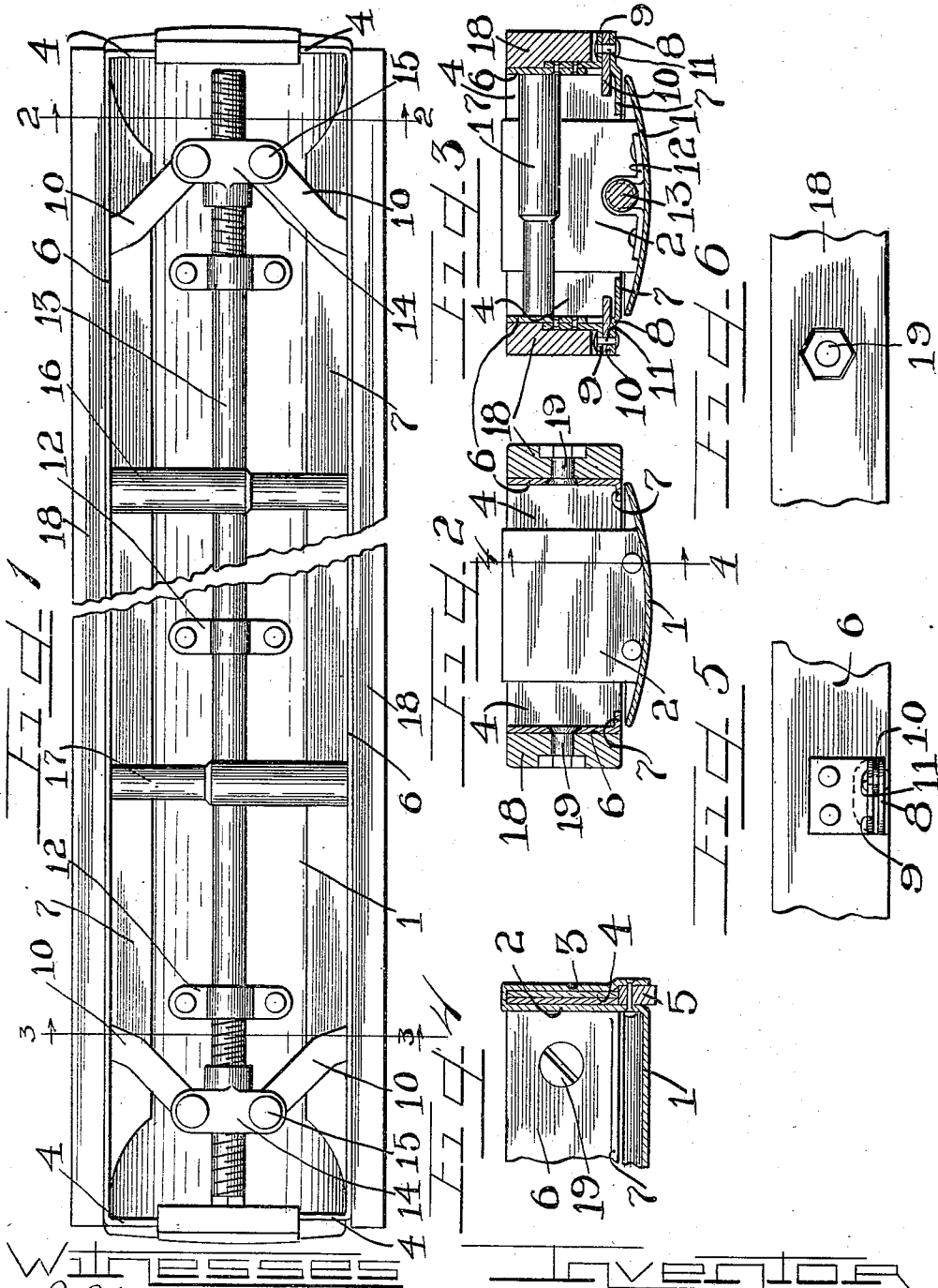


R. B. WILSON.
 LOOSE LEAF LEDGER.
 APPLICATION FILED OCT. 11, 1909.

992,318.

Patented May 16, 1911.



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RALPH B. WILSON, OF CHICAGO, ILLINOIS.

LOOSE-LEAF LEDGER.

992,318.

Specification of Letters Patent.

Patented May 16, 1911.

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To all whom it may concern:

Be it known that I, RALPH B. WILSON, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Loose-Leaf Ledgers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numbers of reference marked thereon, which form a part of this specification.

This invention relates to improvements in that class of ledger backs set forth in my prior patent for "loose leaf ledgers", No. 847,628, issued March 19, 1907, known as a three piece back binder.

It has been a frequent practice heretofore to cast the binding plates and outer back sections integrally of aluminum or other suitable metal and to also cast the intermediate back section of suitable metal. This aside from the expense, has proven unsatisfactory owing to the very considerable unnecessary weight necessitated thereby and also for the reason that a greater thickness of parts is necessary to enable sufficient strength to be secured. As heretofore constructed also, the toggle bars or levers have been pivotally connected at the inner side of the binding plates on the inner face of the back flange and in consequence to afford the necessary movement, they have been unnecessarily wide and the point of pivotal connection with the side members has of necessity been undesirably weak resulting in the binder soon getting out of order and in some instances, resulting in the breakage of the pivotal connection of the levers away from the back section.

The object of this invention is to afford an exceedingly light but exceedingly strong reinforced pressed steel ledger back in which a comparatively thin gage of pressed steel is utilized to afford the binding plates and back sections, but in which an exceedingly strong connection is afforded for the outer ends of the toggle levers, thereby permitting the same to be operatively connected with the binding plates in a manner to afford uniformity of draft and maximum strength.

It is also an object of the invention to afford in connection with light pressed steel binding plates and the back section integral therewith, a reinforcing strip of wood or

other suitable material rigidly bolted to the binding plate and affording means for connecting a cover thereto while strengthening the same.

It is also an object of the invention to provide in a device of the class described the greatest possible range of adjustment of the parts with a relatively slight movement of the adjusting means.

The invention consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is an inner face view of a device embodying my invention with the covers detached. Fig. 2 is a section taken on line 2—2 of Fig. 1. Fig. 3 is a section taken on line 3—3 of Fig. 1. Fig. 4 is a section taken on line 4—4 of Fig. 2. Fig. 5 is a fragmentary outer face view of the binding plate at the toggle joint and with the reinforcing strip removed. Fig. 6 is a fragmentary detail in side elevation illustrating the connection of the reinforcing strip with the binding plate.

As shown in the drawings: The back member 1, is of pressed steel stamped or shaped to afford the usual convex exterior and is struck upwardly at each end to afford an integral inner end plate 2, and thence bent downwardly to afford the outer end plate 3, integral therewith and between which the end flanges 4, of the side clamping plates slide. As shown, a spacing bar 5, is riveted at the end of said back section between the inner and outer end plates 2 and 3, as shown in Fig. 4, and as shown also, said end plates are materially narrower than the width of said back section to permit maximum inward adjustment of the clamping plates. Said lateral clamping plates 6, comprise each a thin sheet or plate of steel stamped or pressed to afford parallel clamping plates on opposite sides of the binder and inwardly directed back flanges 7, which afford when the binder is expanded a part of the closed back of the book in a familiar manner. Integrally connected with said clamping plates and back sections at each end thereof, are the end plates 4, before mentioned, slidable in the seat therefor at the end of the central back plate 1, afforded between the plates 2 and 3, and the spacing bar 5. Said end plates or flanges 4, are of a length each to abut against the opposite clamping plate or to approximately reach the same

light gage pressed steel clamping plate, an integral back section thereon projecting inwardly, end guide plates integral with each clamping plate and directed inwardly at a right angle therewith, outwardly struck lugs near each end of each clamping plate affording an aperture above the same, a complementary lug riveted on said clamping plate, a toggle lever projected through said aperture, and a pivot pin engaging therethrough and through said lugs.

5. In a pressed steel binder back the combination with a pressed steel clamping plate and an integral inwardly directed back flange, of complementary outwardly directed lugs adapted to receive and pivotally engage the toggle levers therebetween, and a reinforcing strip of wood rigidly but removably secured on the outer side of said clamping plate.

6. In a device of the class described the combination with a pressed steel clamping plate and integral back thereof, of an aperture extending through said clamping plate near each end thereof, a toggle lever projected through said aperture, complementary lugs secured on the clamping plate above and below said aperture and adapted to receive the end of the toggle lever therebetween, a pivot pin projecting through said lugs and said toggle lever, and a reinforcing

bar bolted on the outer side of said clamping plate covering said joints.

7. In a device of the class described a pressed metal back plate, pressed metal clamping plates having apertures therein, a shaft having oppositely directed threads at its ends, carriages adjustable on the shaft, levers pivoted to the carriages extending through the apertures in the clamping plates, means secured to the outer side of the clamping plates adapted to pivotally engage the outer end of each lever and a reinforcing bar rigidly but removably secured to the outer side of each clamping plate.

8. A loose leaf ledger comprising a pressed steel back and clamping sections, reinforcing wood strips for the clamping sections and actuating levers pivotally connected with the clamping sections and one of the ends thereof extending outwardly beyond the inner faces of said clamping sections.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

RALPH B. WILSON.

Witnesses:

LAWRENCE REIBSTEIN,
K. E. HANNAH.