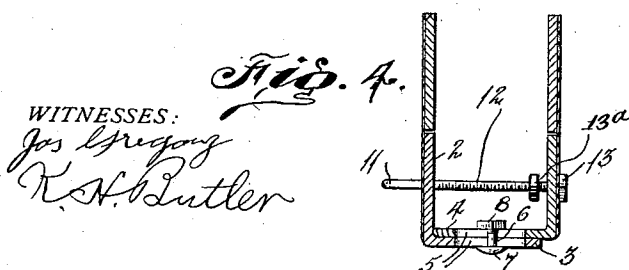
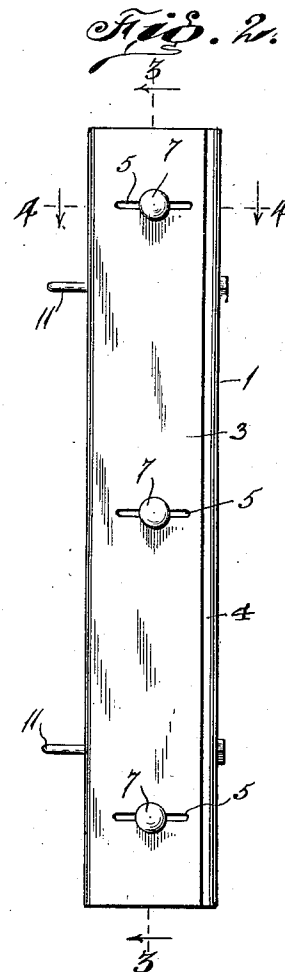
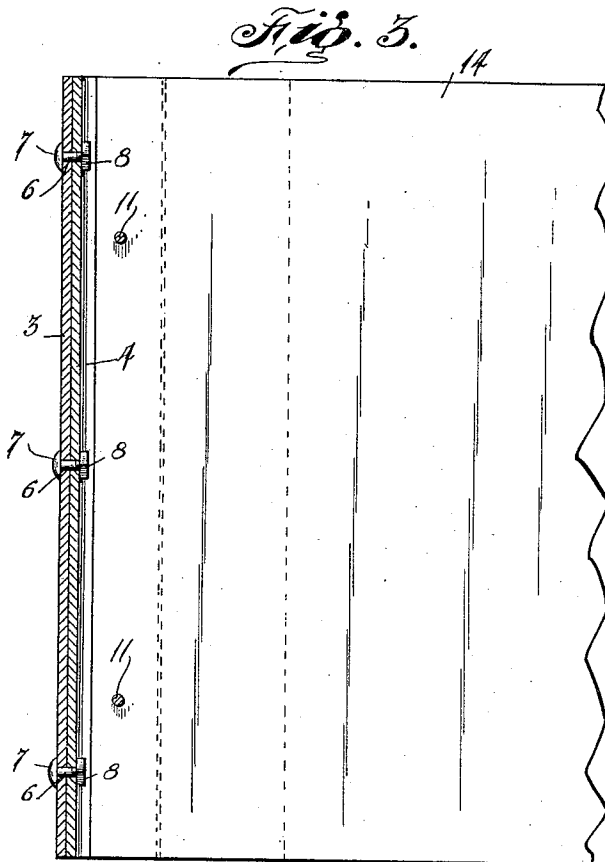
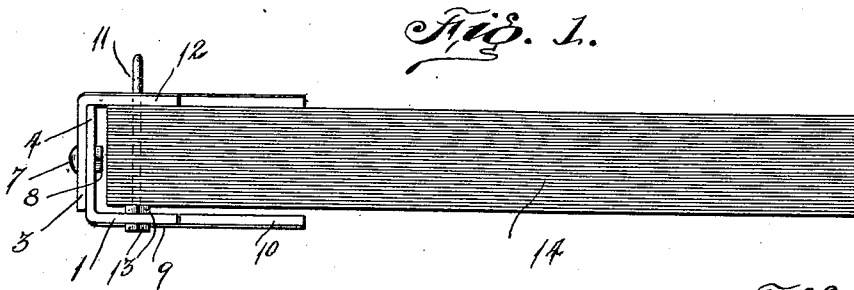


J. LOTH.  
 LOOSE LEAF BINDER.  
 APPLICATION FILED MAY 6, 1911.

1,011,827.

Patented Dec. 12, 1911.



WITNESSES:  
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*R. H. Butler*

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 ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN LOTH, OF HIBBING, MINNESOTA.

## LOOSE-LEAF BINDER.

1,011,827.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed May 5, 1911. Serial No. 625,146.

*To all whom it may concern:*

Be it known that I, JOHN LOTH, a subject of the King of Hungary, residing at Hibbing, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a loose leaf binder, and the objects of my invention are to provide a binder for temporarily holding sheets or pages whereby they can be conveniently used, and to provide an adjustable binder consisting of comparatively few parts, inexpensive to manufacture and easy to assemble.

20 With the above and other objects in view the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

25 Reference will now be had to the drawing wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements are susceptible to such variations as fall within the scope of the appended claims.

30 In the drawing:—Figure 1 is an end view of the binder. Fig. 2 is a rear elevation of the same. Fig. 3 is a longitudinal sectional view of the binder taken on the line III—III of Fig. 2, and Fig. 4 is a cross sectional view taken on the line IV—IV of Fig. 2.

35 A binder in accordance with this invention comprises an angle bar 1 and an angle bar 2, said bars being of an equal length, with the bar 2 inverted relatively to the bar 1, whereby the vertical flange 3 of the bar 2 will engage the outer side of the vertical flange 4 of the bar 1. The vertical flanges 3 and 4 of the bars 2 and 1 respectively have vertical registering slots 5. Loosely extending through the slots 5 are the shanks 45 of bolts 6 having heads 7 engaging the outer side of the flange 3. The threaded ends of the bolts are provided with nuts 8, said nuts being so adjusted upon the bolts, prior to the positioning of a leaf, that the angle bar 2 can be shifted vertically to the angle bar 1 when occasion so requires. It is preferable to use three bolts and to arrange two of said bolts adjacent to the ends of the bars and the third bolt intermediate the 50 ends thereof.

Suitably secured to the outer sides of the

bars 1 and 2 are strips of flexible material 9, as leather, said strips extending beyond the longitudinal edges of the bars and having the inner sides thereof provided with plates 60 of card board 10. It is preferable to use an adhesive material, as glue, to secure the strips of leather 9 to the bars 1 and 2 and the plates 10.

The bar 1 is provided with headed vertical pins 11 extending through openings provided therefor in the bar 2. The lower ends of the pins are fixed in the bar 1. The pins above the bar 1 are screw-threaded, as at 12 for the reception of adjustable nuts 13<sup>a</sup>. The pins 11 are positioned in such proximity to the ends of the bars, so that the nuts 13<sup>a</sup> can be vertically adjusted when occasion so requires. By raising the bar 2 perforated sheets or pages 14 can be placed 75 upon the pins 11 and temporarily held between the bars 1 and 2. When a smaller quantity of paper is to be held, than that shown in Fig. 1, the nuts 13<sup>a</sup> can be adjusted by a suitable tool toward the bar 2 to support the inner edges of the sheets or pages.

The hinged plates 10 are adapted to swing relatively to the bars 1 and 2 when the pages or sheets 14 are raised or swung back for 85 observation purposes.

I attach considerable importance to the simplicity of construction and the fact that the pages or sheets can be easily and quickly removed from the binder. 90

To make the binder permanent, the upper ends of the pins 11 can be cut off and the nuts 8 adjusted to positively lock one bar relatively to the other.

What I claim is:— 95

1. A loose leaf binder comprising longitudinal angle bars with one of said bars inverted and the vertical flanges of said bars slidably connected together to enable the vertical moving of one bar with respect to 100 the other, pins having their lower portions fixedly secured to one of said bars and extending upwardly through the other of said bars, and nuts adjustably mounted upon said pins between said bars, substantially as 105 described.

2. A loose leaf binder comprising angle bars slidably connected together to permit of the vertical adjusting of one bar with respect to the other, pins having the lower 110 portions fixedly secured to one of said bars and extending through the other of said

bars, nuts adjustably mounted upon the portions of said pins next above said lower bar, strips of flexible material carried by the outer sides of said bars, and plates hinged  
5 to said bars by said strips of flexible material, substantially as described.

3. A loose leaf binder comprising a pair of superposed angle bars, one inverted with respect to the other, said inverted bar having  
10 its vertical flange positioned parallel with the vertical flange of the other bar, said flanges formed with alining slots, bolts extending through said opening and loosely connecting the bars together, said slots of a

length to permit of vertically adjusting the 15 inverted bar with respect to the other bar, pins having their lower portions fixedly secured to the lower of said bars, and their upper portions extending through the upper of said bars and nuts mounted upon said 20 pins and arranged between the bars.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN LOTH.

Witnesses:

ROBERT STRATTON,  
MORITZ KELLER.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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