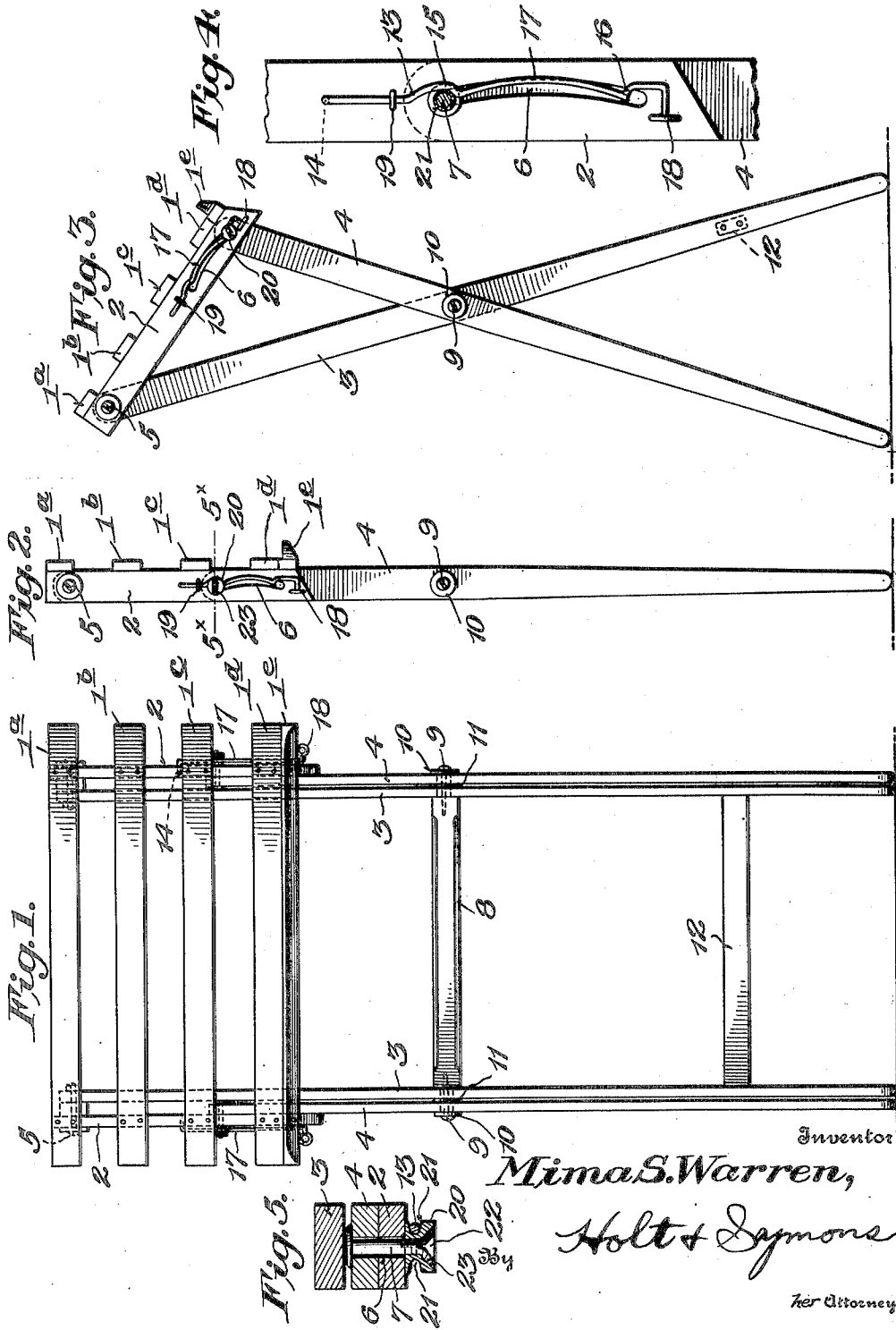


M. S. WARREN.
FOLDING STAND.
APPLICATION FILED SEPT. 4, 1917.

1,291,304.

Patented Jan. 14, 1919.



Mima S. Warren,

Holt & Symons

Her Attorneys

UNITED STATES PATENT OFFICE.

MIMA S. WARREN, OF WAGNER, SOUTH DAKOTA.

FOLDING STAND.

1,291,304.

Specification of Letters Patent.

Patented Jan. 14, 1919.

Application filed September 4, 1917. Serial No. 189,541.

To all whom it may concern:

Be it known that I, MIMA S. WARREN, a citizen of the United States, residing at Wagner, in the county of Charles Mix and State of South Dakota, have invented certain new and useful Improvements in Folding Stands, of which the following is a specification.

This invention relates to improvements in folding stands.

The object of this invention is to provide a simple, inexpensive and easily operated folding stand for holding books, albums and other articles, and which can be readily secured in open and in closed position.

A further object of the invention is the provision of means for automatically locking the stand in closed and in open position.

With these and other objects in view, the invention consists, in one form, of the arrangement and combination of parts herein described, the novel features being particularly pointed out in the claims.

In the accompanying drawings, in which similar reference numerals designate corresponding parts,

Figure 1 is a front view of my stand folded;

Fig. 2, a side elevation thereof;

Fig. 3, a side elevation of the stand in open position;

Fig. 4, a fragmentary side view of one of the side pieces with the locking projection in section, and

Fig. 5, a horizontal section on line 5*-5* of Fig. 2.

My improved folding stand comprises, in the form shown in the accompanying drawings, among other parts, a top composed of pieces 1^a, 1^b, 1^c, 1^d and 1^e spaced apart and secured to two side pieces 2 in any suitable manner. The piece 1^e forms an upstanding ledge or stop to prevent articles from sliding off the top when the latter is in an inclined position.

The top of the stand is supported upon two pairs of crossed legs 3-4, 3-4. Legs 3 are pivotally attached at their upper ends, as by bolts 5, to the side pieces 2 rearwardly thereof, while the legs 4 are attached at their upper ends to the side pieces 2 for movement longitudinally thereof, and for which latter purpose each member 2 is provided with a slot 6 struck on the arc of a circle and

through which slots pass respectively bolts 7 which are carried by the upper ends of the legs 4.

The legs of the respective pairs are pivoted upon opposite reduced ends of a cross piece 8 and are held thereon by screws 9 and washers 10. Washers 11 are inserted between the legs of the respective pairs to prevent them from binding. Although the distance from the cross piece 8 to the lower ends of all the legs is the same, legs 4 are shorter above said cross piece than are legs 3 in order to support the top in an inclined position when the stand is open. Legs 3 are rigidly connected near their lower ends by a cross brace 12.

The means for automatically locking the stand in either an open or a closed position comprises, among other parts, two members 13 consisting each, in the case shown, of a piece of spring wire bent at right angles at one end to form a prong 14, laterally offset to form shoulders 15 and 16 and bowed between said shoulders as at 17. At its end adjacent the shoulders 16, each of these members is bent at right angles and there provided with a thumb piece 18. The prongs 14 of these locking members are driven into the outer faces of side pieces 2 and are further rigidly attached thereto by staples 19. These locking members are so located that shoulders 15 and 16 thereof occupy positions a short distance inward from the opposite ends of slots 6.

Each bolt 7 is provided with a nut 20 having a groove 21 in its periphery, and in which groove rests, respectively, the spring locking members 13. Nuts 20 are dished, as at 22, and their respective bolts 7 are split, as at 23, to lock the bolts on the nuts.

With the construction shown and described, when the stand is folded, as shown in Fig. 2, bolts 7 occupy a position at the upper ends of slots 6 and nuts 20 behind shoulders 15, thus holding the stand closed. When it is desired to open the stand, pressure on thumb pieces 18 transversely of side pieces 2 will remove shoulders 15 from locking relation with nuts 20, whereupon the stand may be opened.

In the open position of the stand, as shown in Fig. 3, nuts 20 occupy positions behind shoulders 16 which prevent the folding of the stand unless unlocked by the

operation of members 13 so as to release shoulders 16 from locking relation with the nuts 20.

The members 13 are so disposed as to bear continuously against nuts 20 so that the locking action at the opposite ends of slots 16 occurs automatically.

Having thus described one specific embodiment of my invention, it should be understood that the same may be varied without departing from the spirit thereof.

Without limiting my invention to the specific embodiment thereof here illustrated, what I claim is:—

1. In a folding stand, the combination with a top, of supports pivoted thereto, a side of said top having a slot therein, a resilient member attached to said side and extending longitudinally of said slot, said resilient member having shoulders thereon adjacent to and facing the respective ends of said slot, a pivot for one of said supports extending through said slot and adapted to be locked by either of said shoulders.

2. A folding stand comprising a top, a side of said top having a slot therein, a pair of folding legs pivotally attached to said top, another pair of folding legs pivotally and slidably attached to said top, said pivotally and slidably attaching means having a head slidable in said slot, a resilient member attached to said side and having shoulders thereon coacting with the ends of said slot to lock the stand in open and in closed positions.

3. In a folding stand, a top having a side provided with a slot, a pair of folding legs pivotally attached to said top, another pair of folding legs pivotally and slidably attached to said top, said pivotally and slidably attaching means comprising a bolt secured to one of said legs and arranged to pass through the slot, and a spring secured to the said side adjacent to the said slot, said spring having a shoulder at one end of the slot adapted to engage the bolt to hold the stand in closed position and having a shoulder at the other end of the slot adapted to engage the bolt to hold the stand in open position.

4. In a folding stand, a top, a side of the top having an arc-shaped slot, a pair of folding legs pivotally attached to said top, another pair of folding legs pivotally and slidably attached to said top, said pivotally and slidably attaching means comprising a bolt arranged to extend through said arc shaped slot, a spring secured to said side at one end and being provided with shoulders near the ends of said slot, one of said shoulders being arranged to engage said bolt for holding the stand in closed position and the other of said shoulders being arranged to engage the bolt to hold the stand in open position and a thumb piece secured to the free end of said spring, whereby the spring may be moved to release the bolt from either shoulder.

In testimony whereof I affix my signature.
MIMA S. WARREN.