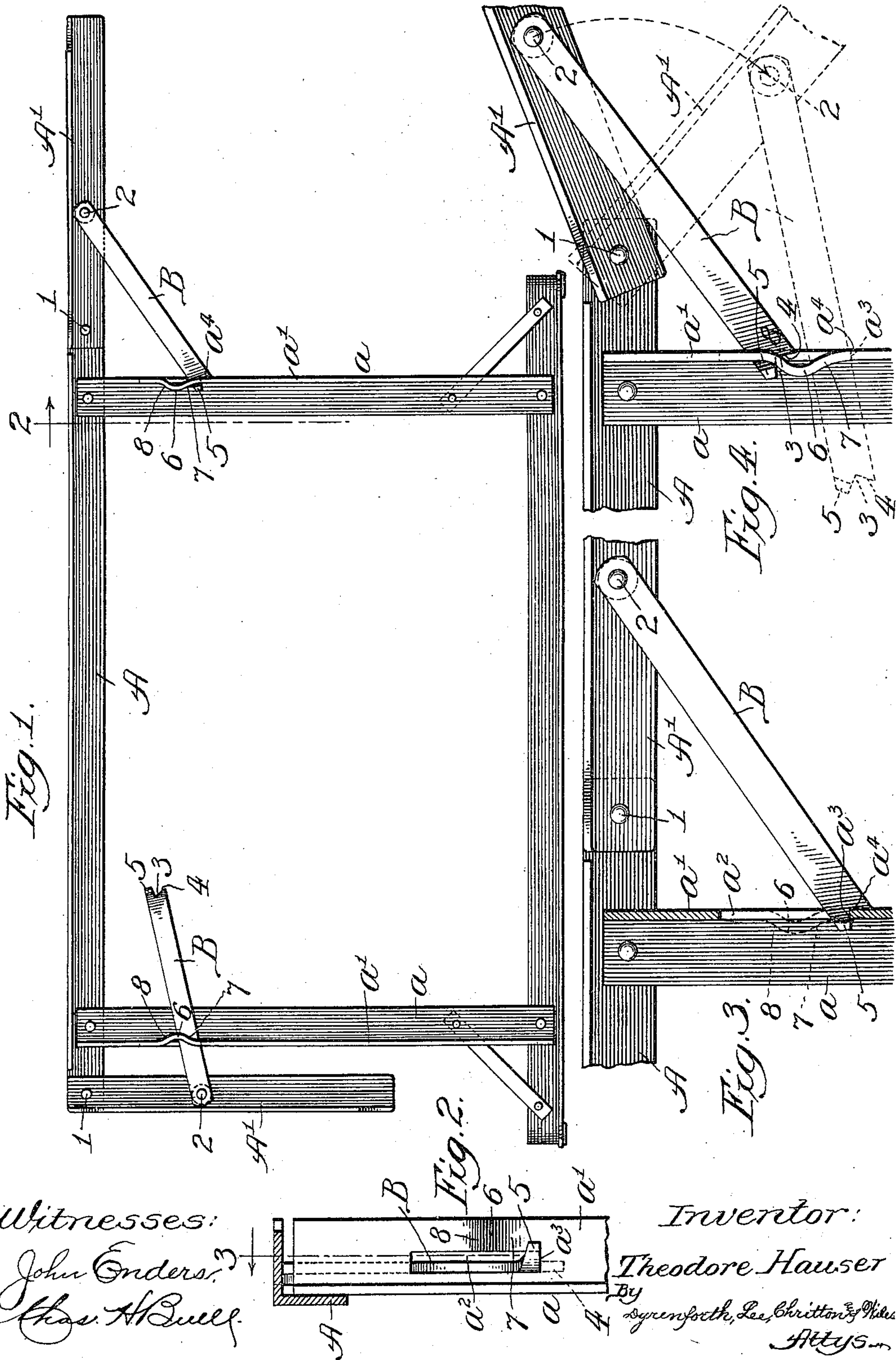


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LEAF SUPPORT.

APPLICATION FILED AUG. 13, 1909.

975,766.

Patented Nov. 15, 1910.



UNITED STATES PATENT OFFICE.

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LEAF-SUPPORT.

975,766.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THEODORE HAUSER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Leaf-Supports, of which the following is a specification.

My invention relates particularly to leaf-supports for articles of furniture, such as folding couches, davenports, sofa-beds, etc.; and my primary object is to provide an improved automatically released leaf-support of that class in which momentum and inertia of the parts are relied upon to effect release, it being my especial purpose to simplify and cheapen the construction and to improve the operation of structures of this class.

The invention is illustrated in its preferred embodiment in the accompanying drawing, in which—

Figure 1 shows an inner view of an end-standard of a metal couch having leaves or wings provided with leaf-supporting links and constructed in accordance with my invention to enable an automatic release to be effected in an improved manner; Fig. 2, a broken sectional view taken as indicated at line 2 of Fig. 1; Fig. 3, a broken sectional view taken as indicated at line 3 of Fig. 2, showing the leaf-support in the normally horizontal position; and Fig. 4, a view similar to Fig. 3, but illustrating the process of operation in effecting an automatic release.

In the construction illustrated, A represents an end-standard of a couch; A¹, leaves or wings pivotally joined thereto; and B, leaf-supporting links pivotally connected with the leaves and co-acting with the frame to hold the leaves in extended position when desired.

The end-standard A has uprights a provided with flanges a^1 which are parallel with the sides of the couch and in which are guide-slots a^2 which receive the links B. The lower ends of said slots are indicated at a^3 , and the outer surfaces of the flanges a^1 adjacent thereto afford stationary locking-shoulders a^4 . The leaves are connected, by pivots 1, to the main frame; and the links are connected by pivots 2 to the leaves. Each link has its free extremity notched at the lower edge of the link, as indicated at 3, thus affording a locking-shoulder 4 at the lower

edge of the link and a short extension 5 at the upper edge of the link, said extension 5 being turned laterally to afford a cam-member, as will be readily understood by reference to Figs. 2 and 4. The metal of the flange a^1 of the upright a which lies on one side of the slot a^2 is struck inwardly to afford a cam-member 6 which lies, when the leaf a^1 is in the horizontal position, slightly above and in the path of the lateral cam-member 5. The cam-member 6 has an under-cut sloping, or beveled, surface 7 and an upper sloping, or beveled, surface 8.

By reference to Fig. 3, it will be understood that the cam-member 6, indicated by dotted lines, lies sufficiently above the plane of the lower end of the slot a^2 to enable the locking-shoulder 4 to engage the locking-shoulder a^4 when the leaf A¹ is raised to the horizontal position. Thus, the leaf-supporting link will serve to hold the leaf in the horizontal position. When the leaf is raised to an abnormally high position, the laterally projecting cam 5 at the free extremity of the link rides upon the cam 6 and attains a position above said cam, or resting upon the inclined upper cam surface 8. When the leaf is dropped, or lowered quickly, from the abnormally high position, the inertia and acquired momentum of the link are sufficient to carry the locking-shoulder thereof past the stationary locking-shoulder of the frame before gravity can act to lower the free end of the link sufficiently to cause it to lockingly engage the stationary locking-shoulder.

It will be noted that the disposition of the cam-members employed is such that but a slight elevation of the leaf above the normal horizontal position will suffice to effect an automatic release when the leaf is dropped, or lowered quickly. Moreover, this arrangement of the cam-members enables the leaf-supporting link to be materially shortened, thus resulting in economy of material. Of course it will be understood that ordinarily a leaf-supporting link is employed at the end of each leaf of the couch. When it is borne in mind that sanitary, or all-metal couches, of this general type are manufactured and marketed in this country in quantities reaching an enormous aggregate annually, and that such couches are sold at a

popular or very low price, the importance of economy of construction will be appreciated.

My improved structure not only results in effecting substantial economy of material and labor in the manufacture, but also results in improved operation, as has been pointed out.

It may be stated that the cam 6 may be provided in any desired manner. Preferably it is formed of the material of the flange a^1 in any desired manner.

The foregoing detailed description has been given for clearness of understanding only. Hence, the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a structure of the character set forth, the combination of a frame having an upright provided with a guide, a cam on said frame flanking said guide and immovable with relation to the frame, a leaf pivotally connected to said frame, a leaf-supporting link pivotally connected to said leaf and provided with a locking shoulder engaging said guide and a laterally projecting part adapted to engage the cam member on the frame, for the purpose set forth.

2. In a structure of the character set forth, the combination of a frame having an upright provided with a guide, a stationary locking shoulder, a cam on said frame immovable with relation thereto and flanking said guide, a leaf pivotally connected to said frame, a leaf-supporting link provided with a locking shoulder, and a laterally extending

cam-projection carried by the link and adapted to ride on the cam of the frame, for the purpose set forth.

3. In a structure of the character set forth, the combination of a frame having an upright provided with a guide-slot, said upright having the material thereof struck inwardly at one side of said guide-slot to afford a cam-member, a leaf pivotally connected to said frame, and a leaf-supporting link pivotally connected to said leaf and provided at its free extremity with a locking-shoulder, and a lateral cam-member adapted to engage said first-named cam-member, for the purpose set forth.

4. In a structure of the character set forth, a frame having an upright provided with a guide, a cam on said frame flanking said guide and immovable with relation thereto, a leaf pivotally connected with said frame, a leaf-supporting link pivotally connected to said leaf and provided with a locking shoulder engaging said guide and carrying a laterally extending part adapted to engage the cam-member on the frame, the face of said cam-member being so positioned relative to the locking shoulder and cam-engaging member on the link as to cause said link to pass through the guide without engagement of its shoulder therewith when the leaf is dropped from a plane above that of the frame of the structure, for the purpose set forth.

THEODORE HAUSER.

In presence of—

A. U. THORIEN,
J. G. ANDERSON.