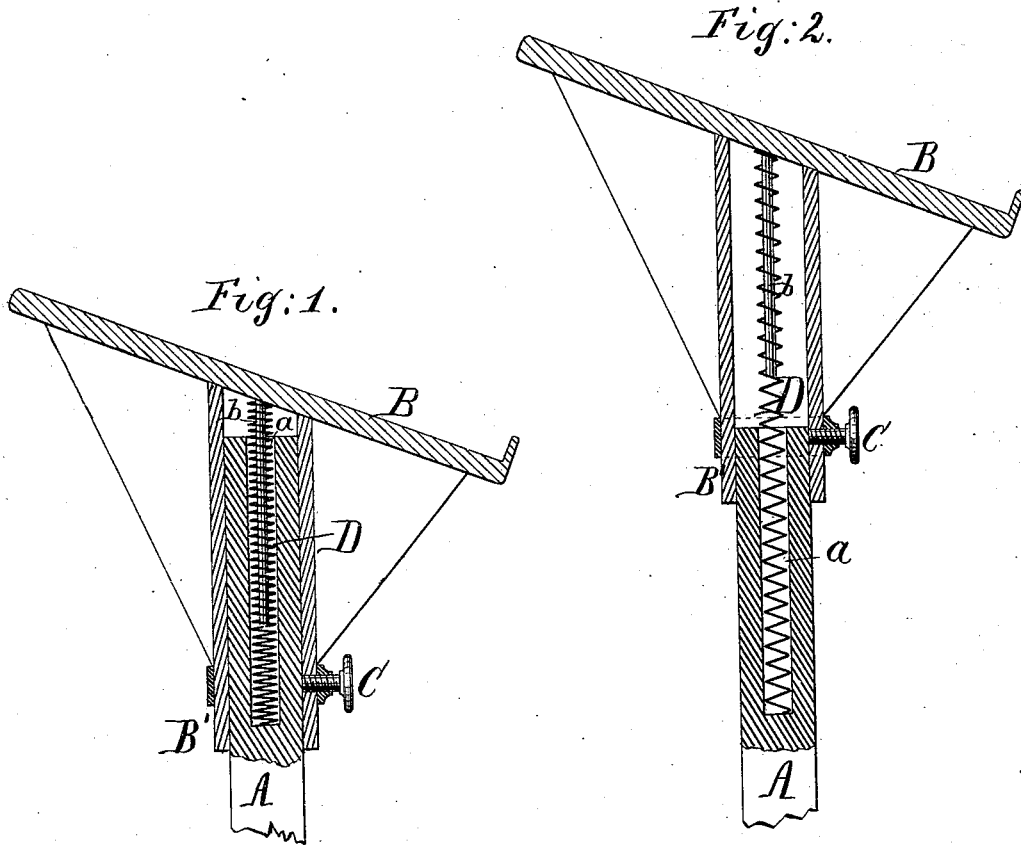


J. & R. LAMB.  
BOOK SUPPORTS.

No. 187,393.

Patented Feb. 13, 1877.



Witnesses:

*Henry Venturo*  
*John Dibble*

Inventors:

*Joseph Lamb and*  
*Richard Lamb.*  
*by their attorney*  
*Thomas J. Peterson*

# UNITED STATES PATENT OFFICE

JOSEPH LAMB AND RICHARD LAMB, OF NEW YORK, N. Y.

## IMPROVEMENT IN BOOK-SUPPORTS.

Specification forming part of Letters Patent No. 187,393, dated February 13, 1877; application filed March 17, 1876.

*To all whom it may concern :*

Be it known that we, JOSEPH LAMB and RICHARD LAMB, of New York city, in the State of New York, have invented certain new and useful Improvements relating to Adjustable Book-Supports, of which the following is a specification :

The invention may apply for music-stands, and every variety of book-stand which is or may be adjustable vertically; but it is intended more especially for sacred desks or pulpits. In such, the book to be supported is usually heavy, and whenever the height requires adjustment, the operation frequently has to be performed by a person possessing only moderate strength and limited skill, and before the eyes of a large congregation.

We have devised a construction by which a sufficiently powerful spring is introduced, having a sufficient range of motion, and the tension of which should by preference be such as to considerably more than balance the weight of the desk when unloaded, and to cause it to rise with some force as soon as liberated by the binding-screw. We prefer to give the spring a force a little more than equal to the weight of the desk and book combined, so that it will require a little force to press down the desk to adjust it lower, even when loaded. In such case the manipulation becomes easy, even to the most unskillful clergyman. On cautiously relaxing the screw, the desk, instead of forcibly sinking, rises with moderate force, which is easily resisted by one hand. If he wishes to raise it, he lets it move upward of itself. If he wishes to lower it, he simply presses down with sufficient force, and, having sunk it to the desired position, again secures the binding-screw.

The following is a description of what we consider the best means of carrying out the invention :

The accompanying drawings form a part of this specification.

Figure 1 is vertical section of the upper portion of the standard or post, with the desk depressed to nearly its lowest position. Fig. 2 is a corresponding section, with the desk elevated.

Similar letters of reference indicate like parts in both the figures.

A is an upright post or standard, which may be provided with a suitable foot, (not represented,) and made of any convenient height, and tastily decorated or molded, carved, &c., except at the upper end, where the extension B' from the desk B is adapted to match on and slide up and down, as may be required. C is a binding-screw, provided with a milled head, and tapped through a ring of metal, which is fixed on and forms a part of the extension B' of the desk. In the upper end of the standard A we bore a hole, *a*, in the line of the axis, of sufficient diameter and length to receive a long and strong coiled spring, D, which, when in place, abuts at the lower end against the bottom of the hole, and at the upper end against a suitable bearing on the under face of the desk B. A slender rod, *b*, extends down from the center of the bearing of the desk to a considerable depth through the hollow interior of the spring.

The force of the spring D tends to lift the desk, while the gravity of the desk, and of a heavy book thereon, (not represented,) tends to depress it. It results that the forces are nearly balanced, but we prefer a slight excess of lifting force.

In the operation of the desk, the screw C, on being set up, holds it in any position desired, like an ordinary adjustable desk, but the spring D, instead of allowing gravity to sink the desk with force, balances it, and somewhat more than balances, so that it is easy to change it with little strength or skill to any desired elevation, when it may be again secured firmly by setting the binding-screw C.

We believe it possible to attain very nearly the same end by reversing the relative position of rods A and B, so that the smaller rod A shall extend down from the desk, and the larger rod which receives it shall be the lower and stationary part. But we esteem it vitally essential to the success of the device that the spring D be let into the interior of the inner and smaller rod, so that a great length of spring may be inserted.

We are aware that the desks and analogous articles have been adjustably supported by the aid of springs, inclosed within a large cavity, and abutting against the end of a

rod inserted adjustably. Such we do not claim; but

What we do claim is—

1. The adjustable table-support described, having two parts fitting adjustably, one within the other, and having a counter-balancing spring, D, inclosed within a cavity, *a*, in the interior of the smaller part, as and for the purposes herein specified.

2. A rod, *b*, in combination with the hollow

post A *a*, the adjustable desk B, extension B', spring D, and binding-screw C, as herein specified.

In testimony whereof we have hereunto set our hands.

JOS. LAMB.  
RICHARD LAMB.

Witnesses:

CHAS. A. BENEDICT,  
OSBORN R. LAMB.