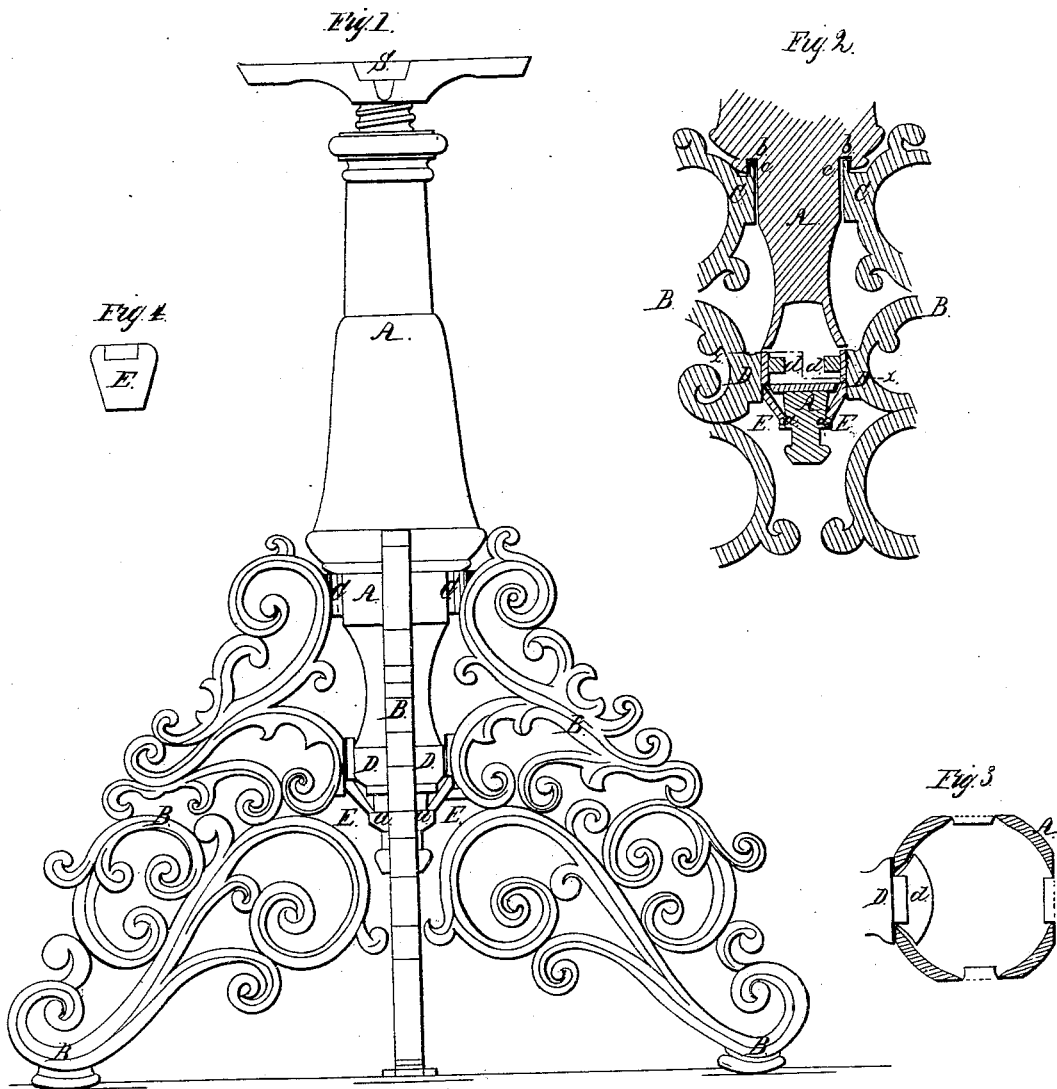


# W.A. Ingalls, Piano Stool.

N<sup>o</sup> 54,551.

Patented May 8, 1866.



Witnesses;

W. E. Mang.  
L. L. Ceburn.

Inventor;

W. A. Ingalls

# UNITED STATES PATENT OFFICE.

WILLIAM A. INGALLS, OF CHICAGO, ILLINOIS, ASSIGNOR TO WM. W. KIMBALL, OF SAME PLACE.

## IMPROVED PIANO-STOOL.

Specification forming part of Letters Patent No. 54,551, dated May 8, 1866.

### *To all whom it may concern:*

Be it known that I, WILLIAM ALLEN INGALLS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Piano-Stools; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

The nature of my invention has more particular reference to piano-stools, but is equally applicable to other seats and analogous uses; and it consists in a novel mode of attaching removable legs or supports to the column upon which the seat rests, so that while the said legs may readily be detached when desired they are firmly and securely held in place when the stool or seat is in use, and arranging the two points of attachment of each leg to the single column or standard, one some distance below the other, so that when a center column or standard is used the lower one will operate as a draw-brace and supporter of the upper joint and the leg.

To enable those skilled in the art to understand how to construct and use my invention, I will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a side elevation of my invention; Fig. 2, a detached vertical section of the same; Fig. 3, a transverse section of the column at *x* in Fig. 2; and Fig. 4 is a detached view of the key used in securing the supports to the column.

Similar letters of reference in the several figures denote the same parts of my invention.

A represents the vertical column or standard upon which the seat is arranged, as shown, being adjusted upon or by means of a screw in the usual manner.

B represents the legs or supports of the stool, which are removably attached to the column A by means of lugs upon said legs, (marked C D,) as shown in the drawings.

The lugs C are provided with lips or projections, (marked *c*,) which are inserted in corresponding vertical slots or recesses *b* in the column A, as shown in Fig. 2.

The lugs D are provided with T-shaped projections or attachments, (marked *d* in the

drawings,) which enter into suitable slots or recesses in the column A, being of such shape or configuration that they can be readily introduced into said slots or recesses when the legs are arranged transversely with respect to the axis of the column A, but which cannot be withdrawn therefrom when the legs are arranged in their natural position with reference to said column, as indicated in Fig. 3.

It will be seen, by referring to Fig. 1, that the lower joint (marked D) is about one-third of the distance down from the upper joint (marked C) to the floor. This arrangement of the joints enables me to make them of less material, as the weight upon the stool is mainly supported by the upper end of the joint at C; but if this was the only joint or point of connection it would need to be made very strong, as the leverage of the legs, caused by their tendency to spread at the bottom, is quite powerful and tends greatly to open or break the joint when single, and particularly so when mounted on casters; but when the center column or standard is extended downward and an arm of the leg connected with it, as shown, the upper joint is entirely relieved from lateral strain or pressure, and the strain which is transferred to the lower joint, being nearly in a straight line with it, with but slight leverage, and bearing equally upon all points of the joint, makes it so strong that it will resist an immense weight without giving way, so that I am enabled to make a stronger stool with less material and of less weight than can be done with safety with but one joint, and still retain all of the advantages of taking apart for packing and repairs. It will be obvious that different devices for making the connection at the joints can be used.

E represents removable keys, which are arranged in connection with each of said lugs D as shown, one edge resting beneath the lug and the other being driven in upon a shoulder, *a*, upon the column A, as clearly indicated in the drawings. This key forces the leg upward and out, so as to bring the projection *d* firmly upon the interior surface of the recess into which it enters, and thus securely fastens the leg in place.

To remove the legs the aforesaid keys are driven out in any suitable manner, which allows the projection *c* to withdraw from the re-

cess *b*, when, by turning the leg at right angles with the column, as aforesaid, the lug *D* is detached from its rest and the leg removed, as desired.

Having described the construction and operation of my invention, I will now specify what I claim and desire to secure by Letters Patent—

1. The employment of the keys or braces *E* in a piano-stool, arranged and operating substantially as and for the purposes set forth.

2. The combination of an extended standard, *A*, with an upper joint, *C*, and a lower joint, *D*, when applied to a stool having removable legs,

substantially as and for the purposes set forth and shown.

3. The arrangement and combination of the upper lug, *C*, provided with the projection *c*, and the lower lug, *D*, provided with the T-shaped or double-hooked projection *d*, with the corresponding openings and recesses in the column *A* and the key or brace *E*, substantially as set forth and specified.

WM. ALLEN INGALLS.

Witnesses:

W. E. MARRS,  
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