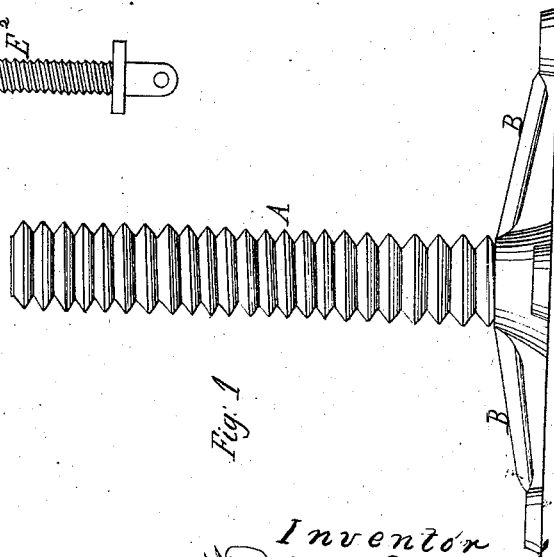
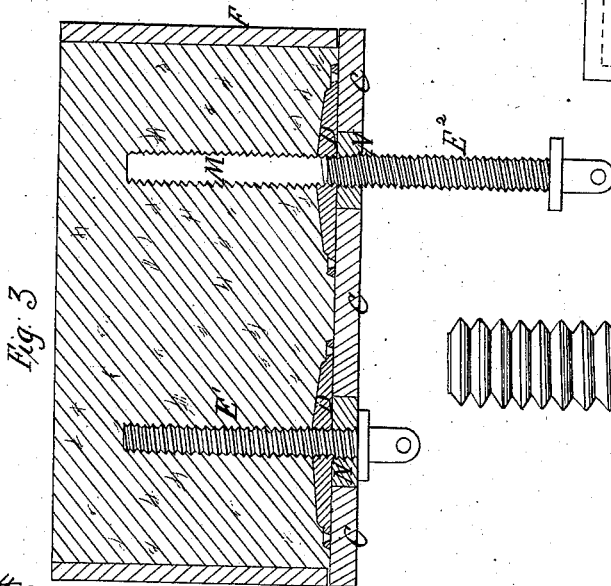
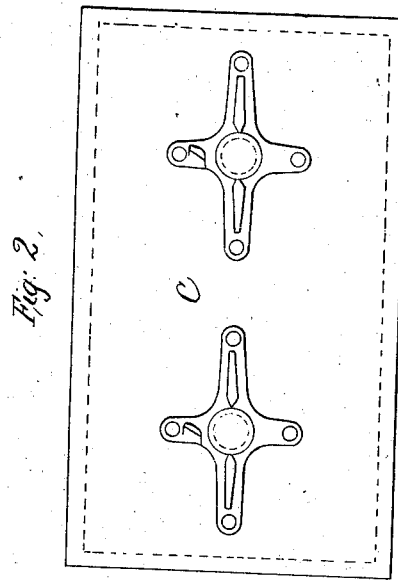
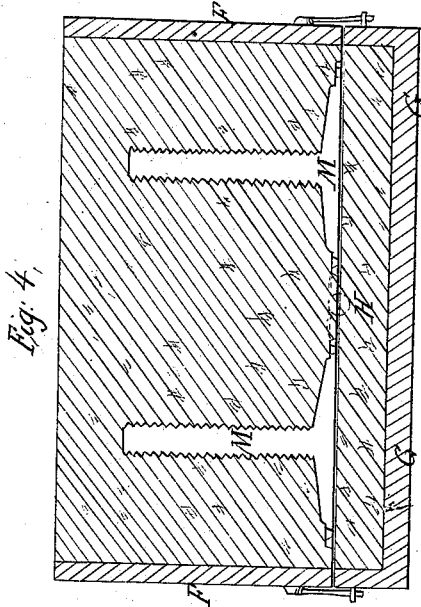


W. A. Ingalls,

Casting Stool Screws.

No 54,733.

Patented May 15, 1866.



Witnesses. F.
W. E. Mears
J. M. Hentel.

Inventor
W. A. Ingalls

UNITED STATES PATENT OFFICE.

WILLIAM ALLEN INGALLS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SCREWS FOR STOOLS, &c.

Specification forming part of Letters Patent No. 54,733, dated May 15, 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, useful, and Improved Screw for Stools, Chairs, &c.; 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 and object of my invention consist in constructing a cast screw without seams or scars from the mold for piano and other stools, chairs, letter-presses, and other analogous purposes, and so made that the thread of the screw will be perfectly formed up to the head or arms of the screw, the head or arms and screw being cast in one piece.

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

Figure 1 represents a view of the seamless screw. Fig. 2 represents a plan or top view of the pattern prepared for making the molds. Fig. 3 is a transverse section of the flask in which the mold is formed, with one pattern withdrawn; and Fig. 4 is a similar section having the patterns removed and the molds ready for filling.

Similar letters of reference in the several figures denote the same parts, as herein described.

A represents a view of a screw cast in the manner hereinafter described. The screw represented is provided with a head, B, cast with four lugs, whereby the screw may be attached to a seat for piano-stools or other purposes; but screws may be cast in this manner whether provided with a head or not.

The mode of preparing the molds for casting the screw A with its head B is as follows: The patterns for the head B (marked D in the drawings) are secured to a plank or board of suit-

able size, (marked C,) as shown in Fig. 2. Through the center of said patterns D and the metallic blocks N, arranged as shown in Fig. 3, is cut a female screw whose diameter and threads correspond exactly with the diameter and thread upon the screw-patterns E, which are then screwed in through said female screw, as shown at E' in Fig. 3. When the patterns are thus arranged the box F is placed upon said plank C and packed with any suitable molding-sand around and upon said patterns, so as leave distinct and accurate impressions thereof in the sand when the patterns are removed. After the sand has been properly packed, as aforesaid, the patterns are turned or screwed out from the sand, as shown at E² in Fig. 3, the working thereof in the nut formed by the pattern D and block N causing the pattern to withdraw in such manner as not to destroy the threads of the molds.

The screw-patterns may be of iron or any other suitable material, and turned out from the molds by inserting a pin in the hole shown near the collar, or by a wrench, or in any other suitable mode, as may be preferred.

When the patterns are withdrawn, as shown at E² in Fig. 3, the plank C with the patterns are removed, and the molds M are then backed by a surface of molding-sand contained in a box, G, which is hooked to the box F, as shown in Fig. 4.

In Figs. 3 and 4 the molds are turned down upon one side to allow the patterns to be removed and the molds to be filled, which is effected through a hole, H, which has gates leading into the molds M near or at the bottom thereof.

What I claim, and desire to secure by Letters Patent, is—

The above-described screw as an article of manufacture.

WILLIAM ALLEN INGALLS.

Witnesses:

W. E. MARRS,

JNO. W. HERTHEL.