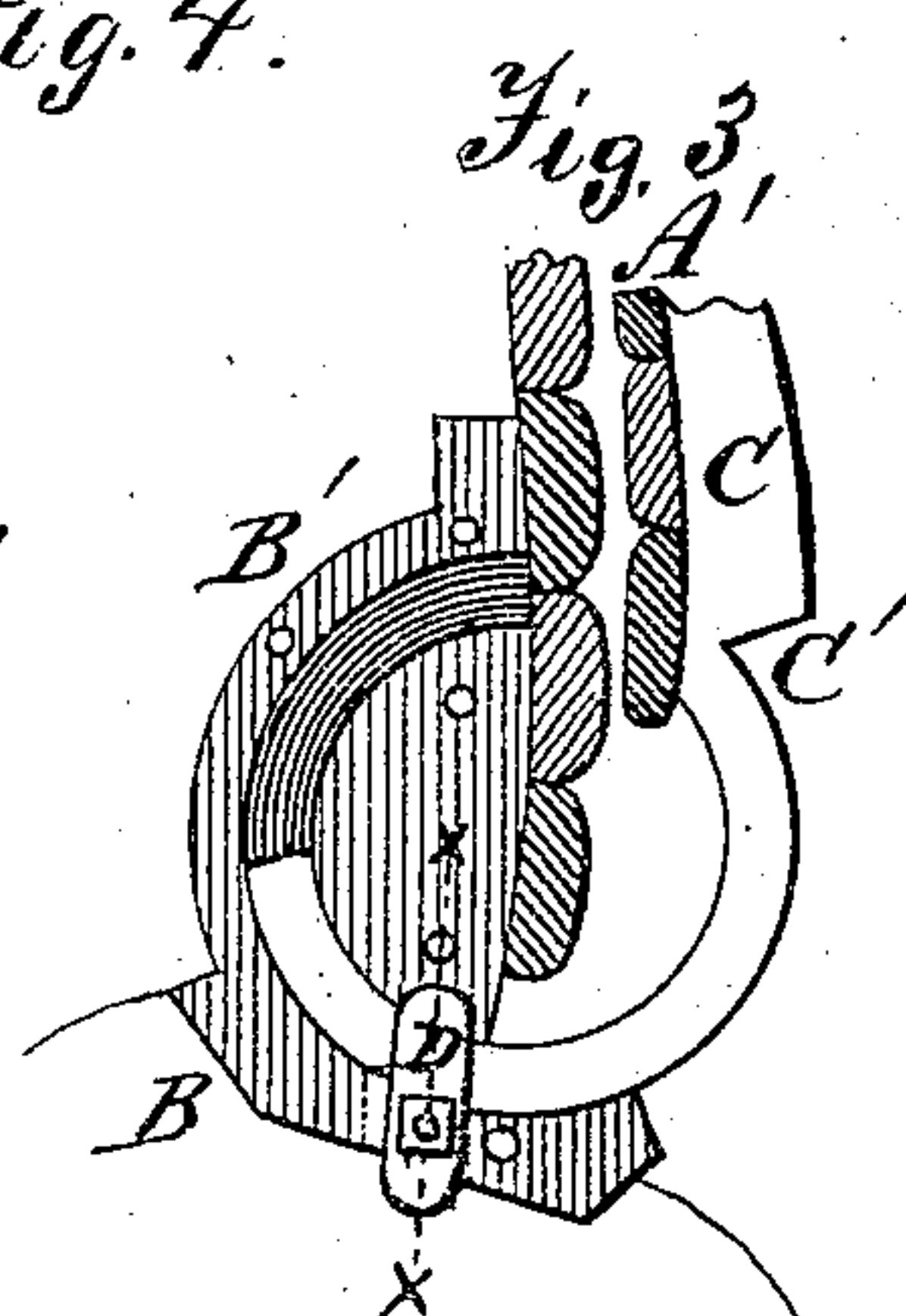
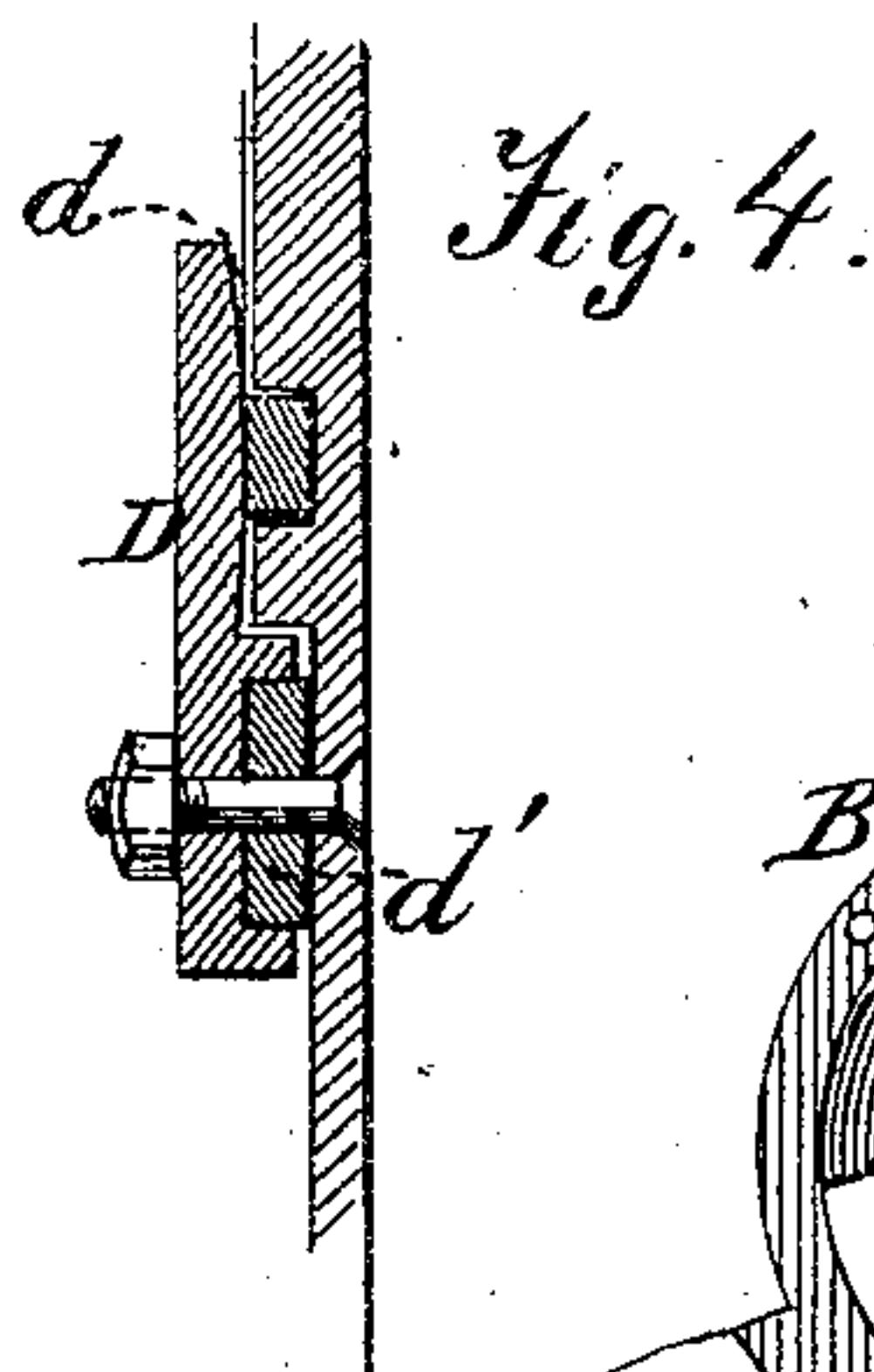
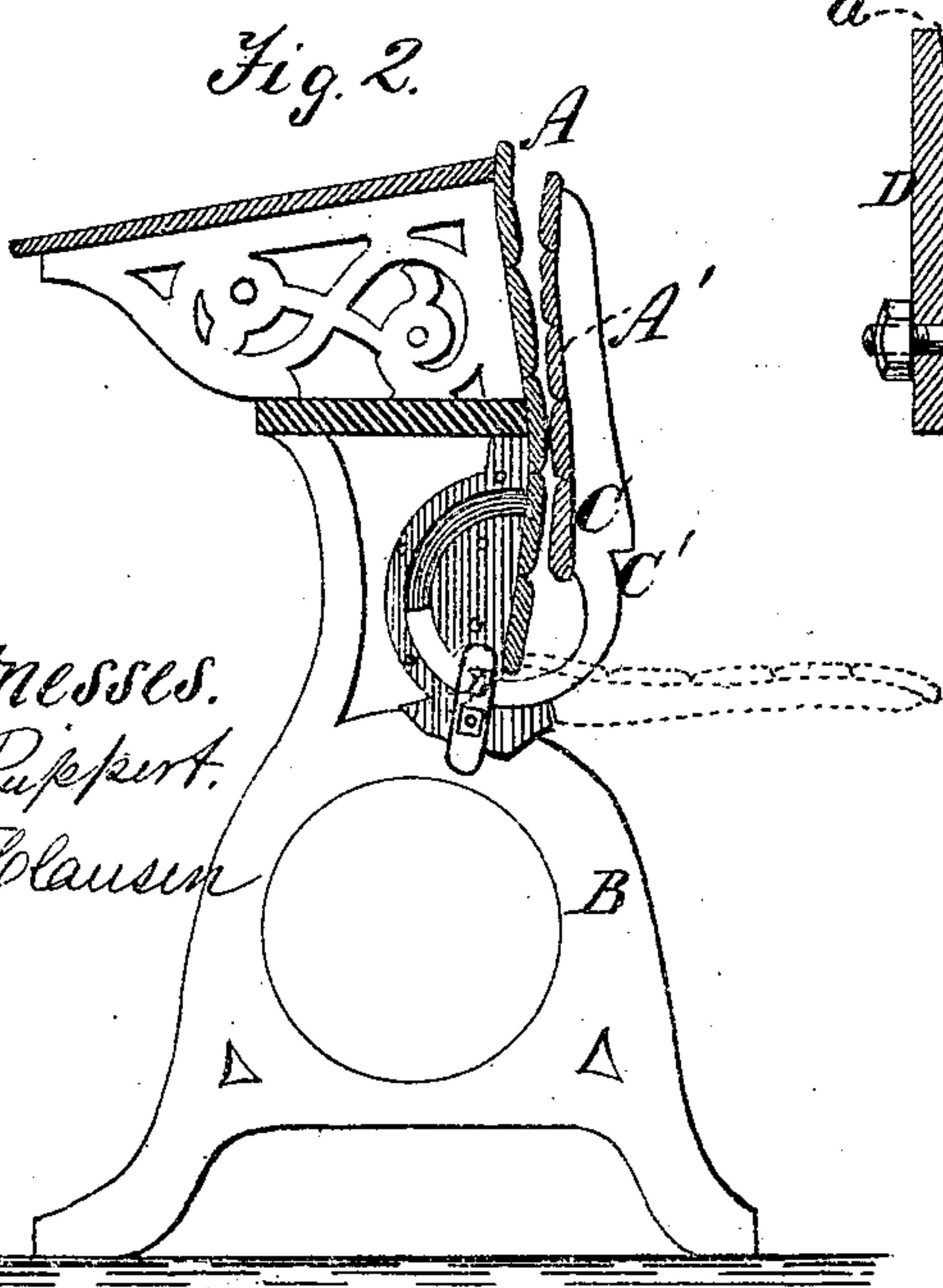
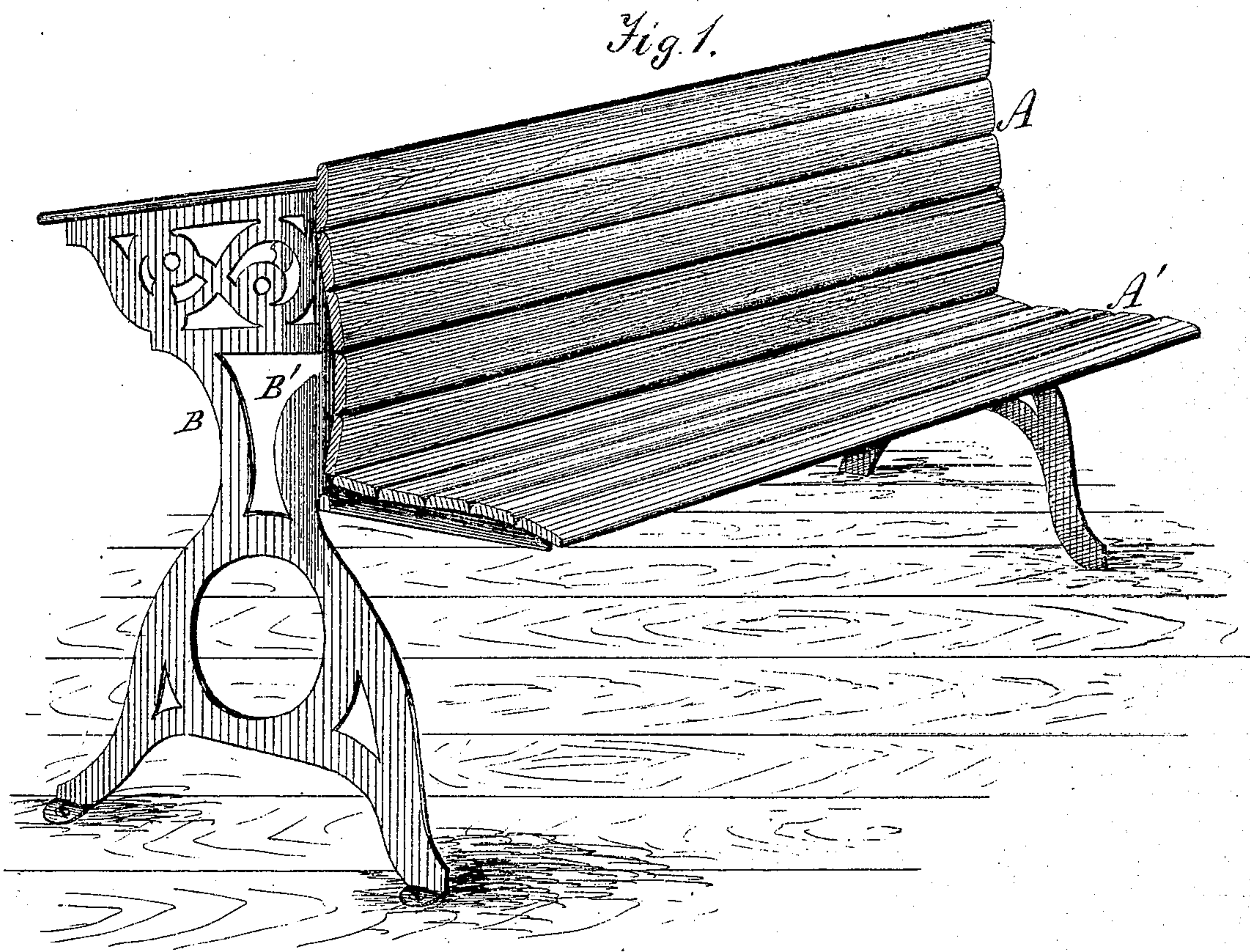


THOMAS GREGG.

Improvement in Joints for School Desks, &c.

No. 119,515.

Patented Oct. 3, 1871.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

THOMAS GREGG, OF DANVILLE, PENNSYLVANIA.

## IMPROVEMENT IN JOINTS FOR SCHOOL-DESKS, &c.

Specification forming part of Letters Patent No. 119,515, dated October 3, 1871.

*To all whom it may concern:*

Be it known that I, THOMAS GREGG, of Danville, in the county of Montour and State of Pennsylvania, have invented a new and useful Improvement in Hinged Joints to be used in connection with School-Desks and for other purposes, of which the following is a specification:

This invention relates to hinged joints which are particularly adapted to be used upon school-desks, but which are also applicable to various other devices, such as seats, sofa-bottoms, lounges, and, in fact, to nearly all articles where strong hinges are used. The improvement consists in the construction of the hinge, its combination with a friction-brake to control its movements, and its combination with a school-desk and seat, as will be more fully described hereinafter.

Figure 1 is a perspective view of a school-desk, it having my improved hinge-joint applied. Fig. 2 is a vertical transverse section of a desk, showing the construction of the joint and the manner of applying it. Fig. 3 is a vertical section, showing the joint and a portion of the frame. Fig. 4 is a detail sectional view on an enlarged scale, illustrating the brake bearing against the sectoral or curved arm of the seat.

Corresponding letters refer to corresponding parts in the figures.

In constructing school-desks with hinge-joints of this character applied thereto for the purpose of enabling their seats to be turned up, or the desk or table to be folded up or down, I use any approved form of back and seat; preferring, however, that shown at A and A', as such are best adapted to support the back and legs of the occupant. The ends of the desk are to be of any approved pattern that will support the parts which are to be secured to it, the form shown in Figs. 1 and 2 being well calculated for such a purpose. At the point upon the frame where the hinge is to be applied a plate of metal, B', is provided, by being bolted upon the frame or by being cast upon it. Upon one side of this plate or portion of the frame there is formed a groove, which may consist of an entire circle or of a segmental part of a circle. This groove may be formed in the frame by having its inner surface sunk below the general surface of the frame to such an extent as to cause the groove to receive and hold the arm to which the seat or lid is attached; or separate parts may be formed

and riveted to the frame, as shown in Figs. 1 and 3, and thus form a recess or cavity for the curved end of the moving portion of the hinge to work in. When this hinge-joint is to be applied to a school-desk the outer end of its movable part is to be formed as shown in Fig. 2, or of any suitable form to receive and hold the slats of the seat, while its inner end is to be a segmental portion of a circle, of such dimensions as to permit it to enter and turn in the groove formed in the frame of the desk. Just at the point where the segmental portion of the arm diverges from the other part there is formed a shoulder, C', which, when the seat is turned down to the proper position for occupation, comes in contact with a shoulder formed upon the frame, and thus forms a stop for the seat and prevents it from turning too far. The segmental parts of the arms work pretty freely in the grooves of the frames, and in order to prevent the seat from falling over by its own weight, the moment it is turned a little friction-brakes D are employed, each of which is composed of a metallic plate bolted at one end to the frame so as to bear with its face d, which may be slightly convex, against the segmental portion of the arms C. These brakes serve at the same time as stops against lateral play of the curved arms. A rubber or other spring, d', is interposed between the brake and the frame, encircling the bolt, so that the force with which the brake shall bear against the arm may be readily regulated by turning the nut on the bolt. The friction of the brakes on the arms should be so regulated as to hold the seat at any point of its path, so that some force must be applied to turn it, until the stops C' come in contact with the stops on the frames. In this way all noise in turning down the seat is obviated.

I have shown this hinge and described it as applied to a school-desk; but it is evident that it is applicable to various other devices, and I do not desire to limit its use to its application to any particular article.

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

1. A hinge-joint, combining in its construction a stationary plate having in one of its sides a groove which forms a segmental portion of a true circle, and a movable portion or arm which has upon it a segmental portion of a circle adapt-

ed to work in the groove in the plate or station-  
a y portion of the joint, substantially as and for  
the purpose set forth.

2. The within-described hinge-joint, in com-  
bination with the friction-brake D, substantially  
as and for the purpose set forth.

In testimony whereof I have signed my name

to this specification in the presence of two sub-  
scribing witnesses.

THOMAS GREGG.

Witnesses:

WM. LUKENS,

A. G. VORIS.

(35)