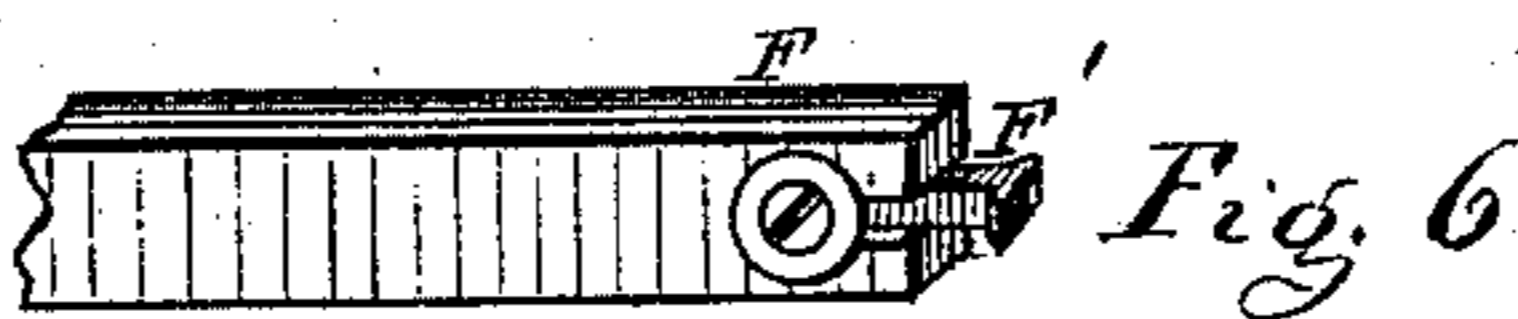
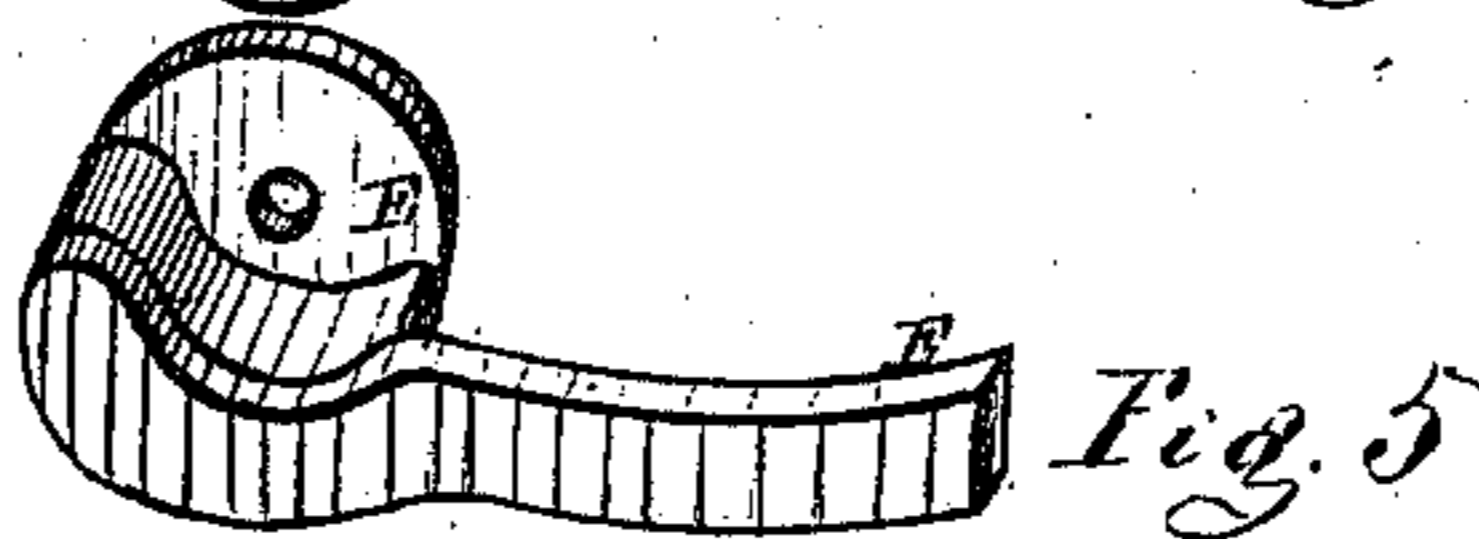
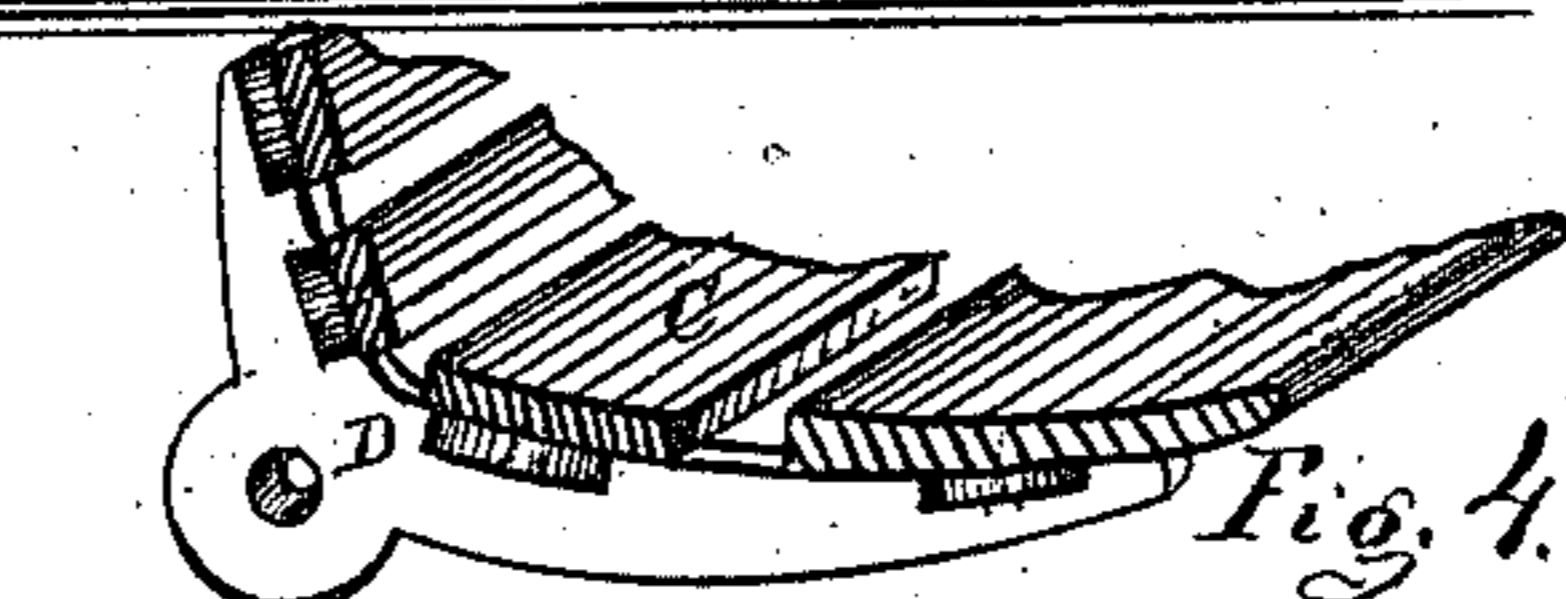
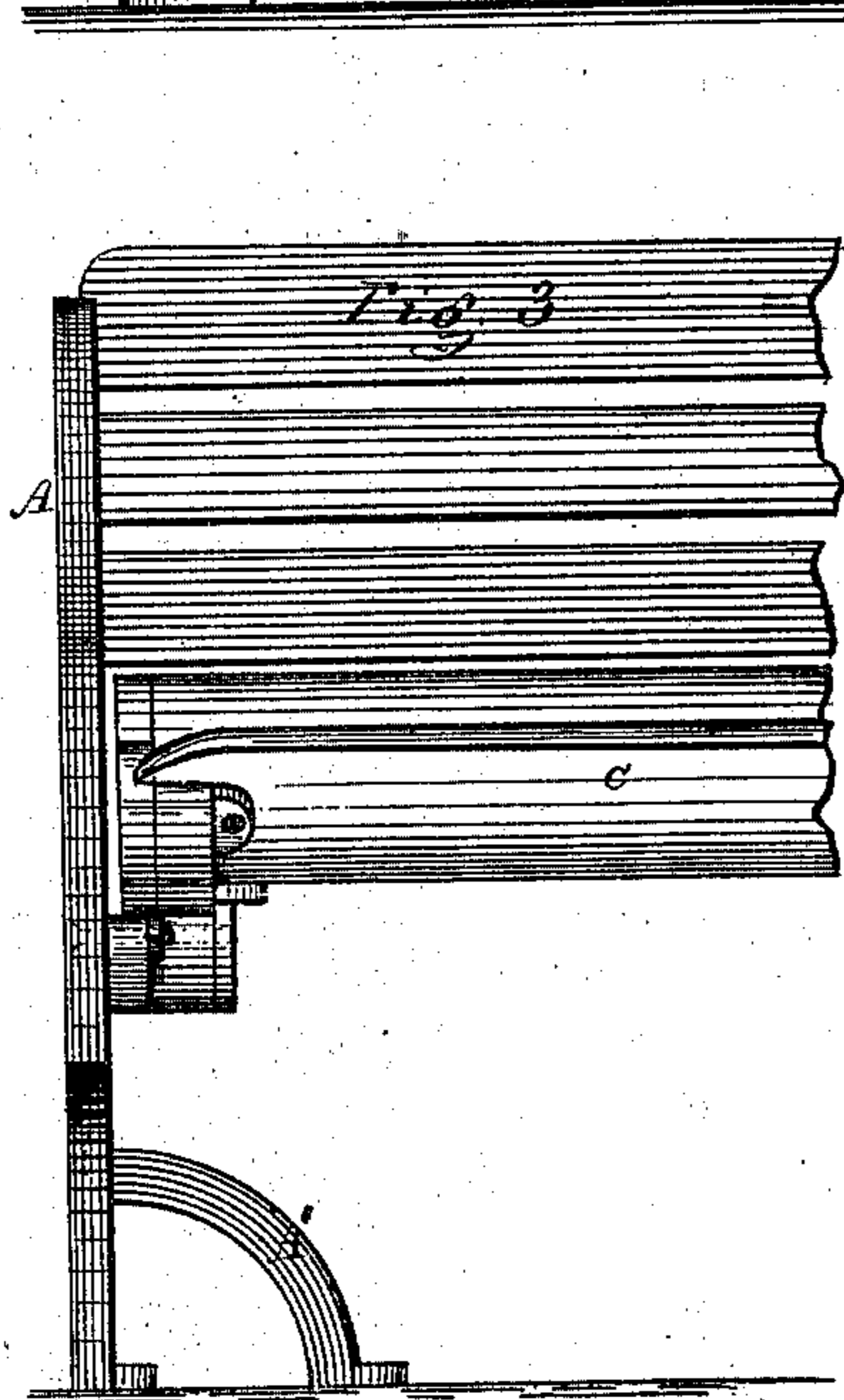
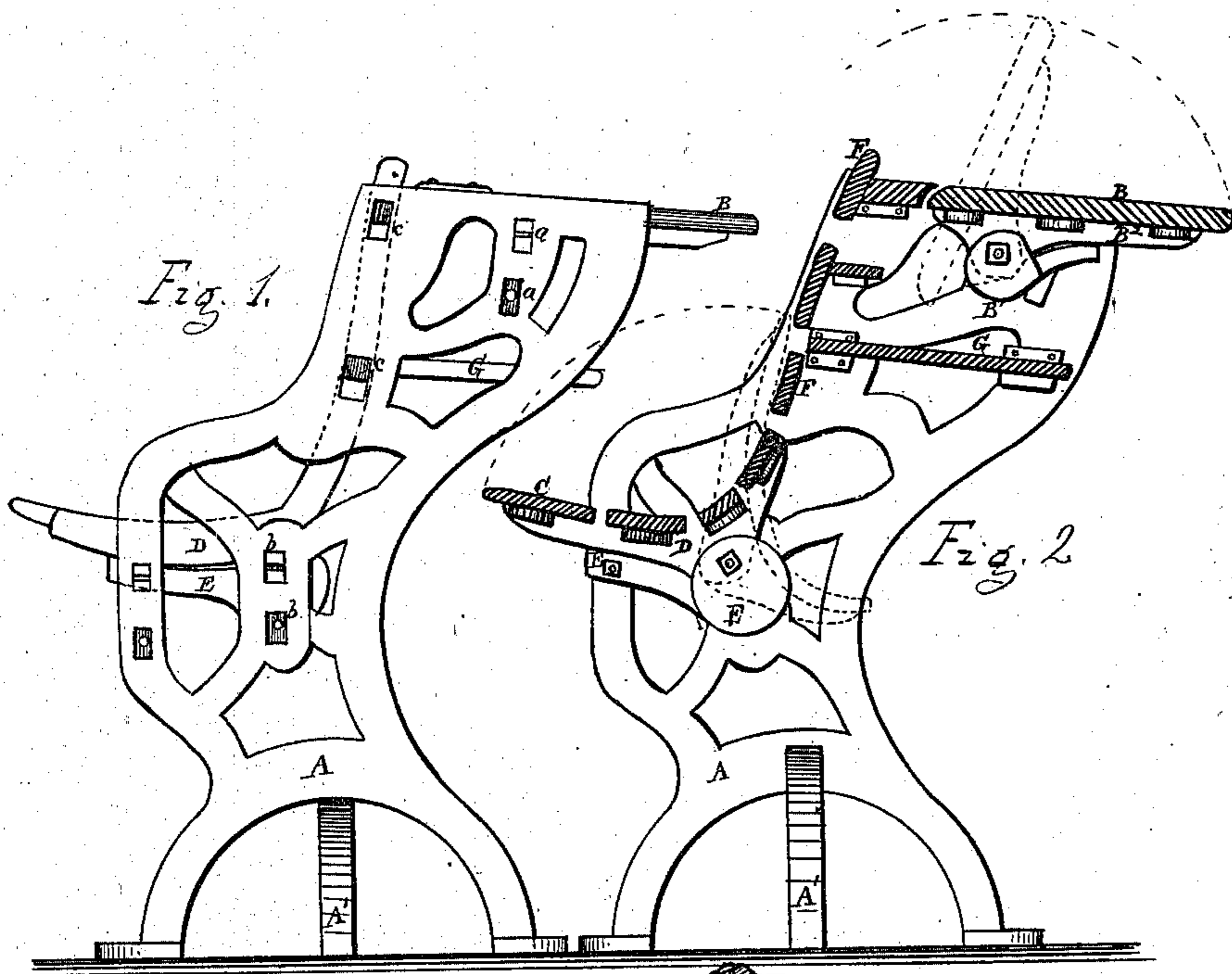


W. H. Kline,

Desk & Seat.

No. 100416.

Patented Mar. 1. 1870.



Witnesses
A. Ruffert
P. E. Hoff

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United States Patent Office.

WILLIAM H. KLINE, OF EATON, OHIO.

Letters Patent No. 100,416, dated March 1, 1870.

IMPROVED SCHOOL-DESK AND SEAT.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, WILLIAM H. KLINE, of Eaton, in the county of Preble, and State of Ohio, have invented certain Improvements in School-Desks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making part of this specification, in which—

Figure 1 is an end elevation of my improved desk, showing the form and arrangement of the seat, the means of raising and lowering it, and also the desk.

Figure 2 is a transverse vertical section, showing the devices for tilting the desk, so as to permit pupils to pass between desks when arranged in the room.

Figure 3 is a section of a front elevation.

Figure 4 is a perspective view of a portion of the seat, showing the means of attaching it to the frame.

Figure 5 is a perspective view of the socket, to which the seat is hinged.

Figure 6 is a detached view of a portion of one of the cross-bars or slats, showing the means of attaching the same to the end frames of the desk.

Corresponding letters refer to corresponding parts in the several figures.

This invention relates to school-desks; and

It consists in the construction and arrangement of its parts, as will be more fully described hereinafter.

A A refer to the end frames of the desk, which are to be of cast metal, and of the form shown in the drawings, or of any other suitable form which will admit of the parts being attached thereto in a manner substantially such as is shown.

The lower portions of these frames may be provided with braces, as shown at A', which will be of great service in giving permanence to the desk when in position.

That portion of these frames to which the socket B¹, which secures the tilting desk to the frames, is attached, is to be provided with a series of holes, *a a*, arranged one above the other, as shown in fig. 1, so that, by unscrewing the bolts which hold such sockets in position, and passing them through other holes, the desk may be raised or lowered to suit pupils of different ages and sizes.

Another series of holes is to be formed in that portion of the frames to which the sockets E, to which the seat is pivoted, are attached, as shown at *b b*, fig. 1, so that it may be raised or lowered at pleasure, and for the purpose above named.

B refers to the tilting desk or table, which is secured to the same frame as the seat, but in rear of and above it. It is to be made of wood or other suitable material, and of a width sufficient to furnish a suitable place for the pupils to place writing and other

material upon, and upon which to place their books while pursuing their studies.

To the outer ends of this desk, and upon its under surface, there are to be attached cleats or pieces of metal, of the form shown at B², in fig. 2, by means of which the tilting table or portion of the desk is pivoted to the sockets B¹, and which furnishes the means of enabling it to be turned up, as shown in dotted lines in fig. 2, so as to be out of the way of persons in passing between two rows of the desks, when in position in the school-room.

B¹ refers to the socket above alluded to, which is to be secured to the end pieces or frames of the desk, by means of bolts, and which may be raised or lowered, as above described. This socket is so constructed as to receive the cleat upon the end of the table or tilting portion of the desk, and allow such portion to turn freely therein, but so as to prevent its falling below the position shown in fig. 2, or such position as will best accommodate the pupils using the same.

C refers to the swinging seat, which may be composed of wood, and of a series of strips, or of a single piece.

D refers to a curved cleat or frame, of iron, to which the wooden portions of the seat are to be secured, there being one at each end thereof. This cleat is to be constructed in the curved form shown in the drawings, and is to have upon its lower surface a projection for attaching it to the socket E, to which it is pivoted, and in which it turns. This construction of the seat enables it to be turned up out of the way at any time, and thus offers additional facilities for passing between the desks. This cleat is to be furnished with ears, as shown, through which bolts or screws may pass, for the purpose of securing the wooden portions thereto.

E refers to the socket, upon which the seat rests, it being constructed as shown in fig. 5, and attached to the end frames by bolts, so as to be capable of being raised or lowered, as before noticed. The arm which projects from this socket furnishes the means of stopping the seat, when it has been turned down to the proper position for its occupant.

F refers to one of the cross-bars, which form the back rest or permanent part of the seat. There may be one or more of these bars, which are to be of the proper length to extend from one end frame to the other, and are to be provided at each of their ends with pieces of metal, as shown at F', fig. 6. This piece of metal may be secured to the cross-bar in any suitable manner, it having upon its outer end a projecting flange upon two of its sides or edges, which form of construction enables it to pass into slots *c c* in the end frames A,

which slots are large enough at one end to permit the flanged ends to pass through, but which for the remainder of their length are only large enough to receive the smaller portion of the projecting piece F', thus causing the flanges to take hold of the frames, and hold them and the cross-bars securely together.

G refers to a shelf, which may be placed directly under the tilting portion of the desk, and be held in position by means of projections formed upon the end frames A A of the desk, so that it may at any time be slipped out or in, as circumstances may require.

It will be seen that as a consequence of the form of construction adopted by me, additional facilities are afforded for taking the desks down after they have been erected, and packing them for transportation, and afterward for re-erecting them, and also for

affording space for moving about among them when arranged in the school-room.

Having thus described my invention,

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

The combination of the adjustable sockets E E, cleats D D, and frames A A, constructed and arranged substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

W. H. KLINE.

Witnesses:

B. EDW. J. EILS,
A. RUPPERT.