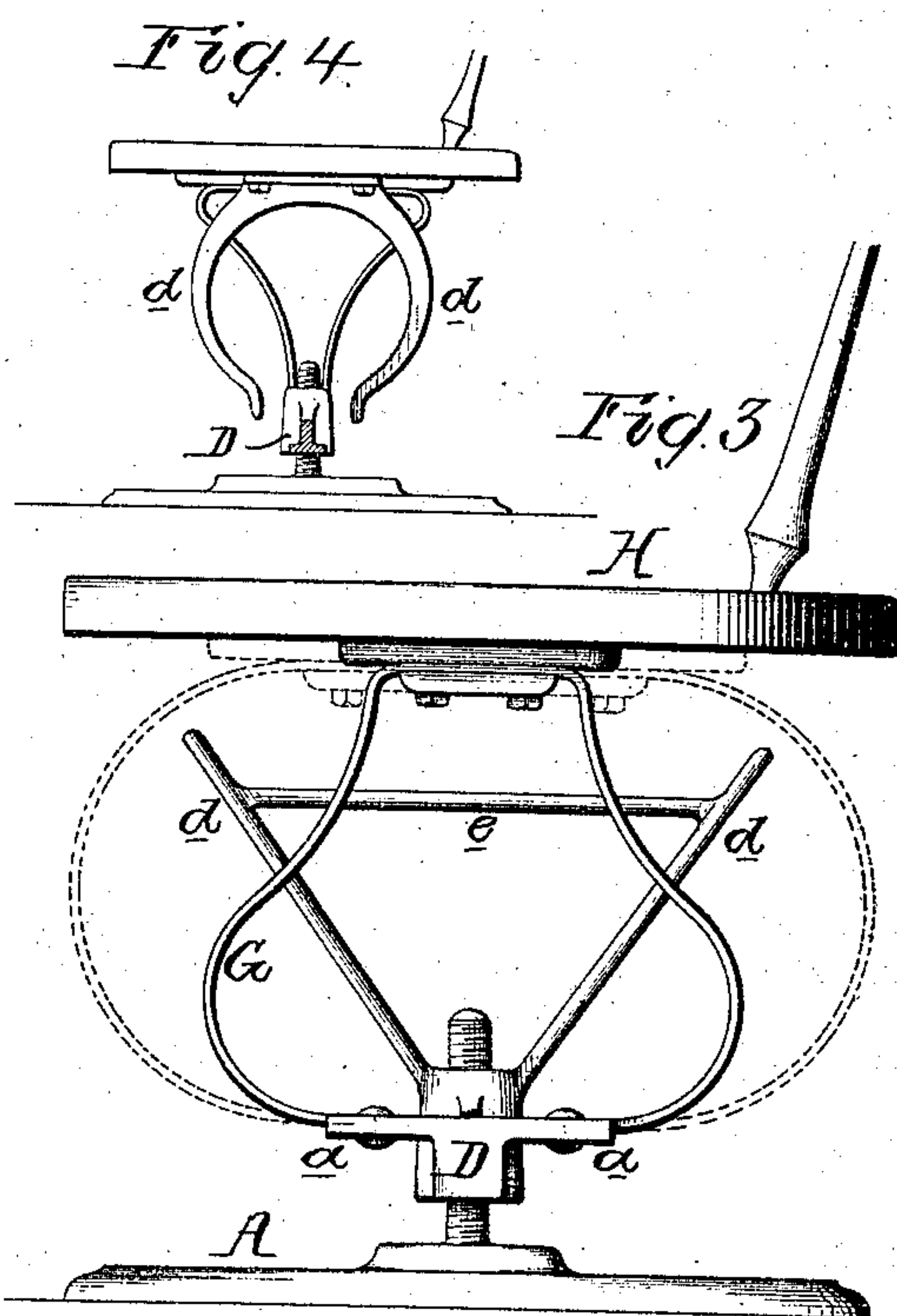
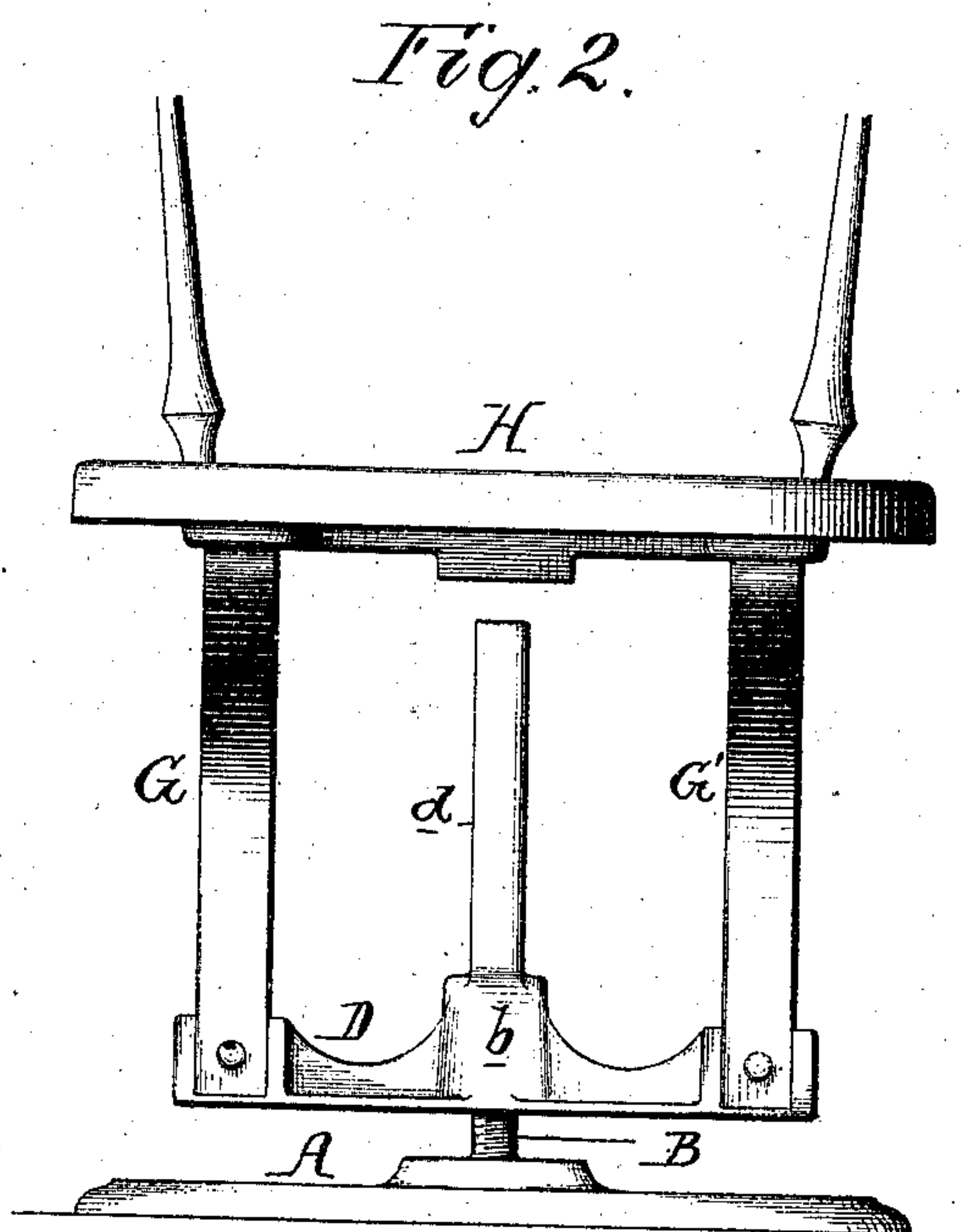
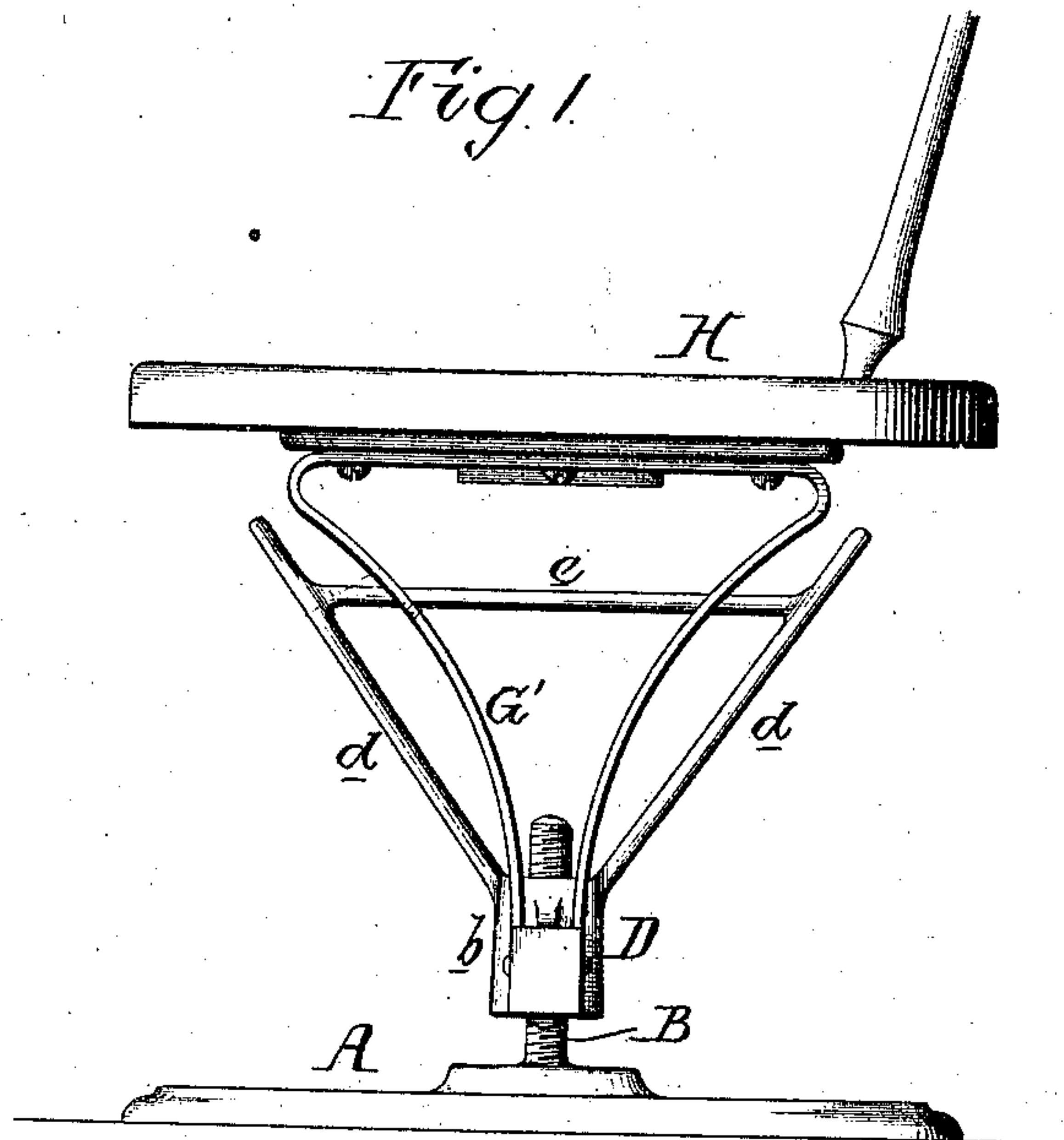


H. HOWSON.
OSCILLATING-CHAIR.

No. 173,636.

Patented Feb. 15, 1876.



Witnesses,
Thomas M. Howson
Harry Howson

Henry Howson

UNITED STATES PATENT OFFICE.

HENRY HOWSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HENRY S. HALE, ARTEMAS KILBURN, J. WARREN HALE, CHENEY KILBURN, AND WARREN HALE, OF SAME PLACE.

IMPROVEMENT IN OSCILLATING CHAIRS.

Specification forming part of Letters Patent No. **173,636**, dated February 15, 1876; application filed December 6, 1875.

To all whom it may concern:

Be it known that I, HENRY HOWSON, of Philadelphia, Pennsylvania, have invented an Improvement in Spring-Supported Chairs, of which the following is a specification:

My invention relates to an improvement in chairs, the seats of which are supported by springs; and the object of my invention is to so construct a chair of this class that the seat can be turned laterally to any desired position, and can be adjusted vertically.

This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a side view, and Fig. 2 a front view, of my improved chair, of which Figs. 3 and 4 represent modifications of the invention.

The base A of the chair may consist of a simple circular disk of wood or metal, as shown, or may be made with four short legs, in the usual manner, and to this base is firmly secured the screw-spindle B, the thread of which is adapted to an internal thread in the bar D, the latter being connected by two pairs of springs, G and G', to the seat H.

As shown in Fig. 1, each pair of springs is composed of one bar of steel, bent to the form shown, the upper straight portions of the bar being secured to the seat H, and the ends being attached, by any suitable means, to the bar D.

In Fig. 1 the springs are bent inward and downward from the seat; but they may be constructed and arranged in many different ways. For instance, the springs may be as shown in Fig. 3, or may be bowed outward, as indicated by dotted lines, the ends being secured to projections *a* on the bar D.

In order to limit the rocking movement of the seat, I secure to the hub *b* of the bar, through which the screw-spindle passes, rods *d*, connected together and strengthened by a third rod, *e*, the frame thus constructed serving to arrest the seat both during its forward and backward tilting movement. In some cases I may secure arms *d*, Fig. 4, to the under side of the seat, one arm arresting the forward tilting movement by coming in contact with the bar D, the other arm, in like manner, limiting the rearward tilting of the seat.

It will be evident that a chair thus constructed possesses all the advantages of other chairs with spring-supported seats; at the same time the seat can be turned laterally to any desired position, and adjusted vertically on the screw-spindle.

I claim as my invention—

1. The combination, in a chair, of a base, A, and screw-spindle B, secured to the same, the bar D adapted to the said screw-spindle, and springs G G', serving as mediums for connecting the bar to the seat H, all substantially as set forth.

2. The combination, with the bar D, adapted to the screw-spindle, the springs and seat, carried by the said bar, and the arresting-arms *d d*, all substantially as specified.

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

HENRY HOWSON.

Witnesses:

HARRY HOWSON, Jr.,
HARRY SMITH.