

No. 623,008.

Patented Apr. 11, 1899.

C. H. GREB & E. B. HEID.

AUTOMATIC STOOL.

(Application filed Dec. 22, 1898.)

(No Model.)

Fig. 1.

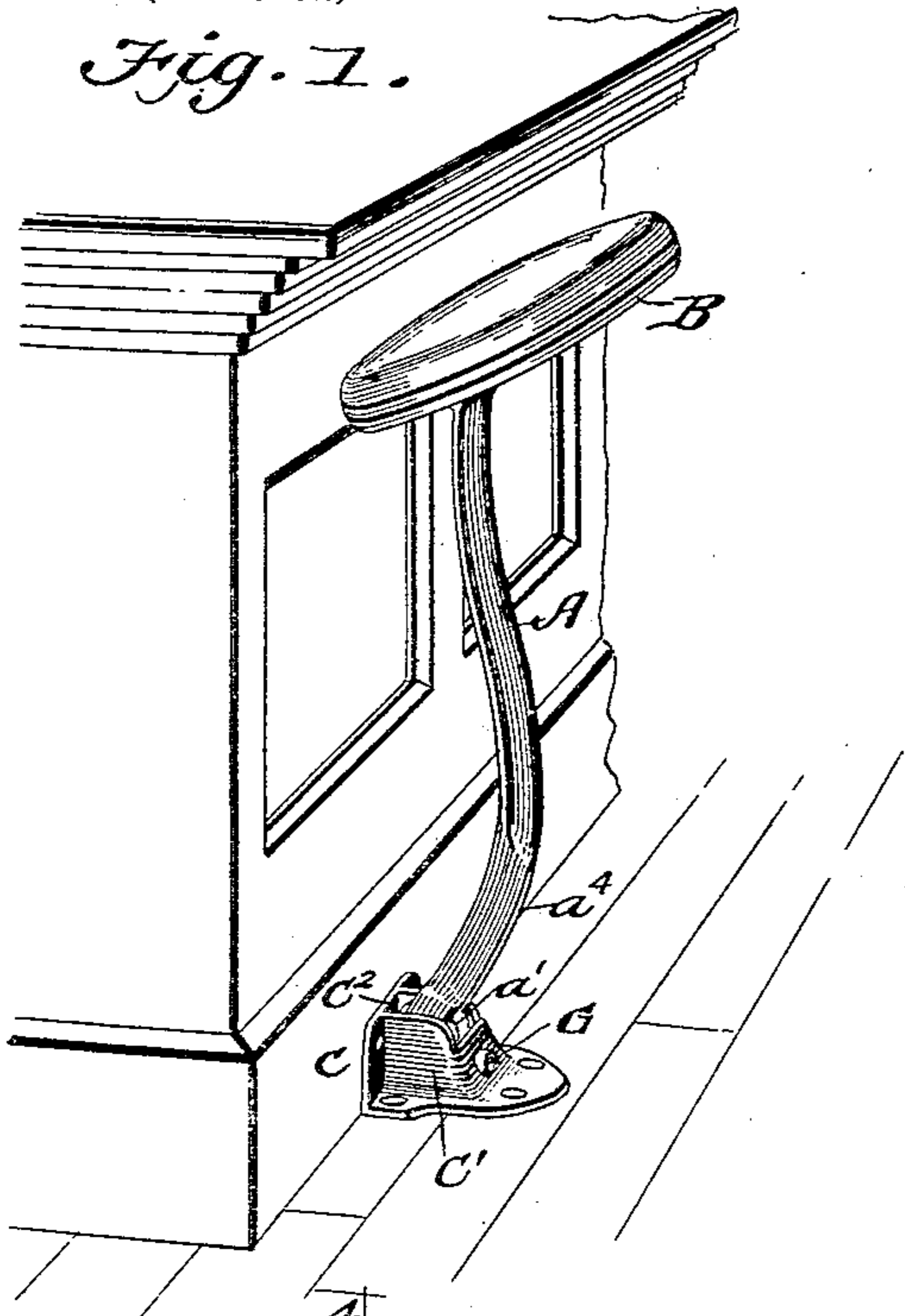


Fig. 2.

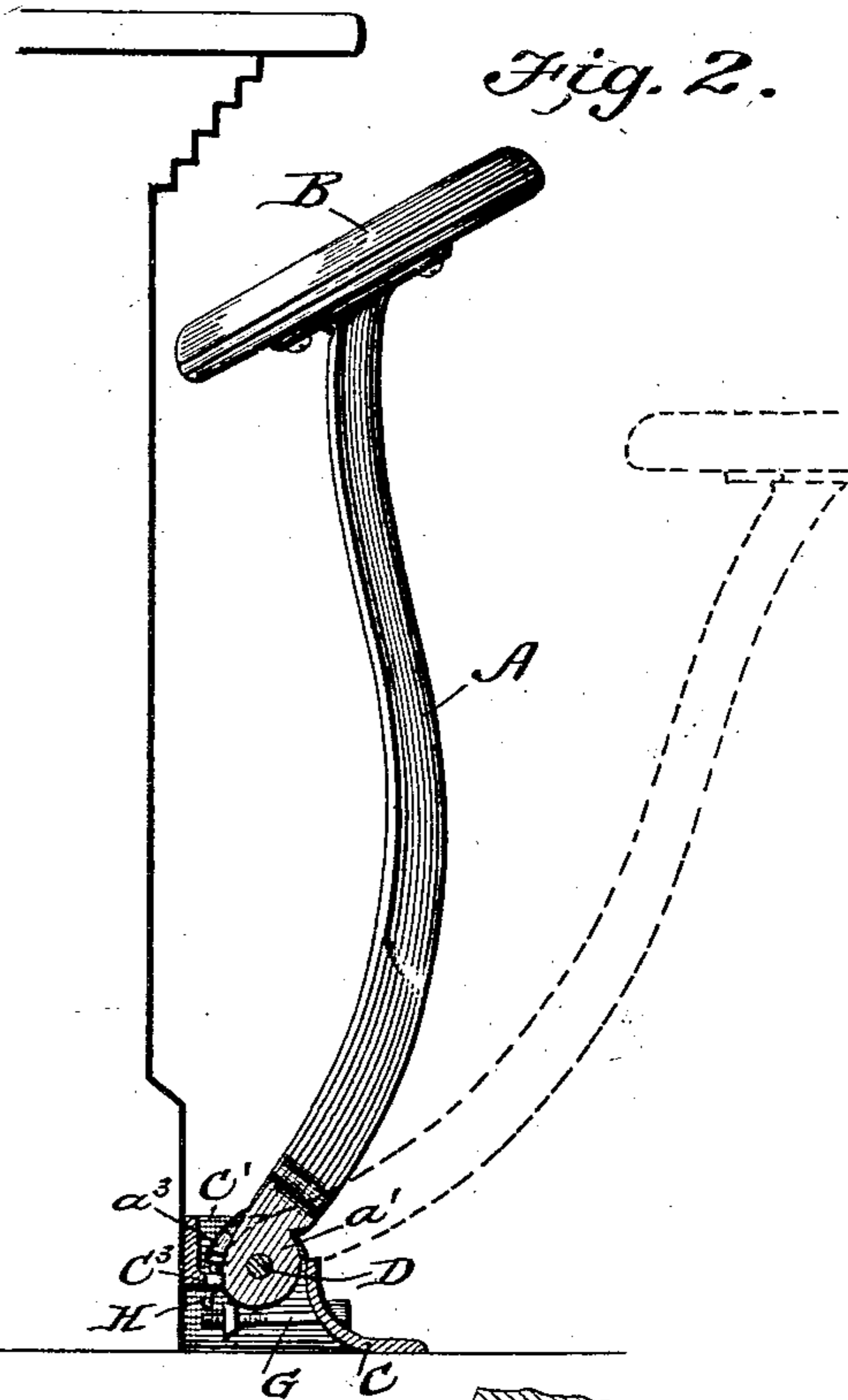


Fig. 5.

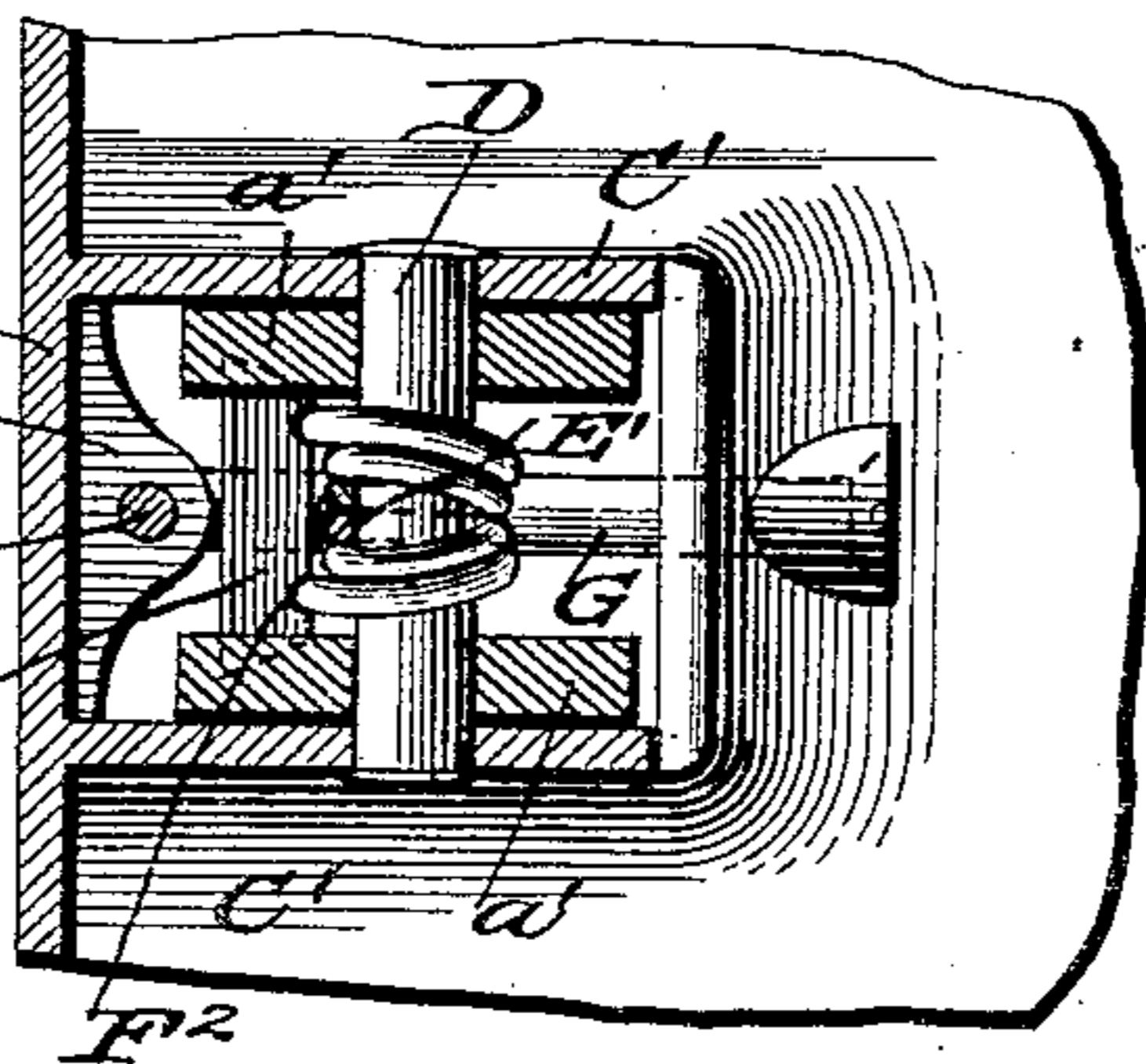


Fig. 4.

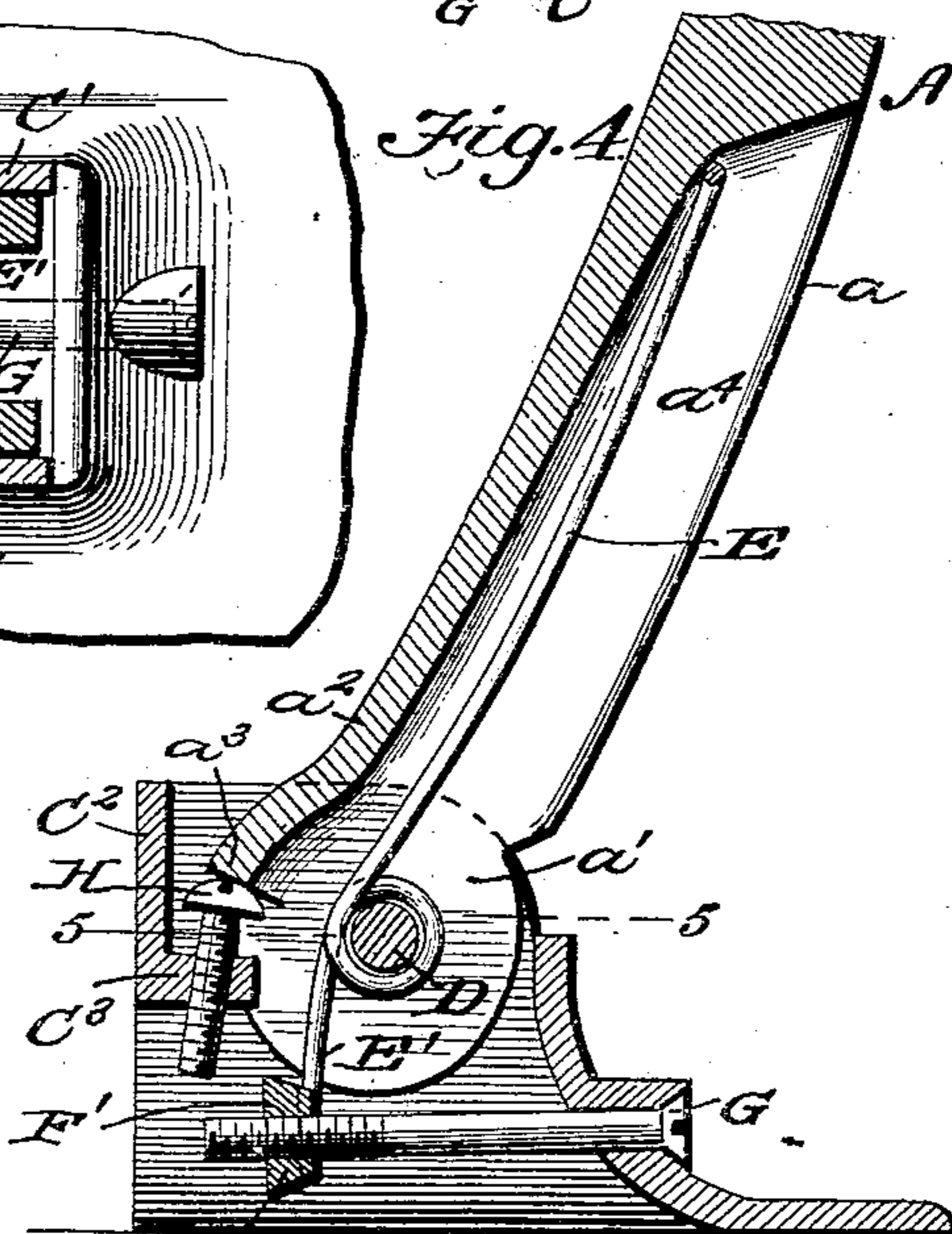
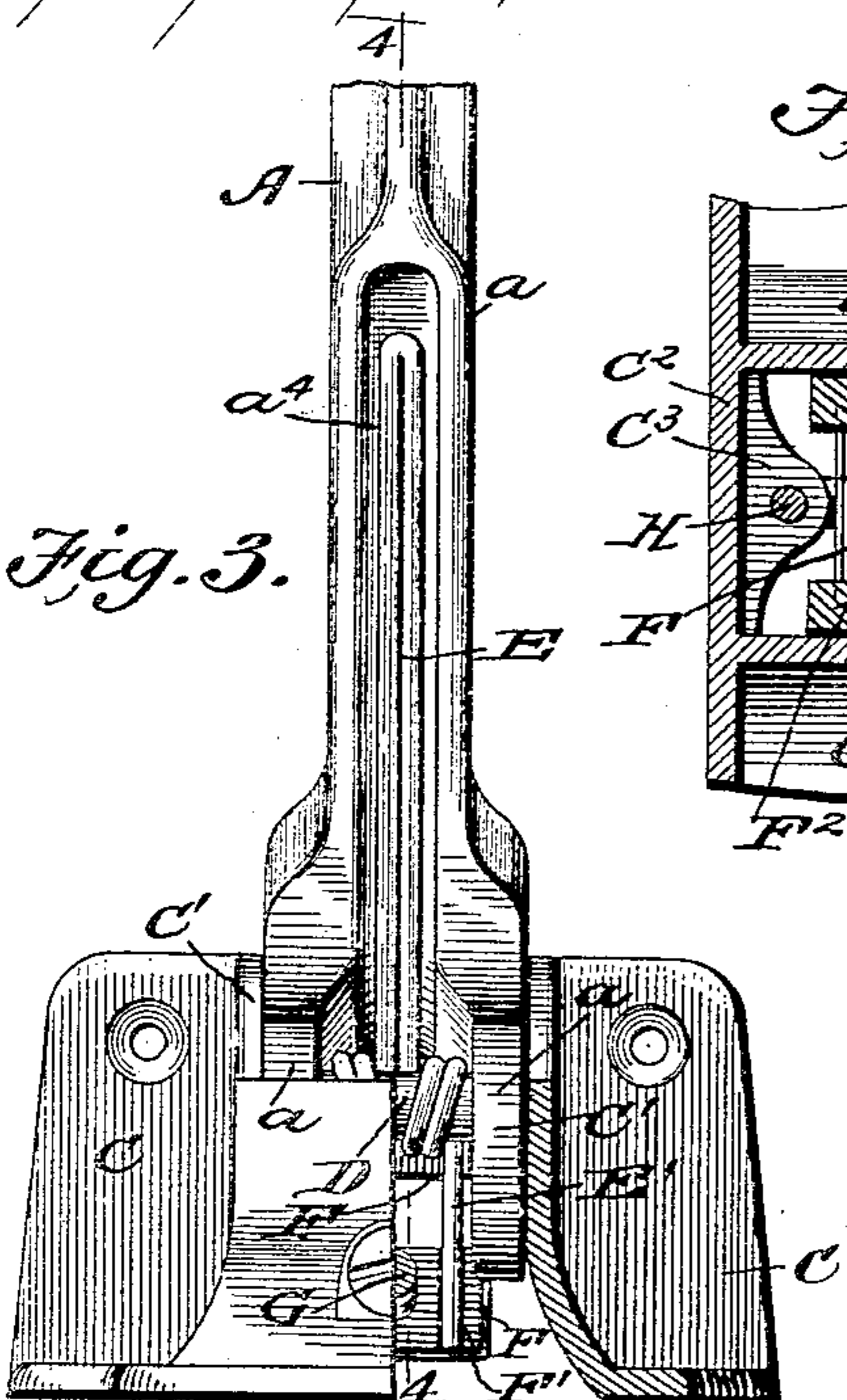


Fig. 3.



WITNESSES:

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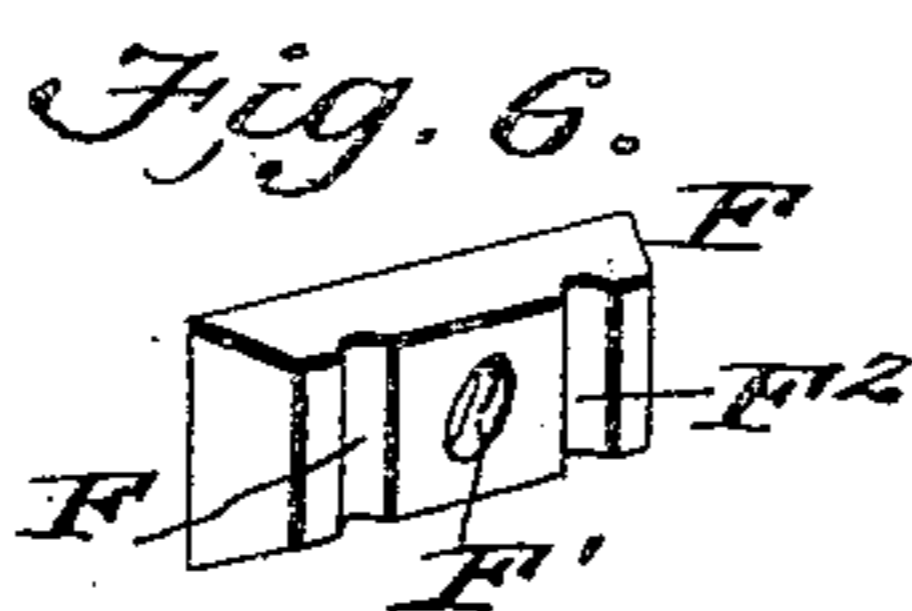


Fig. 6.

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AUTOMATIC STOOL.

SPECIFICATION forming part of Letters Patent No. 623,008, dated April 11, 1899.

Application filed December 22, 1898. Serial No. 700,028. (No model.)

To all whom it may concern:

Be it known that we, CHARLES H. GREB and EUGENE B. HEID, residing at Canal Dover, in the county of Tuscarawas and State of Ohio, have made certain new and useful Improvements in Automatic Stools, of which the following is a specification.

This invention is an improvement in automatic stools of the class wherein the stool-arm bearing the stool at its upper end is pivoted at its lower end in a suitable base secured to the floor.

The present invention seeks to provide a novel construction of the parts whereby the adjustable stop for limiting the movement of the stool-arm is arranged out of the way of the mop or broom used for cleaning the floor, and the spring for actuating said arm is so incased and protected that it cannot be put under tension by the foot of a person on the stool, and it is not exposed to operation except by stress upon the stool-arm.

The invention also provides a novel construction whereby the nut-plate, through the aid of which the tension of the spring is adjusted, is held from turning by the spring, which it aids to adjust.

To these ends the invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of our invention as in use. Fig. 2 is a sectional side view thereof. Fig. 3 is a front elevation of a part of a stool, part in section. Fig. 4 is a vertical longitudinal section of the lower portion of the stool. Fig. 5 is a cross-sectional view on about line 5 5 of Fig. 4, and Fig. 6 is a detail perspective view of the nut-plate.

The arm A may be of any suitable design and is adapted at its upper end to support the stool proper, B. At its lower end the arm A is pivoted to the base C, its specific construction facilitating such pivoting and aiding in the desired results, as will more fully appear hereinafter.

At its lower end the arm A has its side plates a extended to form the ears a' , which are perforated for the passage of the pivot-bolt D, by which the arm A is pivotally connected

with and between the side plates C' of the base C. The front plate a^2 of the arm A extends downward to about a line with the opening for the pivot-bolt D, the lower end a^3 of the plate a^2 being arranged to abut the stop presently described. The ears a' are spaced apart, as are the side plates a , thus forming a recess in the rear side of the arm A at its lower end, which recess a^4 communicates with the space between the ears a' and operates to receive the upper portion of the spring E, which actuates the arm A.

The spring E is coiled at E' upon the pivot-bolt D and has its upper portion bearing against the arm A within the recess a^4 . The lower portion E' of the spring, being the free end arms of same, bears against the nut-plate F on opposite sides of the threaded opening F' therein, the nut-plate F being provided on opposite sides of the said opening with grooves F^2 to receive the ends of the spring. The nut-plate F is held by the bolt G, journaled to the base and threaded within the opening F' of the nut-plate, so the turning of said bolt will adjust the nut-plate back and forth to vary the tension of the spring. In so doing it will be seen the spring operating in the grooves F^2 of the nut-plate holds such nut-plate from turning, and thus insures the proper adjustment of the spring by the described operation.

When the spring is seated in the recess a^4 , it is so disposed that the occupant of the chair cannot put his foot on the spring and force it down, thereby overstraining it and destroying its utility. At the same time the special construction described forms a convenient seat for the spring and leaves the exterior of the arm free and unobstructed from end to end.

The base C has at its inner side the back plate C^2 , which connects the side plates at their rear edges and extends downward to a point slightly below the pivot-bolt D, where it supports the lug C^3 , which projects toward the bolt D and has a threaded opening for the screw H, which forms the stop for abutment by the lower end a^3 of the plate a^2 of the arm A.

By the described construction it is evident that the screw H is in the position of the parts shown in Figs. 1 and 4 protected from the mop or broom used in sweeping by the arm

resting down upon such screw at a point below the top of the side plates C', as is best shown in Fig. 4.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an automatic stool substantially as described the base having side ears and a stop located between said ears and below the upper end thereof, combined with the arm having in its rear side at its lower end a recess forming opposite side plates which are prolonged at their lower ends to form ears, and the front plate which terminates above the lower end of said ears and is adapted to abut the stop of the base, the pivot-bolt securing said ears to the base, the spring coiled on said pivot-bolt and having its upper portion bearing within the recess in the rear of the stool-arm and its portion below said bolt provided with arms spaced apart, the nut-plate having a central threaded opening and grooves on opposite sides of the same and adapted to receive the arms of the spring and the adjusting-bolt threaded into engagement with said nut-plate substantially as set forth.

2. An automatic stool comprising the base, the stool-arm having at its lower end ears and provided in its rear side with a recess in line

with the space between said ears, the pivot-stud extended between the ears of the stool-arm, the spring coiled between its ends on the stud and extended above and below the same, the upper portion of the spring lying in the recess in the rear side of the stool-arm whereby it is protected from the feet of the occupant of the stool, and means for securing the lower portion of the spring substantially as set forth.

3. An automatic stool comprising the base, having the side plates, the plate connecting the inner edges of the side plates, the forwardly-projecting lug at the lower edge of said inner plate and provided with a threaded opening, such lug being arranged below the upper edges of the opposite side plates the stop screw-threaded in said opening, the seat-arm having at its lower end the ears fitting between and pivoted to the side plates of the base and having its front plate between said ears arranged to abut at its lower end upon the stop-screw and the spring for actuating said arm substantially as set forth.

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Witnesses:

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