

(No Model.)

G. E. UNDERHILL.

CHAIR.

No. 351,671.

Patented Oct. 26, 1886.

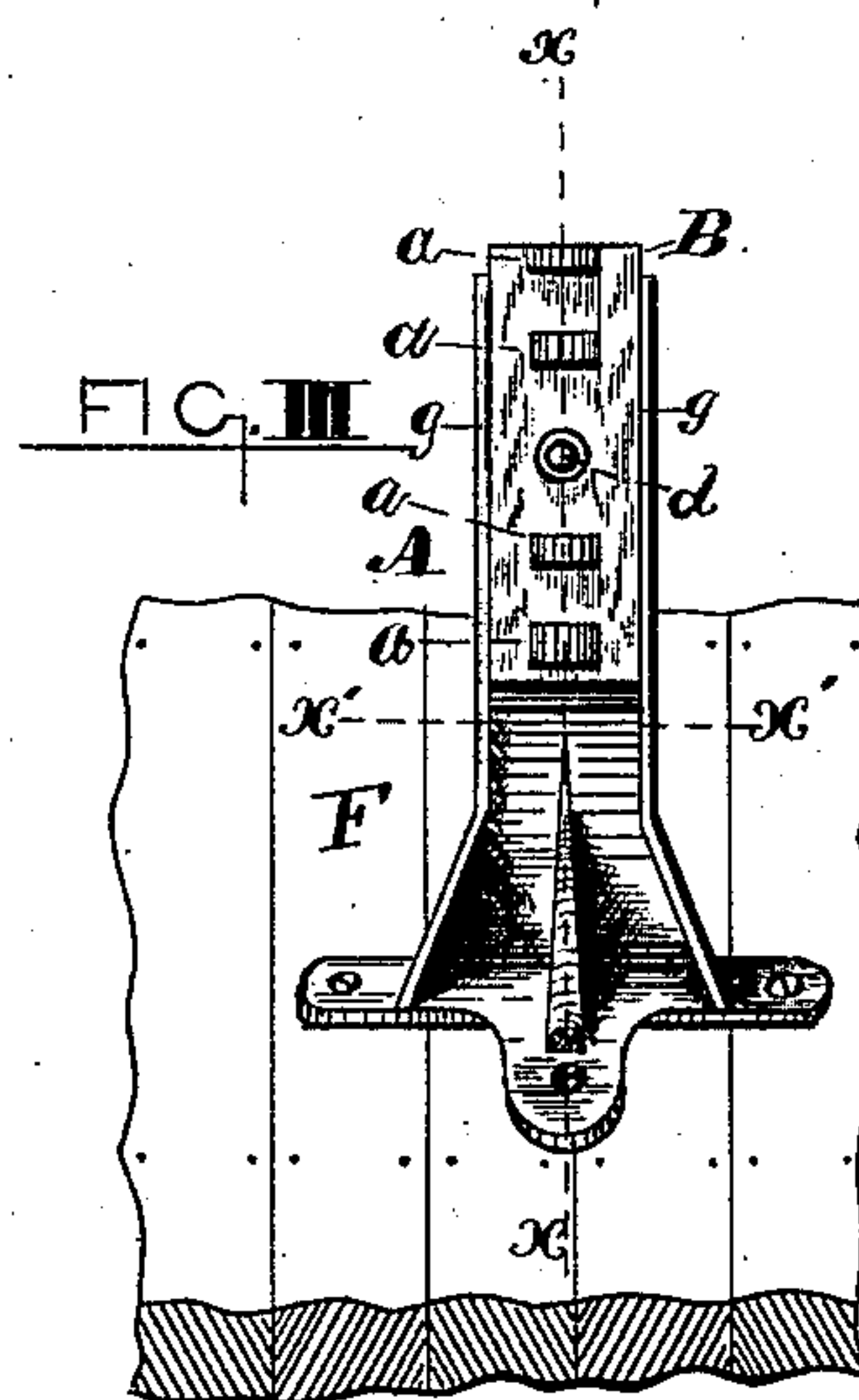
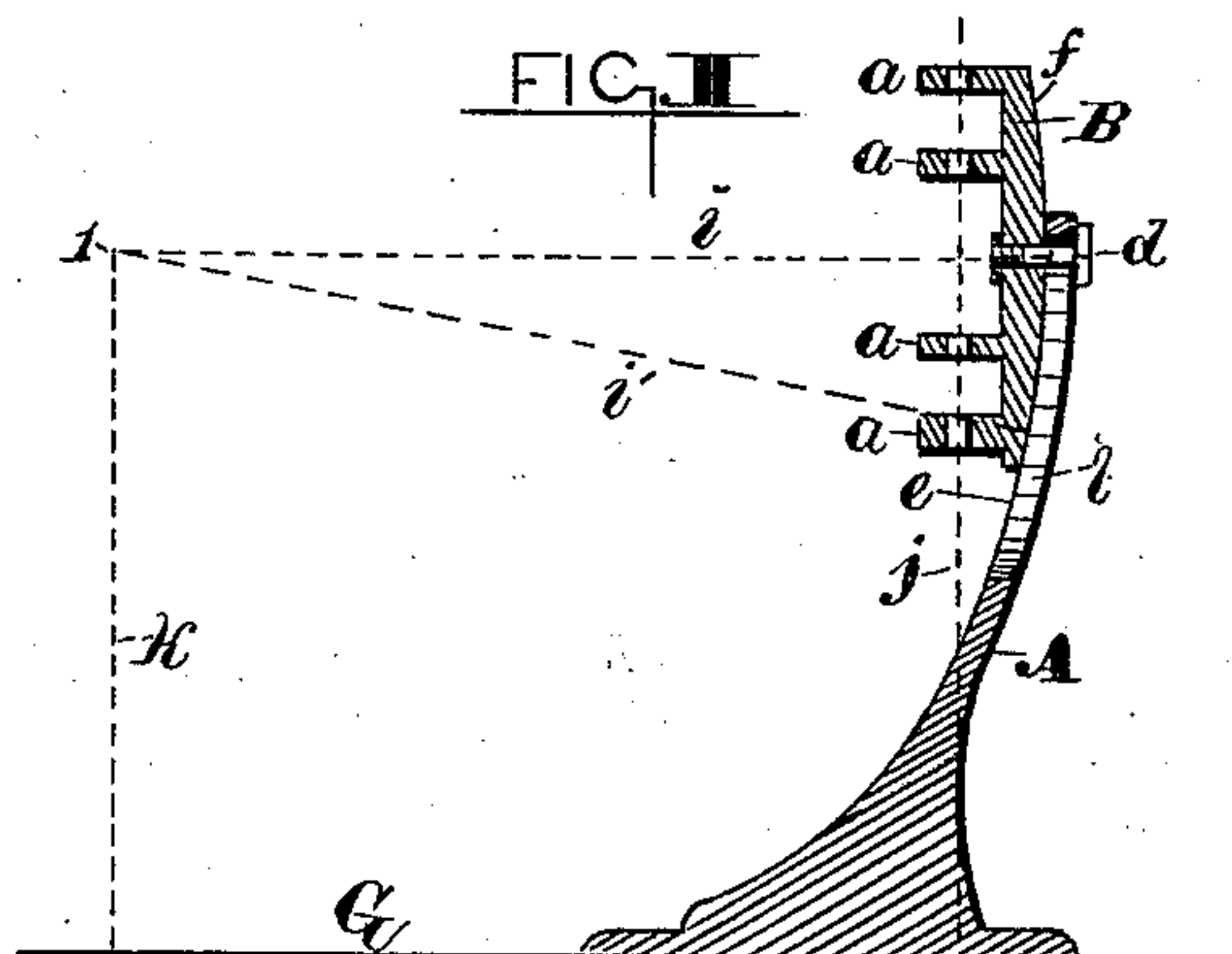
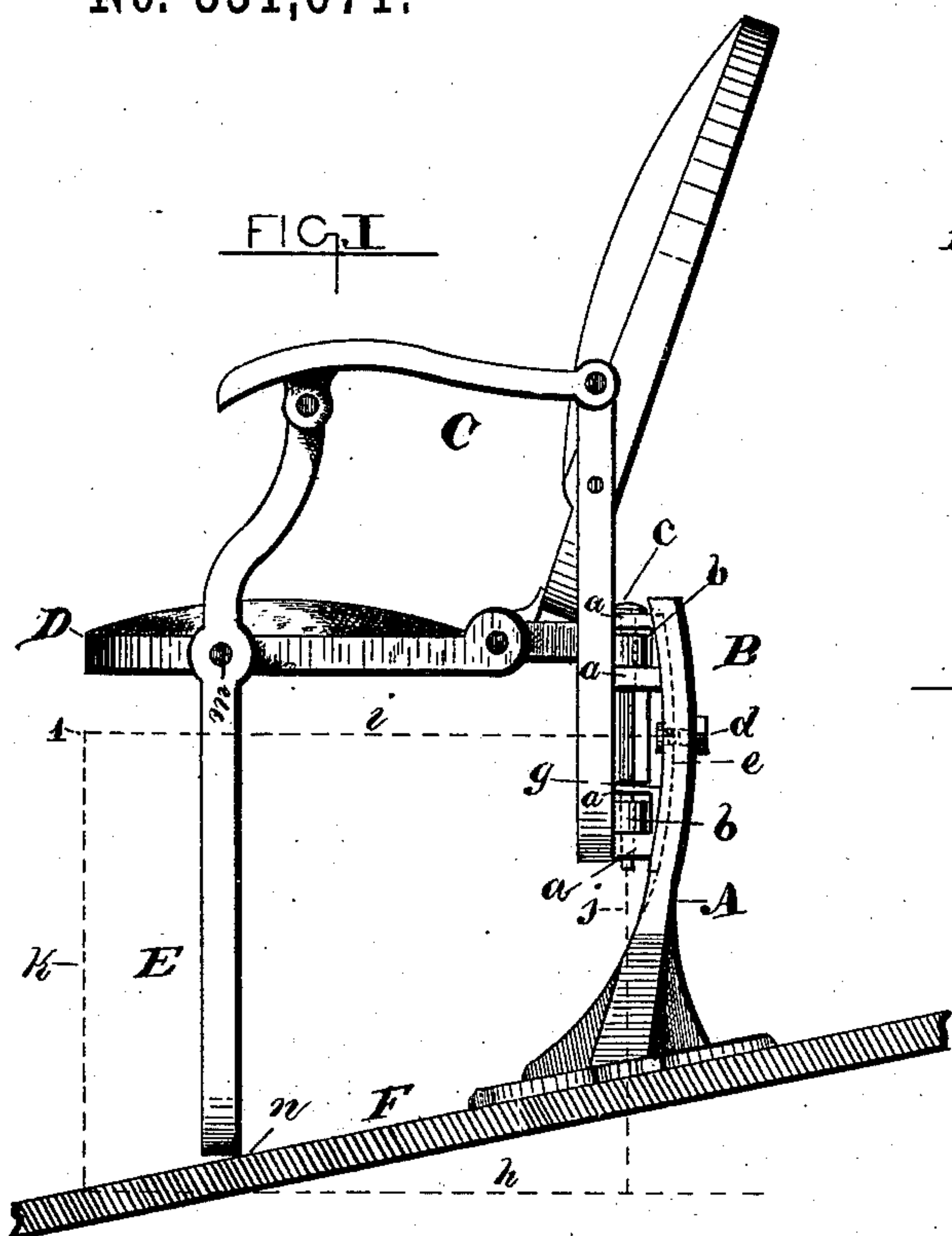


FIG. VI

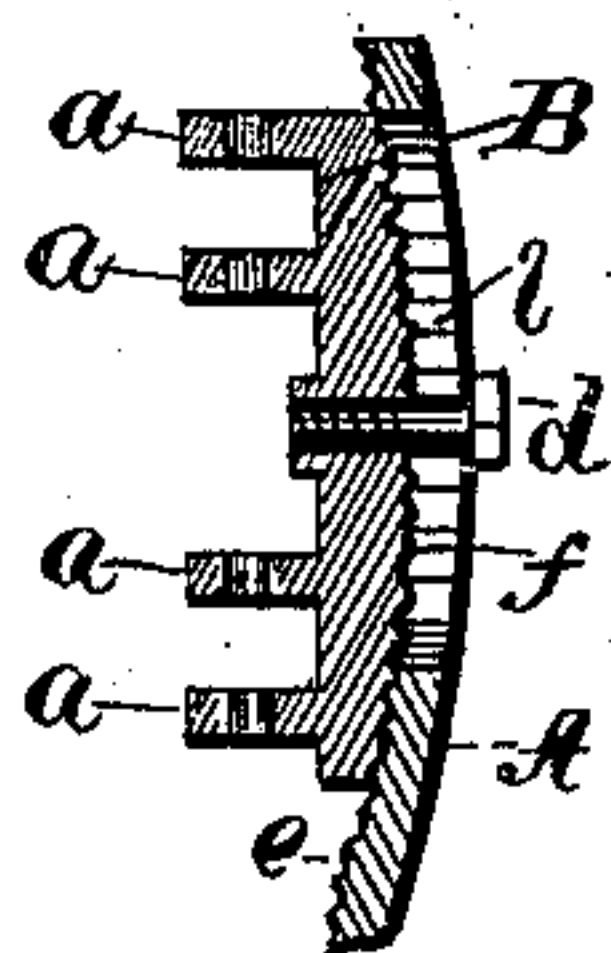


FIG. IV

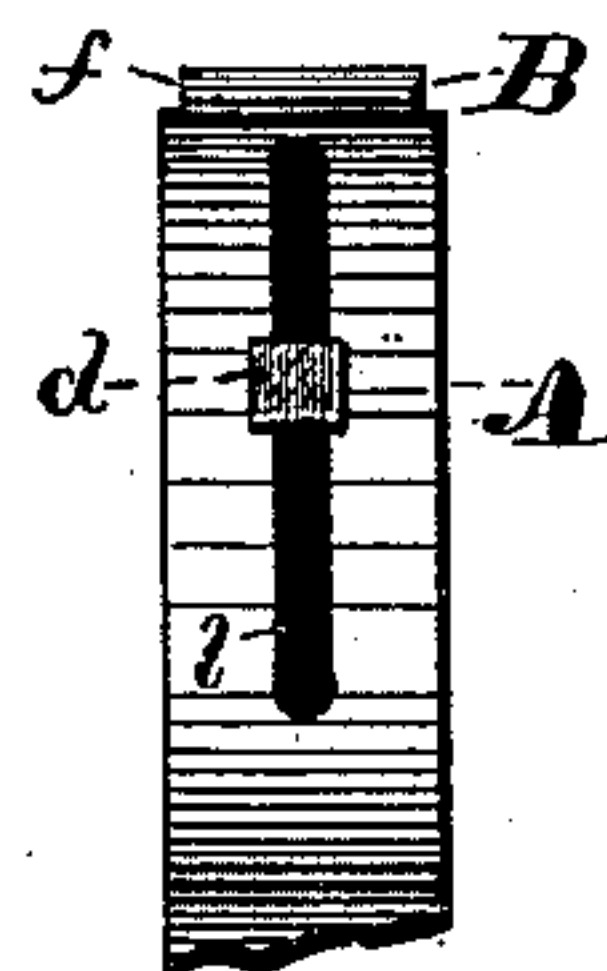
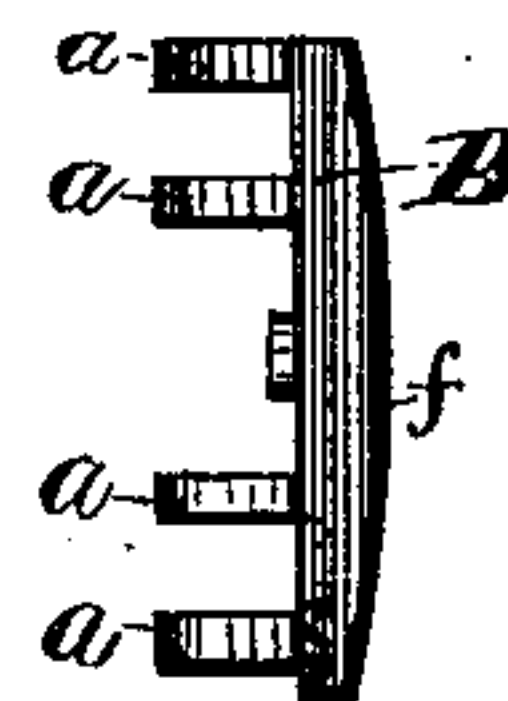


FIG. V



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE E. UNDERHILL, OF BRIDGEPORT, CONNECTICUT.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 351,671, dated October 26, 1886.

Application filed September 28, 1885. Serial No. 178,394. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. UNDERHILL, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Chairs, of which the following is a specification.

My invention relates to fixed seats or chairs used in public halls having a pitch or incline to the floor.

The object of my invention is to compensate for the incline or pitch of the floor by providing the chair with the proper adjustment, by means of which the seat is brought to its true level or horizontal position.

My invention consists of a base-piece resting on the floor and having an adjustable chair-support attached thereto.

To more clearly understand my invention, reference is had to the drawings, and to the figures and letters of reference marked thereon, forming part of this specification.

Figure I represents a side elevation of the device with a chair attached thereto, also a section of the floor. Fig. II represents a sectional view through the dotted line *x* of Fig. III. Fig. III represents a front elevation and section of floor. Fig. IV represents a section and rear elevation through the dotted line *x'* of Fig. III. Fig. V represents a side elevation of the chair-support. Fig. VI represents a sectional view through the line *x*, and section through line *x'* of Fig. III.

Its construction and operation are as follows:

A is the base-piece; B, the chair-support attached thereto; *a*, ears or lugs on said support; *b*, lugs of the chair. C is the chair; D, seat; E, supporting-leg; F, section of floor.

The device as shown is attached to a chair adapted to be folded. The chair does not form a part of the improvement, and is shown only to illustrate my invention.

My improvement consists in attaching the adjustable chair-support B (see Fig. I) to the base-piece A, and projecting at right angles from support B are the lugs or ears *a*, which are connected to the lugs *b* of the chair by the bolt *c*, thus forming a hinge, enabling the chair to swing laterally thereon. The upper portion, *e*, of the base-piece A represents an arc of a circle, as shown more clearly at Fig. II.

On the side of the support B is also described the same circle, the two parts fitting together. The ribs *g g* of base-piece A (see Fig. III) project outward from the surface, and operate to keep the support B in position. F (see Fig. I) represents an inclined floor. The dotted line *h* will represent the true level. The line *i* from the point 1 to *e* is the radius of the circle of base-piece A and support B. When the base A, with the chair attached, is placed on the floor, the support B is raised or lowered, as the case may be, moving in the circle, as before mentioned, until the seat D of the chair is brought to the true level, which will be when the seat D is parallel with line *h* and the line *j* at right angles therewith. In other words, the lines *h i j k* will represent the four sides of a parallelogram. To show more clearly its operation on floors having a different pitch, we will suppose the base-piece A, with support B, after having been properly adjusted for position, as represented in Fig. I, is placed on the level floor G, as seen at Fig. II. Then the line *i* of Fig. I will be in the position as represented by *i'*, Fig. II, and to compensate for the difference between the two floors the support B will have to be raised until the line *i'* is parallel to the floor G and the line *j* at right angles thereto. When properly adjusted, the bolt *d* secures the support firmly to the base A. The slot *l* in the base A (see Fig. IV) allows sufficient range for the travel of the support B, so as to secure it in any position required.

Raising or lowering the support B (see Fig. I) will, as before stated, place the chair-seat D in any position required.

As before mentioned, the circles of the base-piece A and support B are described from the point 1 below the seat D. The exact radius of these circles is immaterial, although there is a position for the center and length of radius that would give practically the best results. For instance, if the center 1 were carried up higher than its present position, it would necessitate the lengthening of the base-piece A. It is therefore desirable to keep this as near the floor as possible to avoid giving it a clumsy appearance. A very short radius, causing the support B to describe a small circle, would interfere with the proper elevation of said support necessary to bring the seat to its level.

In Figs. I, II, III, IV, and V, the circular face of the chair-support and base-piece are represented smooth. The broad surface thus brought in contact, in connection with the bolt 5 *b*, might be sufficient under any circumstances to prevent accidental slipping; but to prevent any possibility of this occurring, I propose to corrugate the circular faces of the chair-support and base-piece, as seen in the sectional 10 view, Fig. VI. These corrugations will be sufficiently coarse to preclude any possibility of the support shifting after being properly placed in position, and yet fine enough to nicely adjust it to the exact height.

15 The leading feature of my invention consists of a chair-support, to which the chair proper is secured. Said support is attached to a base-piece or supporting-standard and adapted to be adjusted, to the end that the 20 seat may be brought to its true level to compensate for the incline or pitch of floor.

I am aware of Patents No. 241,728, May 17, 1881, and No. 157,753, December 15, 1874, and do not claim the construction therein shown 25 and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an improvement in chairs to compensate for the incline or pitch of floors, the combination, with an upright standard or base-piece fixed to the floor, one of its perpendicular sides having a curvilinear face, of an adjustable supporting frame or block, and means 35 provided thereon to connect it with the seat or chair, said block having a curvilinear face

to engage with the curvilinear face of the standard, and means provided to secure the same thereto, substantially as described.

2. As an improvement in chairs to compensate for the incline or pitch of the floor, the upright standard A, having the circular or curvilinear face *e* of the adjustable frame or block B, having circular face *f* to engage with the circular face of the standard, and means 45 provided to secure said frame thereto, and means provided to secure said frame to the chair or seat, so that the seat may be brought to its true level, substantially as described and set forth.

3. The base-piece A, having corrugated circular recess *e*, adapted to engage and hold in position the chair-support B, having corrugated face *f*, and means provided on said support to connect the chair therewith, substantially as described and set forth. 55

4. The combination, with the single upright standard A, having circular face *e*, ribs *g*, elongated slot *l*, of the adjustable frame B, having circular face *f* to engage the circular face of 60 the standard, bolt *d*, to secure the same thereto, lugs *a*, and bolt *c*, to secure said frame to the seat or chair, substantially as shown and set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 15th day of September, A. D. 1885. 65

GEORGE E. UNDERHILL.

Witnesses:

JOHN SCHMERMONTH,
J. B. KLEIN.