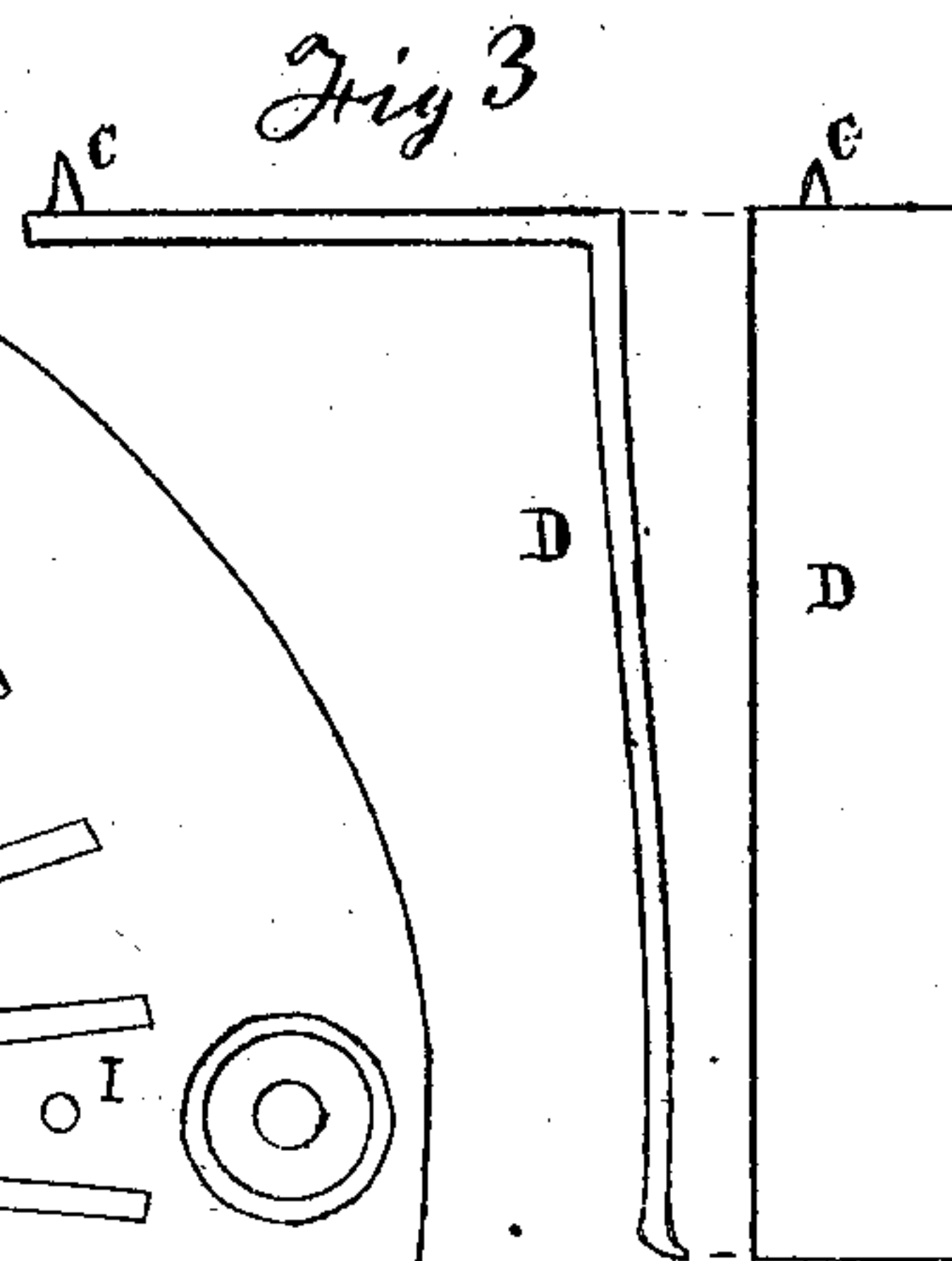
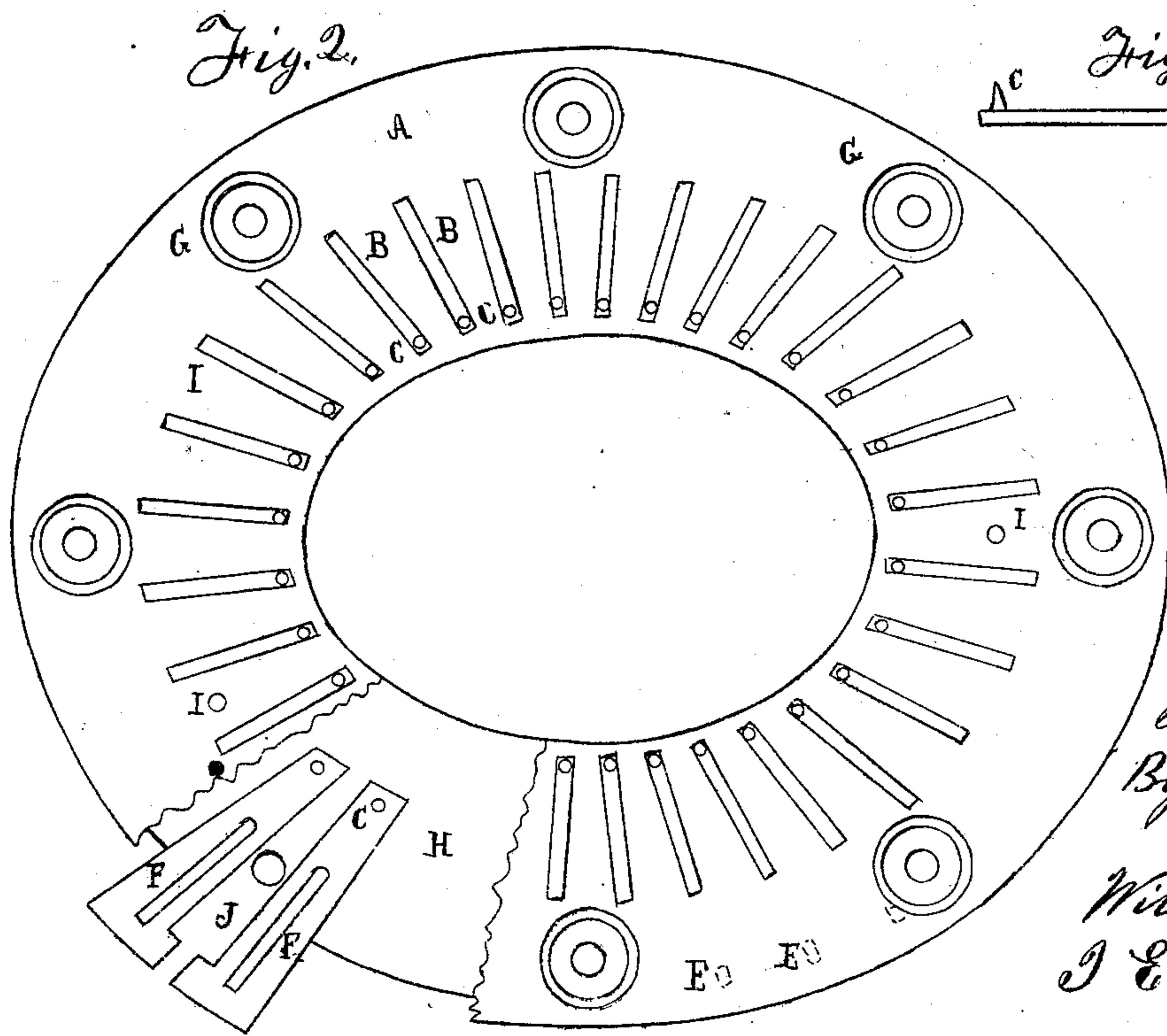
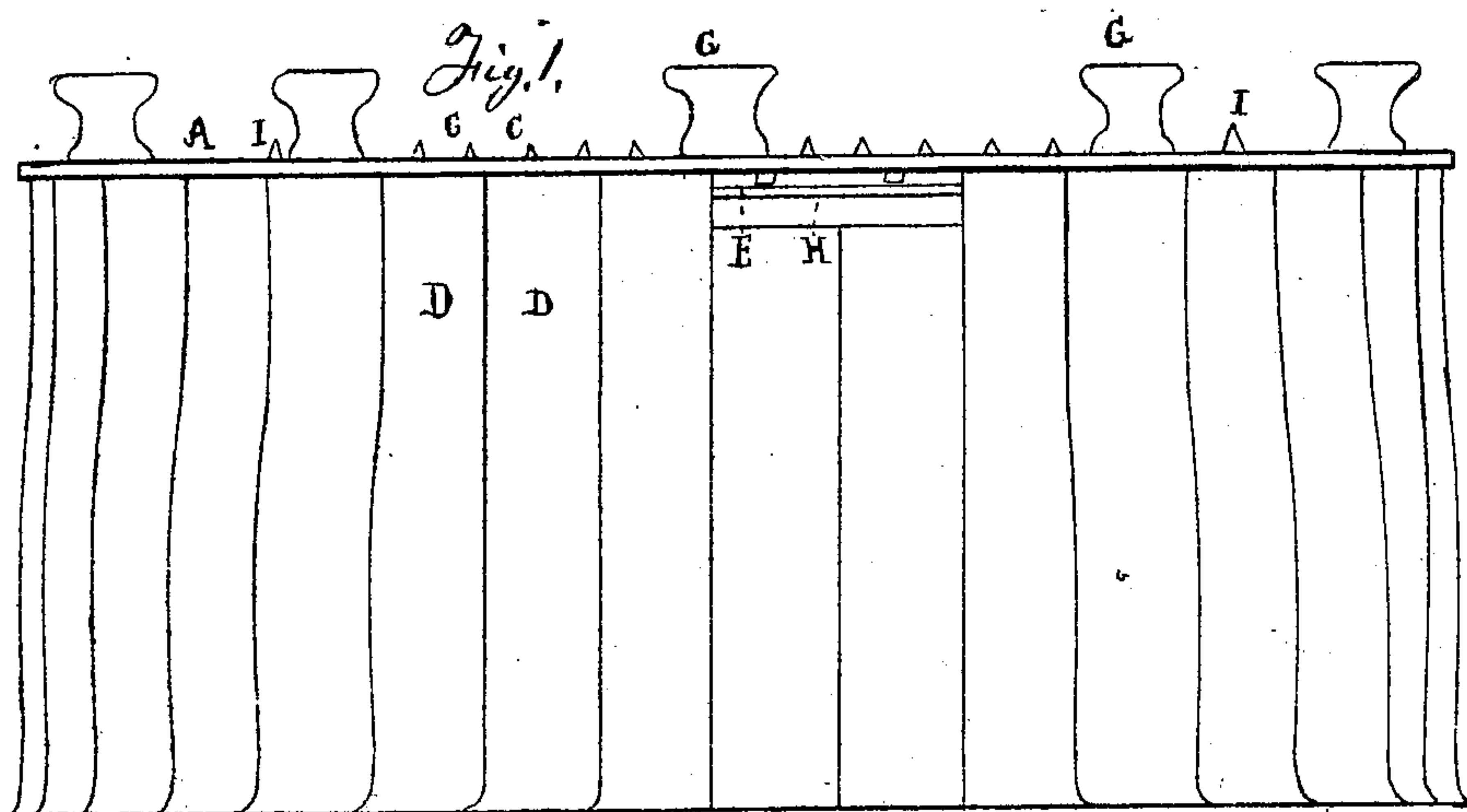


J. F. Klein.
Conformator.

No. 37759.

Patented Feb. 24. 1863



John F. Klein
By his Atty
J. Dennis Jr
Witnesses
J. E. Dennis

UNITED STATES PATENT OFFICE.

JOHN F. KLEIN, OF TRENTON, NEW JERSEY.

IMPROVEMENT IN APPARATUS FOR DETERMINING THE FORM AND SIZE OF THE HEAD AND ADAPTING THE HAT THERETO.

Specification forming part of Letters Patent No. 37,759, dated February 24, 1863.

To all whom it may concern:

Be it known that I, JOHN F. KLEIN, of Trenton, in the county of Mercer and State of New Jersey, have invented a new, useful, and improved conformator or apparatus for taking the form of the head and shaping the hat to fit it; and I do hereby declare that the same is described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and the mode of using it, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is an elevation of my improved conformator. Fig. 2 is a plan or top view. Fig. 3 is one of the arms.

The nature of my invention and improvements in conformators consists in making the arms of the conformator to project so far in one direction from the plates or stock which holds them that they will serve the double purpose of taking the form and size of the head and shaping a hat to fit it, and in making the projecting ends of the arms of a conformator about as thick or a little thicker than the ordinary leather hat-lining, so that the thickness of the lining will be about a substitute for the thickness of the arms, and enable the hatter to shape the hat on the same arms with which he took the form and size of the head without changing the position of said arms; also, in turning out the lower ends of the arms of a conformator for the double purpose of facilitating the putting the conformator on the head, and to prevent it from going too far into the hat; also, in some clamping-plates provided with slots and lugs corresponding with slots and pins in the arms, so as to guide and hold the arms as required; and in pointing the pins in the arms so as to take a registering-card with the fixed pins in the plates.

In the accompanying drawings, A is the top clamping-plate, made of metal, of the size and in the form shown in the drawings. It is provided with radial slots B B for the guide-pins C C in the arms D D. It is also provided with pins or lugs E E on its under side, (shown by dotted lines in Fig. 2,) which fit the

guide-slots F F in the arms D D. The top plate is perforated for the clamping-screws G G from the bottom plate, L, which is made a little thicker than the top plate at the outer edge, and about one-fourth of an inch smaller, so that the arms D D may be pushed in even with the edge of the top plate. The horizontal part of the conformator-arms D D (shown in Figs. 2 and 3) and the upper part of the perpendicular should be made one-twelfth of an inch or more thick, and provided with a pointed pin, U, to traverse in the slot B, and a groove, F, for the lug E, which pin, lug, and grooves guide the arms as they are traversed. The lower part of the perpendicular portion of the arm D should be made one-sixteenth of an inch or less in thickness, so that the thickness of the leather lining will be about a substitute for the arms if the hat is shaped before the lining is put in. If the hat is to be shaped with the lining in the arms may be thinner, and the yielding of the arms from the pressure of the hat, with the shrinking of the hat, will about compensate for the thickness of the arms. The lower portion of the arms D should be rounded on the outside and hollowed on the inside, with a curve corresponding to the edge of the plate A, and their lower ends bent out to facilitate applying the conformator to the head, and to prevent the conformator from slipping too far into the hat. The guide-pin C is pointed so as readily to perforate paper for a record and index, by which the arms may be set in the same position the second time. The permanent pins I I in the top plate enable the operator to place the paper in the same position in which the record was taken as often as required to prepare a hat for the same head. The screws G G are provided with thumb-nuts, so as to be readily turned to clamp or loosen the arms when required. The top of the bottom plate is covered with some yielding substance, as cloth, or cloth with a thin sheet of india-rubber upon it, and a piece of paper on top of that next to the arms to prevent the rubber from sticking to the arms and prevent them from sliding freely when the screws are loosened. This packing on the bottom plate holds the arms firm when they are pressed against it by the top plate. The arms D, which come

next to the screws G, are cut away, as shown at J, to permit them to slide by the screws.

To use my invention, the nuts on the screws should be turned back one or two turns to loosen the arms, which should be moved out, and the conformator put on the head to which the hat is to be fitted, and the arms moved in so as to come to the head. A band, elastic or otherwise, should now be applied around the arms, near their lower ends, and tied or buckled so as to press the arms gently to the head, when the nuts on the screws should be turned so as to clamp the arms firmly between the plates, when the band may be removed and the conformator taken from the head and placed on a block, and a piece of stiff paper put in between the thumb-nuts and pressed onto the pointed pins with a piece of cork or some other substance, which paper may be kept as a record of the form and size of the head, to be used as an index for setting the machine to fit hats to the same head at any future time. The conformator is now placed upon a bottom board, (a curved board used to iron hat-brims on,) and the hatter takes the hat to be shaped and softens the brim and the sides of the crown next the brim with a hot iron or otherwise, and places the hat quickly on the conformator while it is soft, with

the brim down to the bottom board. He then proceeds to press, curl, and set the brim while the conformator is in the hat. When this is done, and the hat cooled and stiffened, seize the brim, and give the hat a gentle shake, and the conformator will fall out, and the hat will be found to fit the head most admirably.

My conformator is a cheap and simple apparatus, little liable to get out of order when properly used, and serves the double purpose of taking the form, size, and shape of the head, and blocking a hat to fit it far better than it ever has been done before and with the greatest facility and least labor.

I believe I have described and represented my conformator so as to enable any person skilled in the art to make and use it without further invention or experiment, and I will now state what I desire to secure by Letters Patent, to wit—

A conformator constructed substantially as described—to wit, so that it can be used to take the form and size of the head, and then put into a hat to shape it (the hat) to fit the head.

JOHN F. KLEIN.

Witnesses:

SAM'L EVANS,
GOTTWALD WINKLER.