

(No Model.)

D. WHITE & P. W. CORNWELL.

DRAFT REGULATOR.

No. 249,711.

Patented Nov. 15, 1881.

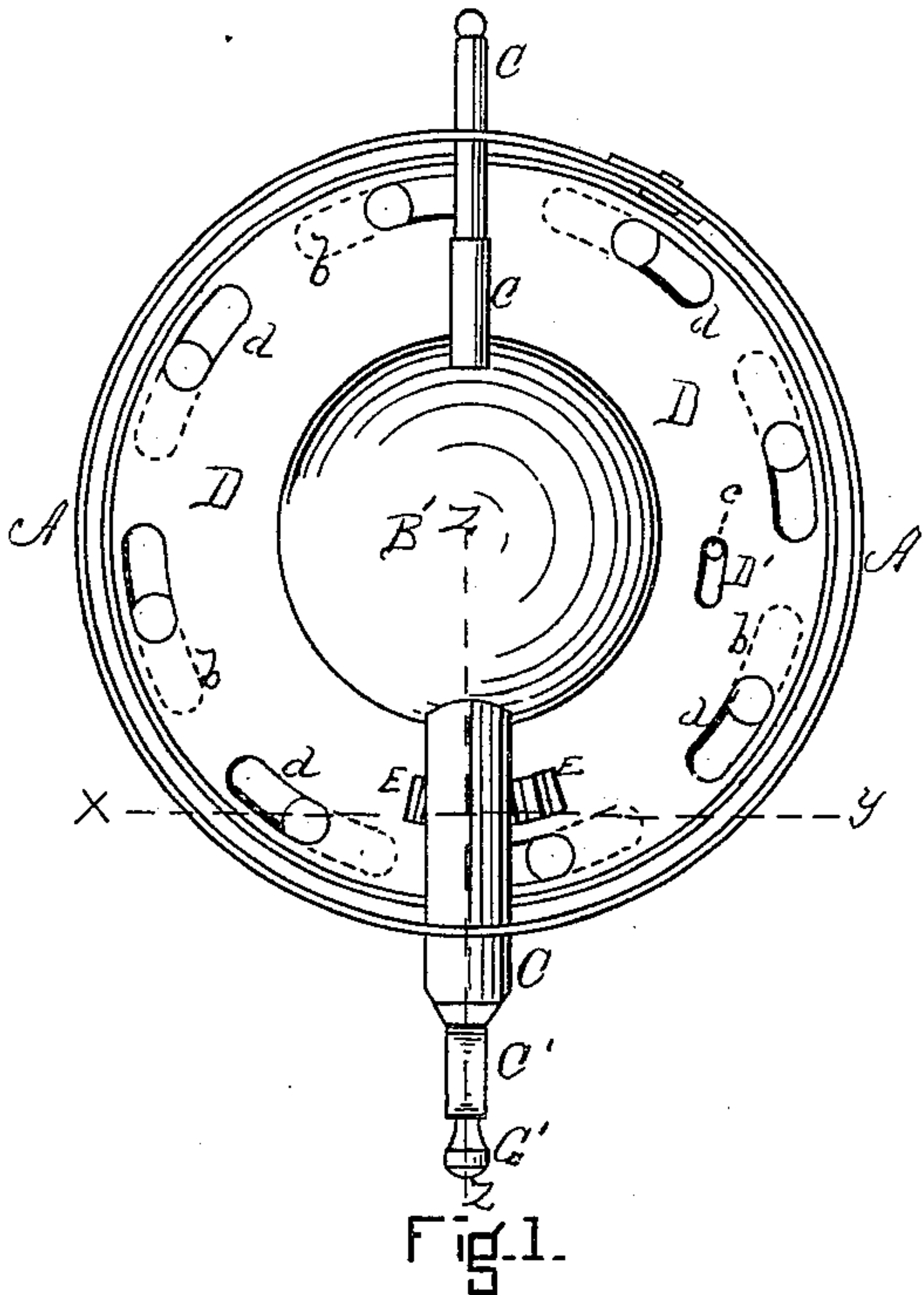


Fig. 1.

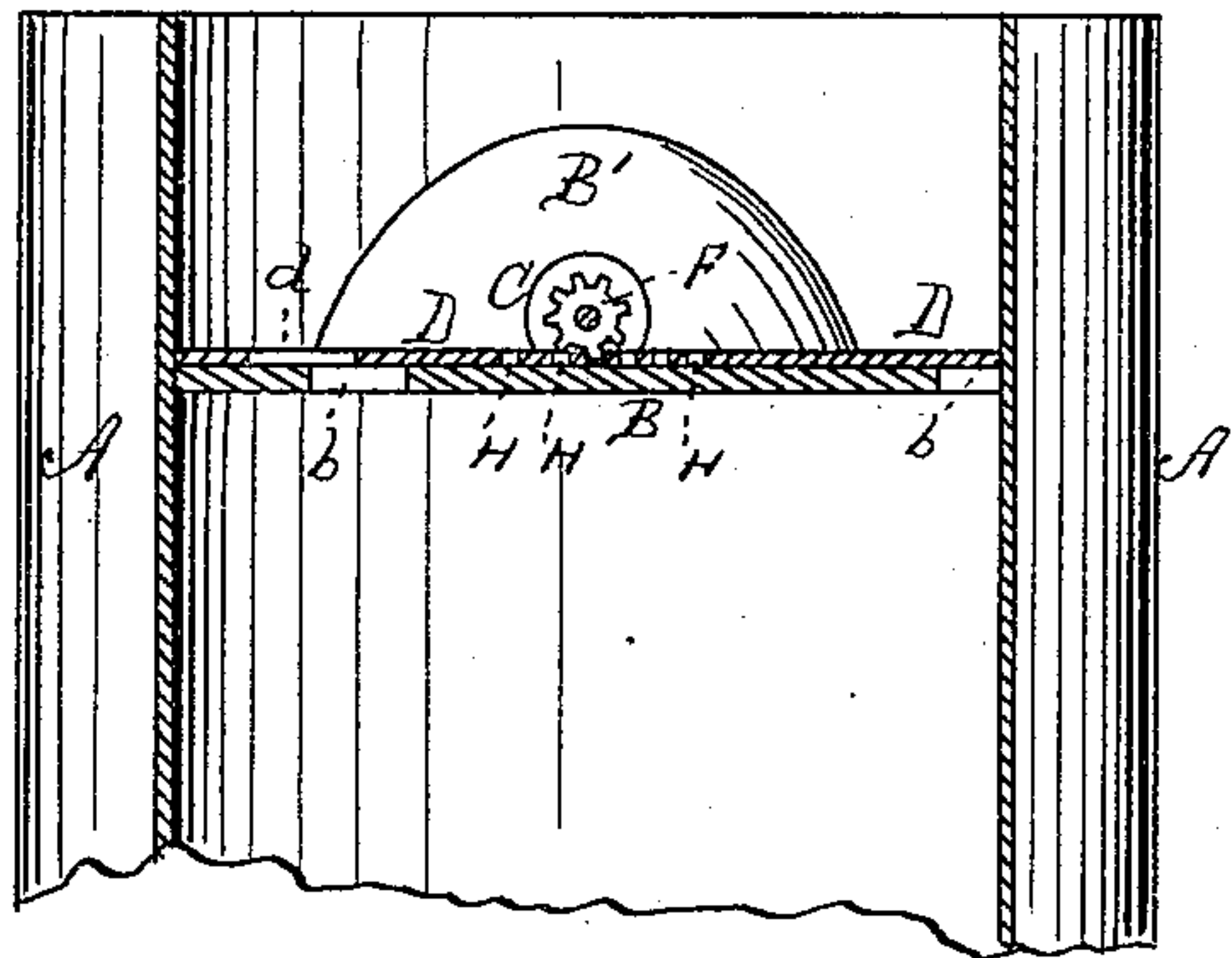


Fig. 4.

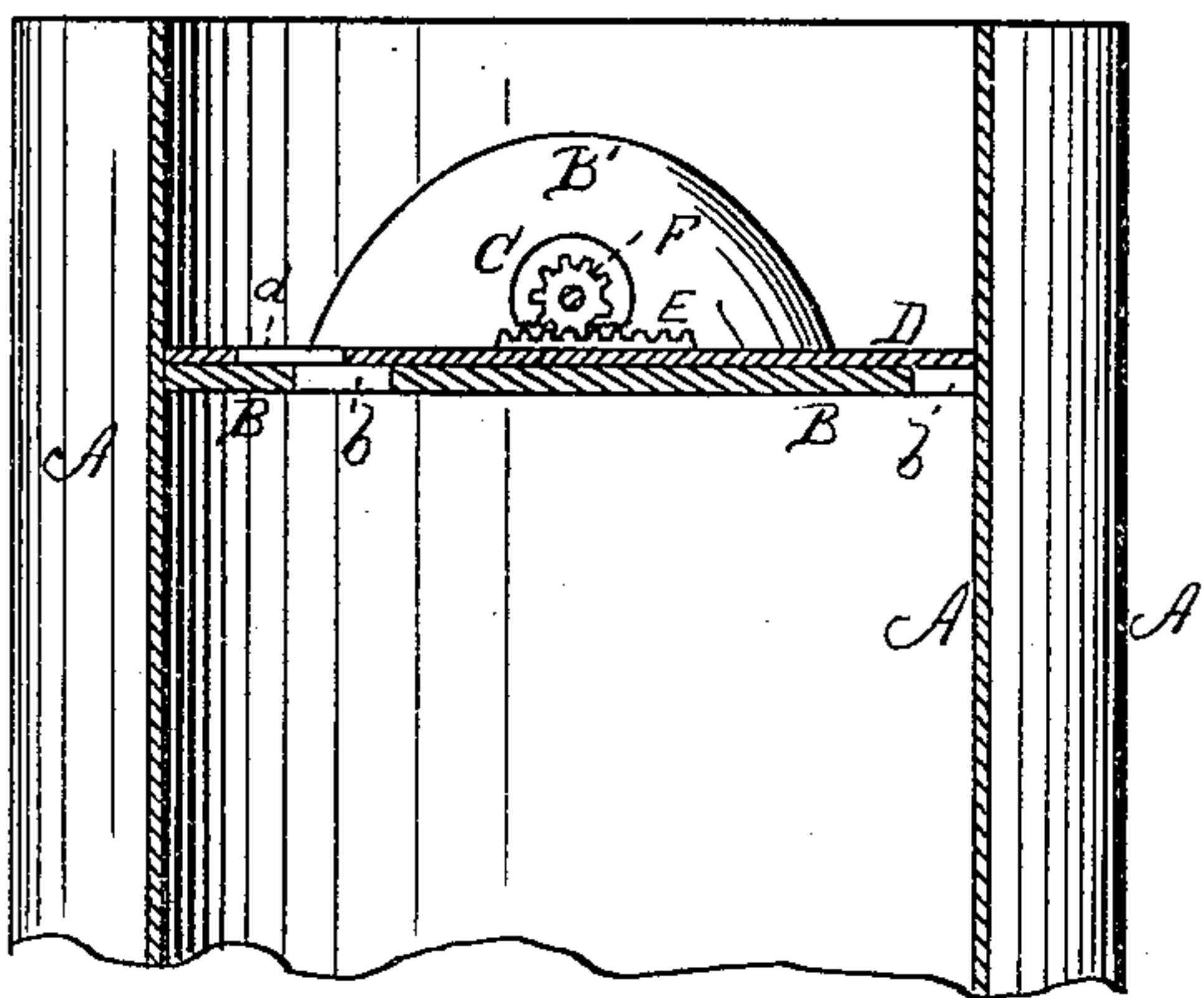


Fig. 2.

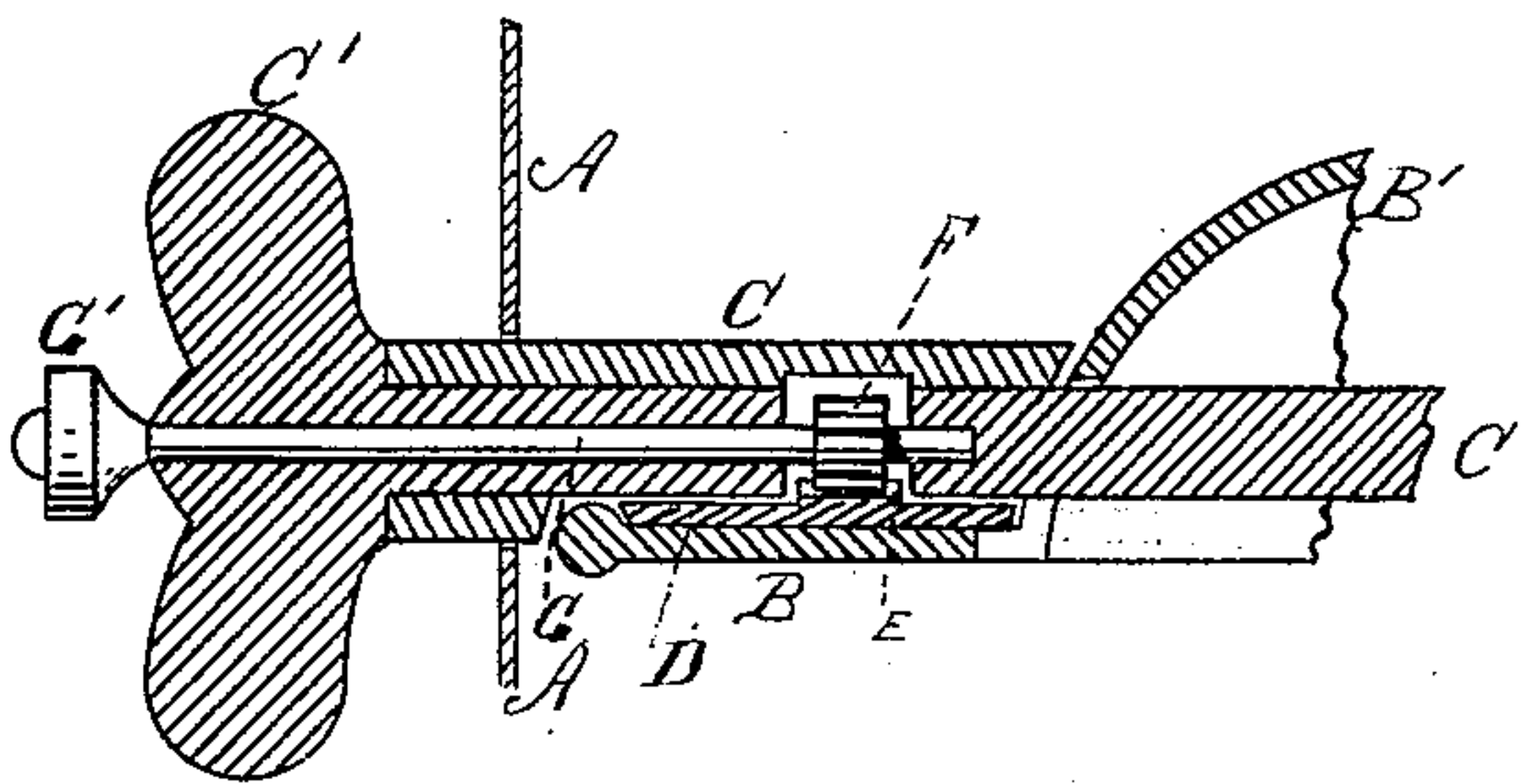


Fig. 3.

WITNESSES

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DORICK WHITE, OF WEYMOUTH, AND PHILLIP W. CORNWELL, OF  
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## DRAFT-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 249,711, dated November 15, 1881.

Application filed October 5, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, DORICK WHITE, of Weymouth, in the county of Norfolk and State of Massachusetts, and PHILLIP W. CORNWELL, of Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Draft-Regulators, of which the following is a specification.

10 This invention relates to draft-regulators to be used in the funnels of stoves and furnaces, ventilators, and other places where the improvement may be of service, and it is an improvement upon the Letters Patent of the  
15 United States No. 49,899, granted September 12, 1865, to J. H. Littlefield.

The main object of the improvement is to more thoroughly and with a greater degree of exactness regulate the draft, and hence control the heat.

20 In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a plan of a device embodying our improvement applied to the funnel of a stove  
25 or furnace. Fig. 2 is a transverse vertical section on line *xy*, Fig. 1. Fig. 3 is a vertical section on line *zz*, Fig. 1, on an enlarged scale. Fig. 4 is a vertical section, similar to that shown in Fig. 2, of a modification.

30 A represents the funnel of a stove or furnace, through which the products of combustion escape.

B is a perforated disk, usually of cast-iron, provided with the concavo-convex central swelling or bulging portion, B', (projecting toward the open air or from the fire,) and swinging upon the spindle C. This disk B is essentially the same as the disk lettered A in the Letters Patent above referred to, except-  
40 ing that the openings *b b* in our improvement are not round, but oblong.

D is a thin disk upon the upper or outer surface of the disk B, cut out at its center in order to allow the portion B' to pass through, and provided with a slot, D', into which projects a stud, *c*, which is integral with the disk B. The disk D is provided with oblong openings *d*, corresponding with the openings *b* in the under disk, and also with the rack E.  
50 This rack E is engaged by the pinion F, fixed upon the shaft G, which lies within the spin-

dle C, as seen in Fig. 3, terminating at its outer end in a handle, G'.

The operation is as follows: When it is desired to let a heavy draft through the funnel A—as in building a fire, for instance—the disks B D are turned, by means of the spindle C, in the ordinary manner, by grasping the thumb-piece C'. When the disks are closed, as in the drawings, and it is desired to regulate the draft to a nicety, the disk D is partially rotated by turning the shaft G by means of its handle G', thus causing the pinion F to engage the rack E. The greatest amount of draft is produced by so turning the disk D that its openings *d* exactly coincide with the openings *b* in the under disk. The least amount of draft is obtained when the disks D and B are in the relative positions shown in Fig. 1. Of course there must always be some draft, hence the stud *c* is provided, projecting into the slot D', thus regulating the amount of rotary play in the disk D, and especially preventing the draft-openings from being wholly closed and putting out the fire.

75 In Fig. 4 a modification is shown, in which the pinion meshes into slots H corresponding to its teeth in the disk D instead of the rack E. The effect is, of course, the same in each case.

80 The operation of the part B' of the disk B is the same as described in the Letters Patent to Littlefield, above alluded to, and hence needs no further explanation here.

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

In a draft-regulator, the combination, with the disk B, provided with the openings *b*, and the spindle C, of the disk D, provided with the openings *d*, and the shaft G placed within said spindle and adapted, by means of the pinion F, to partially rotate the disk D for the purpose of regulating the length of the passages through said disks, all substantially as set forth.

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Witnesses:

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