

(No Model.)

2 Sheets—Sheet 1.

R. C. DOENITZ.  
VENTILATING ELBOW JOINT.

No. 539,360.

Patented May 14, 1895

Fig. 1.

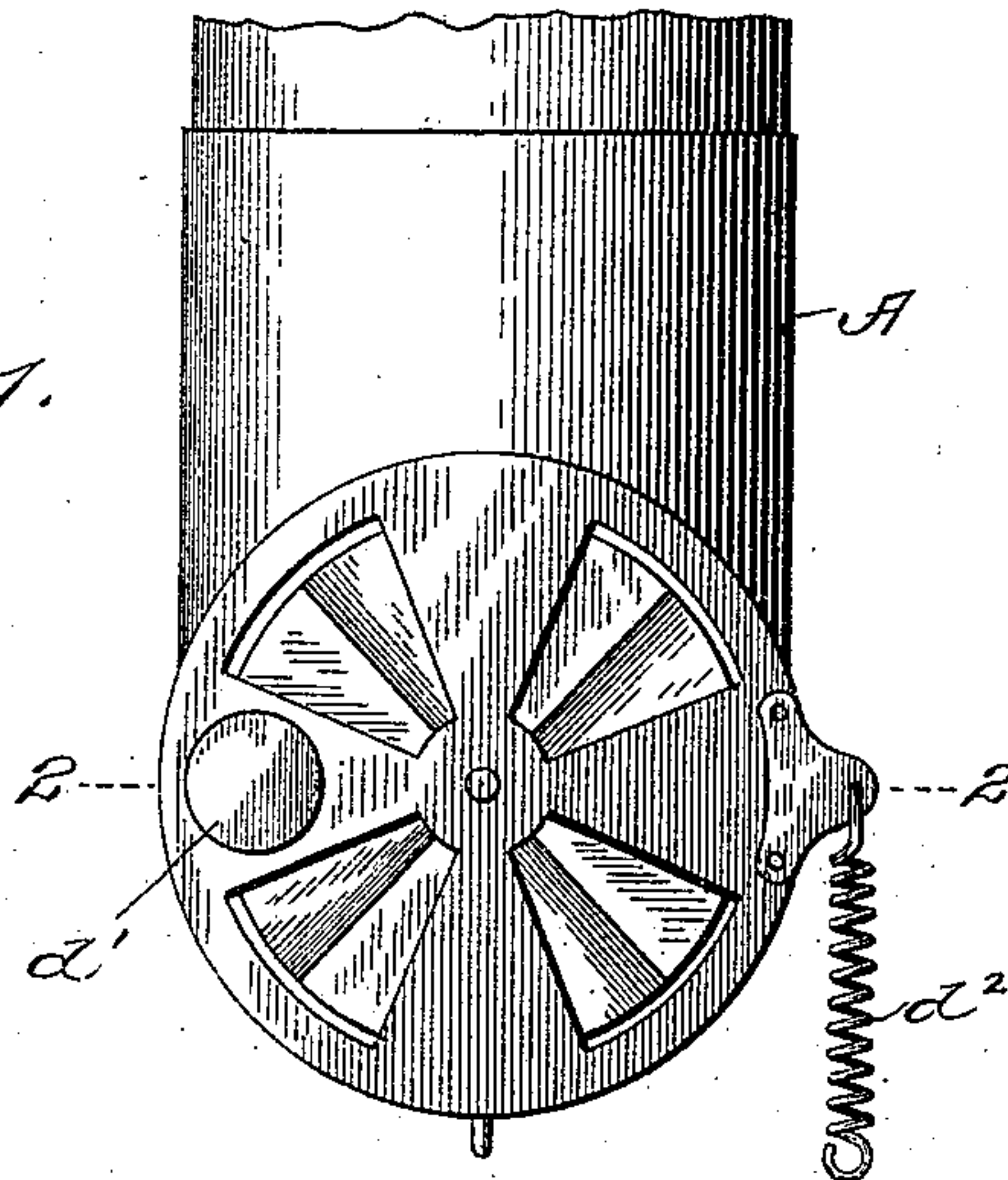


Fig. 2.

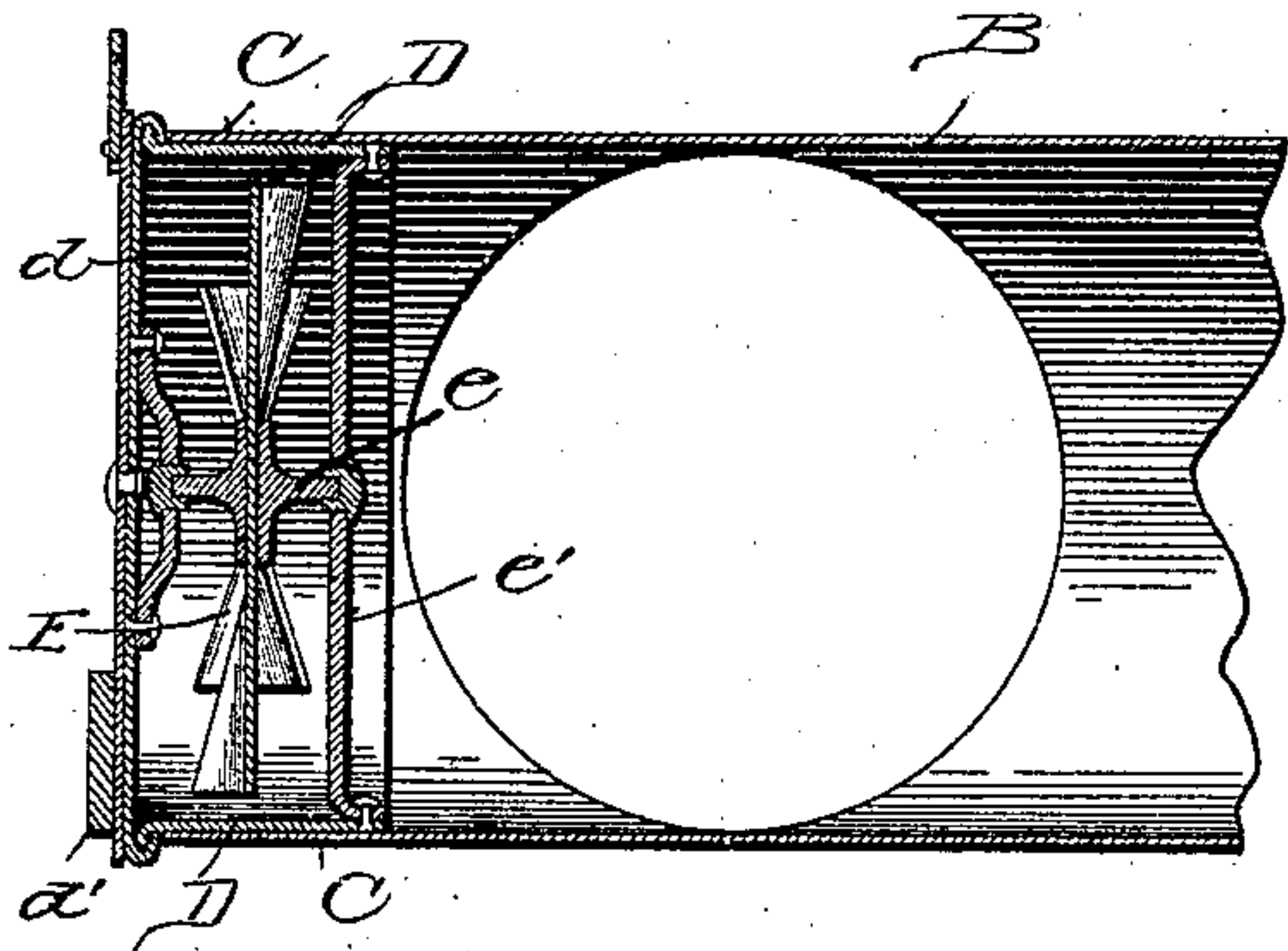


Fig. 3.

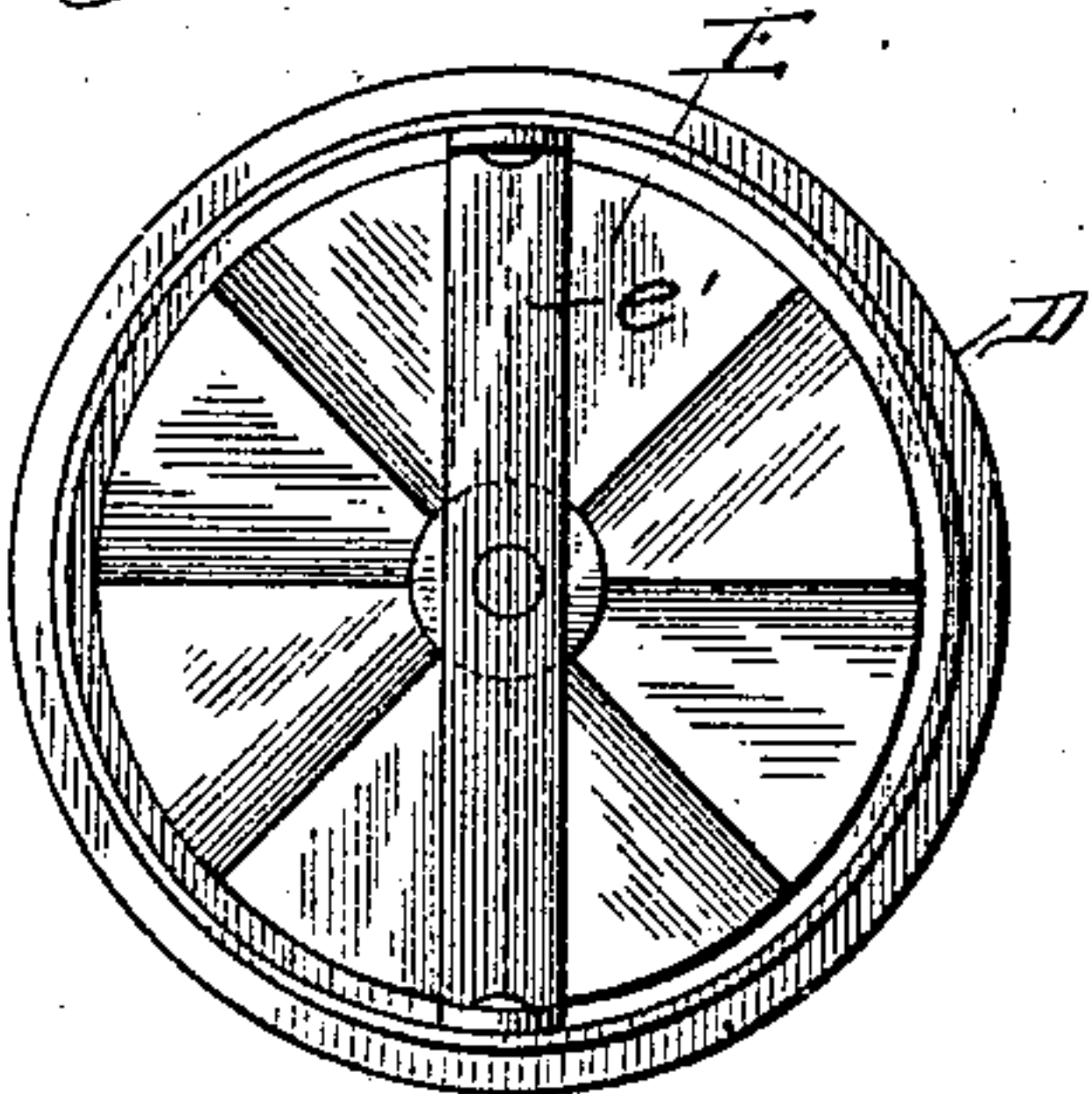


Fig. 5.

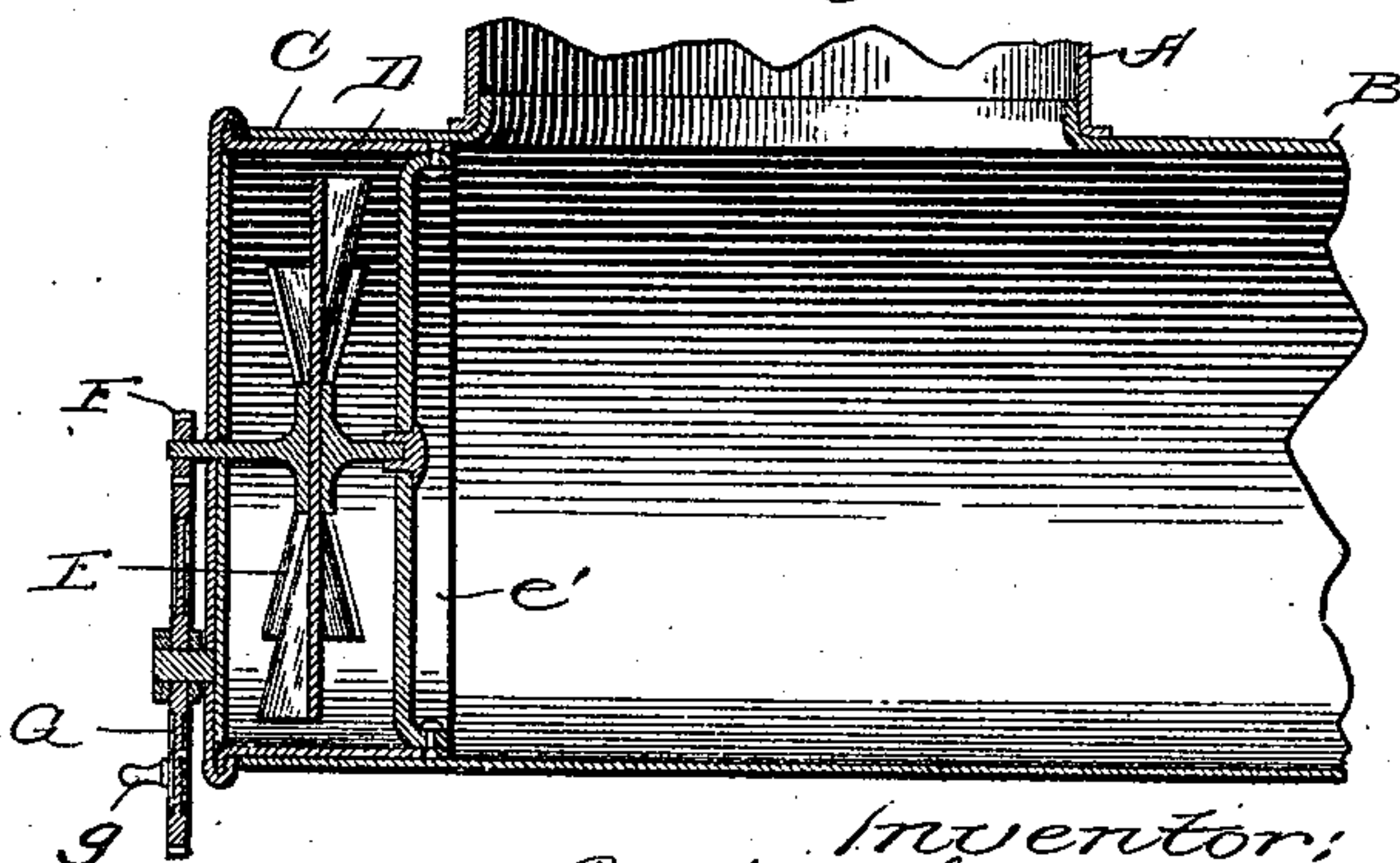
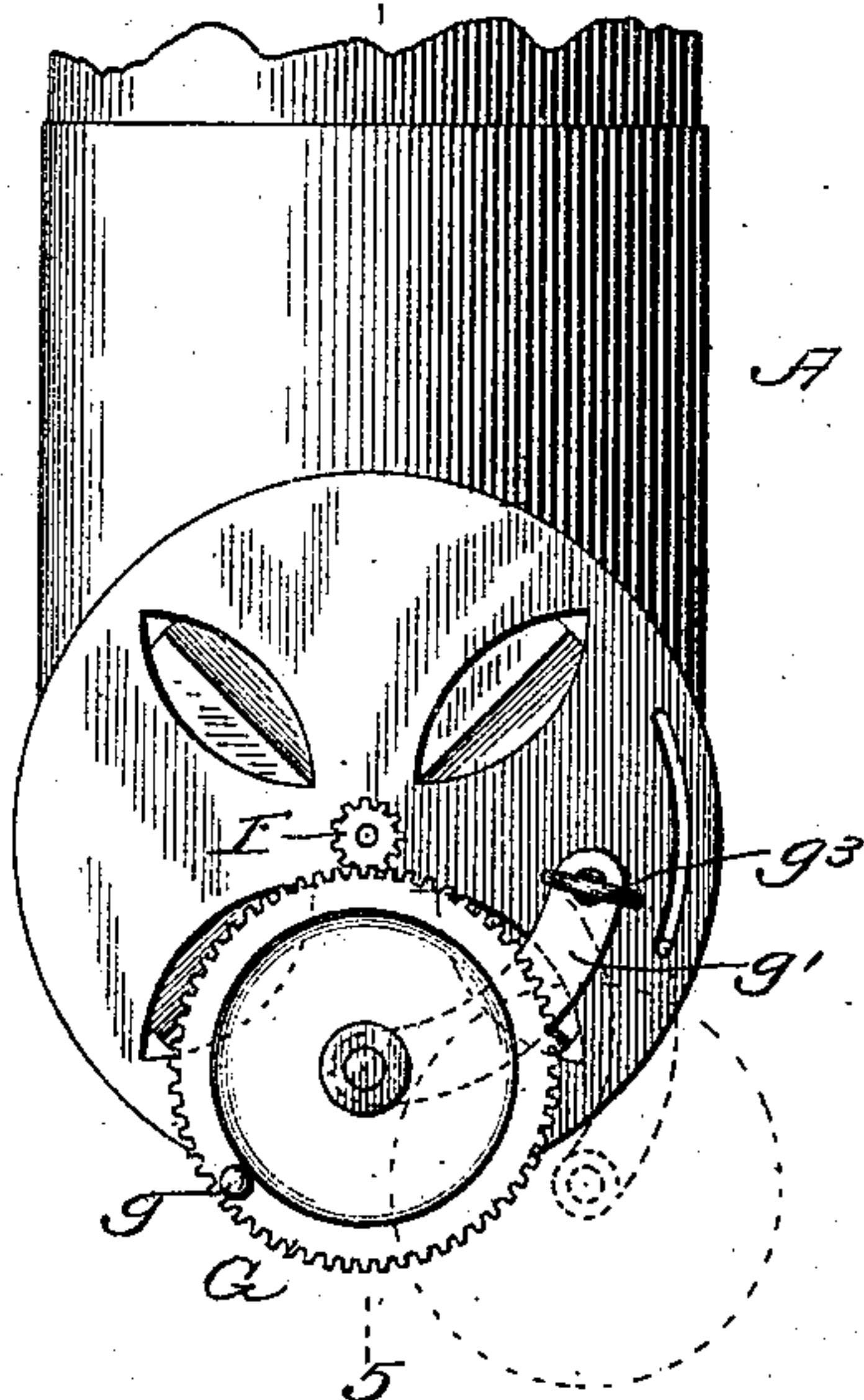


Fig. 4.



witnesses:  
Harry D. Pomeroy.  
Herbert Bradley.

Inventor:  
Reinhold C. Doenitz  
By J. F. Beale.

Atty.

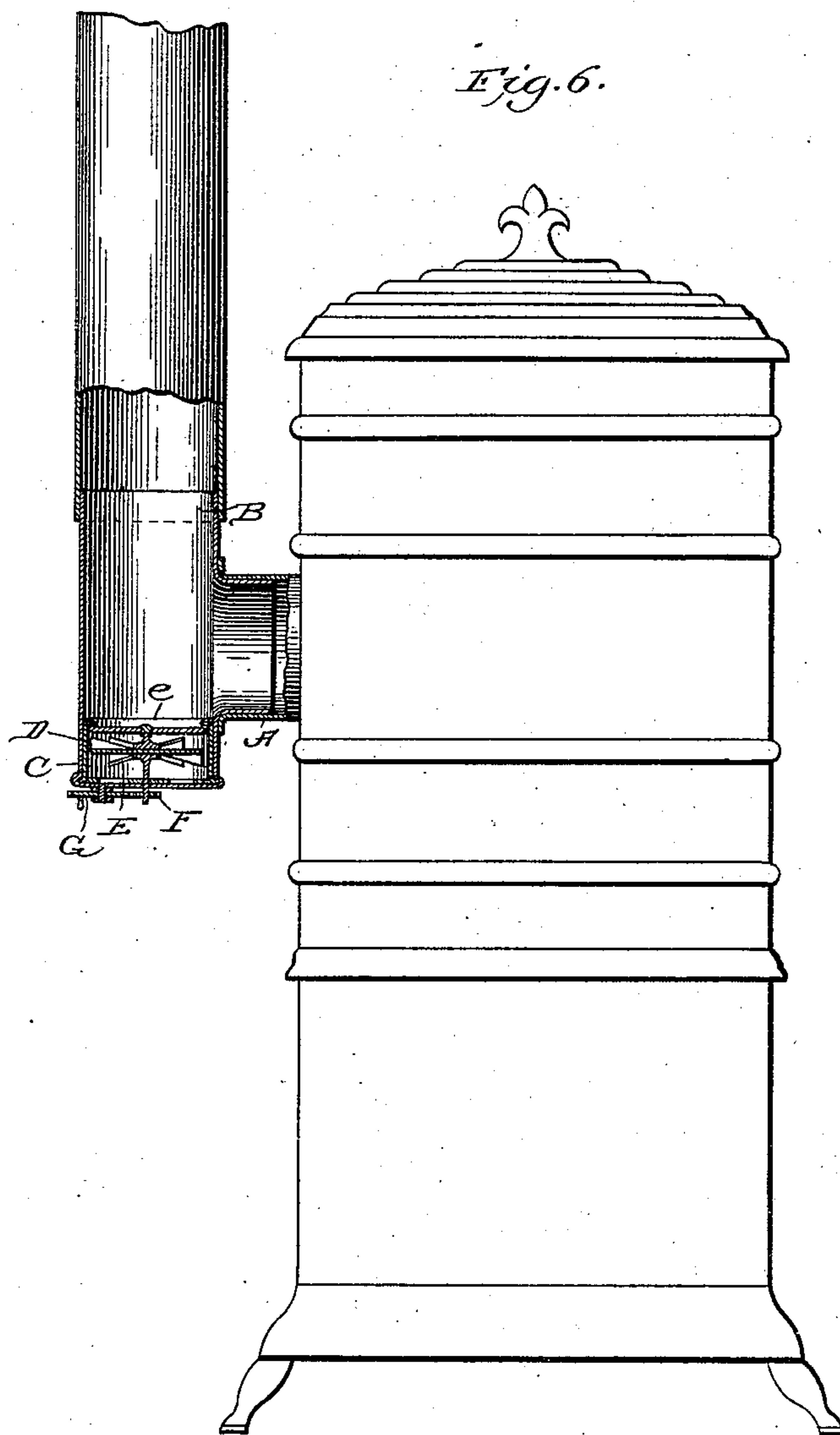
(No Model.)

2 Sheets—Sheet 2.

R. C. DOENITZ.  
VENTILATING ELBOW JOINT.

No. 539,360.

Patented May 14, 1895.



*witnesses:*

*Harry D. Rohrer.*  
*Herbert Bradley.*

*Inventor:*

*Reinhold C. Doenitz.*

*By J. F. Beale*  
*Atty.*



# UNITED STATES PATENT OFFICE.

REINHOLD C. DOENITZ, OF IRON RIVER, MICHIGAN.

## VENTILATING ELBOW-JOINT.

SPECIFICATION forming part of Letters Patent No. 539,360, dated May 14, 1895.

Application filed January 25, 1895. Serial No. 536,270. (No model.)

*To all whom it may concern:*

Be it known that I, REINHOLD C. DOENITZ, a citizen of the United States, residing at Iron River, in the county of Iron and State of Michigan, have invented certain new and useful Improvements in Elbow-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to elbow-joints and more particularly to right-angle elbow-joints.

The object of my invention is to provide an elbow-joint with improved means for ventilating a chamber through the stove-pipe; also improved means for increasing or forcing the draft, and providing an entrance through which the stove-pipe may be cleaned without detaching the same from the stove or chimney.

In the accompanying drawings, forming a part of this specification, Figure 1 is a front elevation showing an end view of the ventilating-cap attached to a right-angle elbow and arranged at right angles to one joint and opposite to the other joint thereof, which latter is not shown. Fig. 2 is a horizontal section taken on the line 2 2 of Fig. 1. Fig. 3 is an inside plan view of the cover detached. Fig. 4 is a front elevation showing means for applying a forced draft. Fig. 5 is a vertical section taken on the line 5 5 of Fig. 4. Fig. 6 is a side elevation of a stove and smoke-pipe, showing my invention applied adjacent to the stove and connecting the lower end of said pipe therewith.

A denotes one joint of the elbow, and B the other joint projecting at right angles thereto, and C denotes an offset in the elbow arranged opposite to the joint B and at right angles to the joint A as shown in Fig. 5.

D denotes a detachable cap which fits inside the inner walls of said offset, open upon the inside, and provided with a perforated end plate and slide  $d$  which affords, when open, an exit for the air of the chamber. Said slide is provided with a weight  $d'$  on one side for holding the slide open, and on the opposite side has fastened thereto a coiled spring  $d^2$  terminating in a hook which engages a knob secured to the stove pipe for holding the slide closed.

E denotes a fan or blower which is operated, when the slide is open, by the draft, but which may also serve, as hereinafter described, for giving a forced draft. Said fan is mounted inside of the cap on a shaft  $e$  which is journaled at one end to a short bowed arm secured to the end plate of the cap. The other end of the shaft is journaled in an arm  $e'$  extending diametrically from side to side and secured to the inner walls of said cap by its outwardly bent ends as shown in Figs. 2 and 5. Said arm and its bent ends also serve as a brace for supporting the walls of the cap. In Figs. 4 and 5 I show the fan differently mounted. Instead of using the short arm attached to the end plate of the cap, I extend the shaft through said plate and provide it with a pinion F which engages with a larger gear wheel G operated by a handle or stud  $g$ . The wheel G is mounted on a pivoted arm  $g'$  held by set screw  $g^3$  secured to the end plate of the cap.

When it is desired to use the fan to create a forced draft the arm  $g'$  is swung into the position shown in Fig. 4. The wheel G will then engage with the pinion F. Good results may be obtained by closing the slide before operating the wheel G to produce the forced draft, or the slide may be partly closed. When closed, the action of the fan, being at the base or end of a section of vertical pipe as shown in Fig. 6 will cause the air in the section to be forced upwardly or outwardly in the direction of the chimney and thus create a forced draft which draws the air in through the stove. When the forced draft is not in use and it is desired to employ the fan for ventilating purposes, the arm  $g'$  is swung back which disconnects the gearing and allows the pinion F to revolve freely.

It is evident that my elbow joint is adapted for use in any line of stove pipe, and furnishes a simple and efficient means for ventilating a room. It also affords an opening in a line of stove pipe through which the pipe may be cleaned without disconnecting the same.

My invention is also adapted for causing a forced draft when the fire is first lighted or when it is desired to increase the draft at any time.

Having shown and described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. An elbow joint composed of two sections arranged at right angles to each other, a detachable cap arranged in line with one section and at right angles to the other section and provided with a ventilating valve or slide.

2. An elbow joint composed of two sections arranged at right angles to each other, an offset arranged in line with one section and at right angles to the other section, and a detachable cap for said offset having a perforated end and ventilating fan.

3. An elbow joint composed of two sections arranged at right angles to each other, a detachable cap arranged in line with one section and at right angles to the other, a fan mounted in said cap, and means for operating said fan to cause a forced draft substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

REINHOLD C. DOENITZ.

Witnesses:

NICHOLAS MICHAELS,  
P. O'BRIEN.