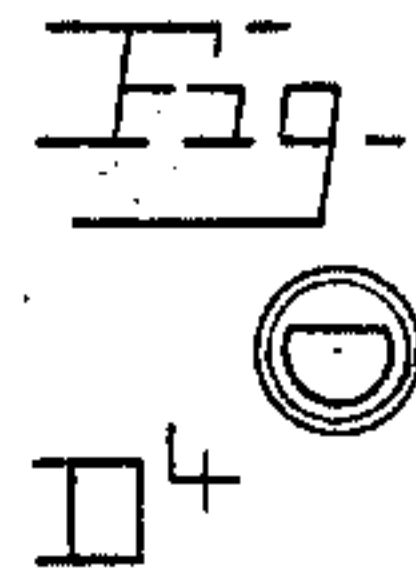
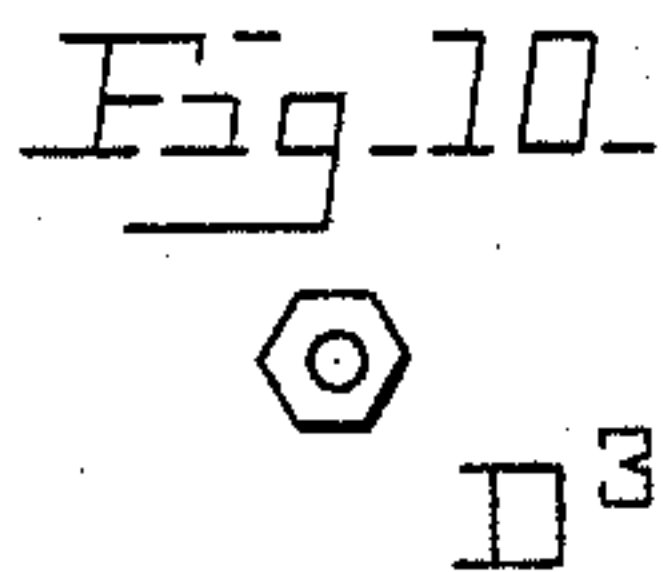
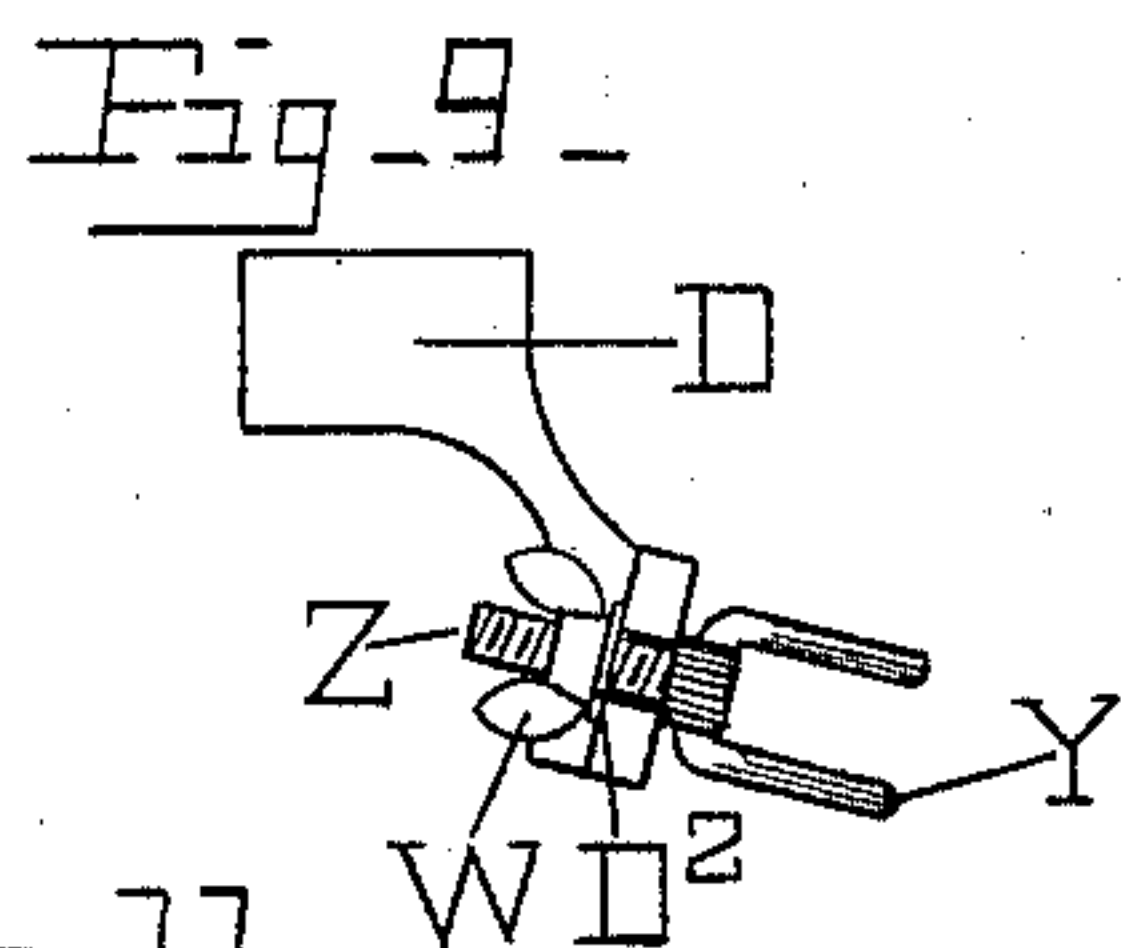
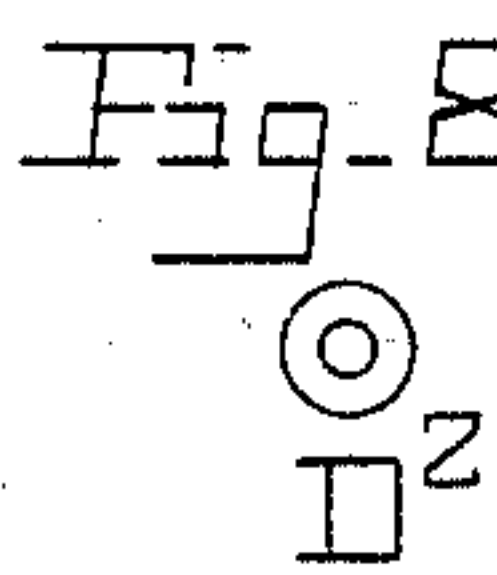
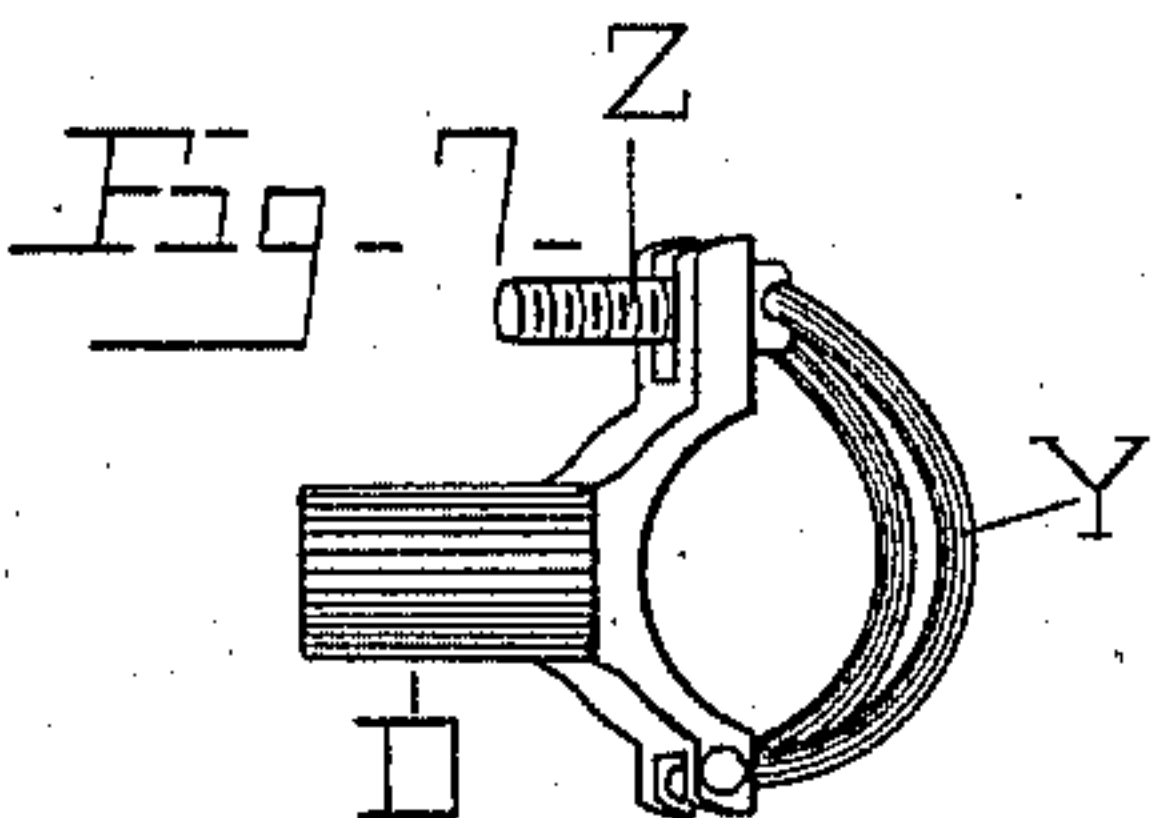
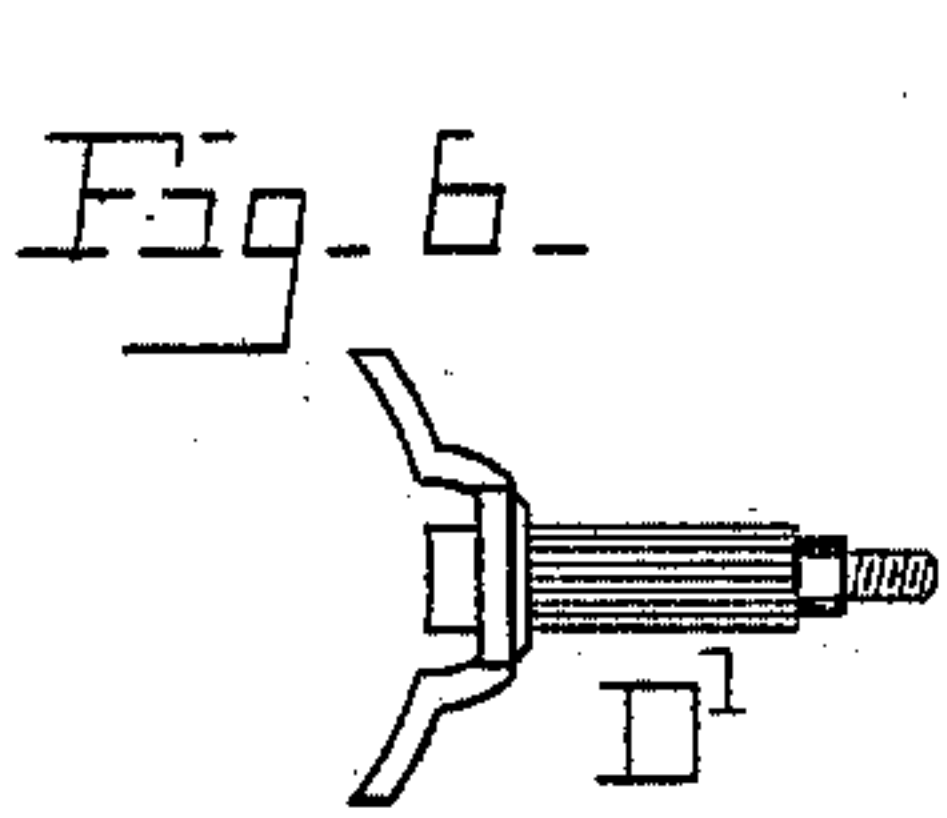
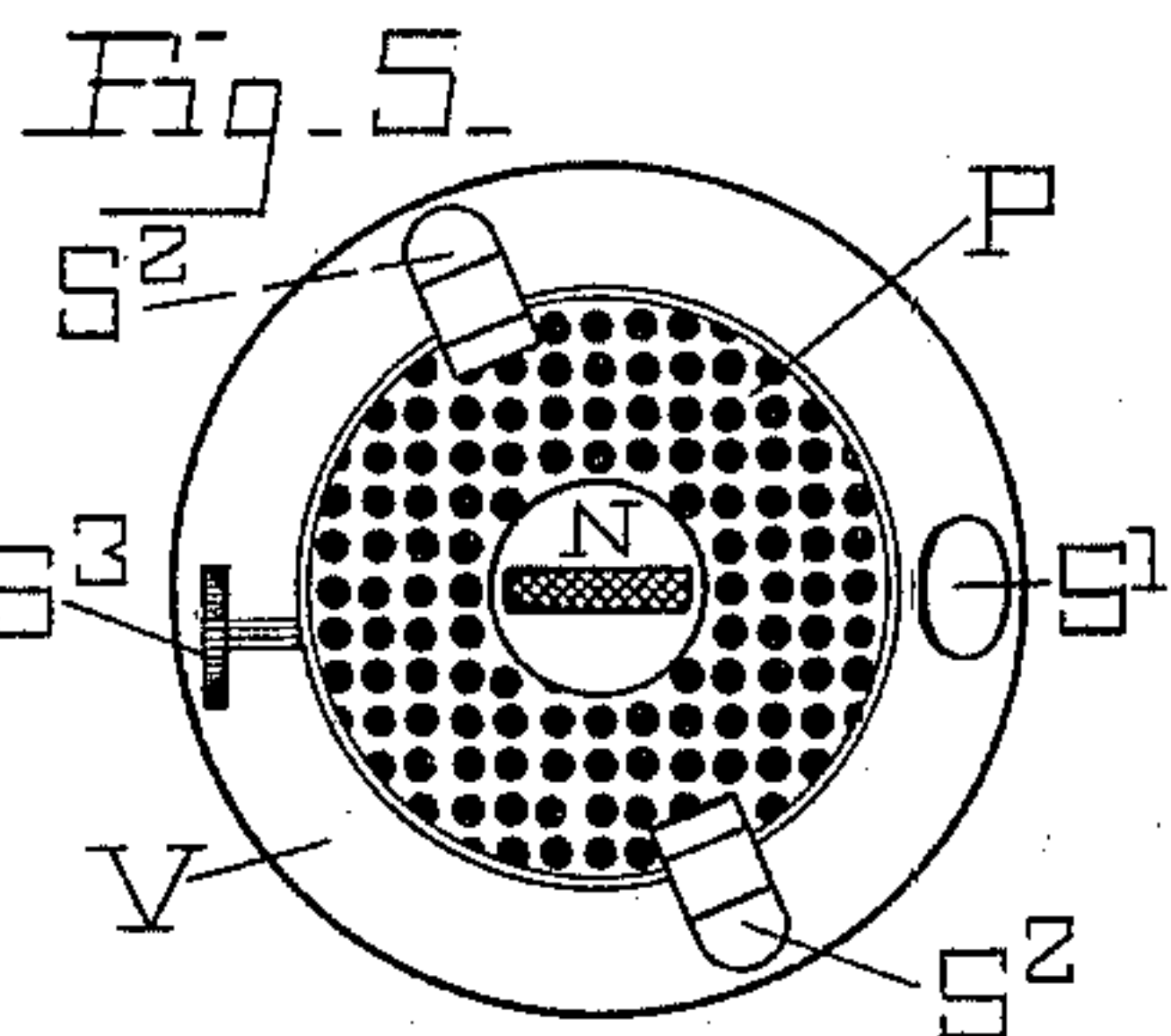
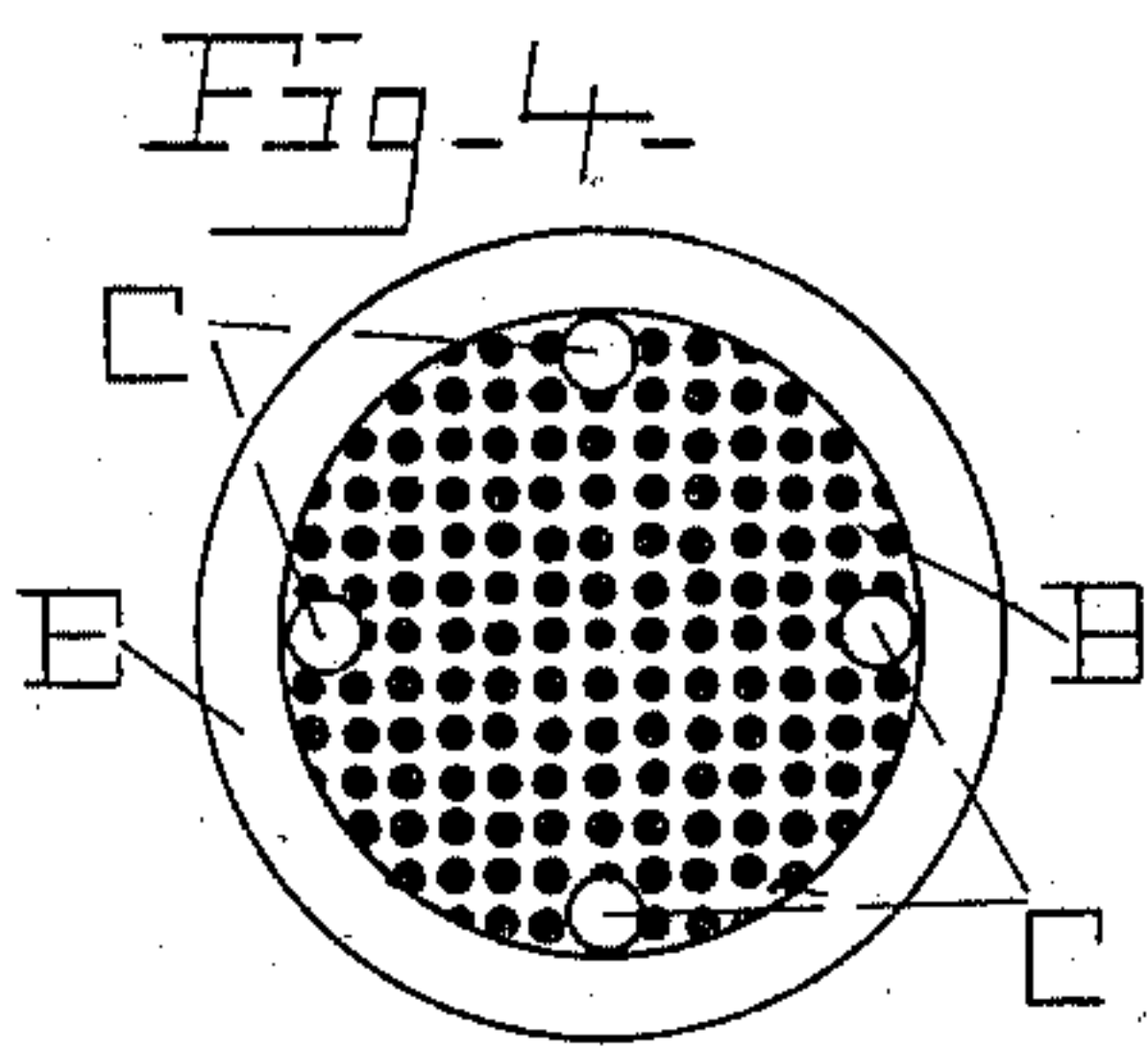
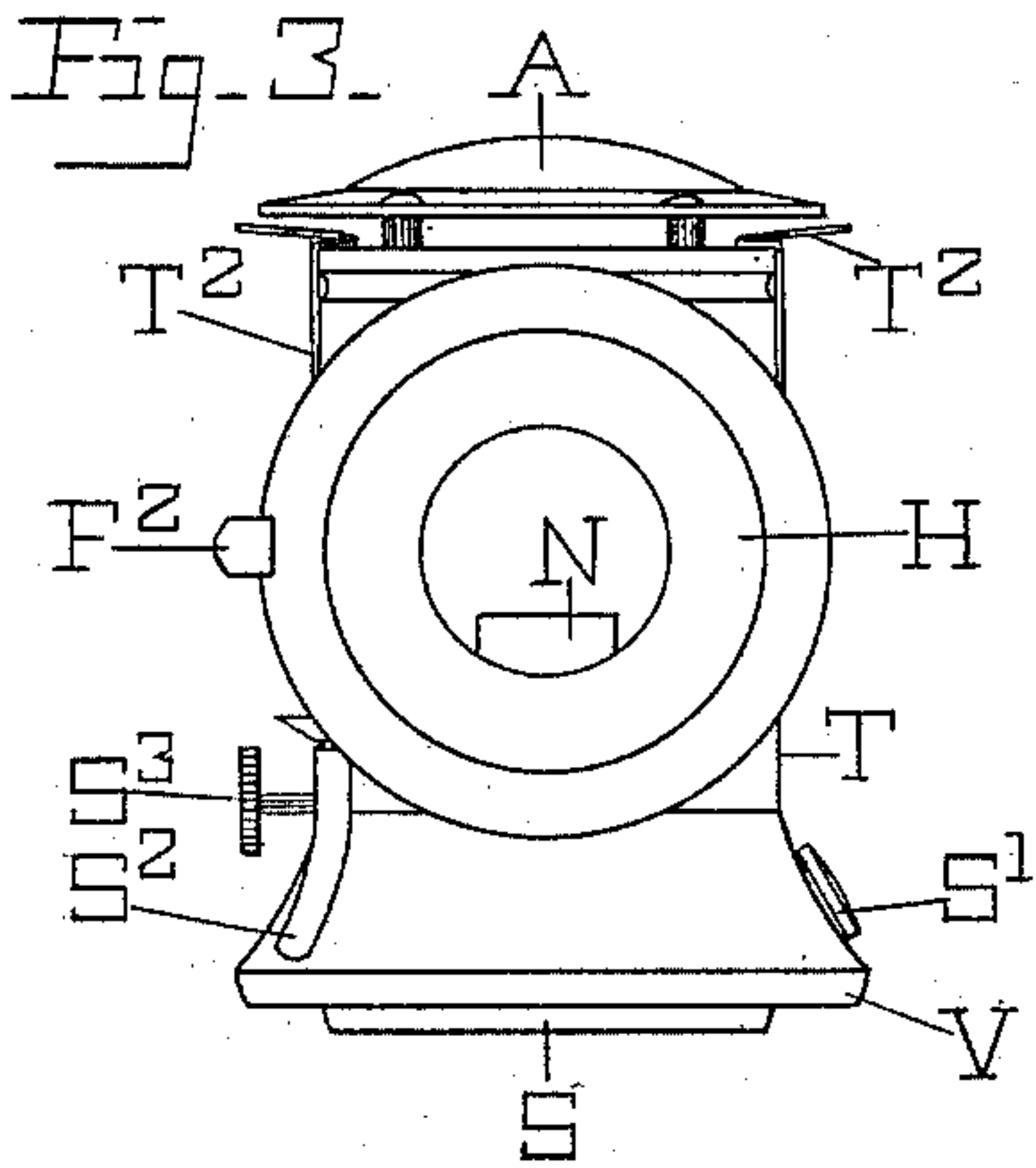
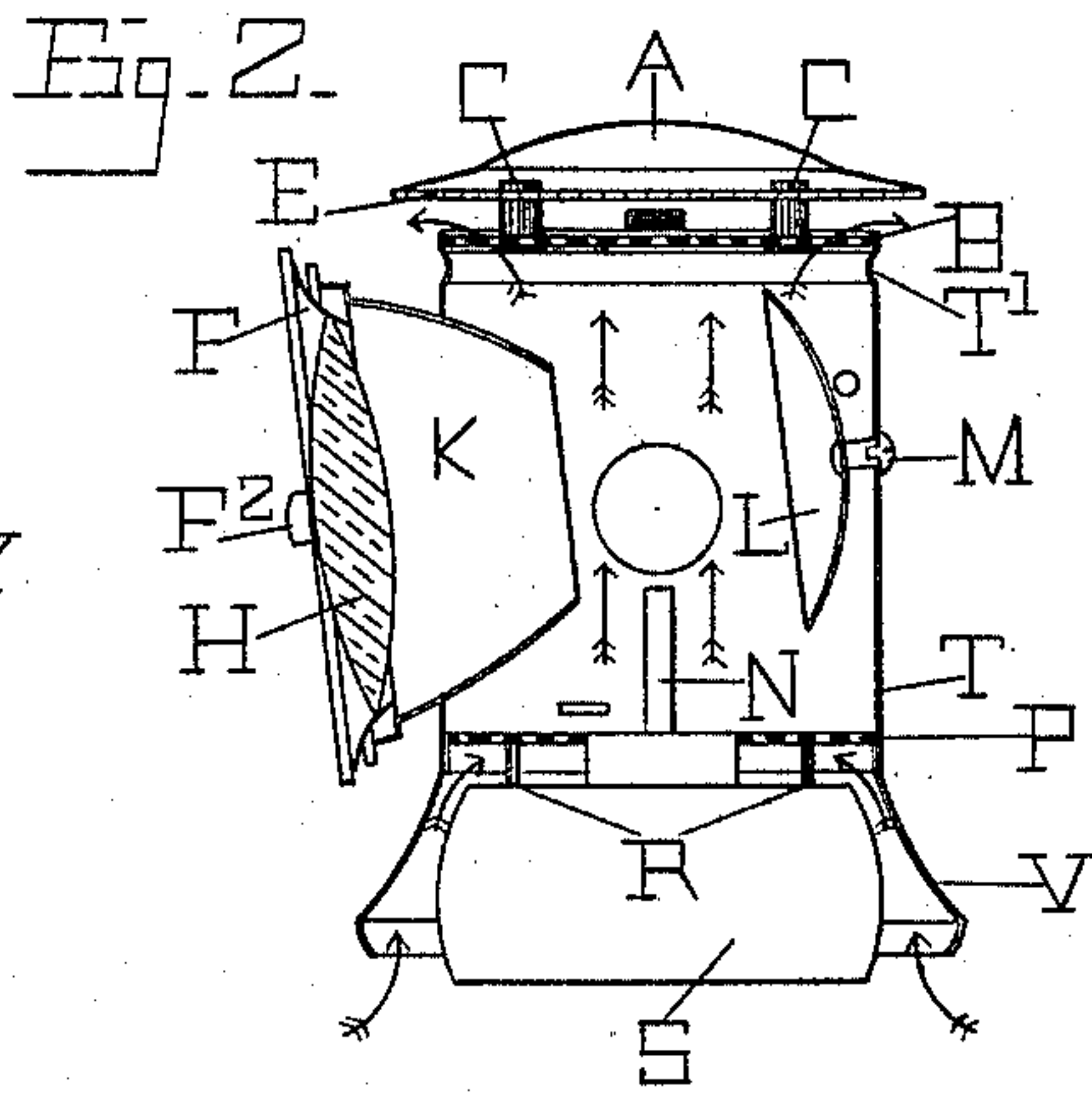
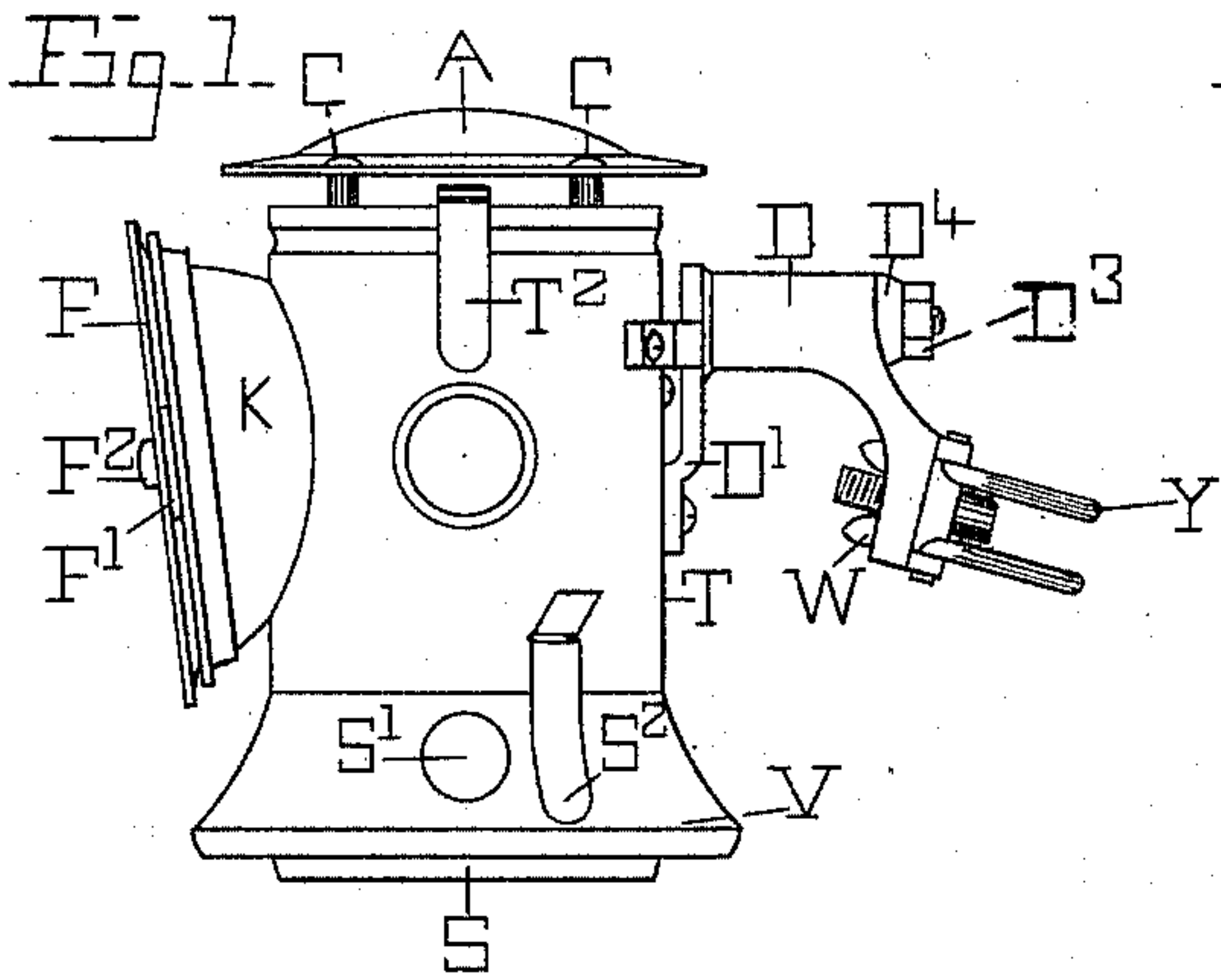


(No Model)

I. H. ATWOOD.  
BICYCLE LANTERN.

No. 586,000.

Patented July 6, 1897.



WITNESSES.

M. E. Tamm.  
C. G. Spencer.

INVENTOR.

Irving H. Atwood.  
per Page and Stone.  
Attys.



# UNITED STATES PATENT OFFICE.

IRVING H. ATWOOD, OF AMESBURY, MASSACHUSETTS.

## BICYCLE-LANTERN.

SPECIFICATION forming part of Letters Patent No. 586,000, dated July 6, 1897.

Application filed July 1, 1896. Serial No. 597,732. (No model.)

*To all whom it may concern:*

Be it known that I, IRVING H. ATWOOD, of Amesbury, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Bicycle-Lanterns, of which the following, taken in connection with the accompanying drawings, is a specification.

Figure 1 is a side elevation of my improved bicycle-lantern. Fig. 2 is a central vertical section with the supporting-bracket removed. Fig. 3 is a front elevation of the lantern. Fig. 4 is a plan of the dome A, showing the perforated disk B. Fig. 5 is a top view of the fount. Fig. 6 is a top view of a portion of the bracket D'. Fig. 7 is a top view of a portion of the bracket D. Fig. 8 is a top view of the washer D<sup>2</sup>. Fig. 9 is a side view of a portion of the bracket D reversed from Fig. 1. Fig. 10 is a top view of the nut D<sup>3</sup>. Fig. 11 is a top view of the washer D<sup>4</sup>.

Similar letters refer to similar parts throughout the several views.

The object of my invention is to construct a lantern suitable for attachment to bicycles and other vehicles and by its special arrangement of parts to entirely obviate the danger of jarring out the flame.

It is a well-known fact that when one wishes to extinguish a railroad or other lantern it is only necessary to give a quick downward motion, when the light is immediately extinguished, although the lanterns will burn well in a strong wind. This I maintain is due to the improper ventilation of the lantern, and bicycle-lanterns have the same defects.

From actual experiments I have demonstrated that my lantern cannot be jarred out, and therefore I have adopted a perfectly rigid bracket and abandoned the old-style bracket with springs, and by the construction of my bracket the lantern is allowed to swing laterally, so that it will always remain in an upright position.

I still further maintain that there is no confining of air in the body of the lantern, the air being as free to escape as to enter, and the cool air entering the bottom of the lantern around the fount which contains the oil tends to keep the fount and oil cool.

My lantern is constructed in the following manner: The body of the lantern is prefer-

ably cylindrical and made of one piece of metal. The fount S has attached to its upper side the perforated disk P, which is raised a sufficient distance above the fount to enter the body of the lantern T and to allow a free circulation of air between the fount and the perforated disk. This disk is attached to the fount by the posts R, and the burner N also assists in holding it in position. From the periphery of the disk P is a downwardly-extending rim V, which flares outwardly a sufficient distance from the fount S to allow the air for supporting combustion free ingress to the body of the lantern. The fount S is provided with a suitable oil-cap S', which extends outwardly through the rim V for the purpose of filling the fount without removing it from the body of the lantern. The wick-raiser S<sup>3</sup> extends outwardly beyond the body of the lantern, so that the flame may be easily regulated. The fount S extends below the rim V, so that when the lantern is resting on the fount the air will not be shut off from the burner. The fount is secured to the body of the lantern T by the spring-catches S<sup>2</sup>.

The reflector K extends only part way into the body of the lantern, and there is another reflector L attached to the back of the body of the lantern by the post and screw M. The object of this arrangement of the reflectors is to allow a perfectly free passage to the air up and around the flame, as indicated by the arrows in Fig. 2.

In front of the reflector K is the ring F, which holds the lens H, said ring being attached to the reflector K by the hinge F' and held in place by the spring-catch F<sup>2</sup>, so that it may be swung open, thereby providing a quick and easy method of lighting.

The dome A has attached to it by the posts C the perforated disk B. This disk enters the body of the lantern T and is held in place by the groove T' and the spring-catches T<sup>2</sup>.

The dome A is raised a sufficient distance above the perforated disk B to allow a free exit of the products of combustion.

The dome A simply acts as a shield to the lantern to prevent rain from entering the lamp, and I prefer to have the dome provided with the flat disk E, which is parallel to the perforated disk B, so that the air will blow through the top of the lantern and not be



forced down into the body, as I find would be the case if the disk E were arched or crowned.

It will be seen from this construction that all the air admitted to the lamp must come  
5 through the perforated disk P and all the products of combustion must escape through the perforated disk B. This does away with the complicated methods heretofore employed for admitting the air and ventilating the lantern and also very materially simplifies its  
10 construction.

The bracket, which is shown in detail in Figs. 6 to 11, inclusive, is designed to be secured to the head of the bicycle and consists  
15 of a post D', which is provided with legs for attachment to the body of the lantern. This post is sufficiently long to give a good bearing for the sleeve D. This sleeve is provided with a downward and rearward extension,  
20 said extension having lugs, to which is attached the wire Y. This wire is riveted to the lugs so as to admit of being turned, and is bent in the form of a loop and passes through a suitable hole in the bolt Z. This  
25 bolt Z swings on the wire Y and can be entered in a slot on the sleeve D, as shown in Fig. 7. The bolt Z is further provided with

a thumb-screw W and a washer D<sup>2</sup>. The sleeve D is held in position on the post of the bracket D' by the washer D<sup>4</sup> and the nut D<sup>3</sup>. 30

By means of the thumb-screw W any desired tension may be obtained to hold the bracket securely to the head of the bicycle.

What I claim as new, and desire to protect by Letters Patent, is— 35

In a bicycle-lantern, the combination with a lantern-body, the post D', provided with means of attachment to said lantern-body, the sleeve D, provided with a downward and rearward extension, the looped wire Y, hinged  
40 to said extension, the bolt Z, attached to said wire, the thumb-screw W, and the washer D<sup>2</sup>, the said sleeve D, secured to the post D', by a nut and washer, for allowing a lateral swing to said lantern-body, substantially as de- 45 scribed.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 26th day of June, A. D. 1896.

IRVING H. ATWOOD.

Witnesses:

SALLIE D. DAVIS,  
ALICE M. BOUTELLE.