

(No Model.)

F. RHIND.
BICYCLE LANTERN.

No. 570,893.

Patented Nov. 3, 1896.

Fig. 1.

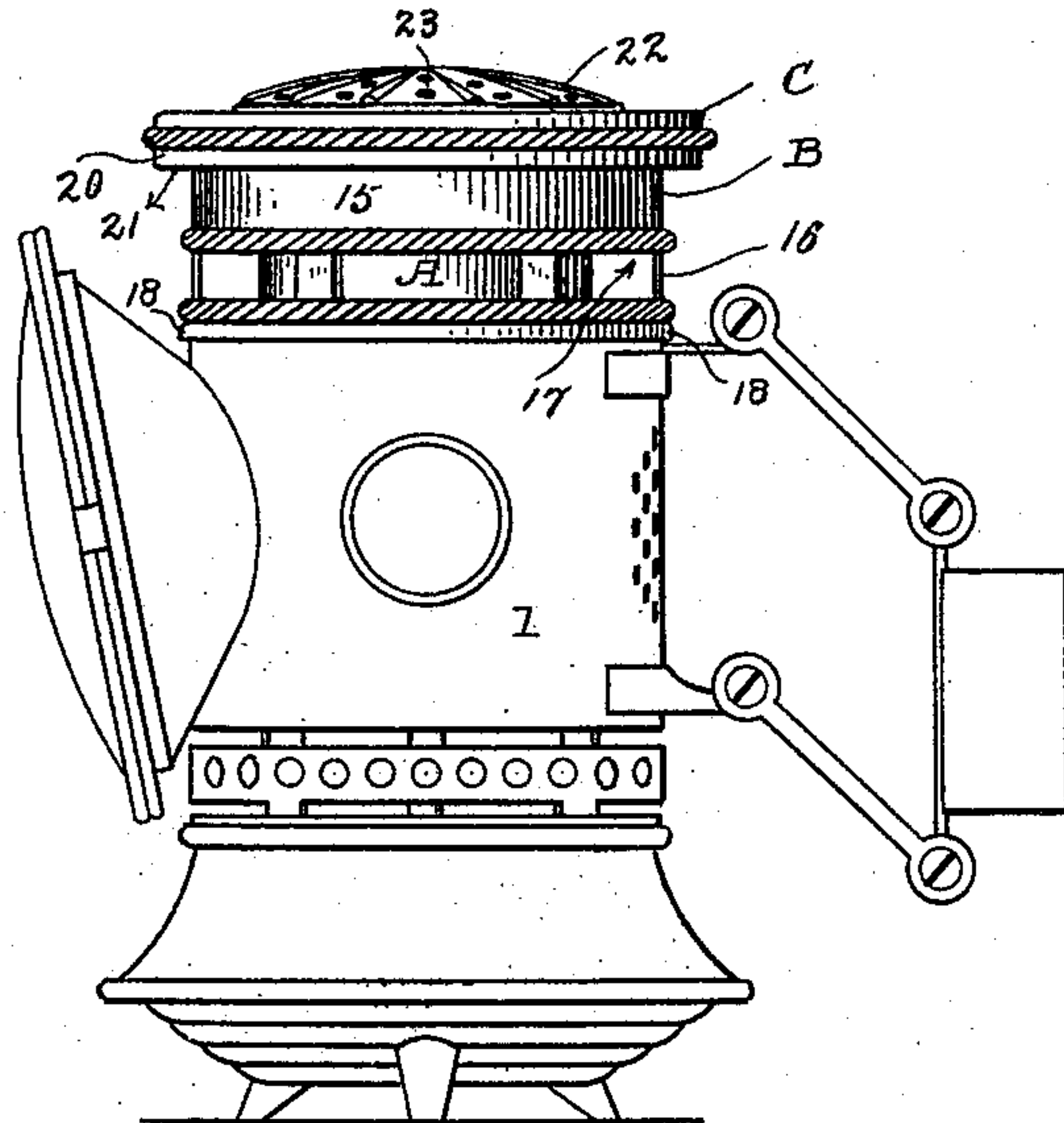


Fig. 2.

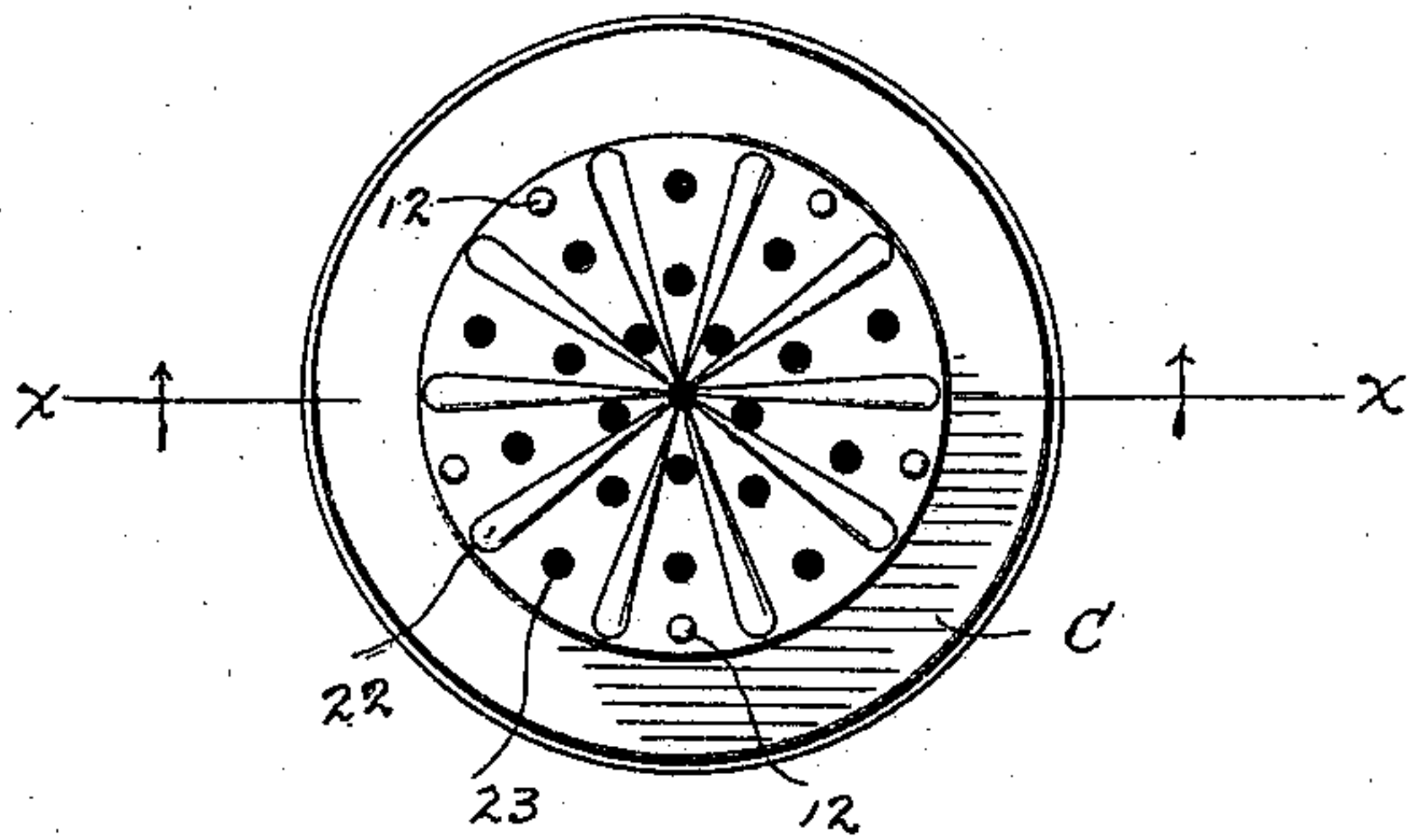
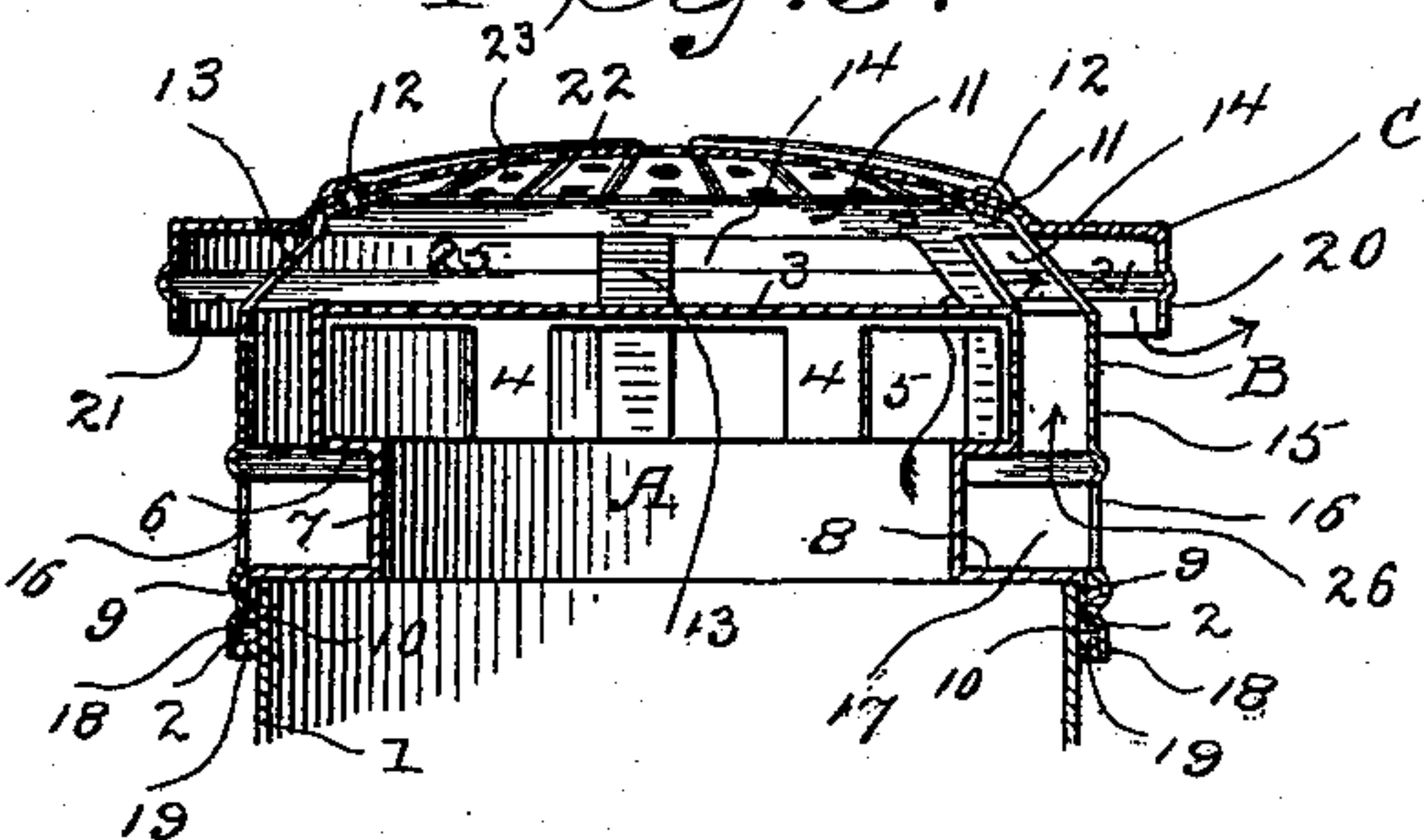


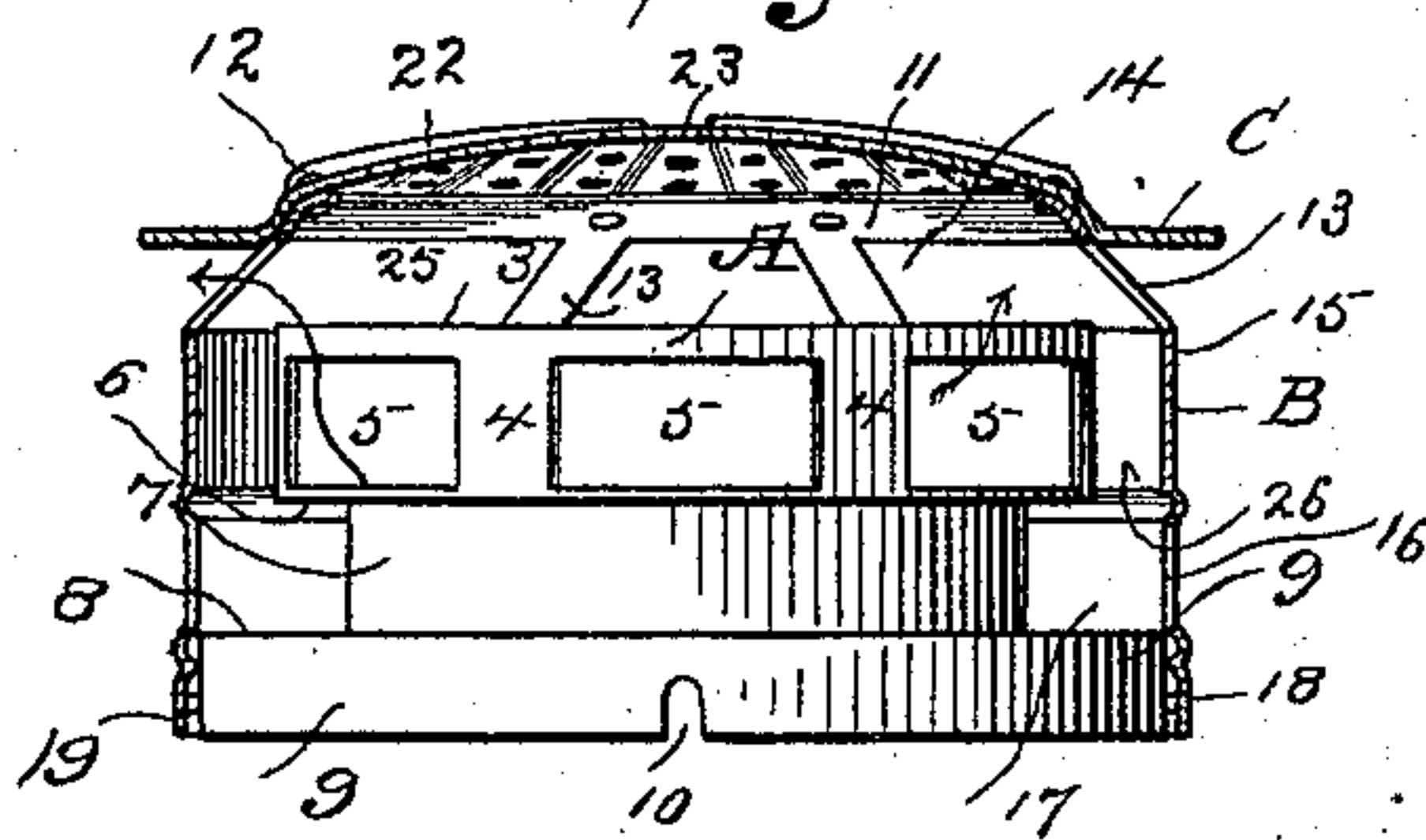
Fig. 3.



WITNESSES

H. A. Lamb
S. V. Richardson.

Fig. 4.



INVENTOR

Frank Rhind
By A. M. Wooster
Atty.

UNITED STATES PATENT OFFICE.

FRANK RHIND, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE
BRIDGEPORT BRASS COMPANY, OF SAME PLACE.

BICYCLE-LANTERN.

SPECIFICATION forming part of Letters Patent No. 570,893, dated November 3, 1896.

Application filed August 7, 1895. Serial No. 558,526. (No model.)

To all whom it may concern:

Be it known that I, FRANK RHIND, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Bicycle-Lanterns, (Case B;) 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 bicycle-lanterns, and has for its object to produce a wind-guard for lanterns of this class which shall consist of an inner shell, an outer shell, and a cap-plate rigidly secured to the outer shell, said inner shell and said outer shell being readily removable from the lantern and being separable from each other for cleaning and other purposes, which feature is not disclosed in my generic case, No. 580,078.

With this end in view I have devised the novel construction of which the following description, in connection with the accompanying drawings, is a specification, numbers and letters being used to designate the several parts.

Figure 1 is a side elevation of a bicycle-lantern with my novel wind-guard in place; Fig. 2, a plan view; Fig. 3, a section on the line $x x$ in Fig. 2; and Fig. 4 is a similar view, the inner shell being in elevation and the cap-plate being slightly modified.

1 denotes the body or case of a bicycle-lantern, which is shown as cylindrical and is provided near the top with outwardly-extending lugs or pins 2. A denotes the inner shell of my novel wind-guard, B the outer shell, and C the cap-plate, which is rigidly secured to the outer shell. The inner shell is preferably drawn from a disk of metal, the center of which forms the non-perforated top plate 3 of the completed shell. Below the top plate is a wall 4, which is provided with openings 5 for the free passage of the products of combustion from the body of the lantern. Below wall 4, which is shown as vertical, although it is not necessarily so, is an inwardly-turned wall 6. Below wall 6 is a wall 7, which is shown as vertical, although not necessarily

so, and below wall 7 is an outwardly-turned wall 8, which extends to the edge of the cylindrical body and is provided with a flange 9, which fits closely over the top of the body, said flange being provided with notches 10, which receive lugs 2. The outer shell B is likewise preferably drawn from a disk of metal and consists of a top 11, the center of which is provided with openings or may be entirely removed, as shown in the drawings, to permit free passage of air, which prevents the parts from becoming unduly heated. To this top the cap-plate C is secured by rivets 12 or in any suitable manner. Below the top are standards 13, between which are openings 14 for the free passage outward of the products of combustion. Below these openings is a ring 15. Below ring 15 are standards 16, between which are openings 17, which permit free passage of air in either direction, and below openings 17 is a flange 18, which fits closely over flange 9 on the inner shell and is provided with sockets 19, which receive lugs 2, the latter being made high enough to extend through notches 10, so as to engage the sockets, the outer shell being held in position when assembled by close engagement with the inner shell and the inner shell being held in position by close engagement with the top of the body.

It will be noticed that I leave an ample opening entirely around the lantern between wall 4 and ring 15 for the upward passage of a current of outside air, this opening being indicated by 26. The cap-plate, as already stated, is rigidly secured to the outer shell. This cap-plate covers the top of the lantern and may be provided with a depending flange 20, which wholly conceals openings 14 from view, there being, however, an opening between flange 20 and the outer shell entirely around the lantern, which permits free passage outward of the products of combustion. The cap-plate is preferably provided with ribs or corrugations 22 for the purpose of strengthening it and is preferably made slightly convex, as shown in the drawings. Between cap-plate C and top plate 3 of the inner shell is an opening, which I have indicated by 25.

23 denotes openings in the cap-plate, which permit free passage of air either into or out of opening 25 for the purpose of cooling the parts, it being understood of course that the openings pass through the top 11 of the outer shell as well as through the cap-plate.

It will of course be understood that the general object of the structure is to permit the products of combustion to escape freely from the body of the lantern without danger of outside air-currents or of rain or snow entering the body of the lantern.

It will be readily seen that in use the products of combustion pass from the body of the lantern into the inner shell and pass out freely from the inner shell through openings 5. It is impossible, however, for outside air-currents to pass in at these openings, as they are protected from outside air-currents by ring 15. Currents of outside air enter the outer shell freely through openings 17, but are deflected outward by walls 6 and 7 and either pass across and out at other openings 17 or pass upward through openings 26 and 14 and out through opening 21. The upward current of outside air keeps the parts cool and also produces an upward draft within the body of the lantern. The outward passage of the current of heated air—i. e., the products of combustion—from the body of the lantern is not impeded to the slightest extent by any portion of the structure, but simply deflected sufficiently to render it impossible for rain or snow or for outside air-currents to enter the body of the lantern. It will thus be seen that the entire outer surface of the inner shell and both sides of the outer shell and the cap-plate are exposed to outside air-currents, so that all of the parts are kept comparatively cool in use.

In Fig. 4 I have illustrated a form of cap-plate which overhangs the outer shell, but in which the depending flange 20 is dispensed with.

Having thus described my invention, I claim—

1. In a bicycle-lantern the combination with a body, of a removable outer shell having openings 14 to permit free escape of the products of combustion, openings 17 to permit free entrance of outside air and a ring 15, and an independently-removable inner shell having openings 5 to permit free escape of the products of combustion and a non-perforated top plate, said ring 15 covering the openings

in the inner shell and leaving an opening 26 between the inner shell and the outer shell.

2. In a bicycle-lantern the combination with a body, of a removable outer shell having openings 14 to permit free escape of the products of combustion, openings 17 to permit free entrance of outside air and a ring 15, an independently-removable inner shell having openings 5 to permit free escape of the products of combustion and a non-perforated top plate, said ring 15 covering the openings in the inner shell and leaving an opening 26 between the inner shell and the outer shell, and a cap-plate secured to the outer shell and having openings 23 permitting free passage of air for the purpose of cooling the parts.

3. In a bicycle-lantern the combination with a cylindrical body, of a removable inner shell having a flange 9 which engages the top of the body and openings for the escape of the products of combustion, a removable outer shell having a flange 18 which engages flange 9, openings 14 to permit free escape of the products of combustion and openings 17 to permit free entrance of outside air, and a ring covering the openings in the inner shell but leaving an opening 26 between said inner shell and said outer shell, and a cap-plate secured to the outer shell and having a depending flange 20 leaving an opening 21 between said cap-plate and said outer shell.

4. In a bicycle-lantern the combination with a body and a removable inner shell having a non-perforated top plate and openings below said top plate for the escape of the products of combustion, an inwardly-turned wall 6, a wall 7 and an outwardly-turned wall 8, of a removable outer shell having openings 14 for the free escape of the products of combustion and openings 17 to permit free entrance of outside air and a ring 15 covering the openings in the inner shell but leaving an opening 26 between said inner shell and said outer shell and a cap-plate secured to the outer shell and having openings 23 permitting free passage of air for the purpose of cooling the parts, the two shells being independently removable.

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

FRANK RHIND.

Witnesses:

A. M. WOOSTER,
S. V. RICHARDSON.