

No. 871,112.

PATENTED NOV. 19, 1907.

W. K. DAVIDSON.  
INDIVIDUAL ELECTRIC GAS LIGHTER.  
APPLICATION FILED MAR. 4, 1907.

Fig. 1.

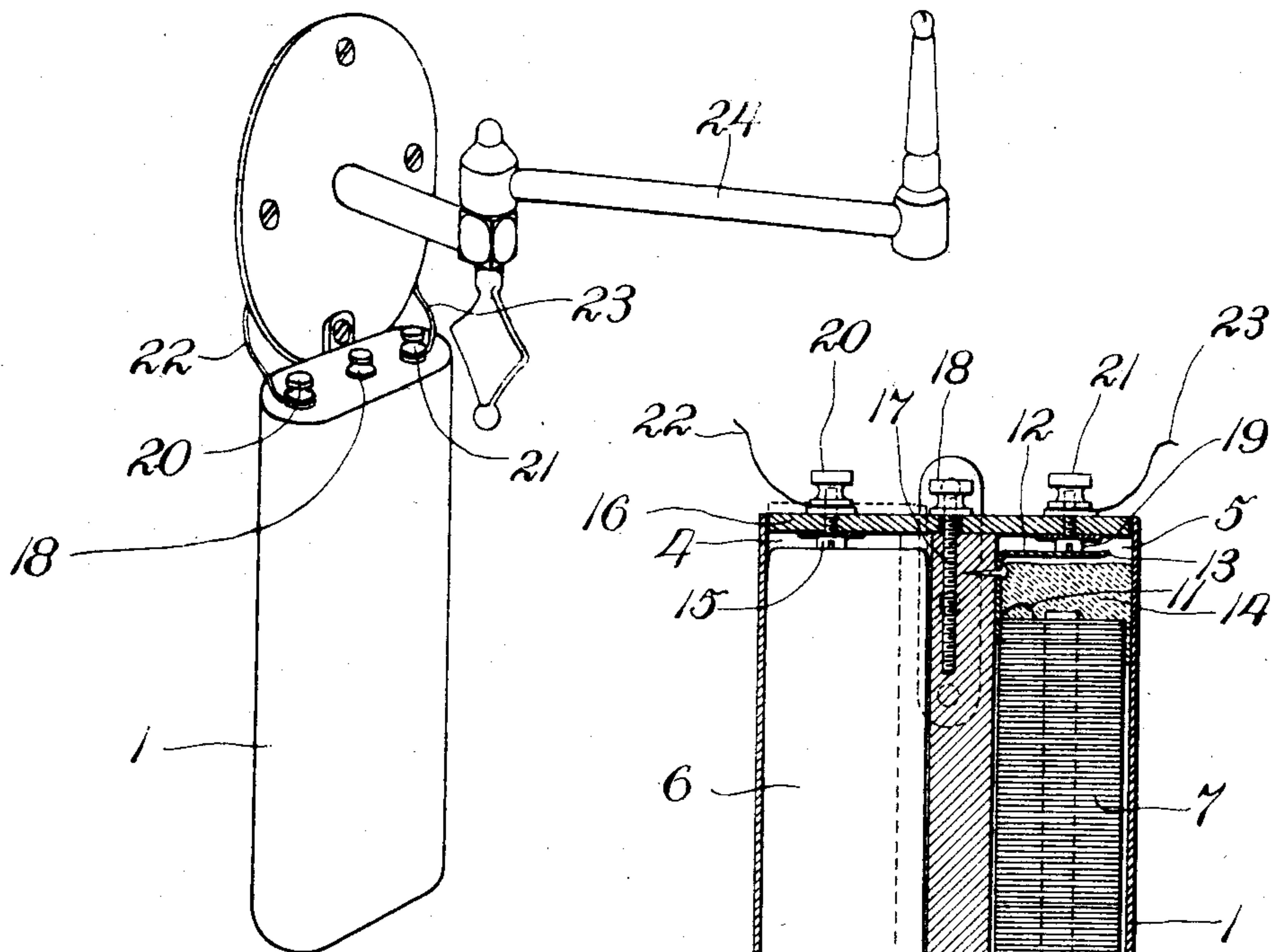


Fig. 3.

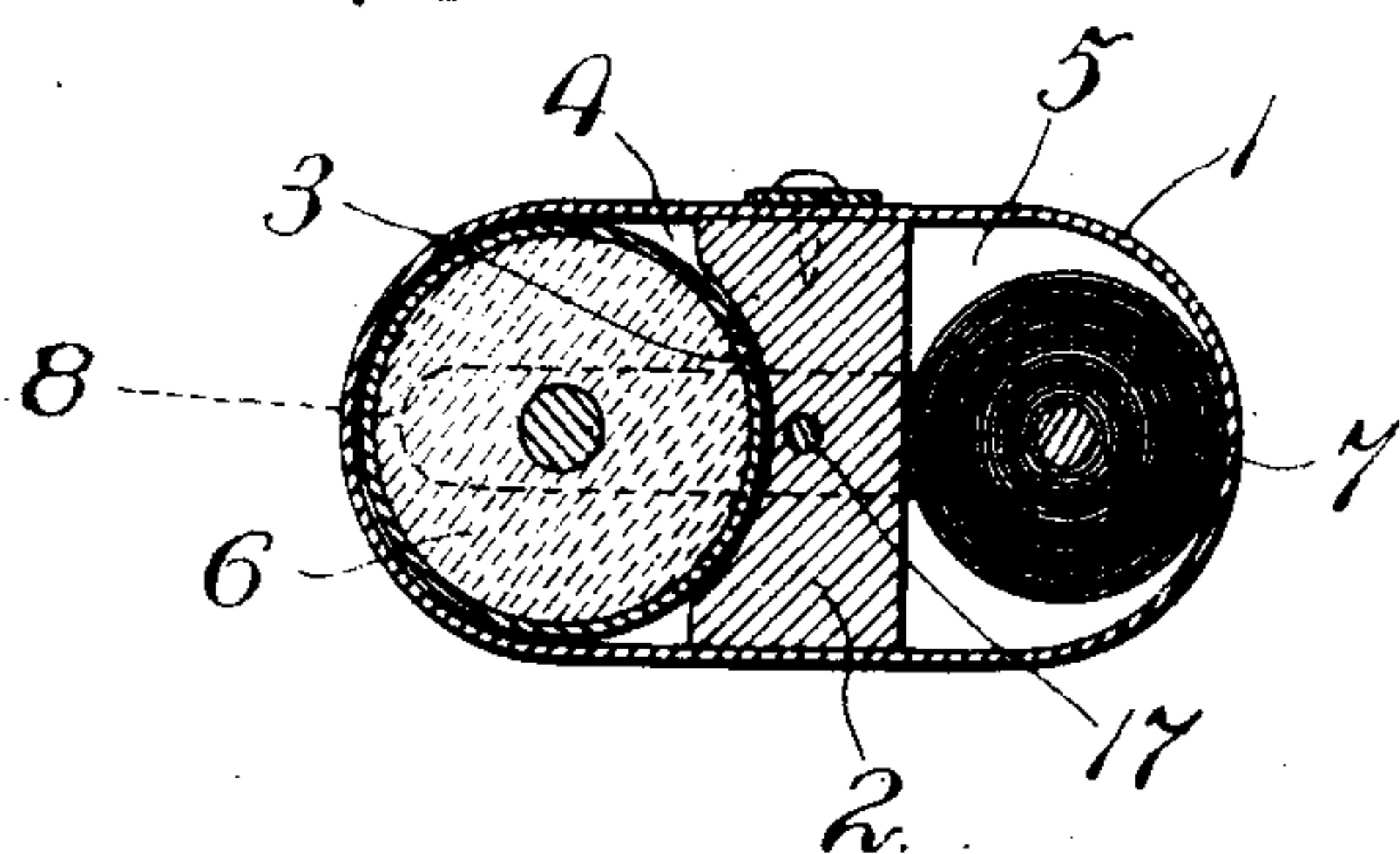
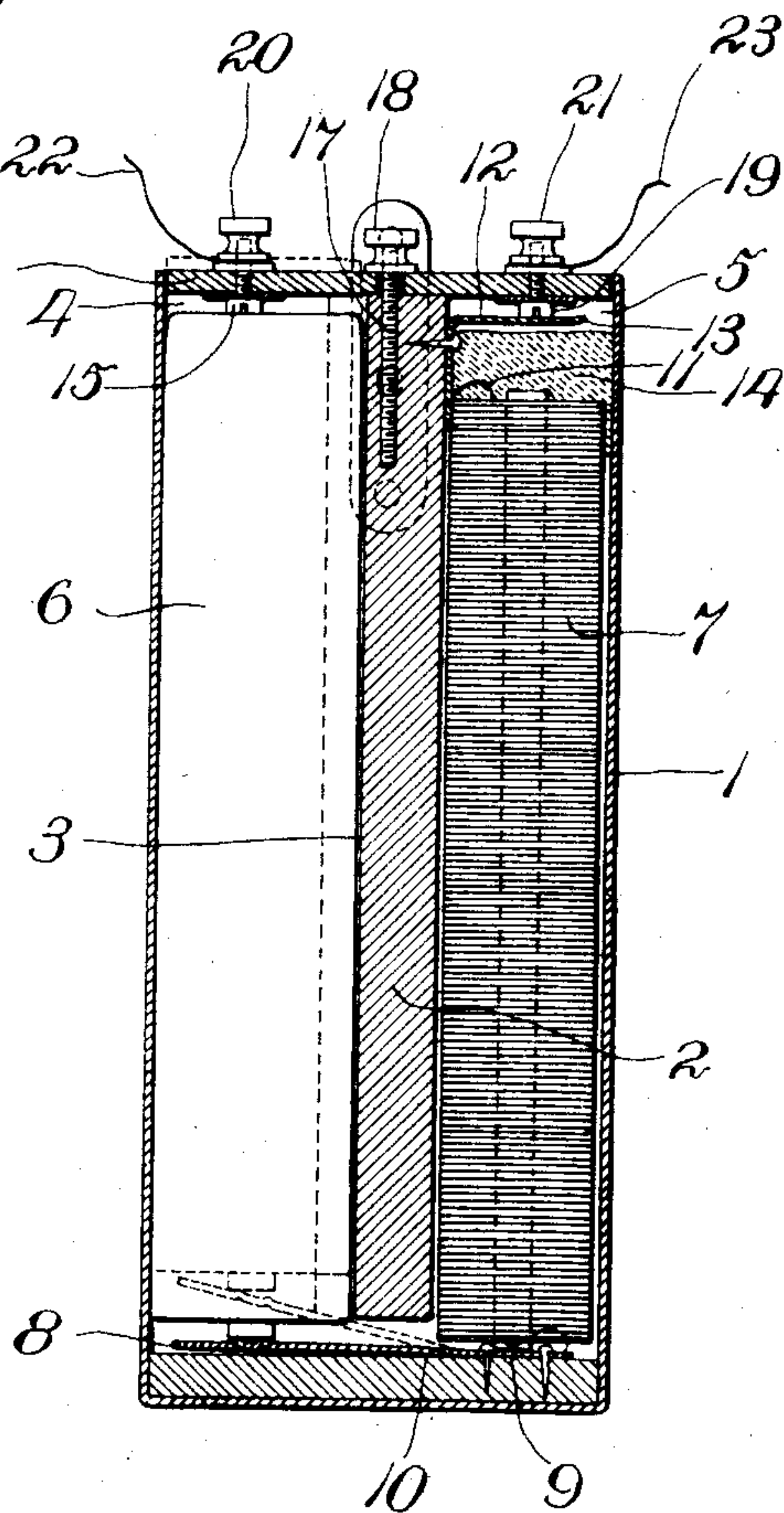


Fig. 2.



Witnesses:

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William K. Davidson,

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# UNITED STATES PATENT OFFICE.

WILLIAM K. DAVIDSON, OF BOSTON, MASSACHUSETTS.

## INDIVIDUAL ELECTRIC GAS-LIGHTER.

No. 871,112.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed March 4, 1907. Serial No. 360,306.

*To all whom it may concern:*

Be it known that I, WILLIAM K. DAVIDSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Individual Electric Gas-Lighters, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention resides in providing, as an article of manufacture, complete means, all ready at hand, for lighting a gas jet by electricity, whereby the expensive and more or less intricate and difficult wiring of a house is avoided.

To apply electric gas lighters to a gas jet of a house it has heretofore been considered necessary to have a battery in a closet or the cellar, and a spark coil, also usually in the cellar or on a shelf in a closet or the like, and run wires through the walls and along the moldings from said battery and spark coil to the gas jet which is to be lighted. Even in the case of a new house being built, it is quite expensive to get the wiring and proper installation referred to put in, but in the case of a house already built the expense and difficulty are so great as frequently to prevent entirely the installation of electric lighters as desired. Accordingly I have devised means whereby all the difficulty and expense of the usual wiring, etc., are avoided, my invention consisting in providing, as an article of manufacture, a unitary attachment which may be of quite ornamental appearance and is so compact, neat and small that it may be readily hung from the gas bracket or on a nail behind a picture or otherwise placed adjacent the individual gas bracket, chandelier or other gas fixture.

It consists of a neat inclosure, simple and light in construction, having opposite pockets, one of which contains a suitable dry battery and the other a suitable spark coil, both inclosed by a contact-making cover, together with other details of construction, all of which will be more fully explained in the course of the following description.

In the drawings, Figure 1 is a perspective view showing my attachment in use; Fig. 2 is a vertical sectional view thereof; Fig. 3 is a transverse horizontal sectional view.

In a suitable inclosure consisting of a shell 1 strongly braced and supported by a central insulating block 2 preferably of wood,

and forming with its opposite sides 3 as clearly shown in Fig. 3, and the adjacent shell 1 more or less cylindrical pockets 4, 5, I place a long cylindrical dry battery 6 of the kind known as a cartridge battery, and a properly wound spark coil 7. The battery 6 rests at its lower end on a contact spring 8 and the coil on the opposite end 9 of said spring which is suitably secured at 10 at the bottom of the box or inclosure 1. The coil 7 is connected at 11 at its upper end to a spring contact maker 12 secured to the bracing partition 2 and having an overhanging end 13, and the upper end of the coil is preferably sealed in place by cement, bitumen or other impervious substance 14. The battery 6 is substantially the same in length as the partition block or brace 2, and the spring 8 has considerable strength and is normally upwardly bent as indicated in dotted lines, so that when left to itself it automatically raises the battery so that it may be readily lifted from position without disturbing the attachment, which may be at the time screwed on the wall or otherwise secured in place. The arrangement mentioned is also of service in maintaining constant and firm contact between the battery and the spring 8 and also at the opposite end between the battery and a circuit closing stud 15 of a cover 16 preferably of wood, which fits snugly down into the open projecting end of the inclosure 1 and is centrally secured by a threaded pin 17 extending rigidly from the bracing block or partition 2, and a nut 18 removably secured on said threaded pin externally of the cover 16.

Opposite the stud 15 is a corresponding stud 19 for engaging the contact spring 12, the studs 15, 19, communicating with external binding posts 20, 21 for receiving wires 22, 23 from the gas burner and bracket indicated in Fig. 1 at 24. I seal the spark coil against external tampering and interference, as this is the part of the apparatus which the unskilled should not be able to get at, and I make the battery conveniently removable and preferably self-ejecting in order to facilitate the replacing of an exhausted battery with a fresh one.

When it is desired to provide a gas fixture with an electric lighter, no expert wiring or undue expense is necessary, but all that is necessary is to suspend my attachment from the gas bracket and then connect the wires of the usual lighter to the binding posts 20



and 21. The construction is not only exceedingly simple, but is very light and inexpensive. I have succeeded in bringing it down to the size of an ordinary hand battery-lamp. It is especially serviceable for quick installation in the sick room, where it is desired to have quick service and avoid polluting the air with the fumes of matches, and I find it particularly convenient for students and others who wish such conveniences, and yet, on account of being only temporarily occupants of a room are not warranted in putting in more expensive house wiring, etc. Also in various isolated situations it is a great convenience, as for instance for providing inexpensive means for lighting the hall at an instant's notice, where the family do not consider it necessary to go to the expense of providing electric lighters for the rest of the house. In fact, one principal advantage of my invention is that it makes it feasible to provide electric lighting in any one or more rooms in the house without mutilating the walls or going to any considerable expense; also, with my invention, the lighting attachment may be shifted at a moment's notice without any particular knowledge or skill, from one room to another or from one gas fixture to another.

The principal advantage is that my invention places within the reach of all the means for having electric gas lighters in the house.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is,

1. As an article of manufacture, a portable gas-lighter attachment consisting of an inclosing case having a central longitudinal bracing block in the form of an insulating partition forming with the adjacent portions of the case opposite approximately cylindrical pockets, a contact spring secured in

the lower end of said case and projecting at its opposite end into said respective pockets, a spark coil in one of said pockets having one terminal secured to said spring, a contact spring projecting above said coil secured to said case, the opposite terminal of said coil being fastened to said last mentioned spring, the free end of said first mentioned spring being bent normally upward, a dry battery in the pocket opposite said coil and normally held forcibly downward against the tension of said upwardly bent spring, and a cover of insulating material secured at the open end of said case and provided with opposite binding posts contacting respectively with said battery and with said overhanging contact spring of the coil.

2. As an article of manufacture, a portable gas-lighter attachment consisting of a case having a central wooden partition bracing the longitudinal middle of the case and dividing the latter into opposite pockets, a dry battery in one pocket and a spark coil in the other, the coil being irremovably sealed in its pocket at the upper end, and contact means connecting the inner terminals of said battery and coil, including spring-ejecting means for rendering the battery readily removable without disturbing the case, and a cover removably secured at the open end of said case and provided at its opposite ends with contact closing devices and binding posts connecting respectively with the adjacent ends of the battery and coil.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM K. DAVIDSON.

Witnesses:

GEO. H. MAXWELL,  
EDWARD MAXWELL.