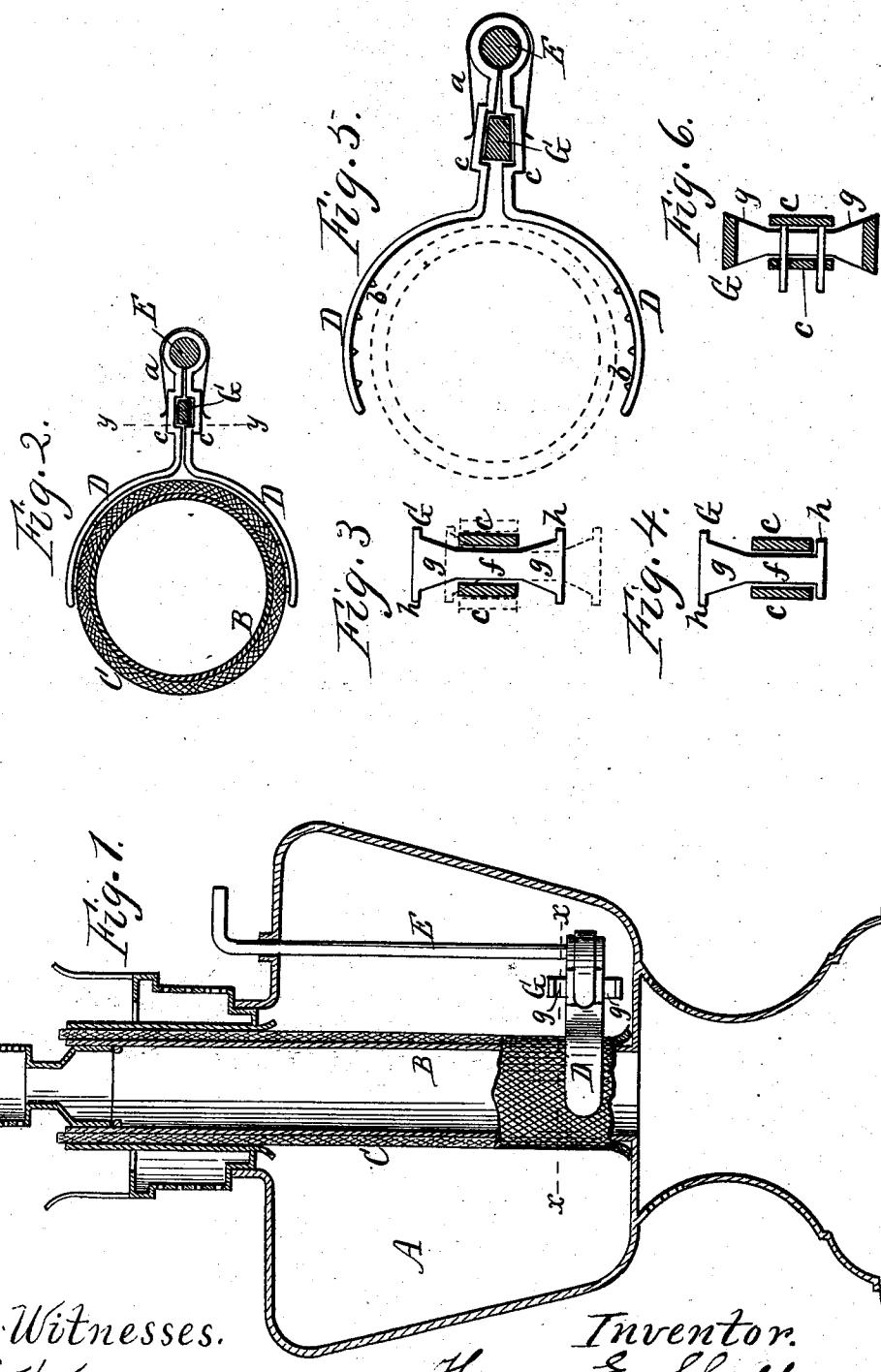


(No Model.)

H. E. SHAFFER,
WICK RAISER.

No. 506,408.

Patented Oct. 10, 1893.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY E. SHAFFER, OF ROCHESTER, NEW YORK.

WICK-RAISER.

SPECIFICATION forming part of Letters Patent No. 506,408, dated October 10, 1893.

Application filed October 28, 1892. Serial No. 450,247. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. SHAFFER, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Wick-Raisers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

10 My improvement relates to raisers for circular wicks. It also relates to that class in which hinged spring jaws are used for clamping the wick. Furthermore it relates to that class in which the jaws are automatically opened at the limit of their movement by means of a wedge.

The invention consists in the construction hereinafter described and specifically claimed.

20 In my invention the opening device is attached to and rides with the jaws and are never detached therefrom in use.

The invention consists in the combination of parts hereinafter described and claimed.

25 In the drawings—Figure 1 is a central, vertical section of a center-draft lamp with my improved wick-raiser attached. Fig. 2 is an enlarged cross section in line $x x$ of Fig. 1. Fig. 3 is an enlarged vertical, cross section 30 through the shanks of the jaws, in line $y y$ of Fig. 2. Fig. 4 is a view similar to Fig. 3, but showing a modification in the form of the device for opening the jaws. Fig. 5 is an enlarged plan view of the jaws in the open position, and a cross section of the wedge part of the opening device. Fig. 6 is a sectional view of the opening device and arms of the jaws, showing a modification in the means of attachment.

40 A indicates the lamp-body, B the wick, tube, and C, the wick, all of ordinary form.

D D are the two wick-raising jaws, and E the handle for raising the same. The jaws are hinged to the lower end of the handle so 45 as to open and close, and are held normally closed around the wick by means of a spring a , of any suitable form. The jaws preferably have small teeth or spurs $b b$ for holding to the wick.

50 My improvement is as follows:—At a point intermediate between the jaws and the handle the arms of the jaws are provided with

offsets $c c$ which form an inclosed socket; and in this socket rests a device G, which forms the opening device. This device forms an attachment to the jaws and is carried up and down with them. It consists of a shank f , of uniform diameter, which is such that the jaws can close to embrace the wick, and a wedge g at one or both ends, also a shoulder h at each end which prevents the device from being forced out from between the arms of the jaws.

Fig. 3 shows the wedges $g g$ at both ends, and Fig. 4 shows a wedge only at the upper end, the lower end being straight.

The device G is operated by striking the top or bottom of the lamp as the jaws are raised or lowered.

In the closed position of the jaws the shank f of the opening device lies between the arms of the jaws, and in that condition the wick is raised till the upper end of the device strikes the top of the lamp, when the upper wedge g is driven between the arms and opens the jaws, freeing the wick. In the down movement the lower end of the opening device strikes the bottom of the lamp, forcing the narrow shank f , between the arms again and allowing the jaws to close. By this means an old wick can be raised and removed, a new one applied, and the jaws engaged therewith by the simple vertical movements of the handle. This result can be produced by either of the forms of the opening device shown in Figs. 3 and 4. In the use of the double-wedge form shown in Fig. 3, the jaws close on the wick before the jaws arrive at their lowest position. A still further movement drives the lower wedge between the arms and opens the jaws when the lowest position is attained.

The object of this is to enable the jaws to be opened and released from the wick at their lowest position, allowing the wick to be removed, replaced, or adjusted, without raising the jaws, which is sometimes desirable.

This invention differs from those having the wedge fixed to the lamp, in as much as, when the jaws have opened by striking at the top, they remain open till the jaws are forced to the bottom again. Therefore a wick can be inserted over the wick tube and forced to the bottom by hand before the jaws are engaged therewith; whereas, in ordinary lamps

of the kind the wick can be entered but a little way, as the jaws close at the top as soon as released from the wedge.

In addition to the wedge form of the ends 5 of the opening device in a transverse direction, as above described, each of these ends *g* is of wedge-shape in horizontal section and in a longitudinal direction, the widest side standing next to the jaws, as shown in Fig. 5. 10 Furthermore, this wedge form gradually increases from bottom to top, the object of which is to cause the wedge to fill the socket in which it rests under different inclines at which the jaws stand in opening more or less. By this 15 means the wedge always rests against a shoulder, and there is no danger of accidentally displacing the device when it strikes the top or bottom of the lamp. Other means might be used for holding the opening device against 20 displacement, for instance that shown in Fig. 6, in which the opening device is slotted and the arms of the jaws provided with pins which pass through the slot.

I do not wish to confine myself strictly to 25 the construction above described, as I am aware that opening devices of different form from that described may be combined with the jaws so as to be carried by them and open and close them by striking the top or bottom 30 of the lamp.

Having described my invention, I do not claim simply and broadly an opening device attached to the jaws and operating to open the jaws at the limit of vertical movement.

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

1. In a lamp, the combination, with the spring jaws and means for raising and lower-

ing them, of a device connected with the jaws adapted to open them by striking a stationary part of the lamp at the limit of vertical movement in one direction, and to release them by striking a stationary part at the limit of vertical movement in the opposite direction, as specified. 40

2. The combination, with the spring jaws and means for raising and lowering them, of a device consisting of a straight shank and a wedge-shaped end resting between the arms of the jaws, and adapted to open them by 45 striking a stationary part at the limit of vertical movement of the jaws, as specified.

3. The combination, with the spring jaws and means for raising and lowering them, of a device consisting of a straight shank and 50 two wedge-shaped ends resting between the arms of the jaws, and adapted to open them by striking stationary parts at the limit of vertical movement of the jaws in opposite directions, as specified. 55

4. The combination, with the spring jaws provided with a socket between their arms, and with means for raising and lowering them, of a device consisting of a straight shank, and an extremity of wedge form both transversely and longitudinally, resting in said 60 socket and adapted to open the jaws by striking a stationary part at the limit of vertical movement, as specified.

In witness whereof I have hereunto signed 70 my name in the presence of two subscribing witnesses.

HENRY E. SHAFFER.

Witnesses:

CHAS. A. WIDENER,
R. F. OSGOOD.