

(No Model.)

J. HOLMES.

LIGHTER FOR BICYCLE OR OTHER LAMPS.

No. 584,054.

Patented June 8, 1897.

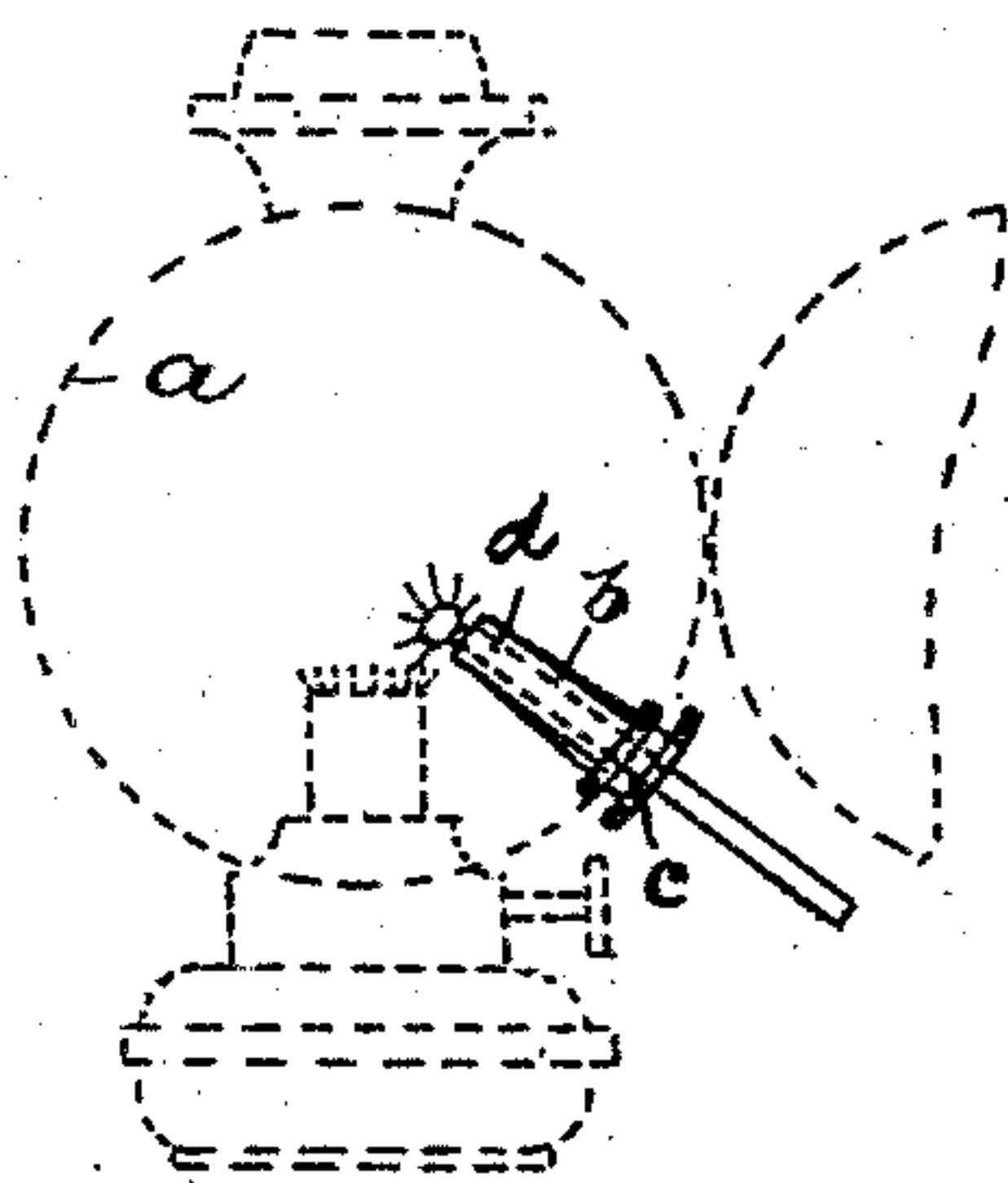


Fig. 1.

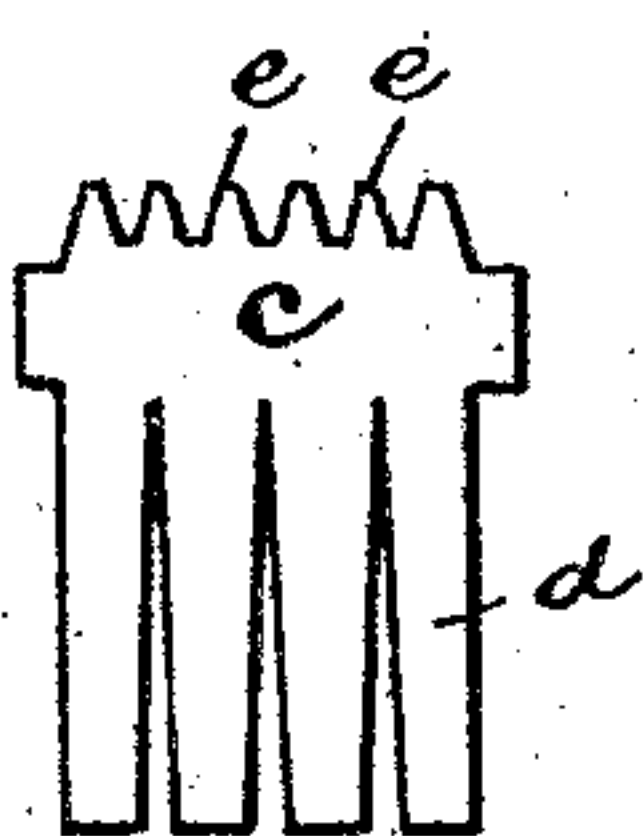


Fig. 2.

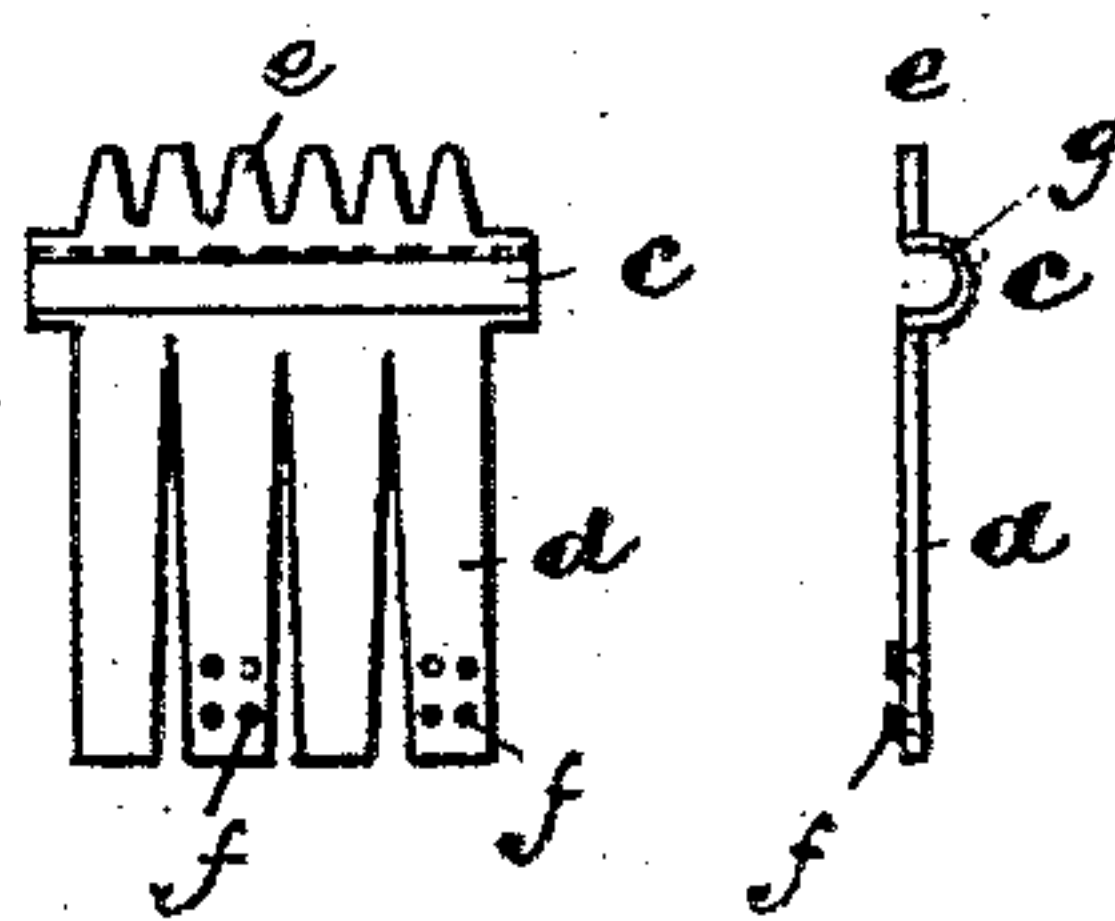


Fig. 3.

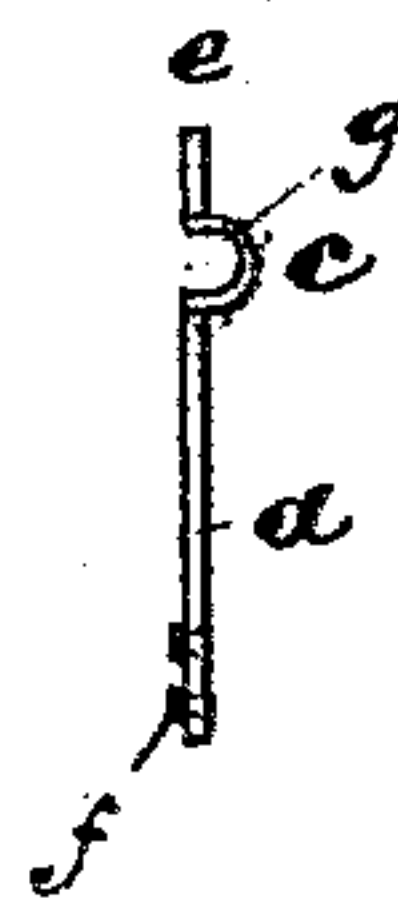


Fig. 4.

Fig. 5.



Fig. 6.



Fig. 8.

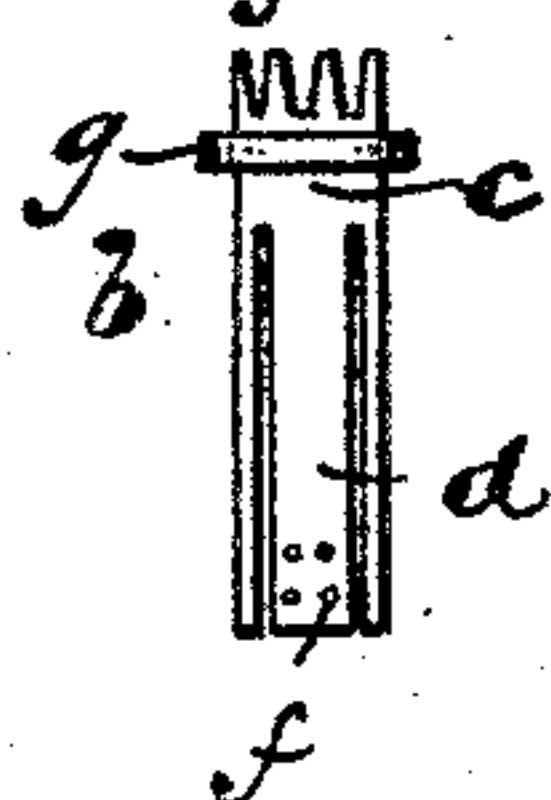


Fig. 9.

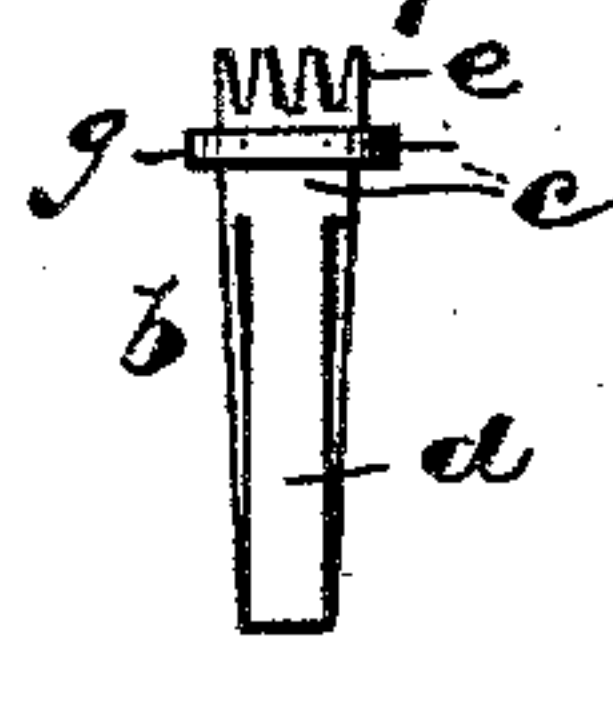


Fig. 7.

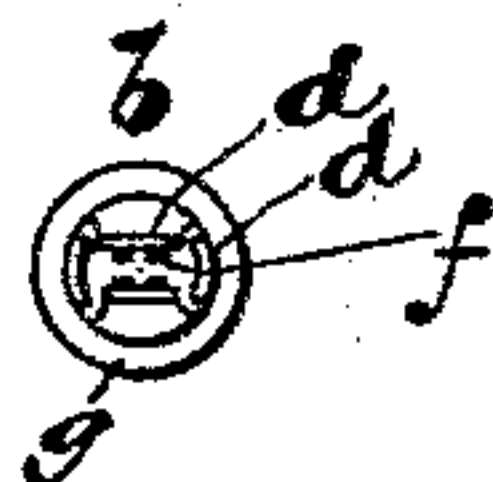


Fig. 10.

WITNESSES:

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JOHN HOLMES, OF NEWARK, NEW JERSEY.

LIGHTER FOR BICYCLE OR OTHER LAMPS.

SPECIFICATION forming part of Letters Patent No. 584,054, dated June 8, 1897.

Application filed September 29, 1896. Serial No. 607,315. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOLMES, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Lighters for Bicycle or other Lamps; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The objects of this invention are to reduce the cost of construction, to provide a device that can be more quickly and easily applied to the lamp and be held thereto with greater rigidity and security, and to obtain other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved lighter for bicycle-lamps and in the arrangements and combinations of parts, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is an elevation in outline of a lamp to which the improved lighter in full line has been applied, a match being shown extending through said lighter into close adjacency to the wick. Fig. 2 is a plan of the lighter in blank. Fig. 3 shows the blank in a second stage of manufacture. Fig. 4 is an edge view of said blank in said second stage. Figs. 5 and 6 are side views. Fig. 7 is an end view of the blank in a third stage of manufacture. Figs. 8 and 9 are side views, and Fig. 10 is an end view, of the lighter complete ready to be fastened upon the lamp-body.

In said drawings, *a* indicates the lamp, the body of which is suitably perforated to receive the lighter, and *b* is the lighter, which latter consists of a single piece of metal, preferably of resilient brass, having a tubular body *c*, with igniting-arms *d* at one end extending, when in the lamp, inward, the free ends of said arms lying near to the wick-tube

and at the opposite end having a series of serrations or teeth *e*, adapted to be bent down to hold the lighter to the lamp firmly and securely.

In manufacturing the lighter I first strike up the blank from a piece of sheet-brass or other suitable metal in the form shown in Fig. 2. Here the sheet metal is shown to be provided at one end of the body with a series of lugs, teeth, or cleats *e*, and at the opposite edge with a series of long arms *d*, while the intermediate body portion *c* is substantially flat. In the second stage of the process of manufacture this said intermediate or body portion is struck up, as clearly shown in edge view in Fig. 4, forming a groove *c'*, extending the full length of the said body portion between the series of teeth and arms.

The arms or certain of the arms, either at the same time or in another operation, are indented, as at *f*, to form lighting or friction surfaces, against which the ignition material of the match is scratched to produce a flame.

In the next stage of manufacture the sheet metal is turned into a U shape in end view, as indicated in Figs. 5, 6, and 7, and in the final operation the turning of the metal is completed, so that the lighter assumes a tubular form with open ends, through which the match can be inserted, as indicated in Figs. 8, 9, and 10.

In the operation in which the final turning to the complete cylindrical form is effected the flange *g*, produced in grooving the blank in the second stage of manufacture, is compressed so as to close the groove and form a more narrow annular shoulder or flange, which serves as a stop against which the metal of the lamp presses when the cleats *e* are turned down, the said shoulder lying on the inside of the lamp, while the cleats are bent down upon the outside hard against the metal, as will be understood, so that the lighter is held with great firmness and security. The arms *d*, or at least one pair of such arms, are bent together or toward one another, as indicated in Figs. 9 and 10, so that their free ends are sufficiently near to one another to produce a friction upon the ignition material of the match when the latter is thrust through the cylinder from the outside.

The parts are so arranged as that by a simple insertion of the match through the lighter and a consequent scratching of the match the match will be ignited and be guided into close relation to the wick. The lighter being thus formed entirely of one piece of metal is of a small cost of manufacture.

Having thus described the invention, what I claim as new is—

1. The improved lighter for lamps comprising a tubular piece of sheet metal having at one end a series of resilient arms *d*, *d*, providing frictional surfaces adapted to engage the ignition material of the match, having an intermediate shoulder or flange *g*, and at the opposite end a series of cleats at the end opposite that having the arms, the said cleats being adapted to be bent down and with the flange hold the lighter in rigid relation to the

lamp, the whole being formed of one integral piece of metal, substantially as set forth.

2. The improved lighter for lamps comprising a single integral piece of resilient sheet metal having igniting-arms *d*, at one end intermediate bend forming a groove at one side and at the other a flange and at the opposite end providing means for fastening said lighter in place, the said piece being turned into cylindrical form and compressed at the flange, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, 1896.

JOHN HOLMES.

Witnesses:

CHARLES H. PELL,
C. B. PITNEY.