(No Model.)

A. FRENCH.

LAMP.

No. 459,135. Patented Sept. 8, 1891.

Fig: 1.

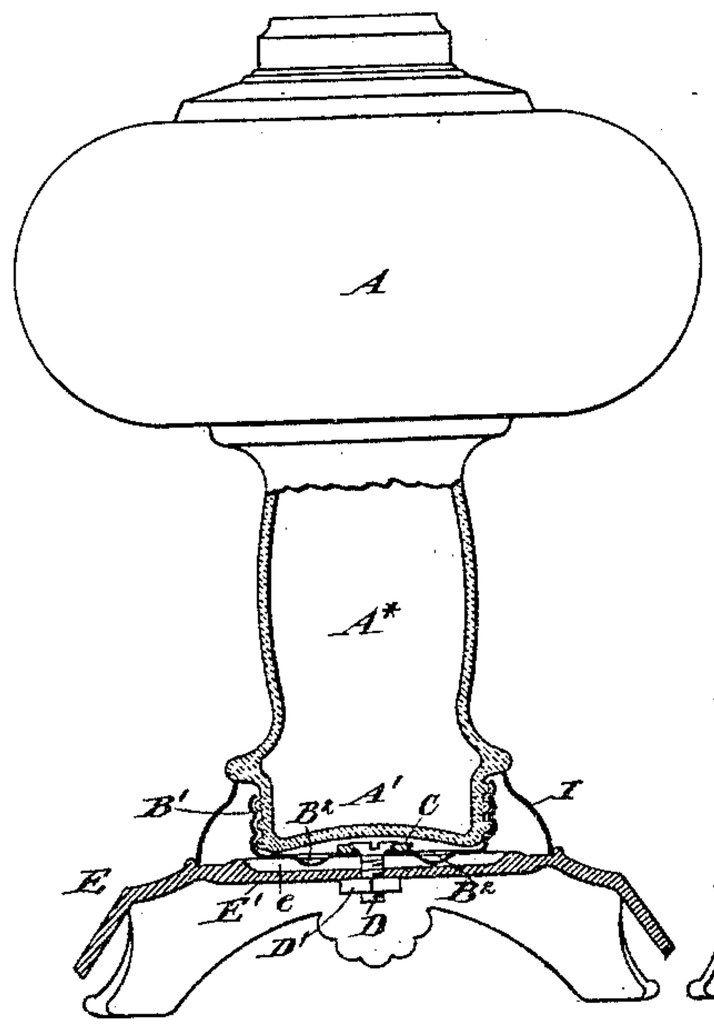


Fig: 2.

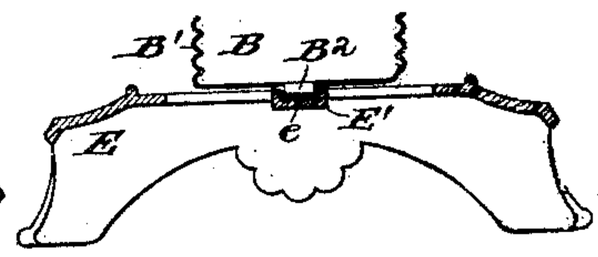
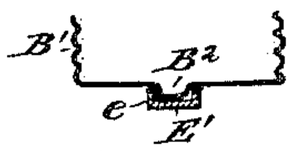


Fig: 4.



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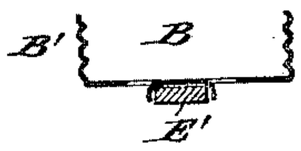


Fig: 3.

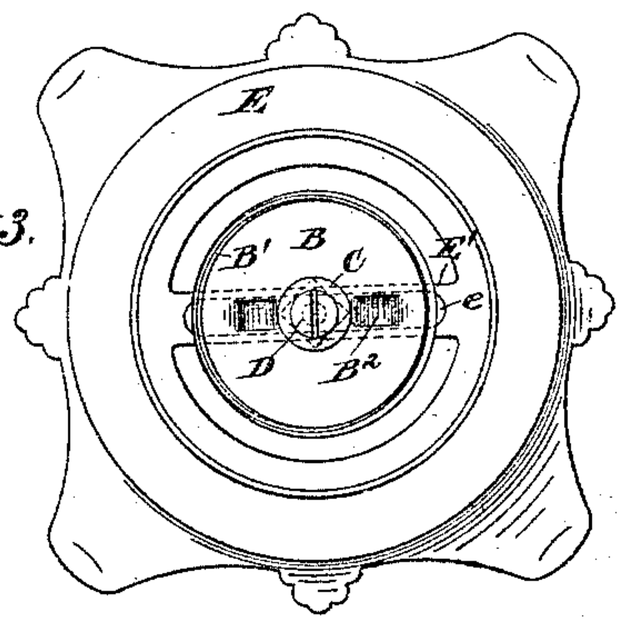


Fig: 6.

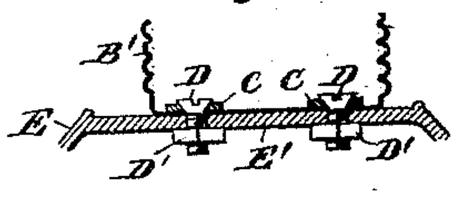


Fig: 7.

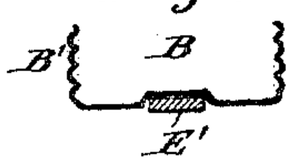


Fig: 8.

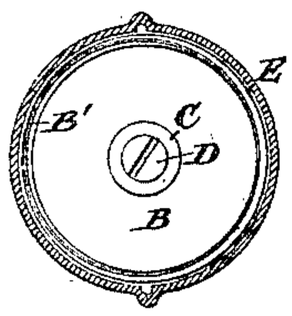


Fig: 9.

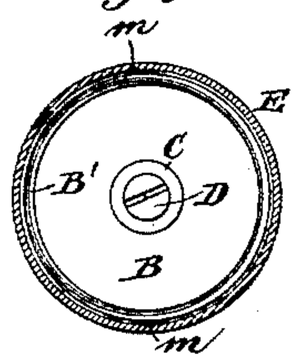
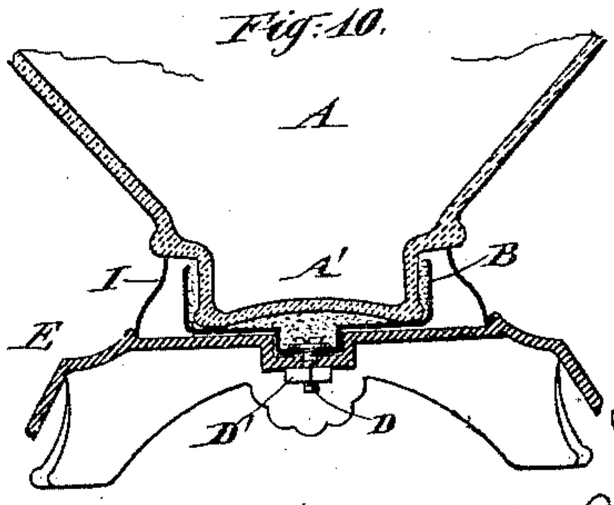


Fig: 10.



Witnesses:

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Chas S. Barbour.

Inventor:

Alonzo A. French

by his attorney

Thomas Drew Stetson

UNITED STATES PATENT OFFICE.

ALONZO FRENCH, OF NEW YORK, N. Y.

LAMP.

SPECIFICATION forming part of Letters Patent No. 459,135, dated September 8, 1891.

Application filed November 1, 1890. Serial No. 370,061. (No model.)

To all whom it may concern:

Be it known that I, ALONZO FRENCH, a citizen of the United States, residing in the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Lamps, of which the following is a specification.

The invention relates to the provisions for joining the body of the lamp to the foot or base. It may apply to lamps and bases of all materials and sizes and adapted for use in lanterns and in various other situations; but I will describe it as applied to an ornamental lamp. The lamp-body is of glass and the base is cast-iron, bronzed or otherwise surfaced. There are difficulties in securing glass to other materials with the required degree of strength and reliability which the many efforts heretofore made have not completely overcome.

My invention provides means for holding the parts together with absolute rigidity, is easily connected, and, when desired, may be easily disconnected by proper effort. It may be secured again as many times as may be required. I mold the lamp-body with a sufficiently prominent screw-thread around the peg at the base, the body above being shown as suitably molded to constitute a handle; but this may be varied. I provide a box spun up or otherwise produced from thin sheet metal, preferably tinned iron, having a hole in the middle and a wall or body extending upward from the edge to a height of three-quarters of an inch, more or less, this upright portion being spun or otherwise formed with screw-threads matching the screw-threads formed on the lamp. I hold this box by a separate small screw-bolt extending downward through the hole in the center, its head resting on a sufficiently large washer and its lower end extending through a cross-bar on the base-casting, and locked downward thereon by a nut on the lower end of the bolt. It is prevented from turning on the base-casting by depressions forced down by a die or otherwise in the bottom of the box and each engaged in a radial groove formed in the cross-bar. There is an ornamental collar a little larger than the box and a little higher fitted just outside of the box to receive the downward pressure of the lamp.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a central vertical section through the novel parts with so much of the other parts of the lamp shown in elevation as is necessary to indicate their relation thereto. The body is shown as having an extension downward of suitable size to constitute a handle, with the screw-threads at the bottom of such extension. Fig. 2 is a vertical section through portions in a plane at right angles thereto on the line $x\,x$ in Fig. 3. Fig. 3 is a plan view of the base and box and the surrounding collar ready to receive the lamp, which latter is not yet applied. The remaining figures show modifications. Figs. 4, 5, 6, 7, and 10 are central vertical sections. Figs. 8 and 9 are plan views of the base and box, the lamp not yet being applied.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is the body of the lamp, and A′ a portion of the bottom extending downward and having a screw-threaded exterior.

B is my box of tinned sheet-iron or other strong sheet metal, having screw-threads spun or otherwise formed in its upright body and depressions at opposite points in its generally plane bottom. The screw-threaded portion is marked B′ and the depressions B^2. A washer C is fitted on the inner or upper face of the bottom of the box. Through this extends a short screw-bolt D.

E is the base. The cross-bar E′ is cast in one therewith. It has a hole in the center for receiving a bolt. There is also a deep radial groove *e* on its upper face adapted to receive the depressions B^2 from the box.

D′ is a nut screwed on the lower end of the bolt D.

The base is cast or otherwise formed with any suitable ornamental contour, which affords a sufficiently-extended bearing to reliably support the lamp, and also affords means whereby it may be strongly grasped to turn it and the box B, the latter being rigidly connected by the bolt D and nut D′ by the aid of the depressions B^2 and groove *e*.

The body is formed with an elongation A*

of less diameter and of sufficient height to hold the main body A at a proper altitude for table use. This portion A* also serves as a convenient handle by which to grasp the lamp firmly and conveniently in transferring it from place to place. The construction makes this portion available, as well as the main body A above, for containing oil. The wick, extending down into it, allows the lamp to burn with diminished brightness, but so as to be useful much longer than it otherwise would. The bottom A′ of the elongation A* is formed with an indentation in its center sufficient to allow for the head of the bolt D and also for the thickness of the washer C.

In putting the parts together a base E is laid on the bench, and a box B is applied thereon with a hole in its center coinciding with the hole in the center of the cross-bar E′. The washer C is laid in place and the bolt D dropped into position. The parts are held in these relations and the nut D′ is applied on the lower end of the bolt and screwed up firmly against the cross-bar E′. Next the collar I is placed in the position shown outside of and concentric to the box B, this collar being a little higher than the box. Now the lamp is brought into position and screwed down into the box, its screw-threaded end A′ engaging in the screw-threaded portion B′ of the box. It is screwed down until the resistance forbids further turning movement. The lamp rests on the upper edge of the collar and presses down firmly thereon, being drawn down by the strain received through the box by the screw-threads, with which it has been strongly engaged by the turning movement. The parts will remain firmly held by this means for an indefinite period.

The parts may be readily separated for cleaning or repairs or for the transportation of the lamp, when required, by simply holding the body of the lamp and turning the base E, with its rigidly-connected screw-threaded box B B′ B^2, in the proper direction to let go of the screw-threaded part A′.

Modifications may be made by any good mechanic without departing from the principle or sacrificing the advantages of the invention.

Fig. 4 shows a construction similar to Fig. 2, but having the depression B^2 extending quite across the box. The metal is depressed without being cut.

Fig. 5 shows the cross-bar with a flush top or ungrooved and the bottom of the box depressed each side of it. I have shown the depressions as formed by the aid of a cutting-die, which cuts the metal and bends it downward at four places to bear against the edges of the cross-bar; but the other form of depression, that shown in Fig. 2, may be used at the four points, if preferred, two embracing the cross-bar on each side of the center bolt. (Not shown.)

Fig. 6 shows the box held by two bolts inserted through two holes in the box and two corresponding holes in the cross-bar. The box should be deep enough and the collar should be high enough in carrying out this form of the invention to avoid contact between the glass of the lamp and the heads of these bolts.

Fig. 7 shows the cross-bar plane or ungrooved, but setting a little higher, and a corresponding groove extending radially across the bottom of the box adapted to receive the cross-bar.

The horizontal section in Fig. 8 shows the box formed with projections at two points engaging in corresponding pockets formed in the base, which is extended upward around the box. A single bolt in the center holds the box downward to the cross-bar, as in Figs. 1 and 3.

Fig. 9 shows the box made plain or without depressions or projections. The adjacent surface of the base E is tinned, and the box is firmly secured thereto by solder *m*. The solder may be sufficient to not only prevent the turning movement, but also to resist the strong force exerted by the screw-threaded portion of the lamp tending to lift the box. I prefer, however, when this form is adapted to also employ the bolt D, locking down the center of the bottom additional to whatever hold may be due to the solder.

I have described the invention as a lamp; but the invention may be equally well used on inkstands and various analogous structures where the body is formed separately from the base and is to be firmly connected thereto. The shank or elongation A* downward may be dispensed with and the screw-threaded portion A′ made immediately adjacent to a part of the approximately globular body A. It is not essential that the screw-threads A′ and B′ shall be continuous. Partial screw-threads, making what is sometimes termed a "bayonet-joint," will be equally effective in the combination.

Instead of attaching the box B to the base first and screwing in the body afterward, I can fix the body to the box first and afterward engage the bolt D with the cross-bar of the base and apply the nut. Some of the benefit of my invention may in such case be secured by other means of attaching the body to the box. I can, for example, secure them by plaster.

Fig. 10 shows a form of the invention having a central rectangular portion extending downward in the base of the box and received in a similar recess in the base. The washer and bolt are inserted in the box, and the box is then partly filled with plaster in a soft state and the body pressed down therein. The hardening of the plaster unites the body and box inseparably. Afterward the collar is applied and the base brought into position with the bolt extending down through the top of the base, which may be a cross-bar or a continuous top, as preferred, and the nut is applied and turned with sufficient force.

I claim as my invention—

A lamp-body, of glass or other material, having screw-threads, a sheet-metal box having corresponding screw-threads, a base of cast metal or other suitable material, a bolt and nut, and provisions, as the depressions B^2, in the box engaging in the groove *e* in the base for preventing the turning of these parts upon each other, so as to allow the entire base E to be used as a means for holding and turning the box, as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

ALONZO FRENCH.

Witnesses:

JAMES FORREST,

WALTER P. EVANS.