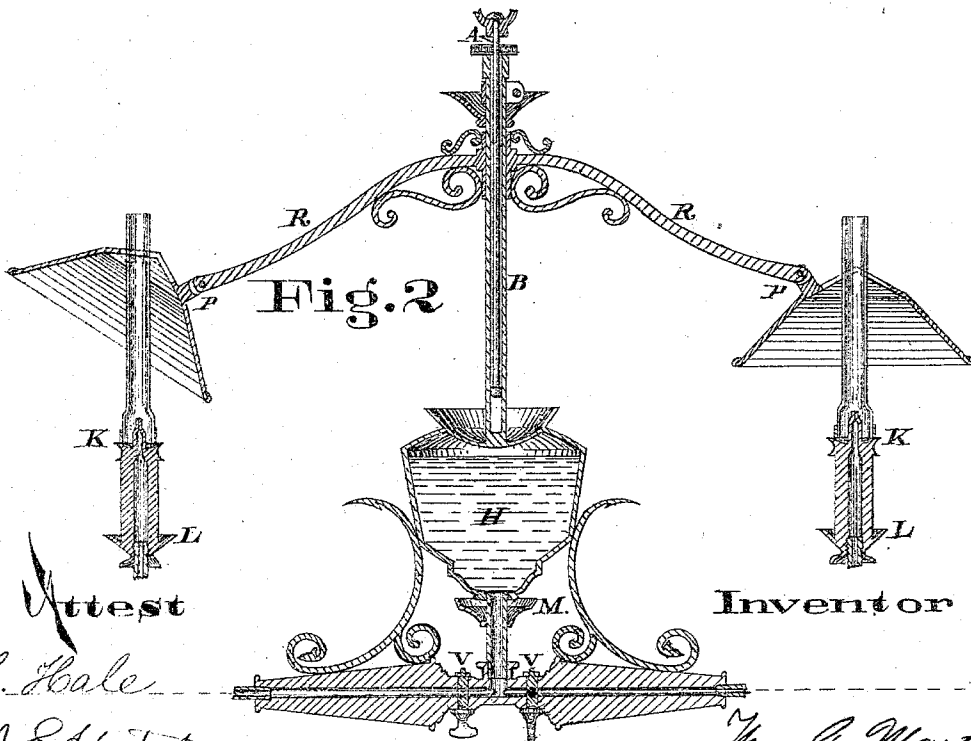
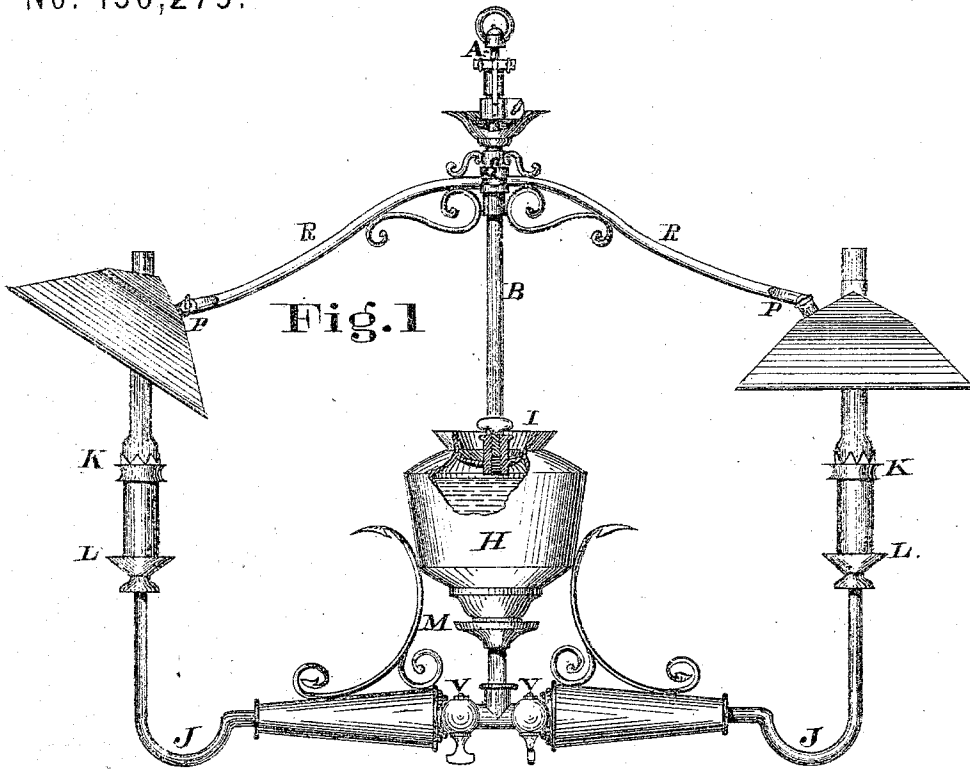


W. St. MARTIN.
Billiard Lights.

No. 136,275.

Patented Feb. 25, 1873.



Attest
b. Hale
J. E. Hatot.

Inventor
Wm. St. Martin

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Fig. 4

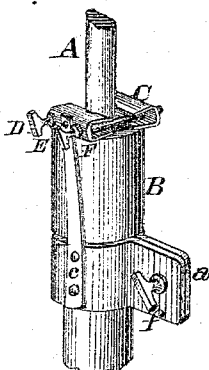
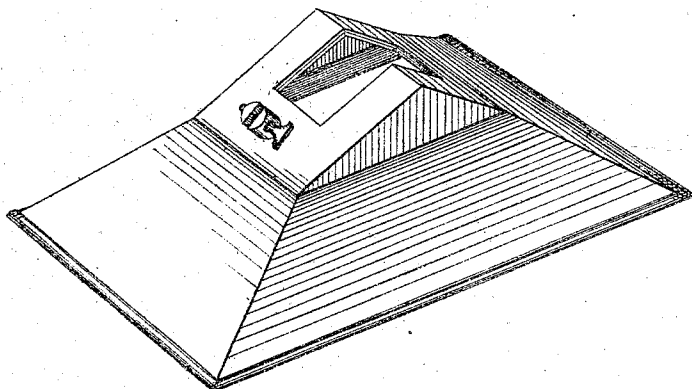


Fig. 3



Attest

Inventor

C. Hale

J. E. Hately

W. St. Martin

UNITED STATES PATENT OFFICE.

WILLIAM ST. MARTIN, OF CINCINNATI, OHIO.

IMPROVEMENT IN BILLIARD-LIGHTS.

Specification forming part of Letters Patent No. 136,275, dated February 25, 1873.

To all whom it may concern:

Be it known that I, WILLIAM ST. MARTIN, residing at the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented an Improvement in Billiard-Light, of which the following is a specification:

My invention relates to hanging lights, which are made adjustable vertically by means of a telescopic tube sliding upon a central rod or support; and the particular object of my invention is to so improve this class of lamps as to better adapt them to the illuminating of billiard-tables, where it is especially desirable to concentrate as bright a light as possible upon the table, and yet, so far as practicable, shield the eyes of the player.

In the accompanying drawing is represented an illuminating apparatus of ordinary construction, to which my improvements have been applied.

Figure 1 is a side elevation of a billiard-light provided with all my aforementioned improvements. Fig. 2 is a central vertical section of the same. Fig. 3 is a view in perspective of one of the shades. Fig. 4 is a view in perspective of my device for tightening the pressure upon the rod, whereby the lights are elevated or depressed.

A is the central rod or support, upon which moves the sliding tube B, the position of the tube upon the rod being regulated by the device hereinafter described. H is the reservoir, borne upon tube B, and contains the oil or other illuminating fluid. This reservoir connects with the lamps K K, through the arms J J, and the lamps should be placed at an elevation a little greater than the top of the reservoir, so as to prevent any overflow of oil from the lamp. The arms J J are provided with stop-cocks V V, by means of which the flow of illuminating fluid from the reservoir may be regulated at pleasure, or entirely cut off. At the base of the lamps are placed annular drip-cups L L, for catching any leakage or drip of oil from the lamps; and a similar device, M, is applied to the base of the reservoir. Upon the top of the reservoir, and surrounding the sliding tube, is placed an annular funnel, I, of such size that the reservoir can be filled without permitting any drip of oil, &c., to fall upon the table below. The orifice leading from this funnel into the reservoir is to be

closed by an adjustable screw-stopper, as shown in the drawing. The reflectors are supported on arms R R, which, in their turn, are borne upon a sleeve which surrounds the sliding tube B, and is adjustable upon it, being set at any particular point along the height of said tube by means of a set-screw. This enables the reflectors to be adjusted independently of the lamps at any desired elevation above them. The reflectors are pivoted to the arms at the points P P in such a way that they may be turned toward or from the supporting-rod at pleasure, and at any desired angle, the joints P P being provided with set-screws, by means of which the reflectors may be held in position after adjustment. To permit of the desired range of adjustment without obstruction from the chimney, a portion of the top of the reflector is cut away, substantially as shown in Fig. 3. The under edge of the reflector is rectangular, the proportion of its two measurements being approximately that of the ratio between the length and width of an ordinary billiard-table. The sides and ends of the reflector are inclined inward from the lower edge toward the axis, and are crowned by a top or roof, which consists of two vertical ends, forming re-entering angles with the sides of the reflector, and of two sides, forming salient angles with the ends of the reflector, substantially as shown in Fig. 3.

The light should be so hung that the plane of the arms R R shall be coincident with the vertical plane passing longitudinally through the middle of the table. When the apparatus is so hung, the vertical adjustability of the reflectors independently of the lamps, and the pyramidal form given to their lower part, enable me so to regulate their position that the width of the area covered by the reflected light may, if desired, exactly equal the width of any table over which the illuminator may be suspended; thus at the same time concentrating all the light upon the table, and, if the sliding tube which carries the lamps be brought down sufficiently low, effectually excluding it from the eyes of the players.

Inasmuch as each of the reflectors has an independent adjustability in the plane of arms R R, it is evident, also, that they may be set at such an angle as by their combined reflection to illuminate an area of the exact length of the

table; and, as there are two lamps, each carried to a considerable distance from the central parts of the apparatus, there will be no part of the table which will remain unilluminated.

A further improvement in telescopic hanging lights, which is illustrated in the drawing, has reference to the friction-clutch, by means of which the sliding tube is held at the desired point in the supporting-rod.

I am aware that it is not new to employ a friction device to regulate the adjustment of the sliding tube in lights of this generic construction, and, therefore, I do not broadly claim a friction device for this purpose. My clutch, however, is different in various particulars from those heretofore in use, and in its features of novelty I deem it both useful and important. It consists of two pieces of rubber, *F*, inserted in inclosing metal strips or other suitable backing, these two strips being connected by set-screws that pass on either side of the supporting-rod, and which may be made to regulate the pressure of the rubbers upon the rod at pleasure. These metal strips, which form the cases in which the rubbers are seated, are to be securely fastened to the upper end of the tube *B*. This may be done in any appropriate way; but the method that I prefer is that shown in Fig. 4, in which *a* is a band encircling the tube, and made to fasten it tightly by means of the screw *f* passing through its two flanges. Attached to this band, upon its opposite sides, are two straps or links, which in turn are securely fastened by riveting or brazing to the metal strips that inclose the rubbers.

This fastening device thus constructed can be taken off at will or easily adjusted to any hanging light, and by means of set-screws, connecting the metal backs that inclose the rubbers, any desired pressure on the rod *A* can be obtained, and the tube be adjusted to slide more or less easily at will.

As the rubbers wear away they can be set up closer against the rod by means of the screws, and when entirely worn out they may be replaced by new ones inserted in the old backing.

What I claim as new in my improved billiard-light, and desire to secure by Letters Patent, is—

1. The combination, with the sliding tube, of the friction device composed of rubbers *F*, the cases *C C* inclosing the rubbers, and the set-screws *D D*, as a means of regulating the position of the sliding tube upon the supporting-rod.

2. As a means of securing my friction-clutch to the sliding tube, the tightening device, consisting of the band *a*, screw *f*, and the straps or links *E E*, substantially as described.

3. The combination, with the sliding tube of a hanging lamp, of the jointed arms *R R*, and the two rectangular-shaped reflectors, substantially as described, for the purpose of concentrating the light of the two lamps upon any desired rectangular space beneath them.

WM. ST. MARTIN.

Witnesses:

ALBERT G. CLARK,
JOHN E. HATCH.