

(No Model.)

J. M. SIMPSON.

DISPLAY BODY.

No. 290,489.

Patented Dec. 18, 1883.

FIG. 1.

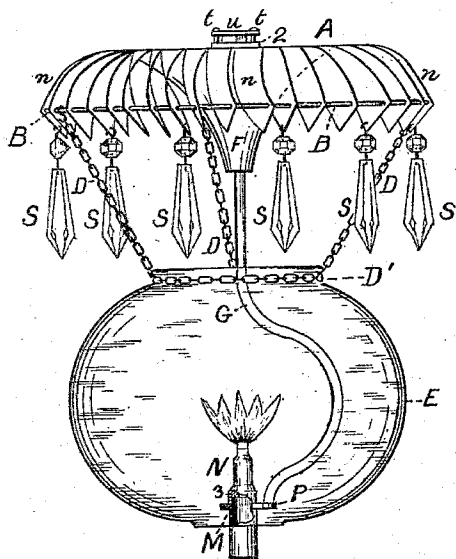


FIG. 2.

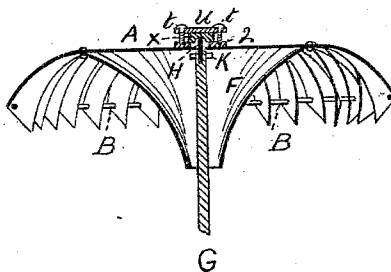


FIG. 3.

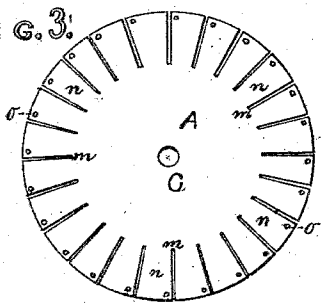


FIG. 4.

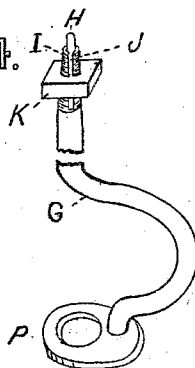
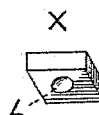


FIG. 5.



WITNESSES:

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JOSIAH M. SIMPSON, OF CHICAGO, ILLINOIS.

DISPLAY-BODY.

SPECIFICATION forming part of Letters Patent No. 290,489, dated December 18, 1883.

Application filed June 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH M. SIMPSON, of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Display-Bodies, of which the following is a specification, reference being had to the accompanying drawings, illustrating the device, in which—

Figure 1 is an elevation of a mechanism embodying my invention. Fig. 2 is a vertical sectional elevation of the top portion thereof; Fig. 3, a top or plan view of the plate of which the wheel is formed, it being in the condition as it came from the dies, with the radial cuts *m* made preparatory to bending the buckets. Fig. 4 represents the curved standard which supports the wheel; Fig. 5, a perspective view of the wheel bearing or step.

The present invention relates to mechanism for rotating globes, signs, and shades for display purposes.

The nature of invention in brief consists, first, in a drive-wheel which has buckets or wings on its outer part bent down on such curves as to form a continuous curve with a concave conical deflector placed on the wheel-support, whereby the heat from the flame is directed properly to the buckets to attain the greater power; second, in a plumbago pivot-bearing and stone step for the wheel to turn on.

My method or plan of construction is as follows: A disk, *A*, of thin spring-brass or other material, has formed inwardly from its periphery radial cuts *m m*, &c., and the pieces of metal or buckets *n* thus separated have each a hole, *o*, punched through them, and are bent downward and twisted, as shown at Figs. 1 and 2, after which a wire, *B*, is strung through the holes *o* to hold the buckets in position, the ends of the wire being riveted together to form what I term a "bucket-wheel." These buckets are curved downward toward the periphery, so that the heated currents may effectively impinge upon them when moving in a direction approximating the horizontal. To the under side of this disk *A* is attached a concave cone-shaped plate, *F*, which serves the purpose of strengthening the disk and deflecting the rising gases onto the buckets *n*. The concave form is important, in that it directs the heat more in a horizontal direction and with less friction

than a cone would. A hole, *C*, is formed in the center of the disk, and surrounding it and on the top thereof is riveted a flat ring, *2*, and placed over and secured to this ring by screws *t t* is a plate, *u*, and to the under side of this plate is secured the step *X L*, in which the wheel-supporting pivot-point *H* bears. The construction of the top of the supporting-standard *G* to hold this pivot is as follows: On the said top part is formed tapering screw *I*, which is slotted vertically at *J*, and has a vertical hole in it to receive the point *II*. A taper-threaded nut, *K*, is turned onto the screw *I*, and by its compressing force holds the point in place.

Any anti-friction material which will withstand the heat may be employed for the support of the wheel; but I have found hard plumbago for the point *H* and stone *X L*—such as onyx bearings—to serve well the purpose, and that plumbago or some material in which it is incorporated is the only substance that will answer the purpose for the point *H*, under heat, without lubricating; and it is for the purpose of using fine black-lead or composition points that the top of the standard *G* is constructed, so that as a point becomes worn it may be removed by loosening the nut *K*, and another point inserted in its place. The standard *G* is provided at its lower end with a collar, *P*, which is of a size to be placed onto the ordinary gas-burner, *M*, below tip *N*, and is held in place by the screw-cap *3*. The globe *E* is suspended from the wheel by means of a chain or ring, *D'*, put around under its top flange, and chains *D D*, attached to it and to the wire *B* of the wheel. Should pendants be desired, they can be suspended from the buckets *n*. It will be understood from this that the standard *G* remains in a fixed position, and that the wheel *A n F*, being rotated by the rising gases, rotates the globe *E*, and that the effect is produced by the devices on the globe or other rotated device, and that the velocity that the globe is to have depends on the plentitude of the flame from the burner. It is well to state that where the standard is attached to the burner of a lamp the same result will be produced. The pendants *S* serve the purpose of governors as well as display.

I am aware that plumbago has been used as

a lubricant, and also as a constituent of a compound for a bearing-surface, and I do not claim such use, except in connection with an opposing bearing capable of resisting heat, which, so far as I am aware, has not heretofore been used.

It is not proposed to claim, broadly, a rotary device for displaying bodies having the general features shown herein, having embraced some of said features in another case, the serial number whereof is 96,058.

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

1. In devices for display-bodies, the wheel A, with downwardly-turned buckets *n*, in com-

bination with an inverted concave cone, F, to form a continuous curve from the lower end of the cone to the outer ends of the buckets, as and for the purpose specified. 20

2. The plumbago pivots H, in combination with the stone X, as a bearing for rotating display-bodies which are driven by heat, as specified.

3. The hollow split screw I J, plumbago point H, nut K, step X L, plates *u* 2, wheel A F, display-body B, and chains D' D, substantially as and for the purpose specified. 25

JOSIAH M. SIMPSON.

Witnesses:

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