G. H. CHATTERTON.

Illuminated Advertising Device.

No. 206,861. Patented Aug. 13, 1878.

Fig. 1.

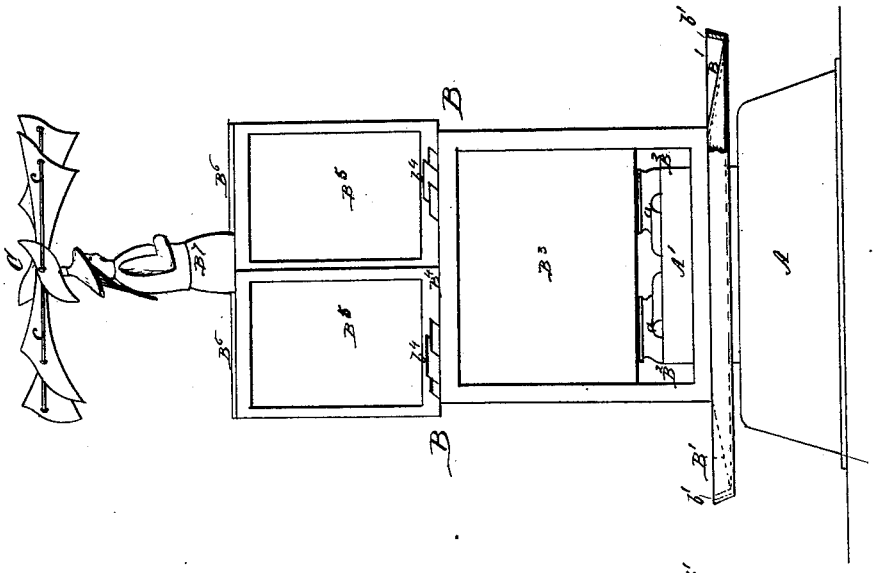
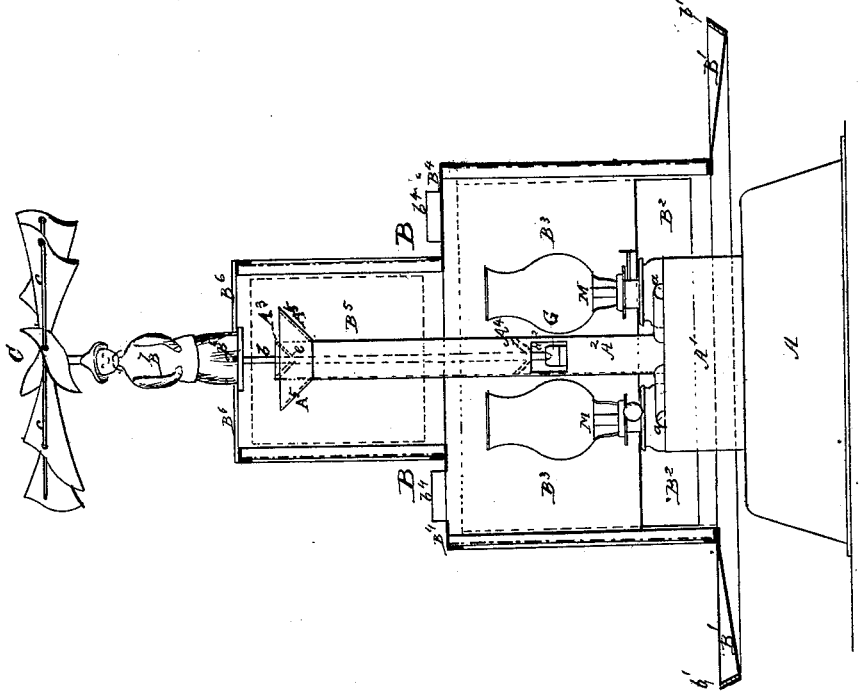


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE H. CHATTERTON, OF NEWARK, ASSIGNOR TO HIMSELF AND JOHN C. CHATTERTON, OF RUTHERFORD, NEW JERSEY.

IMPROVEMENT IN ILLUMINATED ADVERTISING DEVICES.

Specification forming part of Letters Patent No. **206,861**, dated August 13, 1878; application filed May 14, 1878.

To all whom it may concern:

Be it known that I, GEORGE H. CHATTERTON, of Newark, Essex county, in the State of New Jersey, have invented certain new and useful Improvements relating to Show-Stands, available also as a means of advertising; and I do hereby declare that the following is a full and exact description thereof.

My device is of that class in which there is rendered available as a motive power the current of heated air rising from one or more inclosed lamps or gas-burners received on the wings of a light screw-wheel.

I employ a hollow frame covered with a light material, as oiled paper, oiled silk, or other suitable transparent or translucent material, with the top open, except as hereinafter explained. Around the whole or a great part of the lower portion the covering is either perfectly transparent or entirely omitted, the latter being preferable where it is not exposed to currents of air. Through this space the light from the lamps shines upon a shelf which extends the whole or a great part of the way around, and, revolving with the frame-work above, favorably exhibits jewelry or any articles which it is desired to show.

By the revolution of the stand and the shelf the goods are presented to the eye of the spectator in different points of view. I illumine the goods not only by the direct light of the flame, but also by reflectors of moderate height placed at or near the outer edge of the shelf or shelves.

I have in my experiments made the principal and main portion of the framing in the form of two rectangular chests, which may represent corresponding packages of tea or other goods; but this precise form is not essential. I, however, attach importance to the fact that the frame is contracted by a shelf or flat portion at or near the mid-height, on which flat portion goods may be placed, if desired. I also increase the rotating power by forming apertures in this surface, which are provided with inclined wings or deflectors, so that the current of air rising through those apertures will, by its deflection of the current and the reaction thereby induced, contribute to rotate the apparatus.

I support the frame on a peculiarly frictionless pivot. A long polished wire, having a hardened steel point, is fixed to the frame as near the center line thereof as practicable. It is rigidly connected at the top. It extends down through suitable fixed guides with a slight but sufficient bearing at the top, and finds a bearing with its hardened and fine point near the bottom of the stand in a polished steel cup which is provided for its reception. An opening at the side allows the points to be inspected, adjusted, or repaired, if necessary. A very small quantity of oil may be added through this aperture, and keeps the apparatus in condition for revolving with almost inappreciable friction.

All the transparent or translucent faces, being illuminated, are available as advertising-surfaces, the letters or devices being applied thereon either with opaque or transparent medium, black or in colors.

I provide for deflecting the current of air outward from the center and causing it to strike in the most effective position on the wings of the screw.

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 side elevation, and Fig. 2 a vertical section, of apparatus constructed according to my invention.

Similar letters of reference indicate like parts in both the figures.

A is a stand, which may be portable or fixed. I have represented it as spun or stamped from sheet metal. It has a sufficiently-capacious reservoir or receptacle for oil, A^1. From the center of the top extends upward a rigid tube, A^2, having its top flared, as shown. Radial ducts *a*, open at their outer ends, are formed in the top of the reservoir A^1, and they open at their inner ends into the tube A^2, and allow a free circulation of air. One or more burners, M, are mounted on the lamp or reservoir A^1, and adapted both to give a strong light and to induce a strong upward current of air.

B is the revolving frame, different parts of which may be designated by additional marks,

B^1 B^2, &c., when necessary. B^1 is the shelf, slightly inclined outward, as shown. Its outer edge carries a nearly upright reflector, b^1. This revolves with the frame, and the articles to be exhibited being arranged in any desired manner on the broad surface of the shelf, are illuminated by the flame from the burners M, as also by the reflected light from the reflecting-surfaces b^1.

The faces of the revolving frame-work above the shelf are utilized as follows: First, a considerable space, B^2, is left either open or inclosed with transparent glass, to allow as full and strong a flow of light as possible upon the goods. Above this is a surface, B^3, available for advertising. Above this is a flooring, B^4, having apertures provided with inclined shields b^4. The burners M, when in full use, generate a strong upward current of air. A part of this current rises through the apertures in this flooring, and, striking the inclined deflectors b^4, contribute to the rotary motion of the entire framing. Above this the faces B^5 are available for advertising. Above this are light skeleton bars B^6, extending inward to a stout central piece, B^7, which may be an ornamental figure, as shown. Above this is a broad-surfaced horizontal screw-wheel C, which being rigidly connected to the framing, and receiving the strong current of air flowing up through the open top of the frame, is acted on thereby to induce the rotary motion of the frame in the obvious manner. I prefer that this wheel shall be thin sheet metal. Whatever the material, I form it in a large number of wings, curved as shown, and connect the whole by a light ring of brass, *c*. By this means each wing is supported by the others, and very thin material is sufficiently strong.

A long straight polished wire, *b*, is rigidly fixed in the top piece B^7, and extends down in an axial line through the fixed tube A^2. It finds a bearing, *c*, in a cone, A^3, near the top. This wire *b* is of steel, spring temper, with the lower end harder, preferably as hard as it can be made. The fine hard point of this wire rests in a cup, G, of hardened steel, which is set in the position represented. An aperture, a^2, in the side of the tube A^2, allows this point to be inspected, oiled, or repaired. A conical guiding-surface, A^4, is provided above the aperture a^2, which insures the proper insertion of the wire *b*. The upper end of the tube A^2 being flared, as shown at A^5, serves a useful function in spreading the current of air rising from the lamps. Those portions of the current which strike the screw-wheel near the center are ineffective. The current being spread by this deflector strikes the wings of the screw-wheel at their most effective points, near the periphery.

Modifications may be made by any good mechanic without departing from the principle of the invention. A cylindrical, octagonal, or other form may be adopted. Two or more shelves, B^1, of the same or different sizes, may be mounted one above another; but I believe it essential to the success of the device that the weight of the entire structure and its load be kept within very moderate limits. Care must be taken in loading the structure to keep it as evenly balanced as possible.

I can use glass for the transparent sides, and can engrave or use different colors to show the lettering or other devices; but care must be taken to keep the structure light.

I claim as my invention—

1. In a revolving show-stand, illuminated and revolved by an inclosed flame or flames, the combination of the shelf B^1 and reflecting-surface b^1, arranged and adapted to serve as and for the purposes herein specified.

2. The revolving frame B, carrying a shelf, B^1, and provided with openings or transparent surfaces B^2, and inclosing one or more burners M, adapted to throw a strong light upon the articles on the shelf, in combination with an illuminated surface above adapted to serve for advertising, as herein specified.

3. In a show-stand, illuminated and revolved by one or more inclosed burners, the hollow tube A^2, having the flaring top A^5, with cones A^3 A^4, in combination with the axial wire *b* and horizontal screw-wheel C, as herein specified.

4. The revolving frame B, operated as shown, having the axial wire or pivot *b*, in combination with the guiding-tube A^2, having an aperture, a^2, and the supporting-cup G, as herein specified.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

GEO. H. CHATTERTON.

Witnesses:
CHAS. C. STETSON,
EDITH BROOKES.