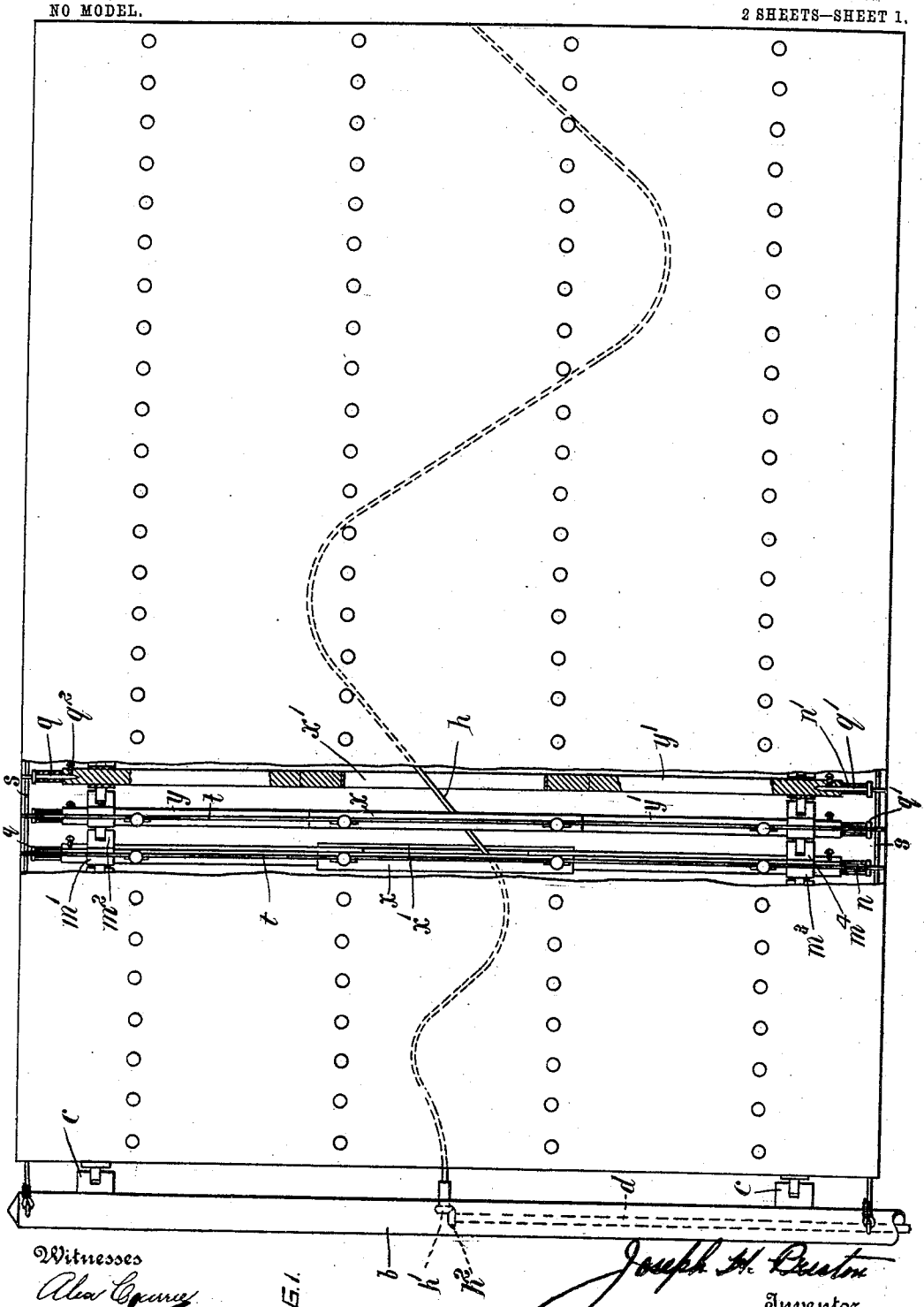
No. 768,909. PATENTED AUG. 30, 1904.

J. H. PRESTON.

DISPLAY DEVICE.

APPLICATION FILED NOV. 19, 1903.

NO MODEL. 2 SHEETS—SHEET 1.



Witnesses
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FIG. 1.

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NO MODEL. 2 SHEETS—SHEET 2.

FIG. 2.

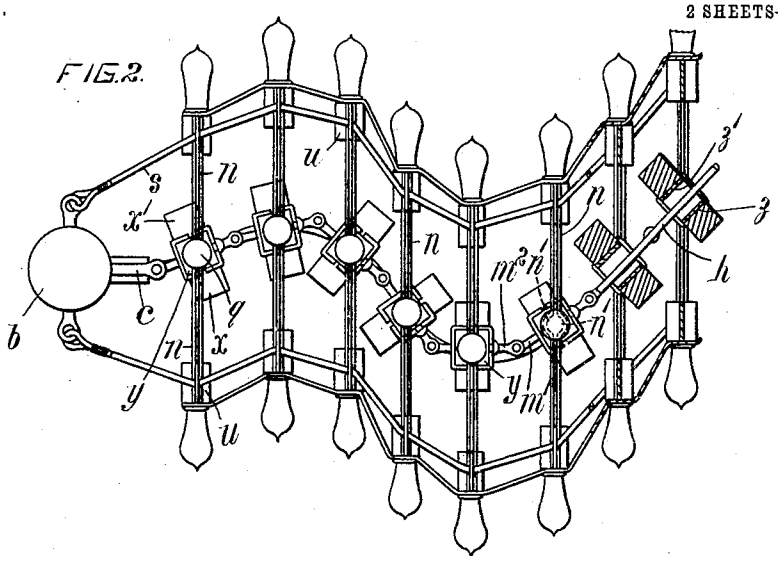
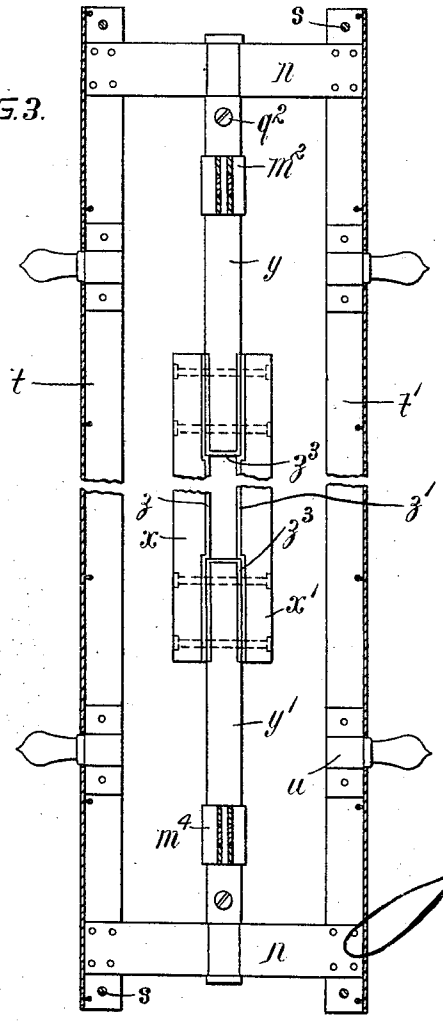


FIG. 3.



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No. 768,909. Patented August 30, 1904.

UNITED STATES PATENT OFFICE.

JOSEPH HARRIS PRESTON, OF MONTREAL, CANADA.

DISPLAY DEVICE.

SPECIFICATION forming part of Letters Patent No. 768,909, dated August 30, 1904.

Application filed November 19, 1903. Serial No. 181,861. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HARRIS PRESTON, of the city of Montreal, Province of Quebec, Dominion of Canada, have invented certain new and useful Improvements in Display Devices; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates particularly to illuminated variable-display devices; and it has for its object to provide a device adapted to bear the subject-matter to be displayed and illuminate such subject-matter while the manner in which the latter is displayed is automatically varied.

The invention may be said briefly to consist of a flexible carrier, means for causing the surface of said carrier to automatically assume different forms, and means whereby the said surface or any subject-matter to be carried thereby may be illuminated.

For full comprehension, however, of my invention reference must be had to the accompanying drawings, forming a part of this specification, in which similar reference characters indicate the same parts, and wherein—

Figure 1 is a side elevation, partly broken away, of a display device constructed according to my invention. Fig. 2 is a part plan and part horizontal sectional view of my improved display device, and Fig. 3 is a cross-section of my improved display device.

The preferred embodiment of my invention is in the form of a flag, as illustrated in Fig. 1, and comprises a flagpole to which the end member of a series of pivotally-connected bearing members is pivotally connected, each of the members having a series of lamps or illuminating devices supported thereon, while mechanically-operated means carried partially by the flagpole and partially by the bearing members causes the latter to assume different positions relatively to one another.

The flagpole b is of tubular form and has a pair of hinge-leaves c rigidly secured thereto, while a rotatable rod d projects upwardly through the interior thereof to a point preferably midway between the pair of hinge-leaves and is adapted to transmit its rotary movement to means within the bearing members for causing the latter to assume different positions. Each of the bearing members consists of a pair of oblong end pieces y and y', arranged in line with one another and having their adjacent ends diminished and covered by a pair of metallic strips z^3 z^3, while a pair of side pieces x and x', having their ends recessed on one side to fit onto the end pieces y and y', are provided with metallic strips or wires z and z', constituting a lining for each. These end and side pieces are preferably made of wood, and they and their linings are preferably secured rigidly together by bolts or binding-wires or other suitable means. Each of the parts y has a pair of hinge-leaves m' and m^2 secured to opposite sides thereof, the hinge-leaves m' having their knuckles fitting between the knuckles upon the hinged leaves m^2 of the members contiguous thereto, the knuckle of the hinge-leaf m' upon the member adjacent to the flagstaff fitting between the knuckles of the upper hinge-leaf c, while the lower parts y' of the members have a series of hinge-leaves m^3 and m^4 adapted to be pivotally connected together and to the lowermost hinge-leaf upon the flagpole. A series of pins are secured, preferably by binding-screws q^2, in the upper ends of the parts y, and a second series of pins q' are similarly secured in the lower ends of the part y'. The spaces inclosed by the end pieces y and y' and the side pieces x and x' are of progressively-increasing length from the pole b to the opposite end of the flag to accommodate a spiral rod h of conical form, with the end thereof at the apex having a beveled gear h' mounted thereon and intermeshing with a second beveled gear h^2, mounted rigidly upon the upper end of the rod d.

The construction as thus far described provides a carrier which may have a flag or other device or subject-matter to be displayed secured upon each side thereof, and upon the rod d being caused to rotate spiral rod h will rotate with it, and a waving appearance be imparted to the bearing members and through them to the device.

In order to enable my improved display device to be illuminated, I cause a series of carrying-frames to be carried by the hinged mem-

bers, each of these carrying-frames consisting of a pair of perforated strips t and t', secured together at their top and bottom ends by a pair of cross-pieces n, each formed with a vertical recess n' in their adjacent sides to constitute a sleeve to fit over and be localized by the pins q and q'. These carrying-frames are constantly maintained in the same angular position relatively to the axis of the flagpole by a series of cords s, each secured at one end to the flagpole and two extending along and being connected to the upper corners of the frames and two being similarly connected to the lower corners thereof. Each of the carrying-frames is provided with a series of sockets u, in which are set the series of incandescent electric-light bulbs or other illuminating devices.

I have discovered that the best results are obtained by securing a pair of the flags or other device to be displayed one upon each side of my display device, and I prefer to secure them in place by stitching or otherwise securing them to the perforated outer vertical edges of the strips t and t', constituting the sides of the carrying-frames.

My improved flexible carrier and means for causing the surface thereof to automatically assume different forms may be used with or without the illuminating means within the spirit of my invention.

What I claim is as follows:

1. A variable-display device consisting of a main supporting member, a series of carrying members flexibly connected together, means hinging said members to one another, means hinging the member at one end of the series to the main supporting member, and means carried partially by the main supporting member and partially by said carrying members and operatively connected to the latter whereby said carrying members are caused to assume different positions relatively to one another.

2. A variable-display device consisting of a main supporting member, a series of carrying members, means hinging said members to one another, means hinging the member at one end of the series to the main supporting member, and means whereby said members are caused to continuously change their positions relatively to one another.

3. A variable-display device consisting of a pole, a series of carrying members flexibly connected together, means hinging said members to one another, means hinging the member at one end of the series to the pole, and means carried partially by the pole and partially by said members and operatively connected to the latter whereby said members are caused to assume different positions relatively to one another.

4. A variable-display device consisting of a pole, a series of carrying members, means hinging said members to one another, means hinging the member at one end of the series to the pole, a spiral rod extending from the pole to the opposite end of the series of members and having a sliding connection with each member, and means carried by the pole for rotating said spiral rod for the purpose of causing the members to assume different positions relatively to one another.

5. A variable-display device consisting of a tubular pole, a series of carrying members, means hinging said members to one another, means hinging the member at one end of the series to the pole, a spiral rod of conical form extending from the pole to the opposite end of the series of members and having a sliding connection with each member, said spiral rod being disposed with its apex adjacent to the pole, and means carried by the pole for rotating said spiral rod for the purpose of causing the members to assume different positions relatively to one another.

6. A variable-display device consisting of a tubular pole, a rotatable rod extending upwardly through said pole to a point below the upper end thereof and having a bevel-gear upon its upper end, a series of carrying members, means hinging said members to one another, means hinging the member at one end of the series to the pole, a spiral rod extending from the pole to the opposite end of the series of members and having a sliding connection with each member, a bevel-gear mounted rigidly upon said spiral rod and intermeshing with the bevel-gear before mentioned, for the purpose set forth.

7. A variable-display device consisting of a tubular pole, a rotatable rod extending upwardly through said pole to a point below the upper end thereof and having a bevel-gear upon its upper end, a series of carrying members, means hinging said members to one another, means hinging the member at one end of the series to the pole, a spiral rod of conical form extending from the pole to the opposite end of the series of members and having a sliding connection with each member, said spiral rod being disposed with its apex adjacent to the pole, a bevel-gear mounted rigidly upon said spiral rod and intermeshing with the bevel-gear before mentioned, for the purpose set forth.

8. A variable-display device consisting of a pole, a series of carrying members, means hinging said members to one another, means hinging the member at one end of the series to the pole, and means carried partially by the pole and partially by said members and operatively connected to the latter whereby said members are caused to assume different positions relatively to one another, means whereby the subject-matter to be displayed is connected to said members to move therewith.

9. A variable-display device consisting of a pole, a series of carrying members flexibly connected together, means hinging said mem-

bers to one another, means hinging the member at one end of the series to the pole, means carried partially by the pole and partially by said members and operatively connected to the latter whereby said members are caused to assume different positions relatively to one another, means whereby the subject-matter to be displayed is connected to said members to move therewith, and a series of illuminating devices carried by said variable-display device.

10. A variable-display device consisting of a pole, a series of carrying members each having a slot midway of the length thereof and extending longitudinally thereto, means hinging said members to one another, means hinging the member at one end of the series to the pole, a spiral rod extending from the pole through the slots in the members to the opposite end of the series, and means carried by the pole for rotating said spiral rod for the purpose of causing the members to assume different positions relatively to one another.

11. A variable-display device consisting of a tubular pole, a rotatable rod extending upwardly through said pole to a point below the upper end thereof and having a bevel-gear secured rigidly upon its upper end, a series of members, means hinging said members to one another, means hinging the member at one end of the series to the pole, each member having a slot midway of the length thereof and extending longitudinally thereto, a spiral rod extending from the pole through the slots in the members to the opposite end of the series, a bevel-gear mounted rigidly upon the end of the spiral rod adjacent to the pole and intermeshing with the bevel-gear before mentioned, a series of open frames each inclosing and disposed at right angles to one of the members, a series of illuminating devices carried by said frames, means maintaining said frames constantly in the same angular position relatively to the axis of the pole, means whereby the subject-matter to be displayed is connected to said frames, and means connecting said frames to the members they inclose to move therewith.

12. A variable-display device consisting of a tubular pole, a rotatable rod extending upwardly through said pole to a point below the upper end thereof and having a bevel-gear secured rigidly upon its upper end, a series of members, means hinging said members to one another, means hinging the member at one end of the series to the pole, each member having a slot midway of the length thereof and extending longitudinally thereto, a spiral rod of conical form extending from the pole through the slots in the members to the opposite end of the series, said spiral rod being disposed with its apex adjacent to the pole, a bevel-gear mounted rigidly upon the end of the spiral rod adjacent to the pole and intermeshing with the bevel-gear before mentioned, a series of open frames each inclosing and disposed at right angles to one of the members, a series of illuminating devices carried by said frames, means maintaining said frames constantly in the same angular positions relatively to the axis of the pole, means whereby the subject-matter to be displayed is connected to said frames, and means connecting said frames to the members they inclose to move therewith.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH HARRIS PRESTON.

Witnesses:

MARY LIZZIE WILLEKE,

BERNARD A. GOW.