(No Model.)

W. LIVINGSTONE.

KNOB.

No. 428,924. Patented May 27, 1890.

Fig. 1.

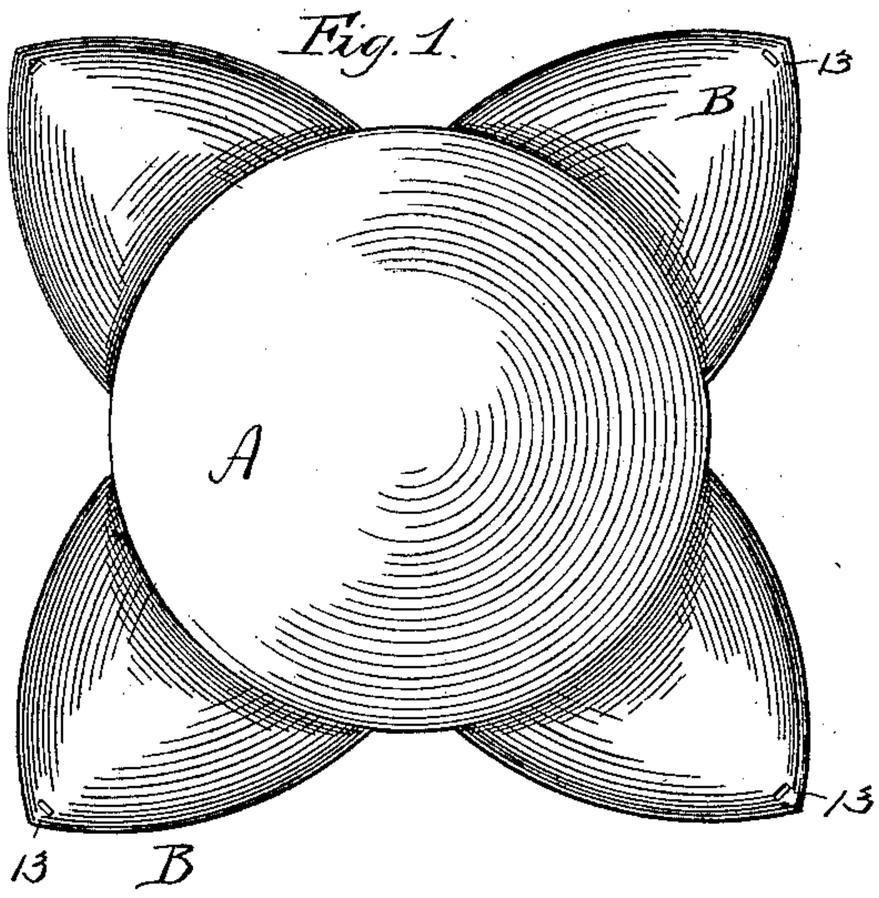


Fig. 2.

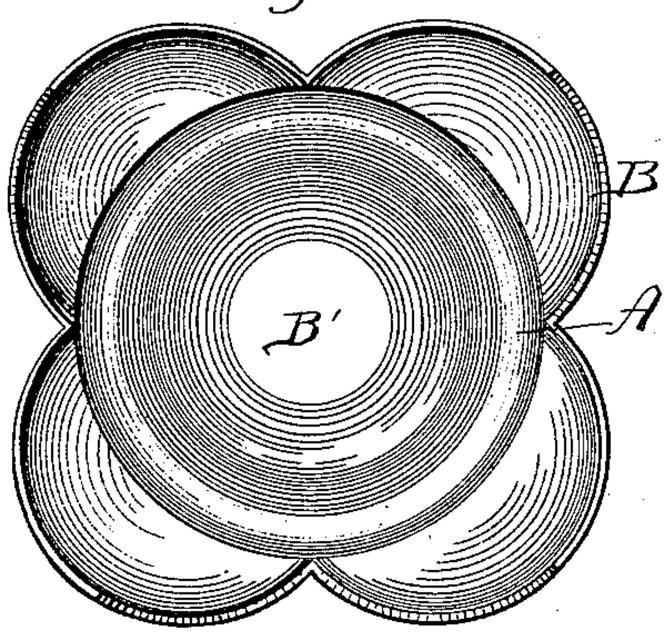


Fig. 3.

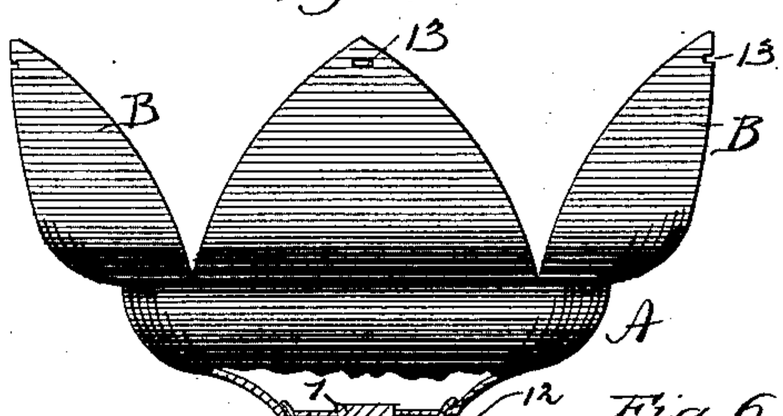


Fig. 4.

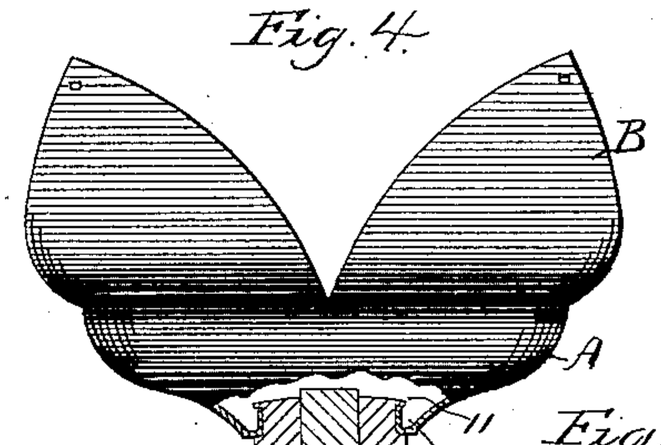


Fig. 5.

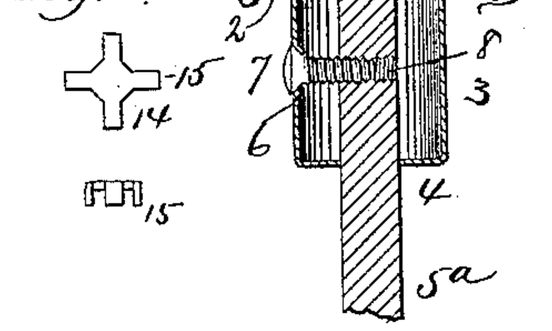


Fig. 6.

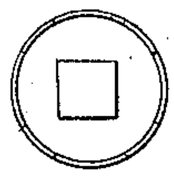


Fig. 7.

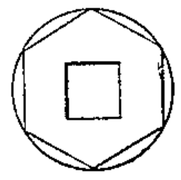


Fig. 8.

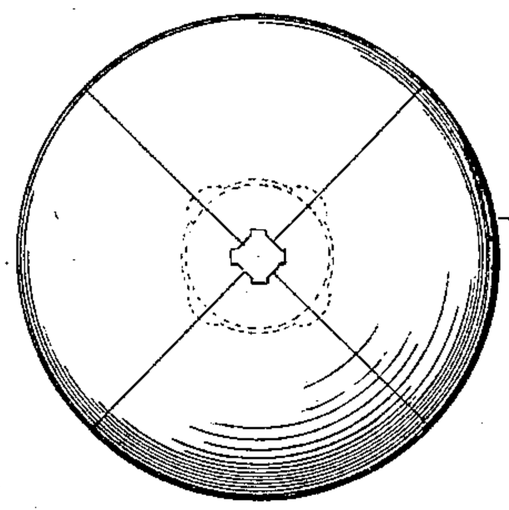
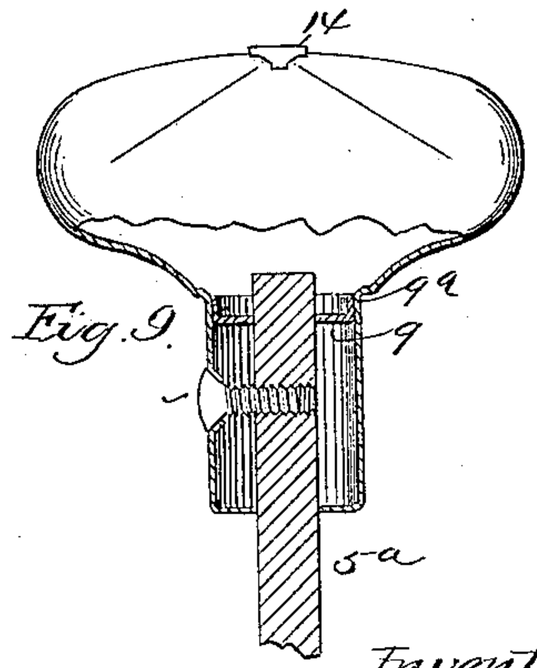


Fig. 9.



Witnesses:
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B. G. Nottingham

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By his Attorney. H. A. Seymour

UNITED STATES PATENT OFFICE.

WILLIAM LIVINGSTONE, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO JOHN COOPER, OF NEW YORK, N. Y.

KNOB.

SPECIFICATION forming part of Letters Patent No. 428,924, dated May 27, 1890.

Application filed December 2, 1889. Serial No. 332,317. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LIVINGSTONE, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Knobs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in metal knobs, and has for its object to produce a knob which shall be cheap and easy to manufacture, durable in construction, and one which shall comprise but a small number of parts.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the sheet-metal blank from which the knob is made. Fig. 2 is a view of the same after it has been "cupped" and its members or leaves made to appear as spoons. Fig. 3 is an elevation, partly in section, showing the dished blank and the manner of attaching a sheet-metal bushing thereto. Fig. 4 is a similar view showing a solid bushing. Fig. 5 represents the cap or seal for securing the members or leaves of the knob together. Fig. 6 is a plan view of the bushing shown in Fig. 3. Fig. 7 is a plan view of the bushing shown in Fig. 4. Fig. 8 is a plan view of the finished knob, showing the bushing in dotted lines. Fig. 9 is an elevation, partly in section, of the finished knob, showing the bushing and knob made of a single piece of metal.

A represents the body of the blank, and B V-shaped members or leaves integral therewith, these members or leaves being four in number, as shown in the drawings, or any other desired number may be made. At the same operation with the cutting out of the blank the leaves or members B are stamped spoon shape. The spoon-shaped leaves are then turned up, and simultaneously with this operation the body A of the blank is dished by means of a suitable tool, a flat portion B′ being left at the center. An opening 1 is made in the center portion B′ for the accommodation of a spindle, and a series of slots 2 (see Fig. 3) are made around and in proximity to the opening 1, for a purpose hereinafter explained.

A cylindrical bushing 3 of sheet metal is provided, having its lower or free end closed by an integral disk 4 and its upper end open. At the open end of the bushing a series of lugs 5 are provided and adapted to enter the slots or perforations 2 in the shell, which, after being inserted in said slots, are bent over, as shown in Fig. 3, thus securing the bushing to the shell. An opening is made in the closed end or disk 4 of the bushing, in alignment with the opening 1 of the shell, for the accommodation of a suitable spindle 5^a, which passes through said openings, as shown in Fig. 3. At a point between its ends the bushing is provided with an opening 6 for the accomodation of a screw 7, which passes into a screw-threaded opening 8 in the spindle 5^a, and thus the bushing is secured to the spindle.

In the form shown in Fig. 9, where the bushing and knob are made of a single piece of metal, the portion B′ of the blank or shell is dispensed with entirely, and in place thereof a disk 9, having a flange 9^a, is swaged into the upper end of the bushing and provided with an opening for the accommodation of the end of the spindle.

When a solid bushing is employed, as shown in Fig. 4, the usual opening will be provided for the accommodation of the spindle, which latter is held in place in the bushing by means of a screw 10 passing through the bushing and into the spindle. In this form the upper end of the bushing is recessed or made in the form of a hexagon or other shape having flat faces, as shown in Fig. 7. When such bushing is employed, the opening in the flat portion B′ of the blank or shell will be cut away, leaving only lugs 12 projecting inwardly, said lugs 12 being adapted to conform to the flat faces of the hexagon. The bushing is inserted into the opening in the shell, and the lugs 12 made to lie flat against the faces of the hexagon, the end of the hexagon-shaped portion of the bushing being then upset to produce a flange

11 over the lugs 12. Thus, it will be seen, the shell and bushing are securely fastened together.

The members or leaves B are each provided, at a point near their free ends, with perforations 13, and to complete the knob these members are bent so as to bring their free ends together, where they are fastened by means of a cap or seal 14. This cap or seal 14 consists of a flat piece of metal having lugs or ears 15 projecting therefrom, which lugs or ears, when bent at right angles to the body of the cap, are adapted to enter the perforations 13 in the free ends of the members or leaves B. The members or leaves B being thus united by means of the cap 14, a tool may be inserted through the bushing and the ends of the lugs bent or upset, thus securely uniting the free ends of the members B.

By constructing a knob and its bushing as above set forth it may be made easily and cheaply, at the same time being durable, light, and substantial.

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

1. A knob made from a sheet-metal blank comprising a body portion and integral leaves, the said leaves being shaped and bent to form the outer portion of the shell, and means for securing the leaves in position, substantially as set forth.

2. A knob made from a sheet-metal blank comprising a body portion, integral leaves or members, the latter forming the outer portion of the shell, and a cap for securing the free ends of said leaves or members together, substantially as set forth.

3. The combination, with a knob made of a single piece of sheet metal and having slots therein, of a sheet-metal bushing having lugs to enter the slots in the knob, substantially as set forth.

4. The combination, with a sheet-metal knob comprising a body portion and integral leaves or members secured together, the rigid leaves or members forming the front face of the knob, of a sheet-metal bushing projecting rearwardly from the body, substantially as set forth.

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

WILLIAM LIVINGSTONE.

Witnesses:
D. VAN WINKLE,
J. E. VAN WINKLE.