

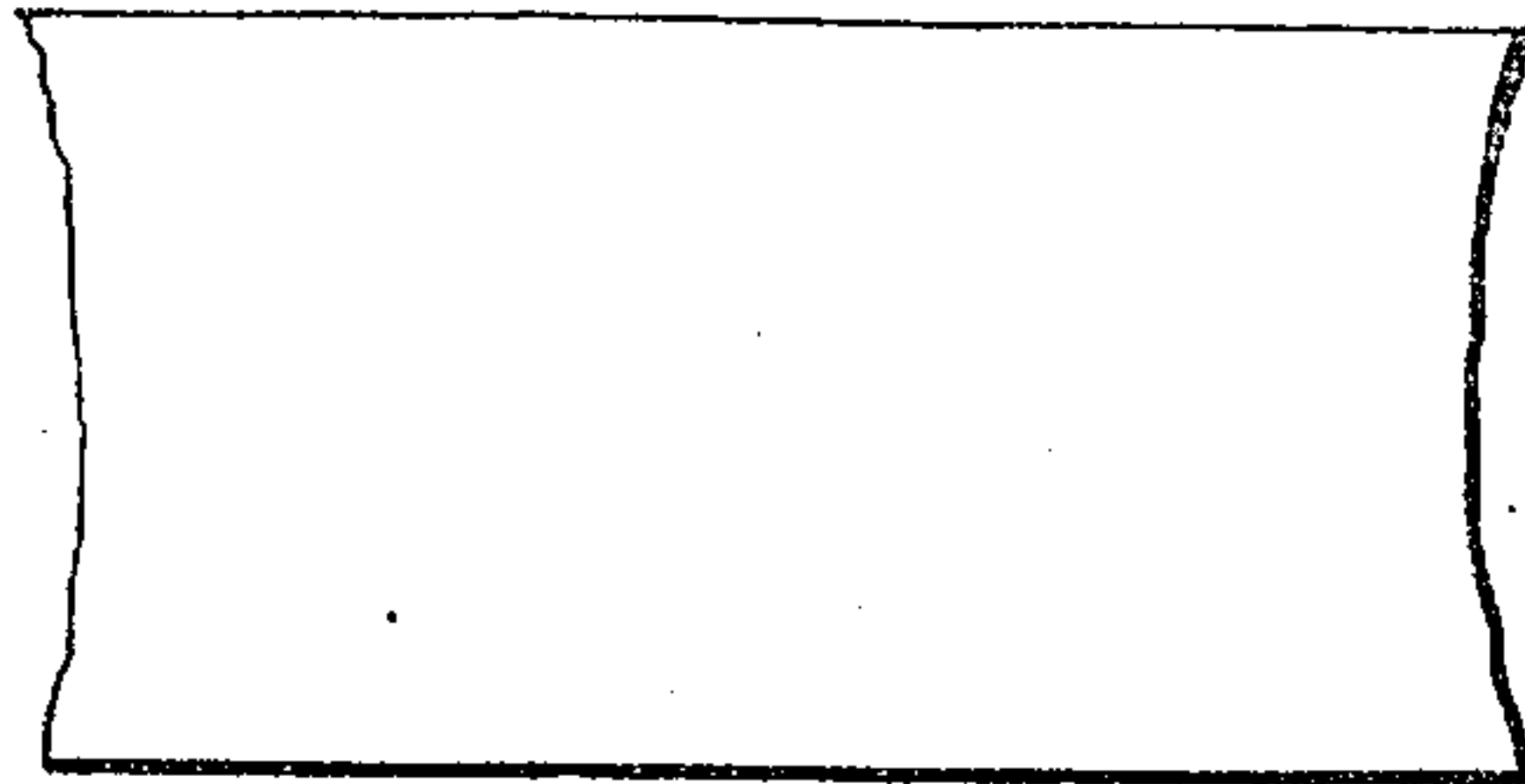
*J. Johnson.*

*Hats & Caps.*

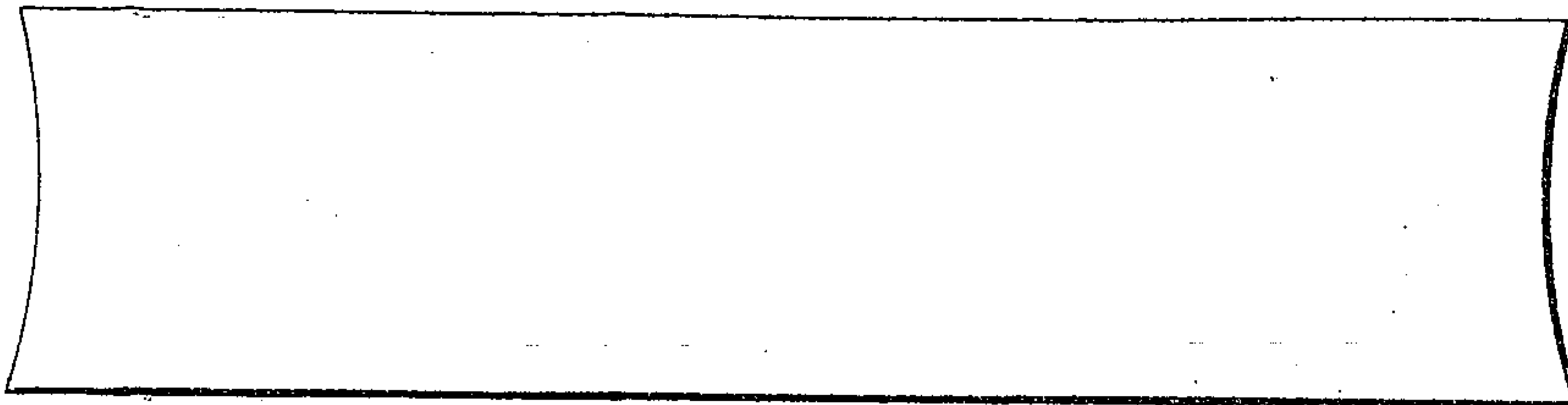
*Nº 14062*

*Patented Jan. 8, 1856.*

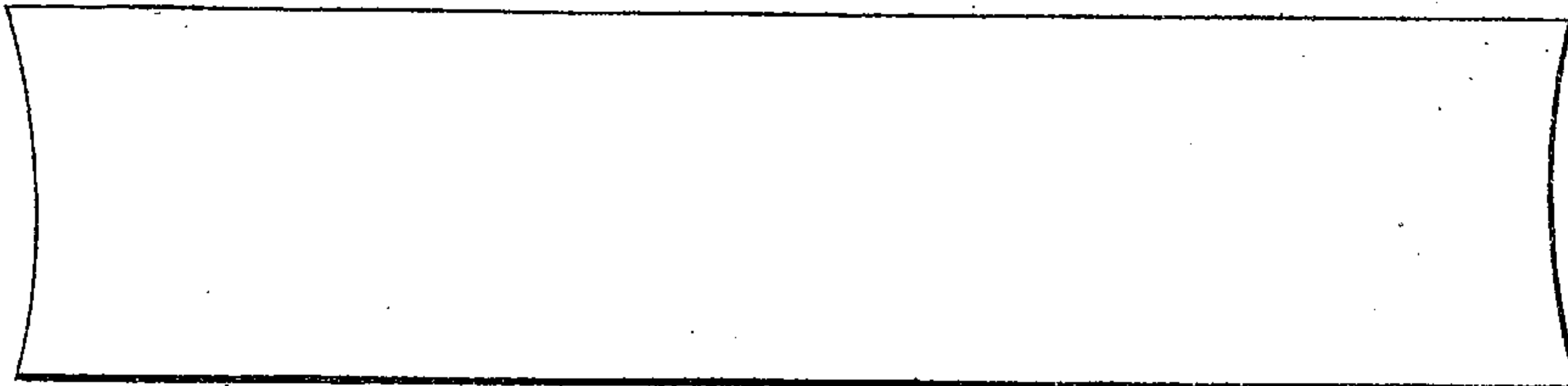
*Fig. 1.*



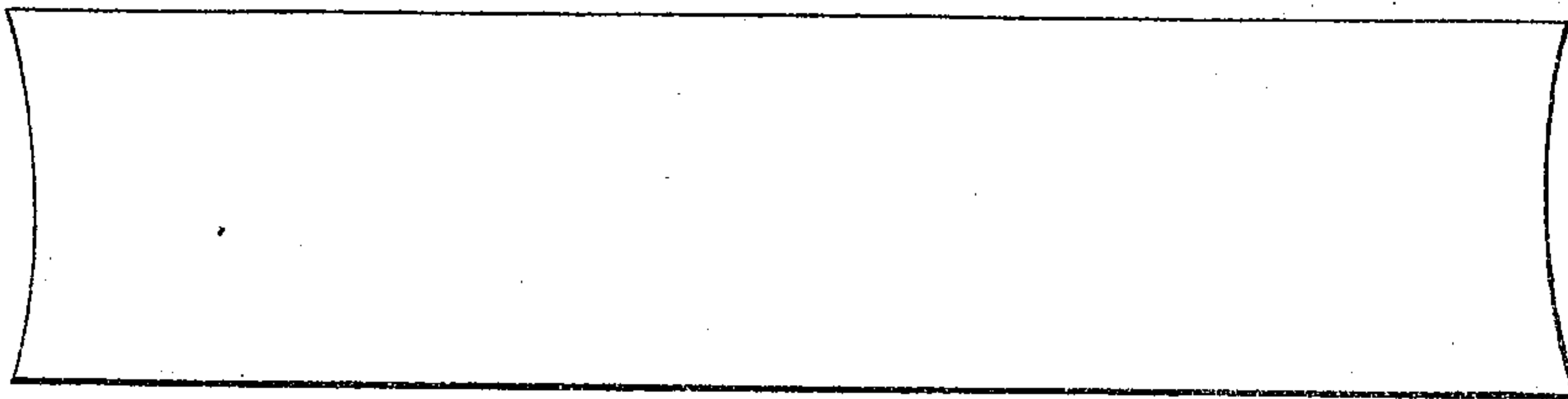
*Fig. 2.*



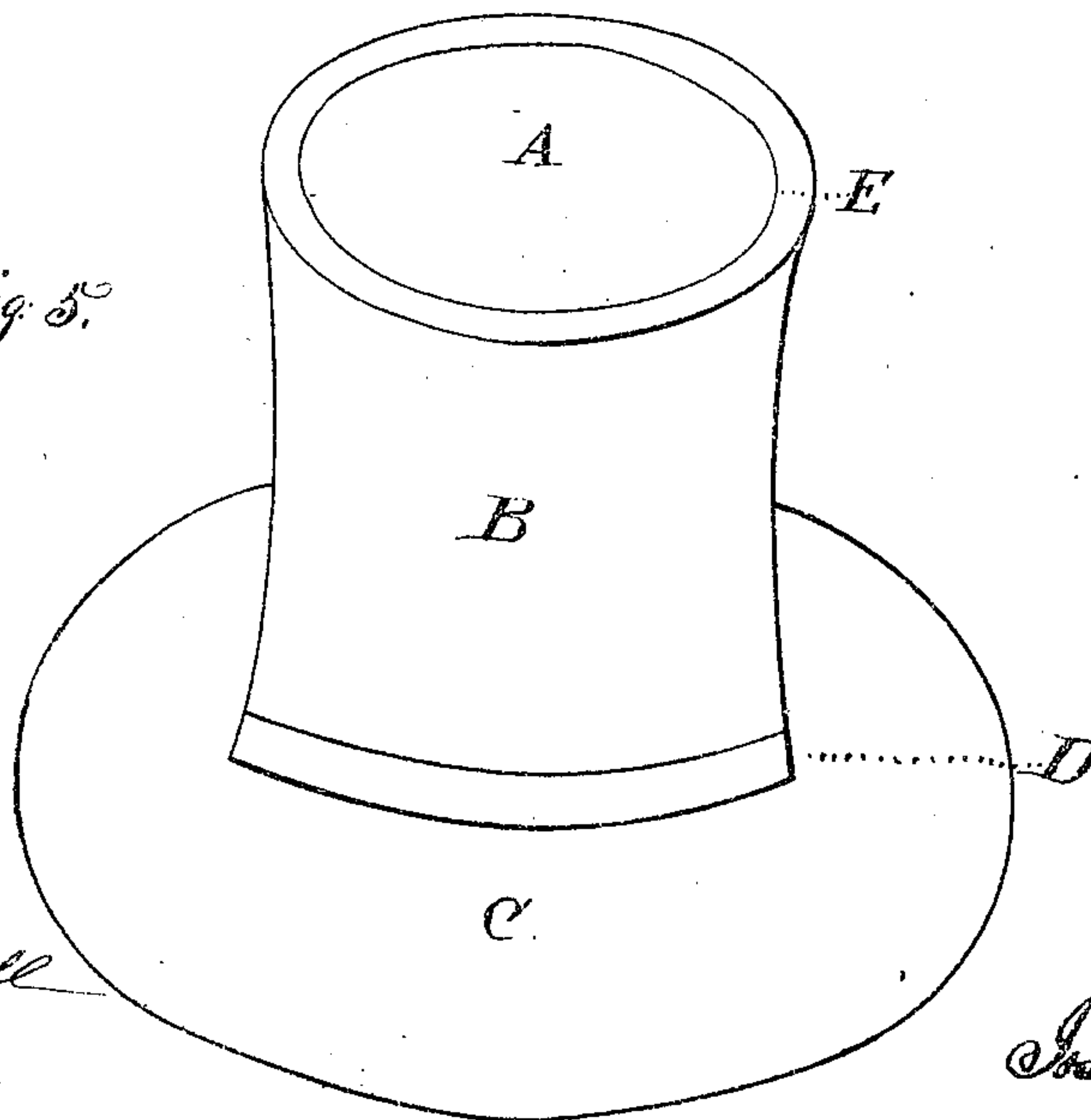
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Witnesses*

*William Doll*  
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*Inventor*

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# UNITED STATES PATENT OFFICE.

JOSEPH JOHNSON, OF NEW ORLEANS, LOUISIANA.

## MANUFACTURE OF HATS.

Specification of Letters Patent No. 14,062, dated January 8, 1856.

*To all whom it may concern:*

Be it known that I, JOSEPH JOHNSON, of the city of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Method of Manufacturing Hats; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in using and adapting a fabric made after the manner of hair cloth, and consisting of slender splints or small strips of whalebone, or of either willow, cane, or other similar wood fiber, as the weft, interwoven with common thread of any suitable kind as the warp, the same being cut out in the required shape, diagonally across the said fibers thereof, and cemented together with soft water-proof gum of any suitable kind, in two or more layers, so that the said splints or strips of whale bone, or wood fiber of each adjoining layer shall cross those of the other, and in forming the same, in combination with the said soft water-proof gum, either alone or in combination with cork leaves, into a hat body which shall be light, elastic and also more durable in wearing in hot climates and without the use of the hard gums heretofore required in making hats, and also in adapting and using in the construction of these hats, when so required, a thin metallic ring, or narrow, thin annular plate, in combination with the "turn over" around the "square," for the purpose of keeping the upper part of the hat in its proper cylindrical form, when the "tip" is made lighter and thinner than the "side crown" thereof, as when made of mosquito curtain material, or open net, for supporting the outside covering above the same, so that the said hat may be ventilating, through the "tip" when so required.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction, and the mode of operation.

Referring to the drawings, Figure 1 represents the shape of half a "side crown" piece; and Figs. 2, 3 and 4, the shape of a whole "side crown" piece, as I cut them diagonally out of the fabric, before described previously to their being seamed, and cemented together in layers of two or more, the relative position of the whale bone, or

wood fiber thereof, being shown by the diagonal lines in Figs. 3 and 4. Fig. 5, represents the body of the hat as constructed previously to the application of the covering, A, being the "tip," B, the "side crown," C the brim, D the "band," or "turn up" of the brim, and E, the "turn over," at the "square." In manufacturing these hats, I usually proceed as follows: I take two half "side crown" pieces (shaped as in Fig. 1), or which is more convenient, one whole "side crown" piece (shaped as in Fig. 2) cut out of thin cork leaf, and lay it over the woven fabric of whalebone, or wood fiber and thread (before described) as a pattern, and cut therefrom two corresponding side crown pieces (Figs. 3 and 4,) so that when one of the said pieces of woven fabric is laid directly upon the other (their edges being even with each other) the splints or strips of whalebone, or wood fiber thereof shall cross each other respectively. I then coat one side of each of these "side crown" pieces of woven fabric, with a thick coat of india rubber, or gutta percha, or any other suitable soft water-proof gum in solution, and cement them together, the fibers of each piece crossing those of the other, as before described. A coat of the same soft gum is now applied on one side of the cork "side crown" piece before mentioned, and also a like coat upon one side of the united plies of the woven fabric. The size of the pieces for the "side crown," is determined by the block over which the hat is to be made; but if the hand of the workman cannot apply it sufficiently tight in measuring, it is necessary to cut the "side crown" pieces about a quarter of an inch shorter than the hand measurement indicates around the block. After the two-ply "side crown" piece becomes dry, I hot press it sufficiently to give it a smooth and even surface. I now chamfer the end edges of these "side crown" pieces, by grinding them down with glass paper, so as to make the joining seams when formed, equal in thickness with the other parts of the same, and coat the chamfered parts of each piece so as to stick the two ends of each together, forming each into a tube using a part of the block in the operation, as a rest beneath the same, and also a moderately hot iron if the cement is of gutta percha, but if of india rubber, simple pressure will be sufficient. I now place the tubular "side crown" thus formed of the



cork, within the tubular "side crown" formed of the woven fabric, so that their ends are even, and the sides thereof which were previously coated with the soft gum, shall  
 5 come in close contact and with their restrictive seams on opposite sides. I then cement them together by pressure, or with the aid of heat if necessary. I sometimes construct the side crown without the cork leaf as one  
 10 of the layers thereof, and also sometimes without the cork leaf when a very strong hat is required, using only the woven fabric described, in which cases, two, three or even four of the layers of the woven fabric de-  
 15 scribed, may be used, and also in such cases, I unite the two ends of each layer piece (forming them into the tubular shape) previously to cementing the pieces together (which is perhaps the best mode in all  
 20 cases), so as to enable me to bring their respective seams at different parts of the finished "side crown," increasing its strength, but in all cases, each woven-fabric piece is cut out diagonally across the fibers thereof,  
 25 so as to bring the whalebone, or wood fiber splints of each adjoining layer in the "side crown," across each other as before described, the same being chamfered and seamed together at their ends, precisely in  
 30 the manner before described, the layers of course being chamfered and jointed at their ends so as to make the inner one slightly less in diameter after being joined, than the outer one, so as to admit of their being  
 35 united at their gummed surfaces, without wrinkling. After steeping the "side crown" in water a few minutes, I force in the "block," which operation, if attended with difficulty, on account of stiffness in the  
 40 "side crown," a little warming before a fire will cause it to "block" easily. The side crown must not be less than one fourth of an inch deeper than the block, so that a narrow portion thereof may be turned over on  
 45 the block (as shown at E, Fig. 5) and then coated with the gum.

I make the tip (A) of the same kind of materials as the side crown, and also cement or coat it with the soft gums in the same  
 50 manner, when the metallic ring or annular plate is not to be applied, and stick it upon the turn over (E) by means of heat or pressure; but when a lighter or more open tip is required for the hat, or when an open net support for the plush or other covering is  
 55 desired as before stated, I make use of or apply the thin narrow metallic ring or annular plate before mentioned, which consists simply of a thin narrow piece of steel, sheet  
 60 brass, or other metal, about an eighth of an inch wide, bent or cut out so as to form a ring, which will fit in between the plies or layers of the "turn over" around the "square" (as shown at E) for the purpose  
 65 of keeping the upper part of the hat in its

proper cylindrical form, when finished. After fixing this metallic ring or plate as described, I then stretch a piece of mosquito curtain fabric, or open net, across the top of the "body," and stick it fast upon the "turn  
 70 over" by heat or pressure, and when dry enough, trim off all which extends over the "square."

For the brim (C) I stretch upon a frame a piece of calico, and then cut two or three  
 75 pieces, each of the same size, from the woven fabric of whalebone, or wood fiber and thread, before described, and place the latter together, cementing them so that the strips or splints of each piece shall cross those of  
 80 the adjoining one as before described, and then cement it to the calico on the frame, applying also upon the upper layer of the woven fabric a thin piece of muslin, and coating the whole with the soft gum in so-  
 85 lution as before described. The number of plies of the woven fabric of whalebone or wood fiber may be thus increased, if a thicker or stiffer "brim" is required. When sufficiently dry I cut out the "brim" to the  
 90 shape required, allowing about one fourth of an inch for the band or turn up (D) which is then chamfered with glass paper and stuck to the lower part of the "side crown," on the block, in the same manner as  
 95 the side crown is closed.

Finally, I now coat the whole outside of the body with soft gum, and it is ready for covering with the silk plush, or any other  
 100 suitable material, in the usual manner.

The utility of my improvement is shown in the fact that a more elastic and durable hat for warm climates can be produced  
 105 thereby than by any other mode heretofore known or used, because the chief material constituting the body, being composed principally of whalebone, or of tough and elastic wood fiber in the form of splints or strips, woven into a fabric as described, and the layers thereof combined together with  
 110 soft water-proof gums in the most advantageous manner for producing elasticity and lightness with strength and durability, and formed up into a "body" adapted for receiving the "plush" or other covering  
 115 without a particle of the hard gums heretofore required, which (being liable to decompose and crumble by the action of perspiration thereon when worn in warm climates) cause the hat to lose its shape; and  
 120 also in the fact that by the application and use of the metallic ring or plate as described, the hat can be made exceedingly light and porous in the "tip" (which is much re-  
 125 quired in hot climates) and at the same time so as not to be liable to "breaks," or the loss of its proper cylindrical form at the "square."

Having thus described my invention and shown its utility, I proceed to state that I  
 130



do not claim, in manufacturing hats, the use of soft, water-proof gums, nor the combination of the same with whale-bone, wood fiber, cork, tarleton, or with either of them, as these have been used before; nor do I claim the peculiar "fabric" herein described as "woven after the manner of hair cloth, and consisting of thread interwoven with slender strips of either whalebone, willow or other wood fiber," although the said fabric is believed to be new; but

What I claim as my invention and desire to secure by Letters Patent is—

1. The application and use of the said fabric in the construction of hat bodies, when the same is cut from the web, united

together and formed into hat bodies, substantially in the manner herein set forth and described.

2. I also claim the "metallic ring" or annular plate, made substantially as described, in combination with the "turn over" around the "square," for the purpose of preserving the proper circular form at the "square," when the fabric of which the "tip" is made is too light or thin to serve the purpose of such support.

JOSEPH JOHNSON.

Witnesses:

MARTIN DOLL,  
G. LEVAY.