(No Model.) 3 Sheets—Sheet 1.

H. G. LEHNERT.

DRUM.

No. 382,045. Patented May 1, 1888.

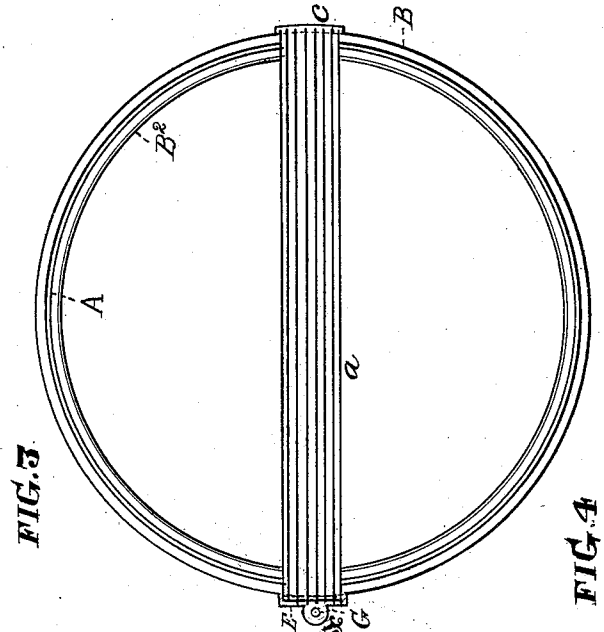


FIG. 3

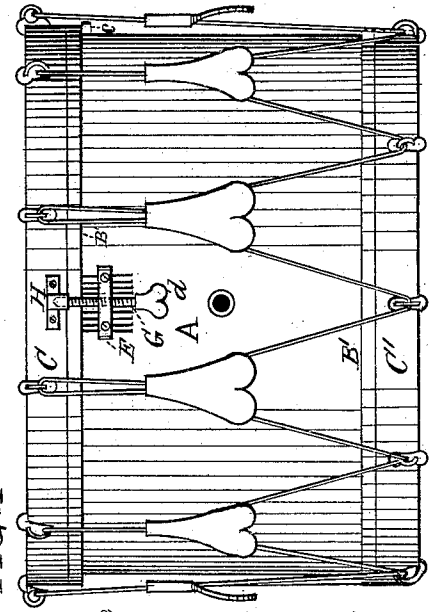


FIG. 4

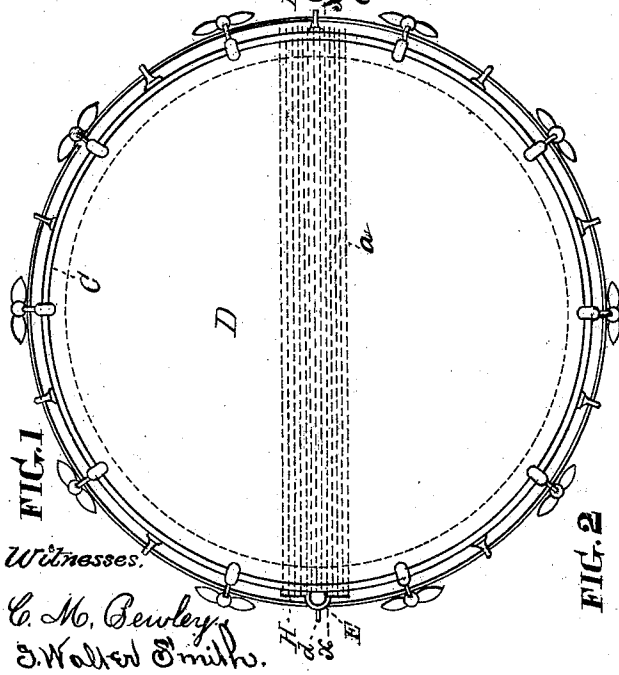


FIG. 1

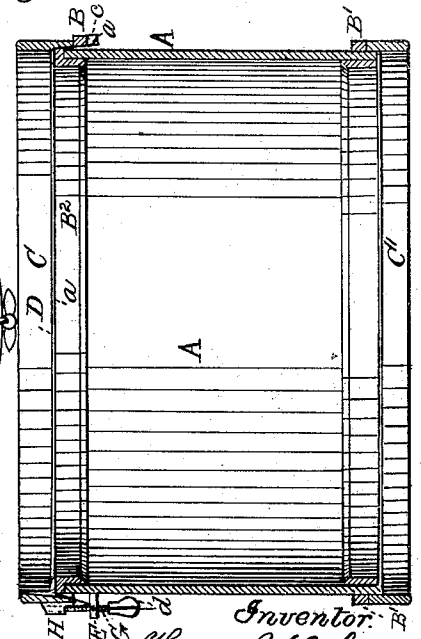


FIG. 2

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J. Walter Smith.

Inventor:
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for Thomas J. Bewley. Atty

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 3 Sheets—Sheet 2

H. G. LEHNERT.

DRUM.

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FIG. 5

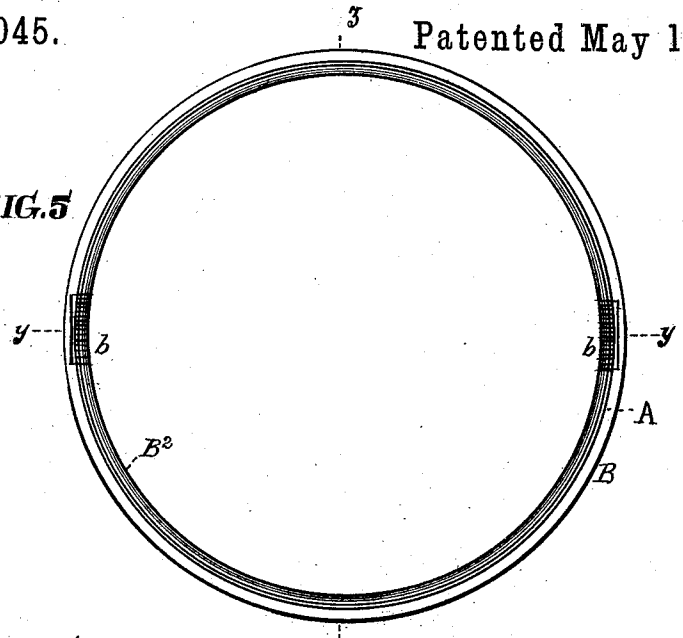


FIG. 6

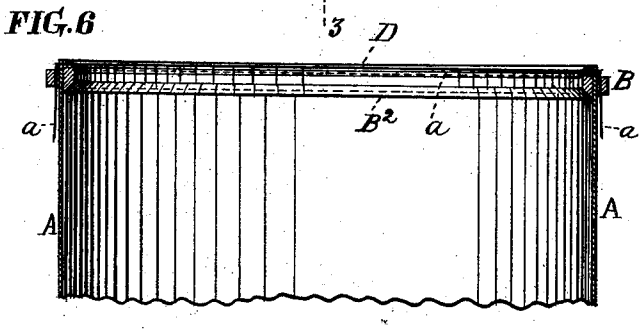


FIG. 7

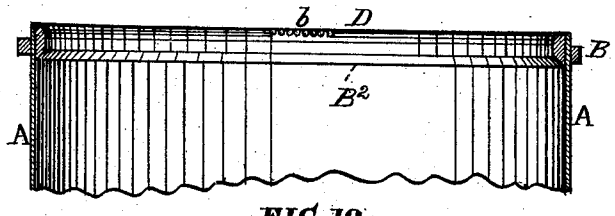


FIG. 8

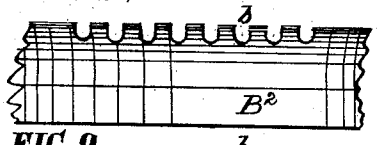
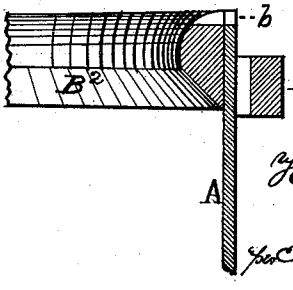


FIG. 9



FIG. 10



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(No Model.) 3 Sheets—Sheet 3.

H. G. LEHNERT.

DRUM.

No. 382,045. Patented May 1, 1888.

FIG. 11

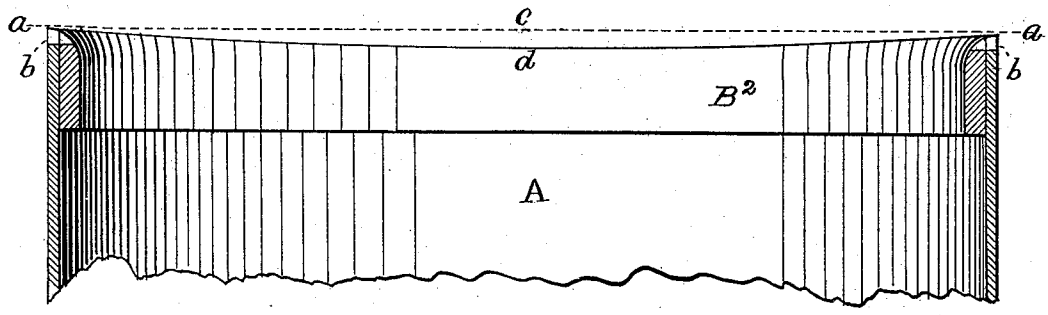
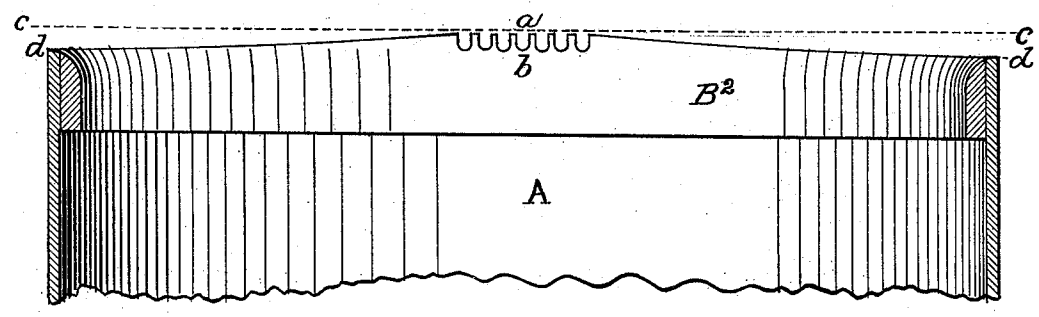


FIG. 12



Witnesses.

Wm. W. Johnston.

Charles Palmer

Inventor.

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UNITED STATES PATENT OFFICE.

HENRY G. LEHNERT, OF PHILADELPHIA, PENNSYLVANIA.

DRUM.

SPECIFICATION forming part of Letters Patent No. 382,045, dated May 1, 1888.

Application filed July 30, 1886. Serial No. 209,585. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. LEHNERT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Drums, of which the following is a specification.

My invention relates to improvements in drums; and it consists, first, in forming the upper edge of the shell thereof of a curved form, as hereinafter set forth, whereby the batter-head when stretched thereon will assume a convex form.

It further consists of the construction and combination of parts, as hereinafter set forth and claimed.

My invention is particularly designed to cause a greater rebounding of the drum-heads and snares when beaten, and a greater resonance to be imparted than can be accomplished by drums constructed in accordance with the method previously used, as will be more fully understood from the following description.

In the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of the drum, looking upon the batter-head. Fig. 2 is a vertical section taken through the broken line *x x* of Fig. 1. Fig. 3 is a top view of the drum with the batter-head removed. Fig. 4 is a side elevation. Fig. 5, Sheet 2, is a plan view of the shell, flesh-hoop B, and stiffening inner hoop, B^2. Figs. 6 and 7 are vertical sectional views of the same, taken, respectively, through the broken lines *y y* and *z z* of Fig. 5. Fig. 8 is a face view, on an enlarged scale, of the upper end of the shell, showing the snare beds or recesses *b*. Fig. 9 is a top or plan view of same. Fig. 10 is a vertical section of same. Fig. 11 is a vertical section, upon an enlarged scale, of the upper end of the shell, taken through a line central with the series of snare-bed. Fig. 12 is a like view taken through a line at right angles to that of Fig. 11.

Like letters of reference in all the figures indicate the same parts.

A represents the shell or cylinder of the drum.

B B′ are flesh-hoops, over which the circumference of the drum-heads are stretched or lapped.

C C′ are top and bottom confining-hoops resting upon the flesh-hoops B.

D is the batter-head, immediately beneath which and within the drum are arranged the series of snares *a*, which may be made of gut, rawhide, cord, metal, or material most applicable for the purpose that will rapidly rebound when the head is beaten. These snares rest in beds or recesses *b* at opposite points of the circumference of the shell, so as to permit of the head being equally stretched upon its surface, and their ends extend out through and beneath the hoops B and C to the exterior of the shell. At one point upon the periphery the ends are confined in the strip *c* and remain stationary, while the opposite ends are rigidly secured between the opposing faces of the clamp E, that is actuated by means of the vertical screw-rod G, passing through the clamp, and whose upper end turns freely in a socket and bears against the brace H, whereby a requisite degree of tension may be given to the series of snares throughout their length to produce a proper rebounding effect by turning the screw-rod by its thumb-piece *d* to the right, which draws the clamp and connected ends of the snares downward; or they may be relaxed from contact with the under side of the batter-head by imparting a reverse motion to the rod. I do not confine myself to this device for imparting tension or relaxation to the series of snares.

The inner surface of the batter-head is made slightly convex, its circumference following the curves of a pair of concave arcs or segments of circles, as seen in Figs. 2, 6, 7, 11, and 12, upon the upper end and outer edge of the shell, said arcs commencing at the outer edges of the snare-beds and curving slightly downward, forming excavations in which the periphery of the batter-head rests.

In Fig. 11 the broken line *a c a* represents an imaginary line drawn on a horizontal plane across the diameter of the upper end of the shell parallel with the upper edges of the series of snare beds or recesses *b*, while the line between the points *a d a* represents the

line of curvature throughout its length of one of the concave arcs or segments that are formed upon one half of the upper end of the shell, there being a corresponding concave arc upon the opposite half of the shell.

The space shown in Figs. 11 and 12 between the letters *c d* represents the extremity of the depth of curvature between the horizontal line and the curve or arc of the circle. The object of such formation is to obtain a rigid and tightly-stretched head and snares, producing greater rebounding qualities than when they are arranged upon a level plane.

One advantage in forming the drum with two series of snares, the upper set of which rest beneath the batter-head, and giving a slight convexity to the under surface of the head which comes into contact with the snares, is to gain greater volume of tone, which is sharper and more distinct than is produced by the use of but the ordinary outer or lower set common to drums heretofore used, as both sets of snares act simultaneously. Another advantage gained is that the drum will have an equal volume of tone and resonance to those made with but one set of snares should the lower or snare-head, or the snares resting thereon, become broken or in any manner unfit for use. Another advantage gained is that the crescendo or decrescendo effect can be easier made with a greater variety and distinctness of tone than by or with drums constructed in accordance with old methods.

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

1. A drum having a shell with two opposite concave recesses in the top thereof, substantially as for the purpose set forth.

2. The shell A, having the pair of concave arcs formed upon the outer edge of its upper end, whereby convexity is given to the under surface of the batter-head contiguous to the series of snares resting longitudinally thereon, substantially in the manner herein shown and described.

3. The combination, with the shell or cylinder of a drum, having the pair of concave arcs upon the upper end, whereby convexity is given to the under surface of the batter-head, of a series of snares whose end portions rest within recesses formed for their reception in said shell, and means for imparting tension or relaxation to said series of snares, substantially in the manner herein shown and described.

HENRY G. LEHNERT.

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WILLIAM KAEMPFFE.