

H. A. BOWER.

ATTACHMENT FOR PLAYING BASS DRUMS AND CYMBALS.

No. 590,182.

Patented Sept. 14, 1897.

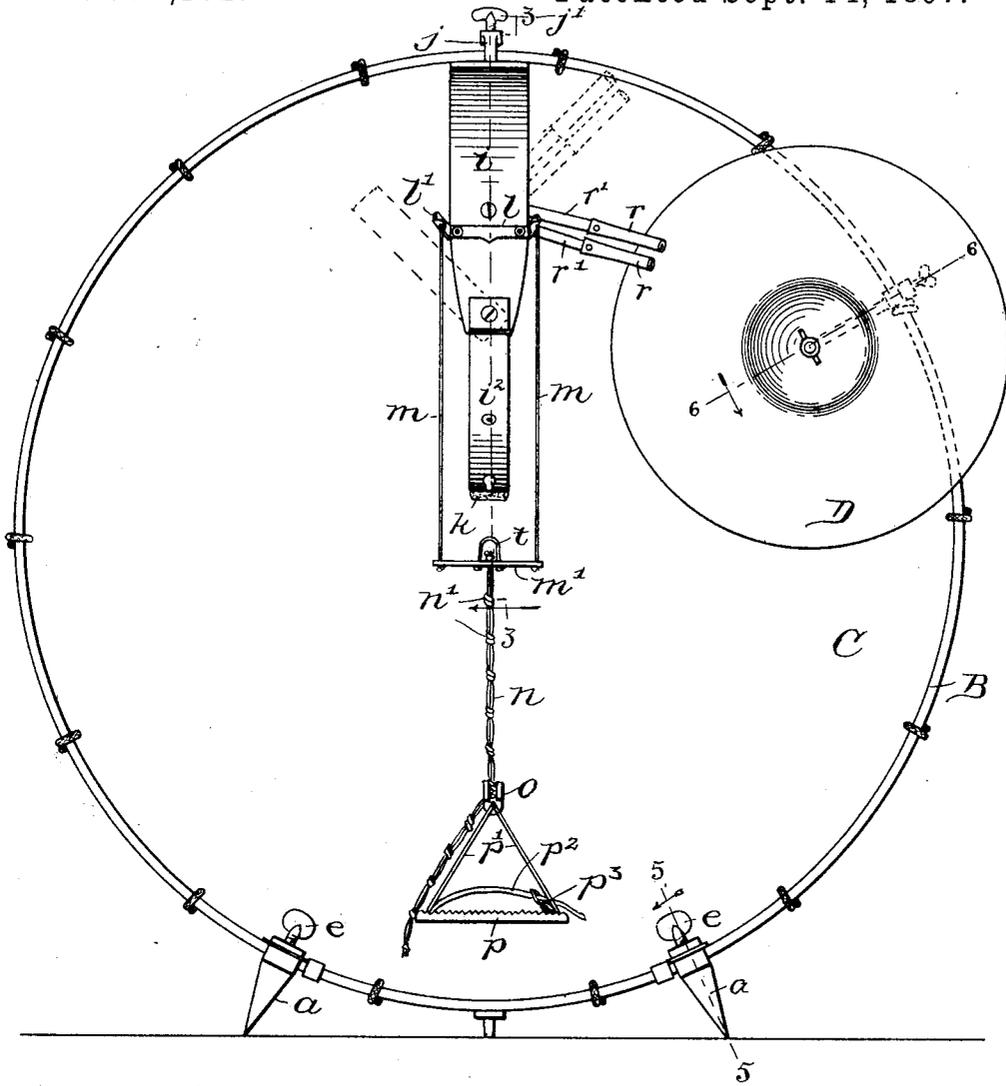


FIG. 1.

WITNESSES:

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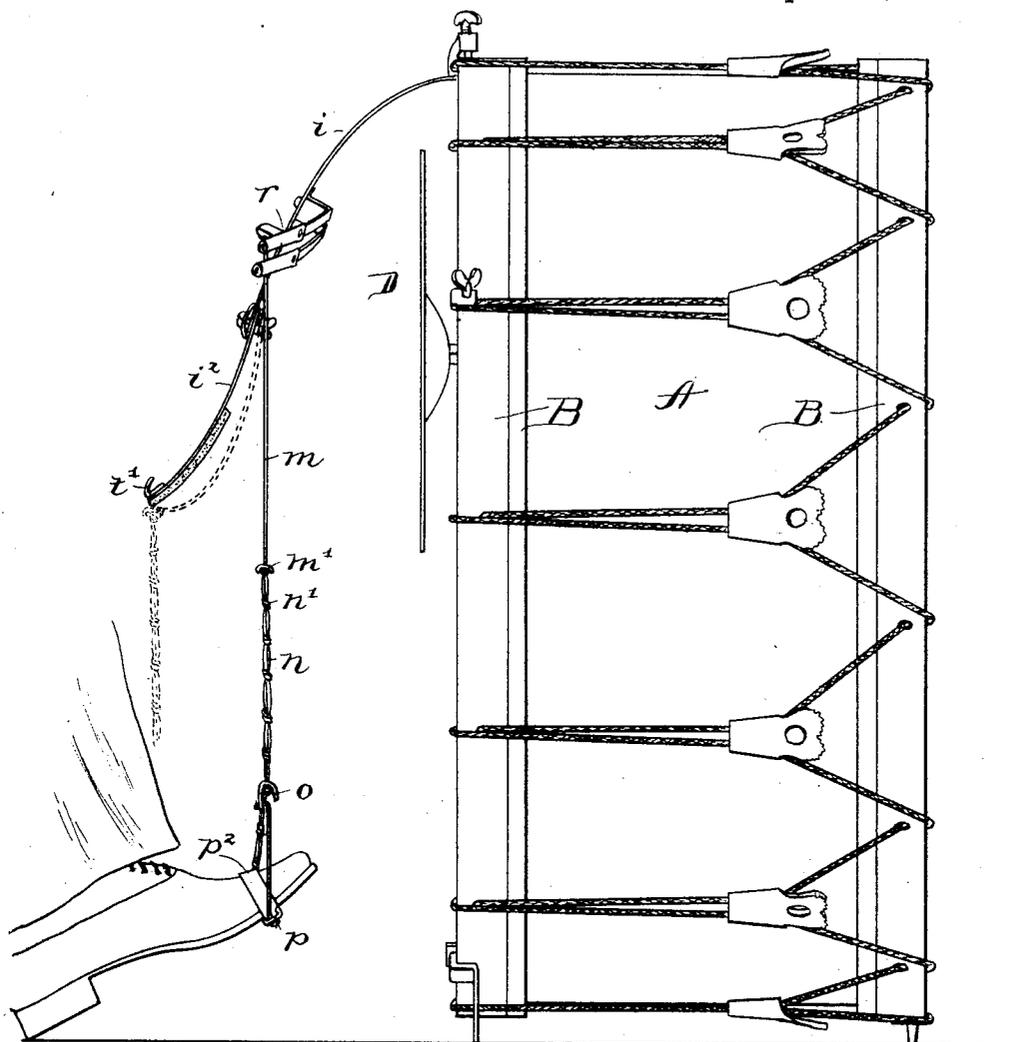


FIG. 2.

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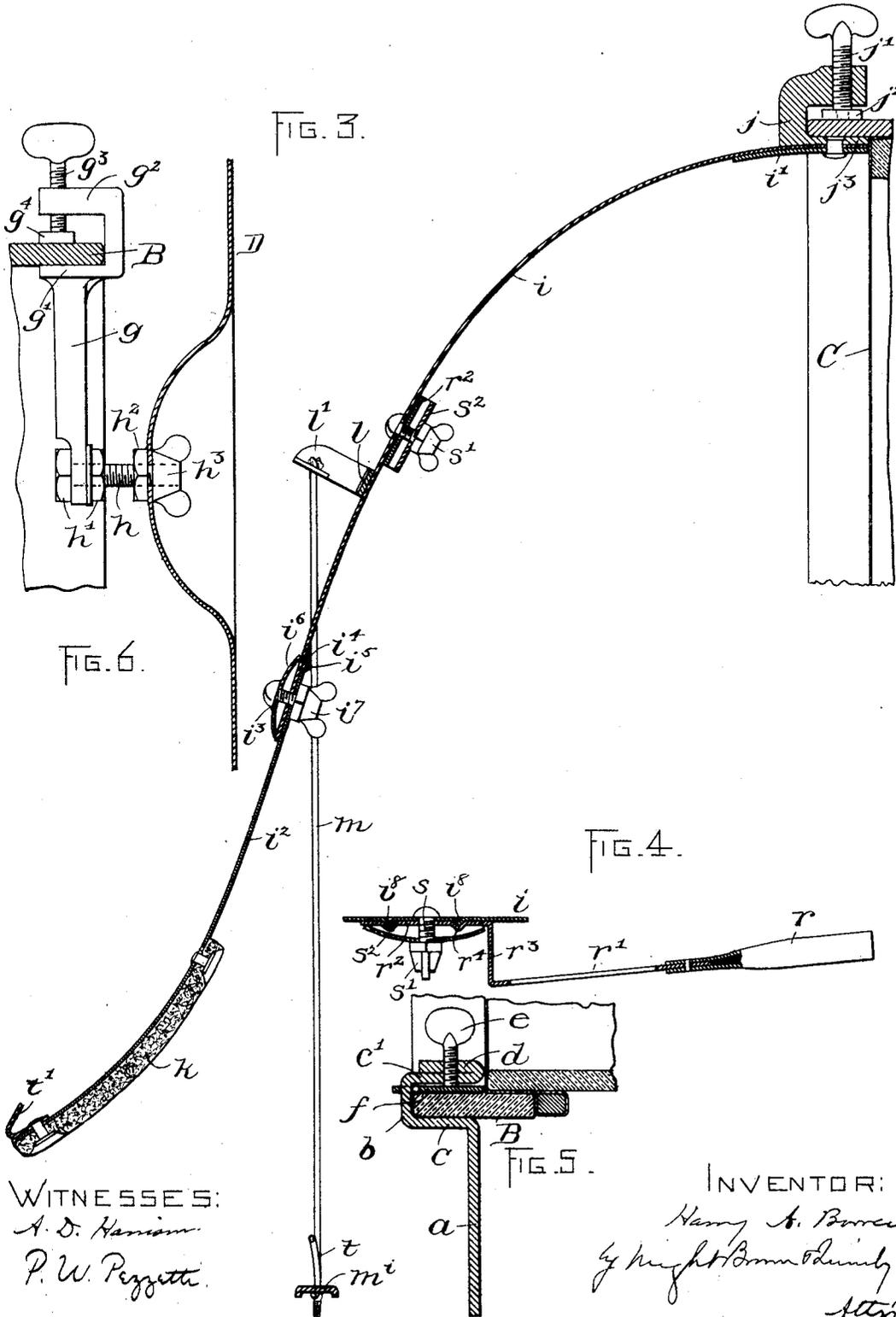
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UNITED STATES PATENT OFFICE.

HARRY A. BOWER, OF CHELSEA, MASSACHUSETTS.

ATTACHMENT FOR PLAYING BASS DRUMS AND CYMBALS.

SPECIFICATION forming part of Letters Patent No. 590,182, dated September 14, 1897.

Application filed October 22, 1896. Serial No. 609,673. (No model.)

To all whom it may concern:

Be it known that I, HARRY A. BOWER, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Attachments for Playing Bass Drums and Cymbals, of which the following is a specification.

This invention has relation to devices for sounding a drum and a cymbal in unison or separately and so controlled by the movement of the foot that a musician may employ his hands with other instruments.

The objects of the invention are manifold, the principal one being to provide a device of this character which will be influenced by the slightest movement of the muscles of the foot, and will be therefore directly under the immediate control of the musician, whereby the drum may be struck a single sharp blow or may be struck so as to produce a sforzando effect, or may be muffled or rolled, which has been heretofore impossible practically with devices of this general nature as previously constructed.

Another object of my invention is to produce a device which will be simple in construction, light, capable of being folded so as to be packed in small compass, and which will bring out to the greatest degree the sounding qualities of both the cymbal and drum.

The invention has also for its object to provide improvements for holding the drum from the floor to allow the greatest freedom of vibration, and for securing the cymbal and the striker thereto in such way as not to mar the hoop of the drum.

To these ends the invention consists of those devices which are illustrated in the drawings, and which I shall now proceed to describe in detail, and then point out in the claims hereto appended.

Reference is to be had to the accompanying drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a front elevation of a bass drum equipped with my improved spurs, my improved cymbal-holder, and my devices for sounding the drum and the cymbal either in unison or separately. Fig. 2 is a side elevation of the same. Fig. 3

is an enlarged section on the line 3 3 of Fig. 1. Fig. 4 is an enlarged section through one of the strikers for the cymbal and its means of connection with the spring-arm of the striker. Fig. 5 is an enlarged section on line 5 5 of Fig. 1. Fig. 6 is an enlarged section on line 6 6 of Fig. 1, showing the cymbal and means for attaching it to the hoop of the drum.

The bass drum, having a barrel A, with hoops B, and the drum-heads or diaphragms C, is similar to any now ordinarily employed.

The drum is supported at a short distance above the floor by spurs, each consisting of the downwardly-projecting tapering finger *a*, which is bent, as at *b*, to have two lateral clamping portions *cc'* lying above and below the hoop B. The upper horizontal portion *c'* is bent upon itself, as at *d*, for strengthening purposes, and a thumb-screw *e* is passed through it and bears against the bearing piece or plate *f*, inserted between its end and the hoop. Now it will be seen that by turning the screw the bearing-piece will be clamped tightly against the hoop, and the latter will not be disfigured or marred, as would be the case if the screw bore directly against it. Two of these spurs are arranged on the front hoop of the drum and the other is arranged between them on the rear hoop, so that the drum is supported upon three legs or standards and at a short distance above the ground or floor, so that the vibratory qualities of the diaphragm and the sounding qualities of the drum are unimpaired by contact with any deadening-surface.

The cymbal, which is illustrated at D, is supported on the hoop by a clamp *g*, having two lateral clamping portions *g'g''*, through the latter of which the screw *g'''*, having a swiveled bearing-piece *g⁴*, is passed, so that when the clamp is in place the bearing-piece and the clamping-arm *g'* bear firmly against the hoop of the drum. From the lower end of the clamp there projects forward the screw *h*, held in place by locking-nuts *h'*, upon which the cymbal is secured by a nut *h²* and a winged nut *h³*, which may be adjusted to adjust the cymbal relatively to the drum.

My improved device for striking the diaphragm of the drum and the cymbal consists of the following devices: *i* is a strip of spring metal which is riveted at its upper end to a

clamp *j*, having a screw *j* with a swiveled bearing-piece *j*² bearing against the hoop of the drum. To the lower clamping member *j*¹ the strip is riveted, there being a strengthening-piece *i*¹ for assisting in holding the strip outward from the drum, as shown in Figs. 1 and 3. To the lower end of the strip *i* is attached a strip *i*², constituting an extension thereof. The screw *i*³ passes through the strip and its extension, so as to pivot them together, one of them being provided with a point *i*⁴, adapted to fit in a socket *i*⁵ in the other one when it is in alinement therewith. The head of the screw *i*³ bears against a flat spring *i*⁶, while the winged nut *i*⁷ bears against the strip *i*², so that the latter may be held in alinement with the strip *i* or may be swung at an angle thereto, as shown in dotted lines in Fig. 1, or may lie directly thereunder for the purpose of packing or transporting it. Preferably the spring-arm comprised by the strips *i* and *i*² is in the shape of a compound curve, and its lower end is equipped with a striker, consisting of a felt pad *k*, riveted thereto. About half-way between the pad and the hoop of the drum the spring-arm *i* is provided with a bracket *l*, projecting out at right angles thereto and secured in place in any desired way, as by rivets, it having two arms *l*¹ *l*², which are so bent that their outer ends extend beyond the edges of the strip *i*. Cords *m* hang from the arms *l* and are connected to a cross-bar *m*¹, which is pendent below the lower end of the body or striker *k*. Preferably the strip *i* tapers at its lower end and the strip *i*² is less in diameter than the strip *i*, so that it can spring back and forth between the cords *m*.

Now it will be seen that by drawing quickly upon the cross-bar *m*¹ the striker will be caused to impinge against the diaphragm of the drum and make it give forth a sound. The sound may be intensified by the additional force with which the cross-bar *m*¹ is drawn downward.

Depending from the center of the cross-bar *m*¹ is a cord *n*, having a series of knots or enlargements *n*¹ at regular intervals, with which may be engaged a hook *o*, from which depend cords *p*¹, having their lower ends secured to a serrated foot-piece *p*. The foot-piece may be strapped to the foot by a strap *p*², passing through a suitable buckle *p*³, so that when it is strapped in place, the toe being raised as shown in Fig. 2, the foot may be brought down to the ground sharply to cause the striker to be brought into contact with the drum, whereby the latter will give forth a soft or loud tone, according to the strength of the blow.

The cymbal is placed to one side of the spring-arm, which is secured to the drum in such way as to have the striker impinge against the central part of the drum when operated by the foot.

For striking the cymbal at the same time the drum is struck I employ two metal tubes

r *r*, each of which is secured at its flattened end to a spring *r*¹, projecting out from a plate *r*², bent laterally, as at *r*³. The plate is pivoted to the spring-arm *i* by a screw *s*, which has a winged nut *s*¹, bearing against a curved spring *s*², the plate *r*² being provided with sockets *r*⁴ to receive points *r*⁵ in the strip *i*. Thus it will be seen that the vibratory strikers or tubes may be temporarily locked at right angles to the spring-arm, so as to strike against the edge of the cymbal, or they may be drawn upward, as shown in dotted lines in Fig. 1, so that the drum will alone be struck by drawing downward upon the foot-piece.

By employing two spring-vibrators they impinge upon the edge of the cymbal while vibrating rapidly, so as to produce a sustained or long tone, and they are so bent as to lie at an angle to the edge of the cymbal, which is approximately forty-five degrees.

From the foregoing it will be observed that I have provided a striker for a drum and a vibrator for the cymbal which may be operated either in unison or separately.

By mounting the striker on the end of a spring-arm it is possible for the musician to cause it to give the drum a sharp blow to produce a loud sound, or else the striker may be caused to vibrate against the drum in such way as to produce what is called a "roll."

The striker is under the immediate control of the foot, and by reason of the cord for the foot-piece being secured about centrally to the spring-arm the striker is caused to traverse a greater distance and to strike with increased momentum at the end of a stroke. Hence a small movement of the foot will cause the striker to traverse a relatively long distance and impinge upon the drum with great force.

When the orchestra is playing a passage which requires the cymbals to be struck without the drum being sounded, the drummer may either throw the striker to one side, as shown in dotted lines in Fig. 1, or else he may pass the loop *t* on the cross-bar *m*¹ over a hook *l*¹ on the end of the spring-arm, so that when the latter is drawn downward by the cord *m* the vibrators alone impinge against the cymbals.

In case it is required to strike a blow to emphasize a particular note or to produce a sforzando effect, it is unnecessary for the drummer to deaden the vibration of the drum and the cymbals by laying his hand upon them, as after striking the blow he may hold the striker against the drum and the vibrators against the cymbal in such way as to deaden their vibration immediately. The spring-arm, which carries the vibrators and the striker, may be folded, as before described, and is made of very light material, so as to weigh but a few ounces, and at the same time it can be used to produce every effect produced by the devices heretofore employed, and is even greater in efficiency than any one of them.

The arm may be easily attached to and de-

tached from the drum, and its position may be changed with great rapidity. When the drummer is required to move in order to play some other instrument than the bass drum or the cymbals, he can let the foot-piece remain strapped in place and merely unhook the hook *o* from the knot *n'* until it is necessary to play the drum or the cymbals again, when he can easily attach it to the cord *n*.

10 Having thus explained the nature of the invention, and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made, or all of the modes of its use,
15 I declare that what I claim is—

1. As a means for sounding a drum, a spring having a striker on one end, and flexible means connected to said spring between its ends and operated by the foot.

20 2. As a means for sounding a drum, a spring, means for securing one end of the spring to the drum, a striker on the other end of the spring, and flexible means adapted to be operated by the foot and connected to the spring
25 between the ends thereof.

3. As a means for sounding a drum, a spring formed of a strip of sheet metal, a clamp for securing one end of the spring to the drum, a striker on the other end of the spring, and
30 a strengthening-strip at the fastened end of the spring.

4. As a means for sounding a drum, a spring formed of a strip of sheet metal, means for securing one end of said spring, a striker secured on the free end of the spring and consisting of a strip of felt, and means under the control of the player and attached to said
35 spring between its ends, to operate it.

5. As a means for sounding a drum, a spring
40 formed of a strip of sheet metal and formed in two separate parts and pivoted together, means for fastening one end of the spring and a striker on the free end of the spring.

6. As a means for sounding a drum, a spring
45 having one end secured to a stationary support, a striker on the free end of the spring, arms projecting outward from the spring between its ends, a foot-piece, and flexible means connecting the foot-piece with the said arms.

50 7. As a means for sounding a drum, a spring having one end secured to a stationary support, a striker on the free end of the spring, flexible means attached to the spring for operating it, and a detachable foot-piece having
55 means for securing it temporarily to the foot, and means for attaching it to the flexible spring-operating means.

8. As a means for sounding a drum, a spring having one end secured to a stationary support, a striker on the free end of the spring,
60 a cross-bar, a cord passing from each edge of the spring to the cross-bar, a flexible cord depending from the cross-bar, and having knots or enlargements, and a foot-piece having a
65 hook for coacting with the knots or enlargements to secure the foot-piece to the depending cord.

9. As a means for sounding a cymbal, an arm consisting of a strip of spring metal provided with a striker on its free end and having
70 its other end rigidly attached to a stationary support, means for operating said arm, and a vibrator mounted on said arm between the striker and the point of attachment of the arm, said vibrator being arranged to strike
75 the cymbal when the arm is operated.

10. As a means for sounding a cymbal, an arm consisting of a strip of sheet metal, means for operating said arm, and a tube connected
80 by a spring with the spring-arm.

11. As a means for sounding a cymbal, an arm consisting of a strip of sheet metal, means for operating said arm, and a pair of tubes each tube mounted on a spring secured to the
85 spring-arm.

12. As a means for sounding a cymbal, an arm, means for operating said arm, and a vibrator mounted on a spring secured to said arm, said vibrator consisting of a metal tube.

13. As a means for sounding a drum or a
90 cymbal, or both, an arm consisting of a spring, means for securing one end of the arm stationarily, a striker secured to the free end of the spring, and a vibrator secured to the said arm, said striker and said vibrator being each
95 so connected to the spring-arm as to be moved into an inoperative position.

14. A spur for supporting a bass drum comprising a pointed finger having its upper end bent laterally into V form to embrace both
100 sides of a drum-hoop, and having the upper portion doubled and provided with a threaded aperture, a bearing-plate arranged between said doubled portion and the hoop, and a set-screw passed through said threaded aperture
105 and bearing against said plate.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 15th day of October, A. D. 1896.

HARRY A. BOWER.

Witnesses:

A. D. HARRISON,
C. F. BROWN.