

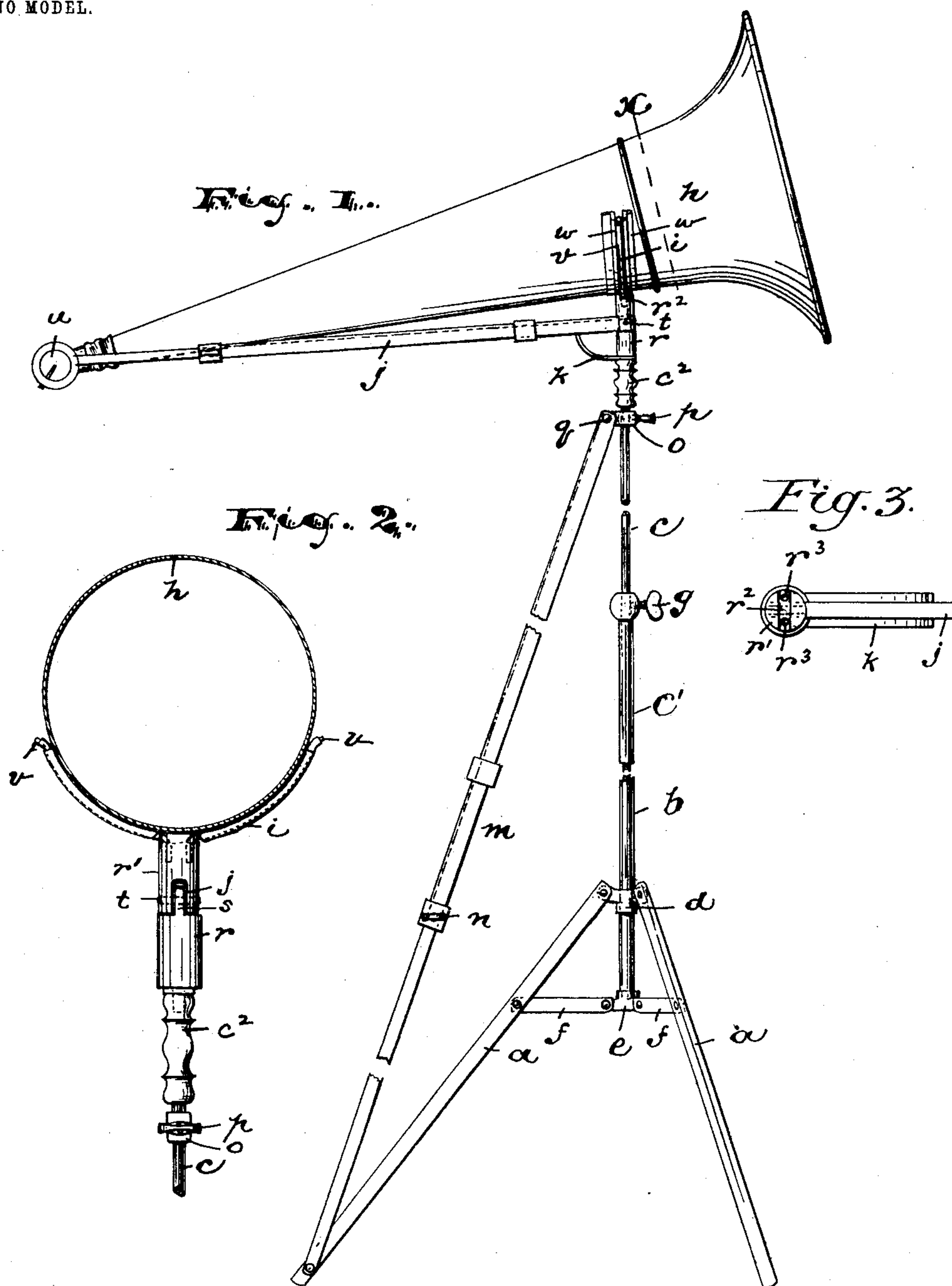
No. 751,140.

PATENTED FEB. 2, 1904.

C. BEECROFT.
HORN SUPPORT.

APPLICATION FILED AUG. 22, 1902.

NO MODEL.



WITNESSES:

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HORN-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 751,140, dated February 2, 1904.

Application filed August 22, 1902. Serial No. 120,642. (No model.)

To all whom it may concern:

Be it known that I, CLEMENT BEECROFT, 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 Horn-Supports; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates more particularly to that class of stands for amplifying-horns adapted to be folded and packed away in small compass for transportation by hand or otherwise, the object being to secure greater rigidity of the stand when in service, to prevent or greatly reduce the tendency of the upper part of the stand to vibrate when in connection with sound-reproducing means, such as a gramophone, and to secure other advantages and results, some of which may be hereinafter set forth in connection with the description of the working parts.

Heretofore it has been common to construct stands each with a long telescopically-adjustable post or center rod supported on a folding tripod and having at the top means to receive or connect with the large end or part of the horn. The movement of the disk or record of the sound-reproducing machine connected to the small end of the amplifying-horn for reasons unnecessary now to detail tended to effect of the horn and stand a vibratory or reciprocating movement in a direction parallel with the longer axis of the horn, which movement because of the lightness or frailty and elasticity of the center post or rod of the stand, ordinarily in sections, was easily permitted. The vibratory or reciprocating movements of the horn, stand, and speaker of the sound-reproducing appliances connected together affected the movement of the stylus of the speaker on the record, and thus impaired the sound issuing from the machine.

An especial object of my invention is to avoid such vibration or reciprocating movement of the top of the stand and connections, and thus secure a more uniform and perfect sound-reproduction because of a more stationary relation of the stylus to the rotary record.

The invention consists in the improved stand and in the peculiar combinations and arrangements of parts, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a side elevation of a stand and its connections; and Fig. 2 is a section of the same at line *x*, on an enlarged scale. Fig. 3 is a plan showing the top of a certain fork-shank, showing holes to receive the lower end of the prongs of the fork.

In said drawings, *a a* indicate the legs of the stand, connected together at the top to form a tripod or in any usual manner, said legs inclining downward from their connection or spreading to secure a broad bearing upon the floor.

d indicates a collar or connecting-piece having ears on which the upper ends of the legs are pivoted, and *e* indicates a lower collar, also having ears, on which the connecting-rods *f* are pivoted. Said connecting-rods *f* extend from the lower collar *e* to the legs *a*, to which latter they are pivoted at points below the pivotal connection of the same with the collar.

Within the collars *d e* is arranged the central post or rod *b*, which is preferably in sections *c c'*, the lower section *c'* being preferably tubular and providing a seat on which the upper section may be fastened. Said upper section *c* is a comparatively small rod adapted to slide telescopically within the tubular rod or post and be held at the proper adjustment therein by a set-screw *g*. At the top of the said rod *c* are means to receive the large end of the horn *h*, said means preferably comprising a removable fork *i* on which the horn rests. Said fork is connected to the speaker of the sound-reproducing devices by

means of a rod j , the said rod being pivoted upon said fork or the shank thereof to permit of a limited vertical play to the end of said rod having said speaker.

5 A bracket or support k , separably attached to the stand, serves to prevent undue strain upon the pivot when said rod j and its speaker are removed from the record.

To prevent the horizontal reciprocating
10 movement due to irregularities in the construction or movement of the machine for reproducing sound-vibrations, I have provided a brace m , which extends from at or near the lower end of one of the legs a up to or near
15 to the top of the rod or section c and lies in or near to the vertical plane of the longer axis of the horn. Said brace m is preferably in sections having a telescopic or longitudinally-sliding relation one section to the other.

20 A set-screw n serves to fasten the sections together when properly adjusted. Said brace is preferably adjustably attached to the rod c or sections by means of a collar o and set-screw p , the rod being pivotally attached to
25 said collar, as at q . In the preferred construction the upper end of the rod or section c is provided with a socket c^2 , in which the lower part of the shank r of the fork i is seated, and the said shank r is in pivoted sections, the upper one of which is recessed, as
30 shown in Fig. 2, to receive the end of the rod j and the pivotal ear s of the lower section, the said rod being Ω -shaped in cross-section for the purpose of securing increased stiffness
35 and to receive said ears s . The pivotal pin t passes through the ears of the shank-sections and the rod and binds the said rod rigidly to the upper shank-section; but a limited pivotal movement between the sections is permitted,
40 whereby the end of the rod j attached to the speaker u of the sound or sound-wave reproducing machines will allow a limited vertical movement to said speaker.

At the top of the upper section r' of the fork
45 the same is transversely slotted, as at r^2 , and down from the bottom of the slot the said section is bored out at two points on opposite sides of the center, as shown in Fig. 3. The prongs $v v$ of the fork near their lower ex-
50 tremities are bent to enter the holes or borings r^3 of the shank and to extend laterally and oppositely therefrom, so as to lie in the transverse slot r^2 , and from thence curve upward to receive the horn between, the said
55 prongs being covered by rubber tubing or the like to prevent injury to the finished surface of the horn. Lying at their lower extremities in the transverse slot the prongs are prevented from turning pivotally.

60 The horn is provided on its exterior surface with parallel cleats $w w$, between which the prongs may lie, the space between said cleats being disposed after preliminary tests at a point at which the small end of the horn
65 will overbalance the large end thereof suffi-

cient to secure the desired pressure of the stylus of the speaker upon the record when the parts are in use. Thus there is no need of making trial adjustments when seating the horn on the fork; but at once said horn may
70 be arranged to bring the parts into final and properly-effective relation to secure the best results of sound-wave reproduction.

I am aware that various modifications and changes of construction may be made without
75 departing from the spirit or scope of the invention, and I do not wish to be understood as intending to limit myself by the various descriptive terms employed or to all the detail features of construction above referred to ex-
80 cepting as the prior state of the art may require.

Having thus described the invention, what I claim as new is—

1. The improved support or stand herein
85 described comprising a collar, legs pivotally connected at their tops to said collar, another collar arranged below the first-said collar, connecting-rods pivotally attached to the lower
90 said collar and to the said legs at points on the latter below where they are pivoted to the first-said collar, a central sectional post, the lower section of which is arranged in said collars and the upper section of which is slidably seated
95 within the lower section, means for fixing the collars in their relation to the lower section, and a sectional brace extending from the lower end of one of said legs, below said pivotal
100 connection with the lower collar upward to the top of the upper section of the central post and means for fastening the sections of the brace together, substantially as set forth.

2. The combination, in a folding stand, with the legs and sectional post, of a sectional brace
105 extending from the top of the upper section of the post downward to the lower extremity of one of said legs, and means for fastening the sections of the brace one to the other, substantially as set forth.

3. The combination with the legs, collars and
110 connecting-rods pivoted together, of a sectional post slidable in said collars, means for setting the post in said collars, means for setting one section on the other, and a sectional brace extending from the top of the upper
115 section to one of the legs, substantially as set forth.

4. The combination with the legs, collars and connecting-rods pivoted together, of a sectional post slidable in said collars, means for
120 setting the post in said collars, means for setting one section on the other, and a sectional brace extending from the top of the upper section downward and at its lower end being secured at a distance from the line of the post
125 to prevent lateral vibration of the upper end of the upper section, substantially as set forth.

5. The combination with the legs, collars and connecting-rods, foldable together and providing a seat or support for a vertical post, of
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said post having a fork at the top adapted to receive the end of a phonograph-horn therebetween, and a brace extending from near said fork to the lower end of one of the said legs, substantially as set forth.

6. The combination with the legs, collars and connecting-rods pivoted together of a post adapted to be seated in said collars, said post comprising a tubular lower section and a rod slidable in said tubular section, means for setting the rod in said tubular section, means for supporting the horn on said sectional rod and a sectional brace, pivotally connected with the top of the post and with one of said legs, and means for setting the post-sections one on the other and for holding the legs, braces and connections in immovable relation, substantially as set forth.

7. The combination with the folding stand having a center post with a transverse groove or slot in its upper extremity and borings extending down from said slot, of a fork made in separable sections, the lower ends of which sections are bent to enter the borings and to lie in said transverse slot, substantially as set forth.

8. The combination with a folding stand, of

a horn-supporting fork removably seated at the top of said stand, the prongs which together form a seat for the horn being separable from one another, and means for holding said prongs from turning on said stand, substantially as set forth.

9. The combination with a folding stand transversely grooved at the top and having sockets for the prongs of the fork, of a horn-supporting fork, the prongs of which are inserted in said sockets and have each a seat on the top of said stand in the transverse groove, substantially as set forth.

10. The combination with a folding stand having a socket c^3 , a fork having a shank in pivoted sections, the uppermost section of which is transversely slotted and provided with holes r^3 , and prongs seated in said holes and in the slot of said shank, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of August, 1902.

CLEMENT BEECROFT.

Witnesses:

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RUSSELL M. EVERETT.