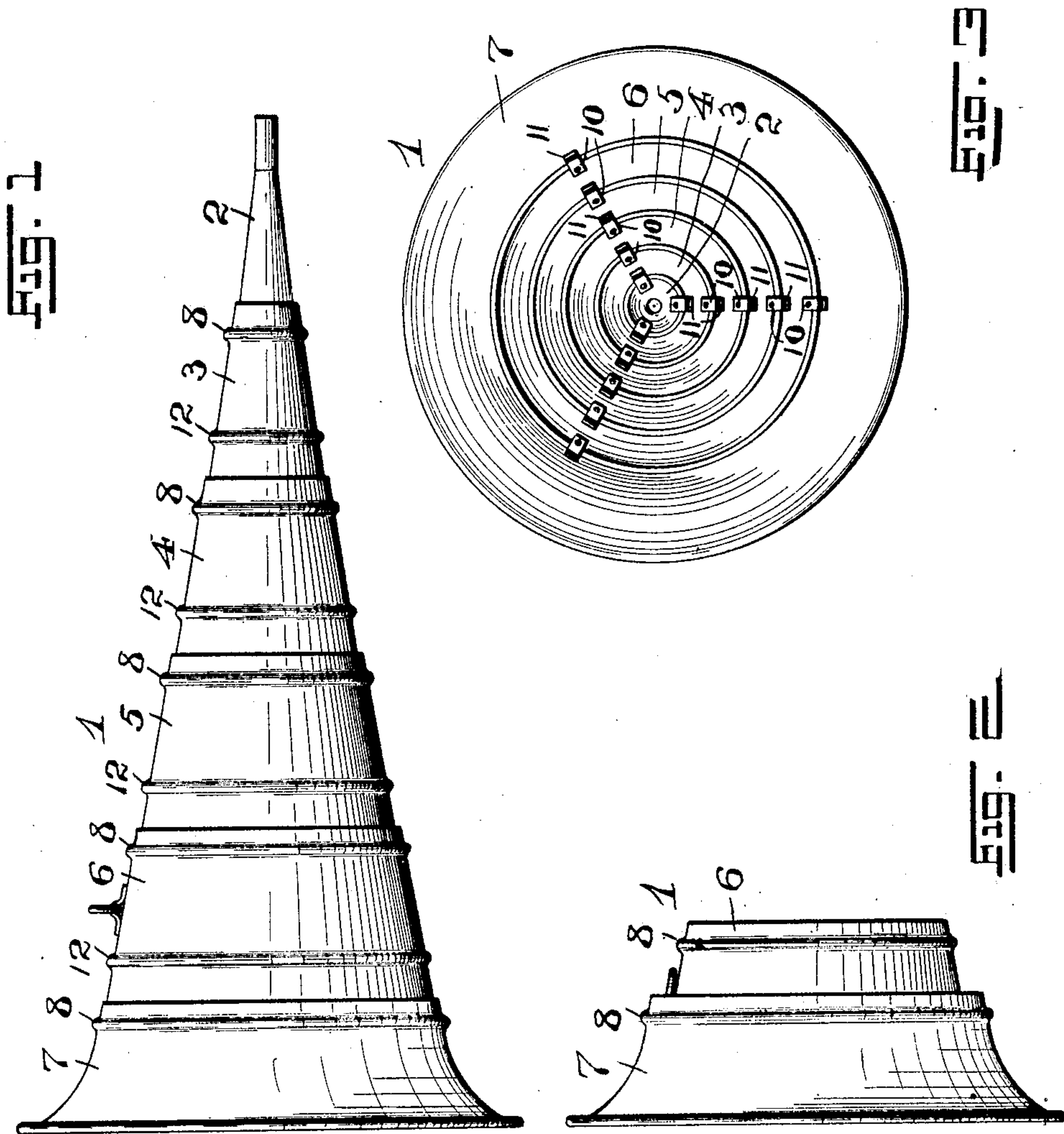


No. 845,007.

PATENTED FEB. 19, 1907.

A. MAURER.
PHONOGRAPH HORN.
APPLICATION FILED MAY 22, 1906.

2 SHEETS—SHEET 1.



WITNESSES:
Evelyn R. Lesser
Frederick Jamison

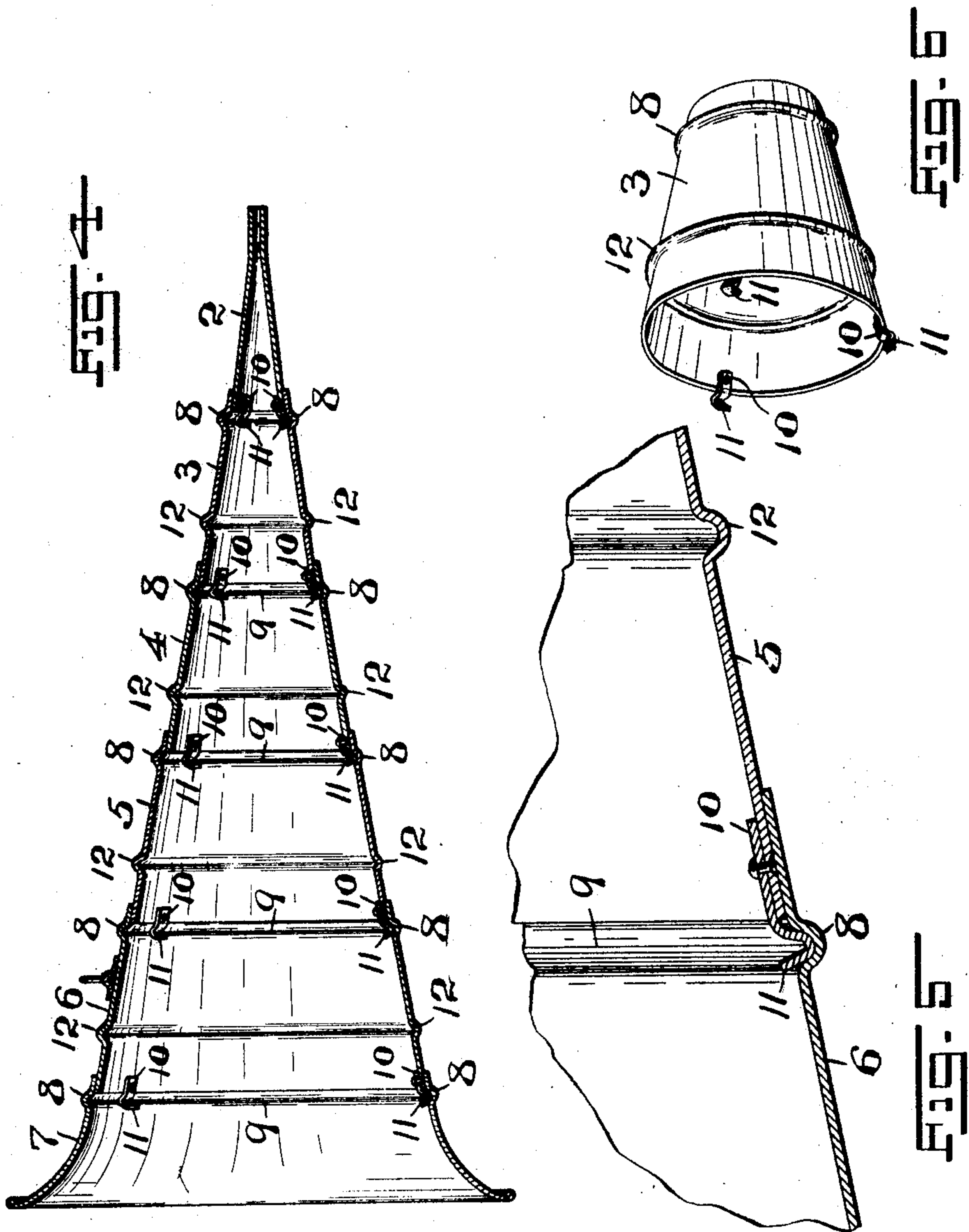
INVENTOR:
Fisher Maurer
BY
Fraentzel and Richards,
ATTORNEYS.

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2 SHEETS—SHEET 2.



WITNESSES:

Ernest R. Lesser
Frederick Jamison

INVENTOR:

Asher Maurer

BY

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UNITED STATES PATENT OFFICE.

ASHER MAURER, OF NEWARK, NEW JERSEY.

PHONOGRAPH-HORN.

No. 845,007

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed May 22, 1906. Serial No. 318,319.

To all whom it may concern:

Be it known that I, ASHER MAURER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Phonograph-Horns; 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 generally to improvements in amplifying-horns for phonographs and similar sound-reproducing machines; and the present invention relates more particularly to a novel construction of horn comprising a number of collapsible horn-sections which can be nested one within the other to produce a very small package for carrying purposes, but which sections can be brought in an extended relation to produce a horn of the ordinary conformation ready for use. To accomplish this main purpose of the present invention, the horn-sections are provided with binding means or friction devices arranged on one horn-section and adapted to engage with portions of another horn-section, whereby the parts are brought in positive holding engagement to provide a rigid horn.

This invention, therefore, has for its principal object to provide a phonograph-horn of the general character hereinafter more fully described, and, furthermore, to provide a collapsible amplifying-horn the horn-sections of which may be quickly brought into their extended and rigidly-connected relation to produce a horn ready for use, but which can be just as quickly separated, so as to be brought into their nested relation to provide a package of very small size.

Other objects of this invention not at this time more particularly mentioned will be clearly understood from the following detailed description of the same.

With the various objects of my present invention in view the said invention consists in the amplifying-horn hereinafter set forth; and, furthermore, this invention consists in the general arrangements and combinations of the devices and parts, all of which will be more fully described in the following specification, and then finally embodied in the

claims of the claim which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a horn embodying the principles of the present invention, the horn-sections being shown in their extended and rigidly-connected relation. Fig. 2 is a similar view of the horn, showing the horn-sections in their collapsed or nested relation; and Fig. 3 is an end view of the horn shown in Fig. 1 looking in the direction of the arrow X in said figure. Fig. 4 is a longitudinal vertical section of the horn shown in said Fig. 1. Fig. 5 is a detail vertical section of portions of two of the adjacent horn-sections and one of the clamping or holding devices between said sections, and Fig. 6 is a perspective view of one of the said horn-sections.

Similar characters of reference are employed in all of the said above-described views to indicate corresponding parts.

Referring now to the said drawings, the reference character 1 indicates the complete horn, the same in the present construction comprising a number of collapsible horn-sections 2, 3, 4, 5, 6, and 7, six of such horn-sections being shown in the present construction; but it will be evident that more or less horn-sections may be used, according to the different sizes of the horns. The said several horn-sections being made from sheet metal and in the shapes of hollow truncated cones, which are adapted to be arranged in a nested manner one within the other, substantially as shown in Fig. 2 of the drawings, are each provided at or near their smaller end portions with an outwardly-extending bead 8, forming upon the interior of each section an annular receiving depression 9, as clearly illustrated in Figs. 3, 4, and 5 of the drawings.

Suitably secured upon the inner surface and extending from the larger open end portion of each horn-section are suitably-constructed holding or clamping devices 10, preferably made from spring metal and formed at their free end portions with curved retaining portions 11, substantially as shown, which are adapted to be slipped into the annular receiving depression of the next adjacent horn-section and in this manner, there being at least two or more of such clamping devices, positively retaining the several horn-

sections in their extended and rigidly-connected relations, as will be clearly understood and as will be evident more particularly from an inspection of Fig. 4 of the drawings. Thus when the several horn-sections have been brought into their extended relation, (shown in said Figs. 1, 3, and 4 of the drawings,) then the horn can be used upon the phonograph or other similar sound-producing apparatus in the usual manner; but when removed from the machine, then by a slight pressure upon the smallest end section, as 2, the several horn-sections are readily brought into their disconnected relation, so as to become nested one within the other. Just as easily the several horn-sections are brought into their extended and connected relations by simply taking hold of the smallest end section and by a sudden pull raising the several sections from their nested positions (shown in Fig. 2) to their fixed and extended relations, (illustrated in Figs. 1 and 4,) all the holding or clamping devices being sprung into the annular depressions of the respective horn-sections to connect the several sections in their operative relations, and thereby producing the complete horn.

To provide additional strength and to prevent the distortion of the horn-sections, each section may be provided with a reinforcing bead or projection 12, as shown.

From the foregoing description it will be seen that I have provided a horn for phonographs and similar apparatus which is useful and can be made very small, so as to be carried about without inconvenience.

I claim—

1. A phonograph-horn comprising a series of collapsible horn-sections adapted to be nested when the horn is not in use, and a series of spring-clamps extending from and beyond the one open end of each section and projecting into the open end of another section each spring device being adapted to slide longitudinally of the horn in frictional binding engagement with such section, all arranged for rigidly locking the said horn-sections when extended to produce a complete horn.

2. A phonograph-horn comprising a series of collapsible horn-sections adapted to be nested when the horn is not in use, an annular receiving depression near one end of each horn-section, and means connected with the opposite end of each horn-section, said means extending from the open end of the horn-section and being adapted to extend into the open end of another section and to slide longitudinally of the horn so as to be brought in

binding engagement with the annular receiving depression for rigidly locking the horn-sections when extended to produce a complete horn.

3. A phonograph-horn comprising a series of collapsible horn-sections adapted to be nested when the horn is not in use, an annular receiving depression near one end of each horn-section, clamping devices connected with the opposite end of each horn-section and curved retaining portions on said clamping devices, said retaining portions extending from the end of the horn-section and being adapted to extend into the open end of another section and to slide longitudinally of the horn so as to be brought in binding engagement with the annular receiving depressions for rigidly locking the horn-sections when extended to produce a complete horn.

4. A phonograph-horn comprising a series of tapered tubular horn-sections, adapted to be nested when the horn is not in use, an annular reinforcing projection near one end of each horn-section, and an annular receiving depression near the other end of each horn-section, and means connected with the opposite end of each horn-section adapted to extend into the open end of another section and to slide longitudinally of the horn so as to be brought in binding engagement with the annular receiving depressions for rigidly locking the horn-sections when extended to produce a complete horn.

5. A phonograph-horn comprising a series of tapered tubular horn-sections adapted to be nested when the horn is not in use, an annular reinforcing projection near one end of each horn-section, and an annular receiving depression near the other end of each horn-section, clamping devices connected with the opposite end of each horn-section and curved retaining portions on said clamping devices, said retaining portions extending from the end of the horn-section and being adapted to extend into the open end of another section and to slide longitudinally of the horn so as to be brought in binding engagement with the annular receiving depressions for rigidly locking the horn-sections when extended to produce a complete horn.

In testimony that I claim the invention set forth above I have hereunto set my hand this 15th day of May, 1906.

ASHER MAURER.

Witnesses:

FREDK. C. FRAENTZEL,
SOLOMON FARB.