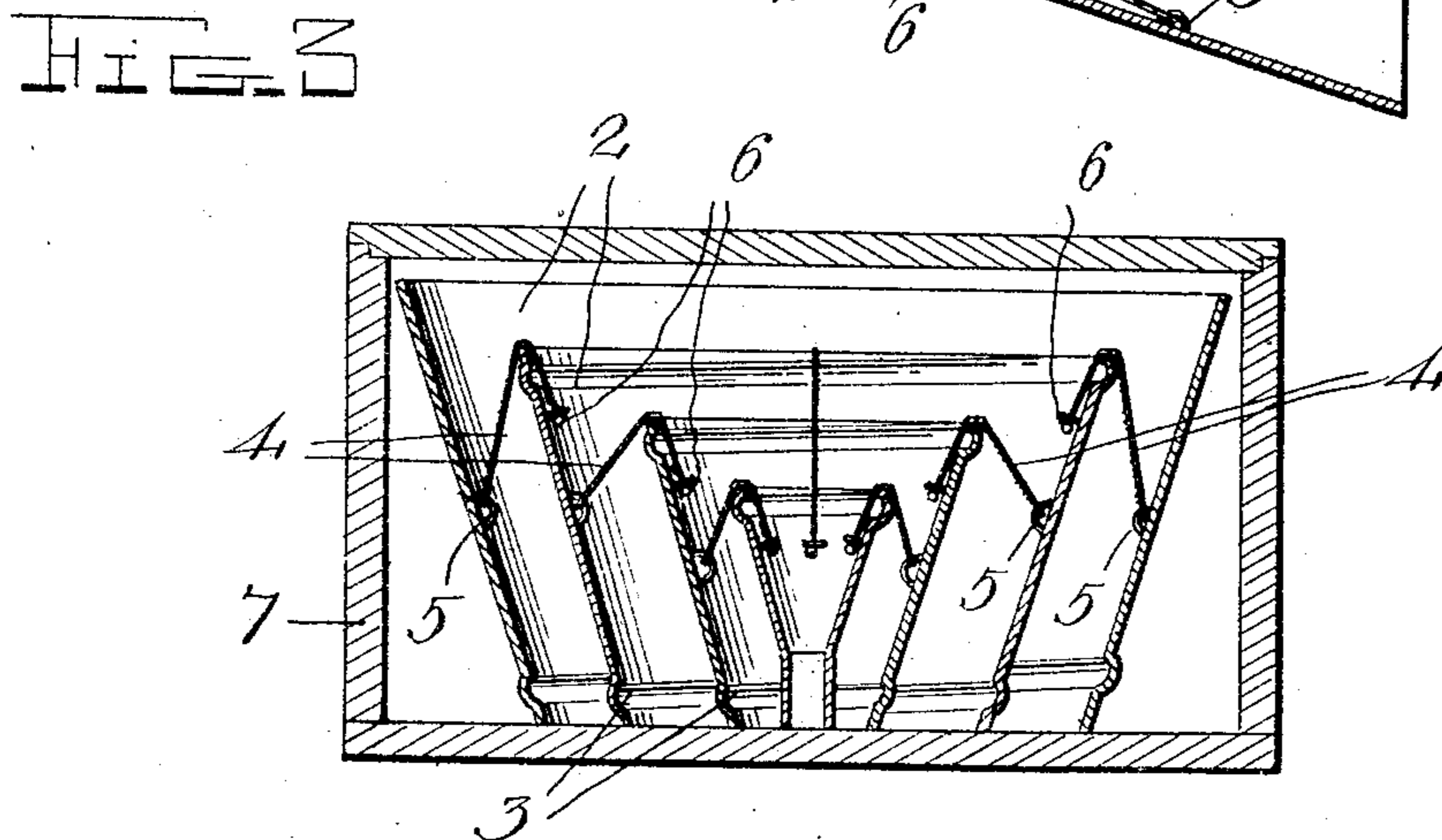
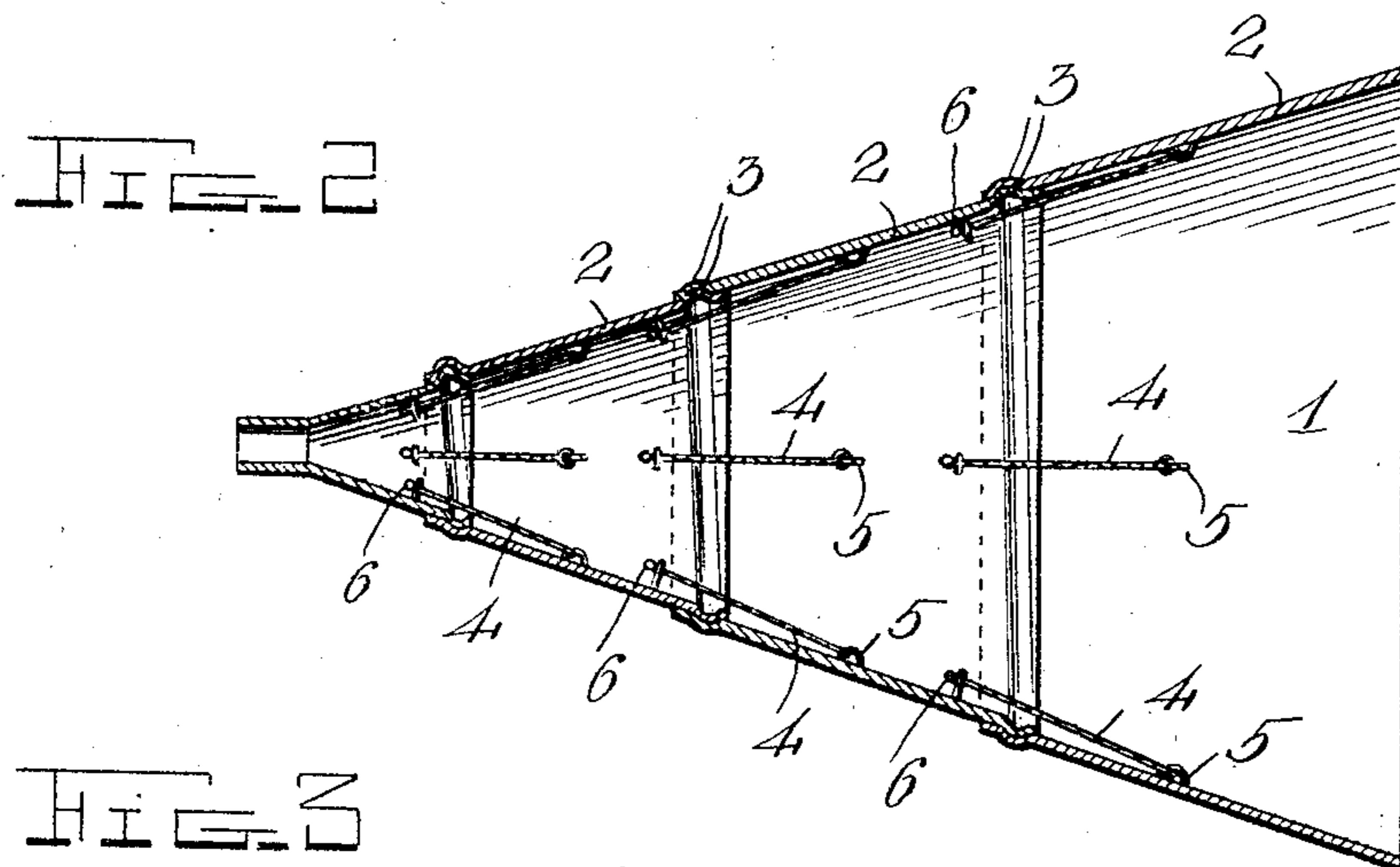
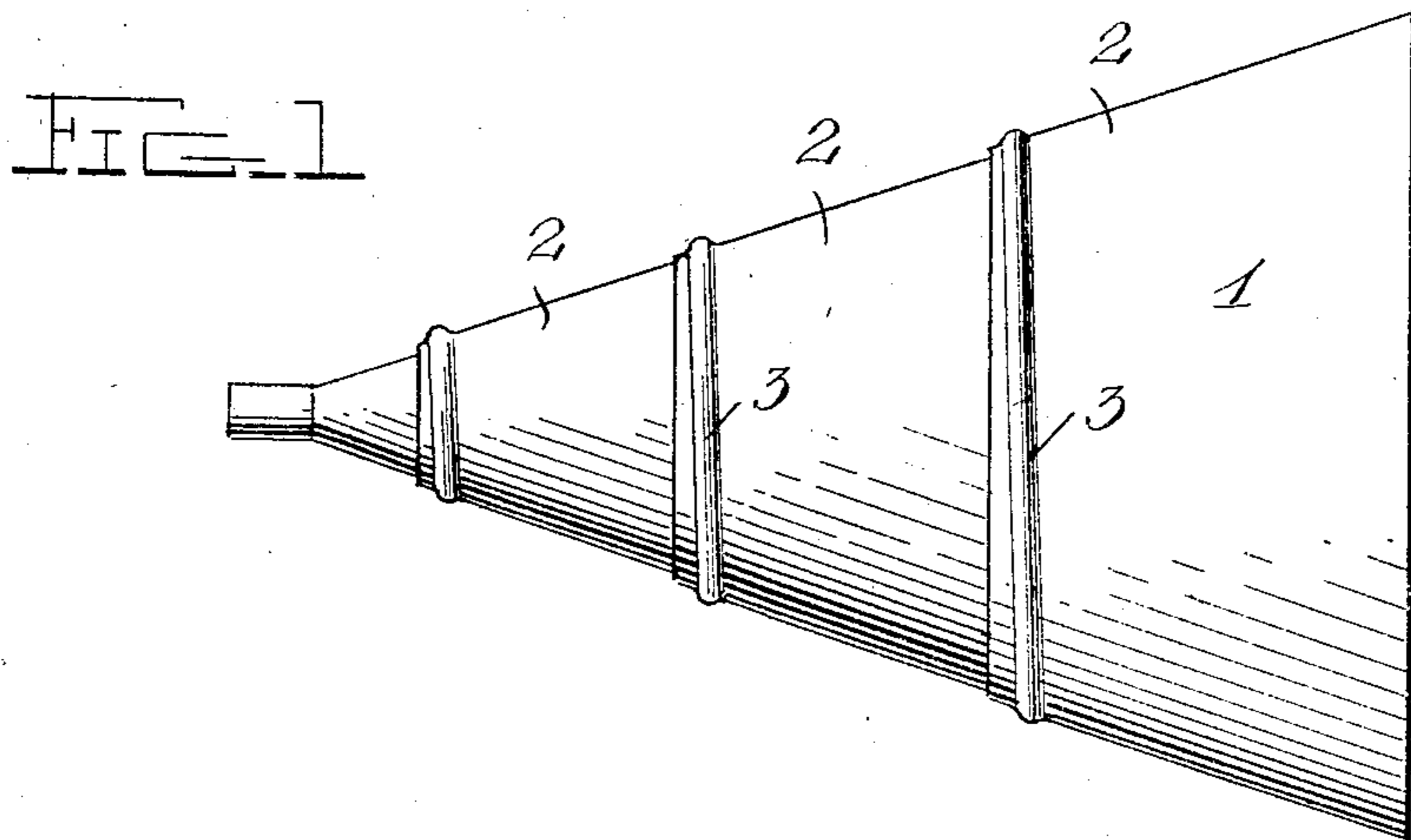


No. 861,648.

PATENTED JULY 30, 1907.

H. GROSS.  
PHONOGRAPH HORN.  
APPLICATION FILED APR. 12, 1906.



Witnesses  
*C. H. Griesbauer.*

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# UNITED STATES PATENT OFFICE.

HENRY GROSS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO FRANK SHILLER, OF NEW YORK, N. Y.

## PHONOGRAPH-HORN.

No. 861,648.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed April 12, 1906. Serial No. 311,390.

*To all whom it may concern:*

Be it known that I, HENRY GROSS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Phonograph-Horns; and I do 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.

10 This invention relates to improvements in collapsible phonograph horns.

The object of the invention is to provide a phonograph horn formed of collapsible telescopic sections provided with means for holding the sections against disengagement at all points when extended, and against longitudinal movement in both directions.

15 With the above and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a side view of the horn with the parts arranged in position for use; Fig. 2 is a longitudinal sectional view of the horn with the parts in the position shown in Fig. 1; and 25 Fig. 3 is a sectional view through the horn, showing the same collapsed and arranged in the box or case for convenient transportation.

Referring more particularly to the drawings, 1 denotes the horn as a whole which is formed of a series of 30 frusto-conical telescoping sections 2, the diameter of the larger end of each of said sections being substantially the size of or a little larger than the inner small end of the next adjacent section, thereby permitting said sections to be drawn outwardly until the walls adjacent to 35 said outer and inner ends come into engagement, thereby forming a funnel-shaped horn.

In order to prevent the sections of the horn from collapsing when the same is in use, the engaging edges of the ends of the sections are provided with screw threads 40 3 which are adapted to be engaged by a slight turn of said sections after the same have been drawn out to an operative position.

In order to prevent any possibility of the sections of the horn from being pulled apart when drawn out, said

sections are provided with retaining cords, chains or 45 other flexible connections 4, of which there are preferably four for each section, the same being shown in the drawings as cords, said cords being arranged at diametrically opposite points on the inner side of the sections. The outer ends of each of the cords are secured to the 50 inner sides of the sections near their outer ends in any suitable manner, while the inner ends of the cords are connected with the next adjacent section, preferably by means of eyes or loops 5 secured to the inner sides of said section, as shown. The inner ends of the cords 55 have formed therein knots, whereby the same are prevented from pulling through said eyes and the sections of the horn prevented from being entirely separated or pulled apart.

A phonograph horn constructed as herein shown and 60 described may be readily drawn out to an operative position or collapsed into a convenient form adapted to be placed in a suitable box or case 7 by which the same may be readily carried.

From the foregoing description, taken in connection 65 with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without 70 departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:— 75

A phonograph horn comprising a plurality of frusto-conical nestable sections, the adjacent sections having a groove in one and a rib on the other of the meeting ends, extending therearound to engage and hold the sections 80 against disengagement at all points when extended and against longitudinal movement in both directions, each section having a plurality of laterally-spaced eyes on its inner face and flexible members connected with the eyes of the adjacent section to hold said sections in position ready for assembling when the horn is collapsed. 85

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HENRY GROSS.

Witnesses:

ERIC E. HANSSON,  
ERNST M. HANSSON.