

H. LAUGHLIN, JR. & D. SCHUYLER.

HANGER ARM.

APPLICATION FILED JUNE 30, 1904.

955,599.

Patented Apr. 19, 1910.

Fig. 1.

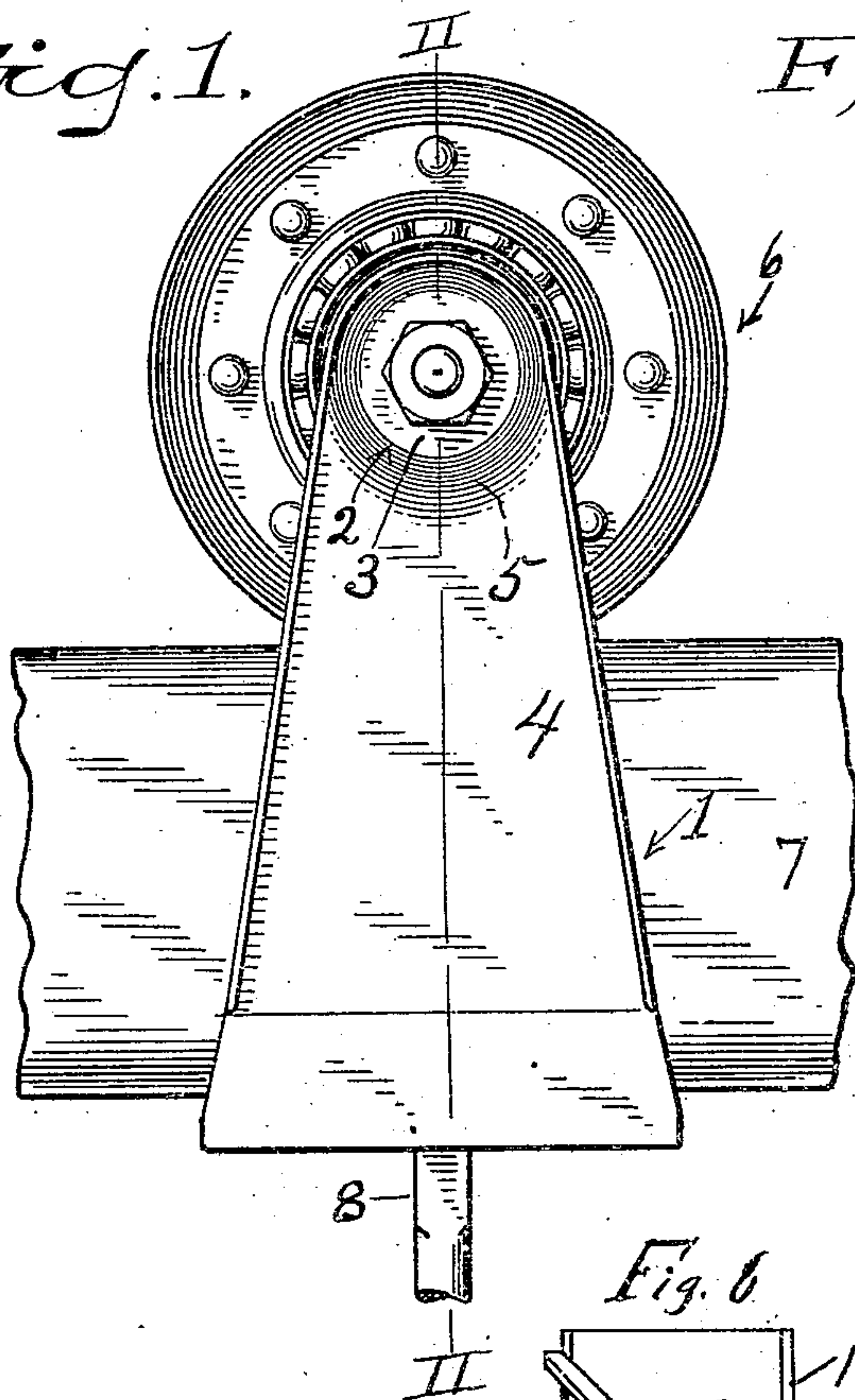


Fig. 2.

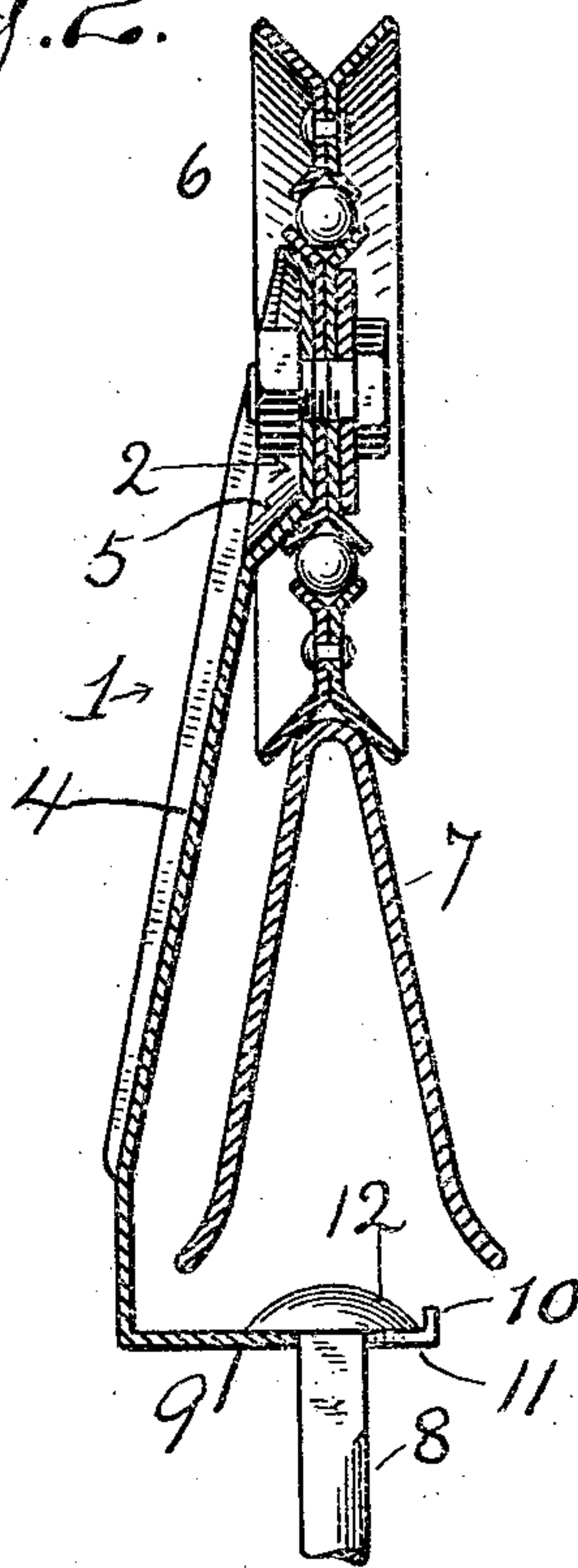


Fig. 3.

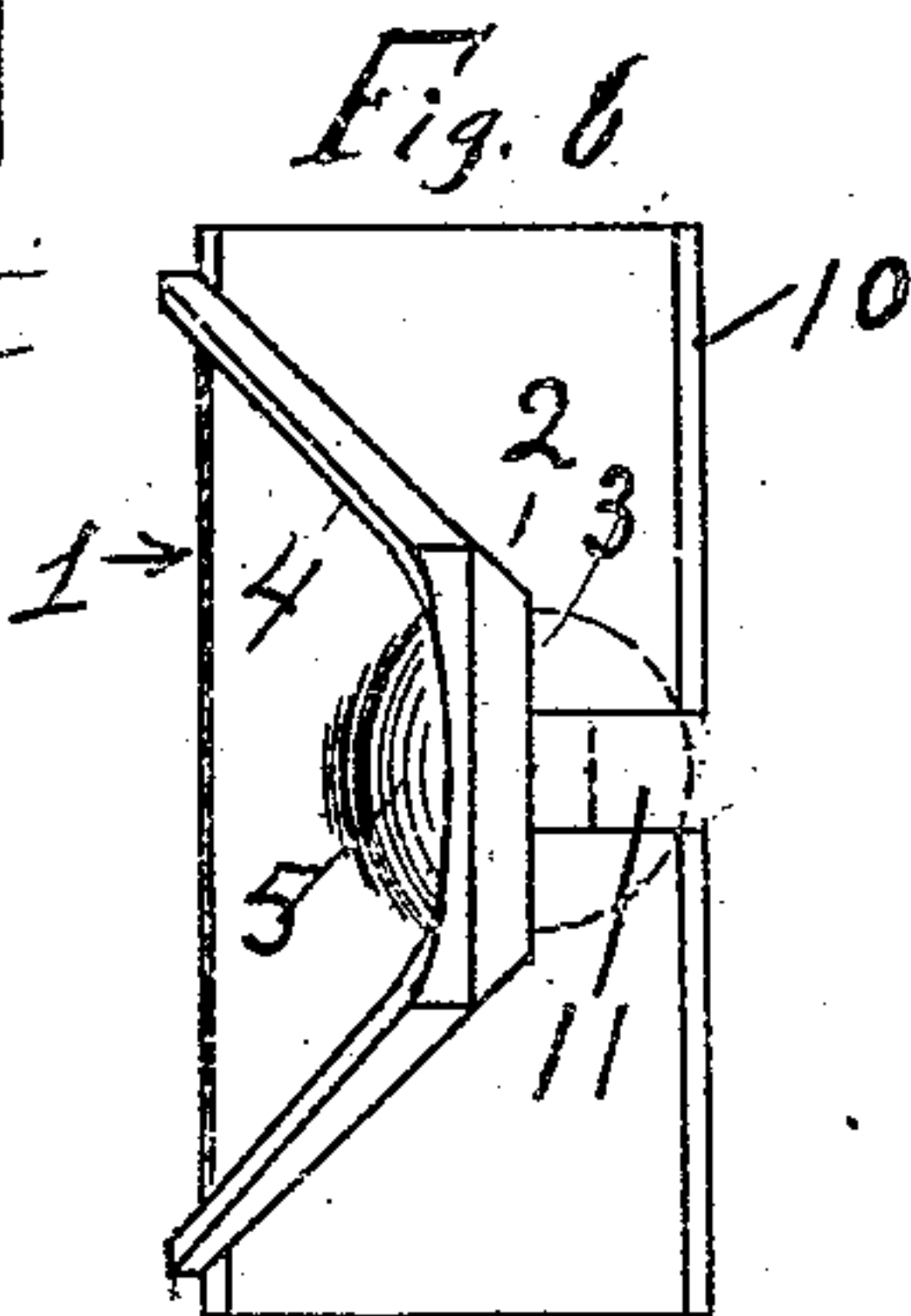
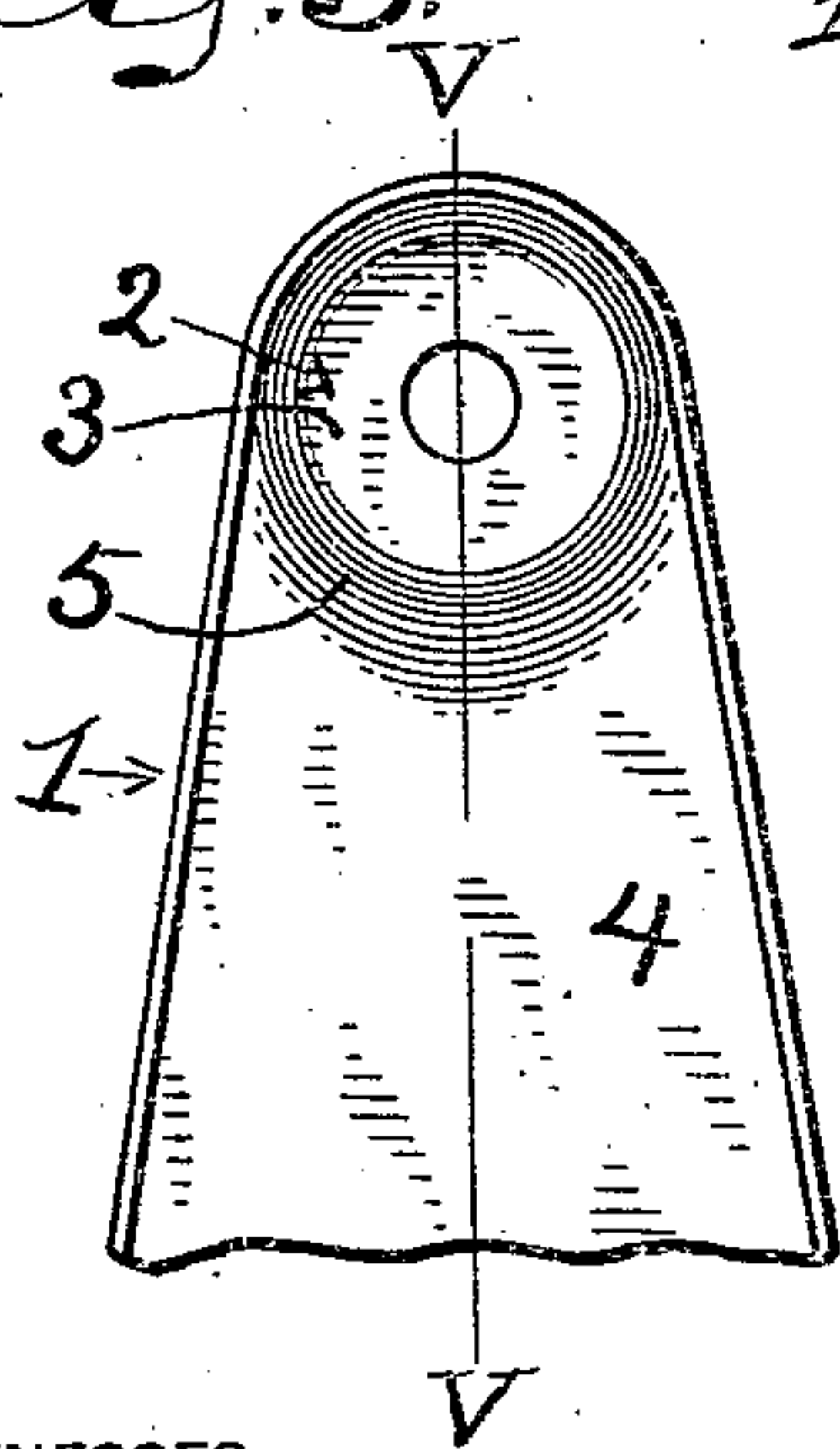


Fig. 4.

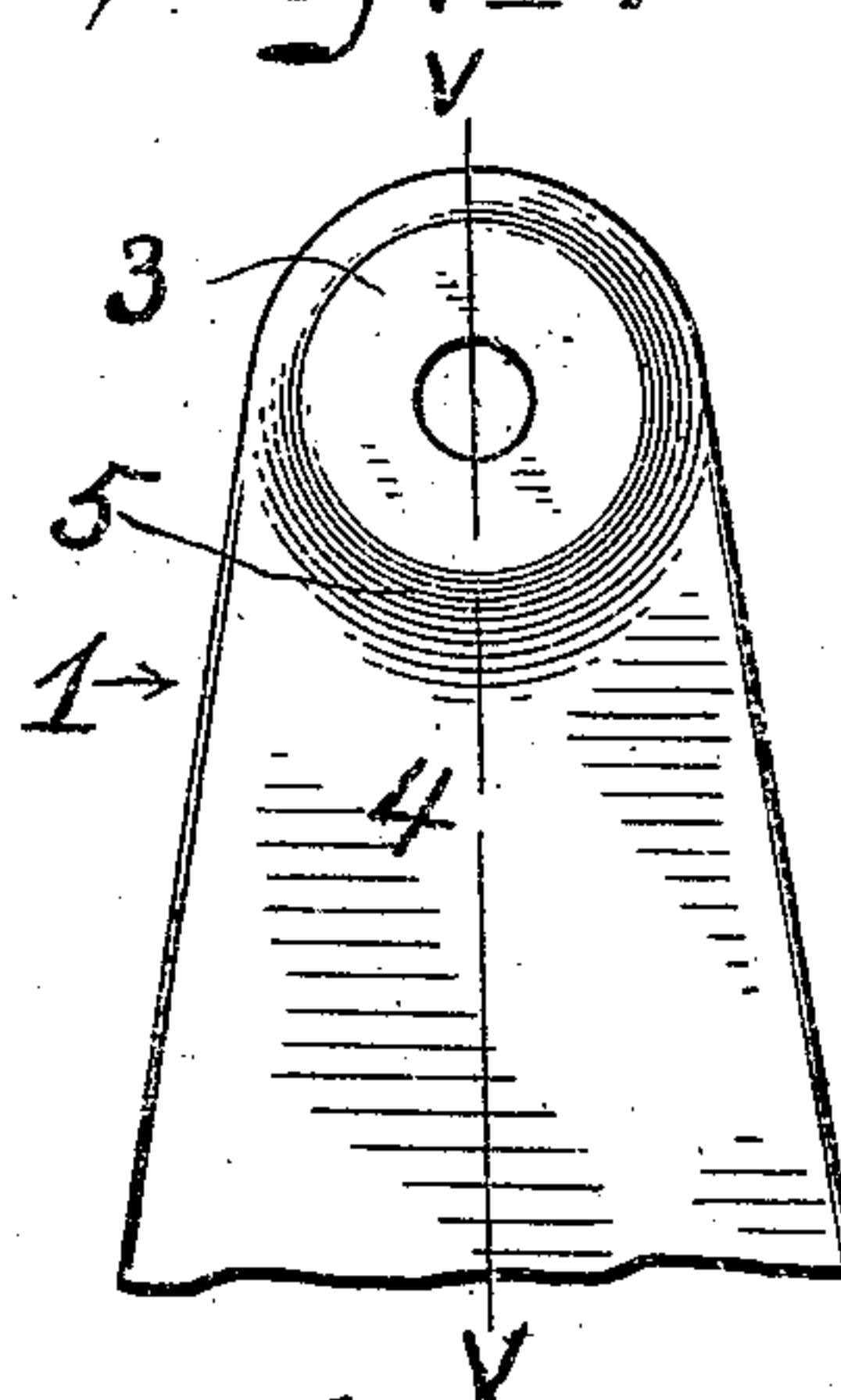
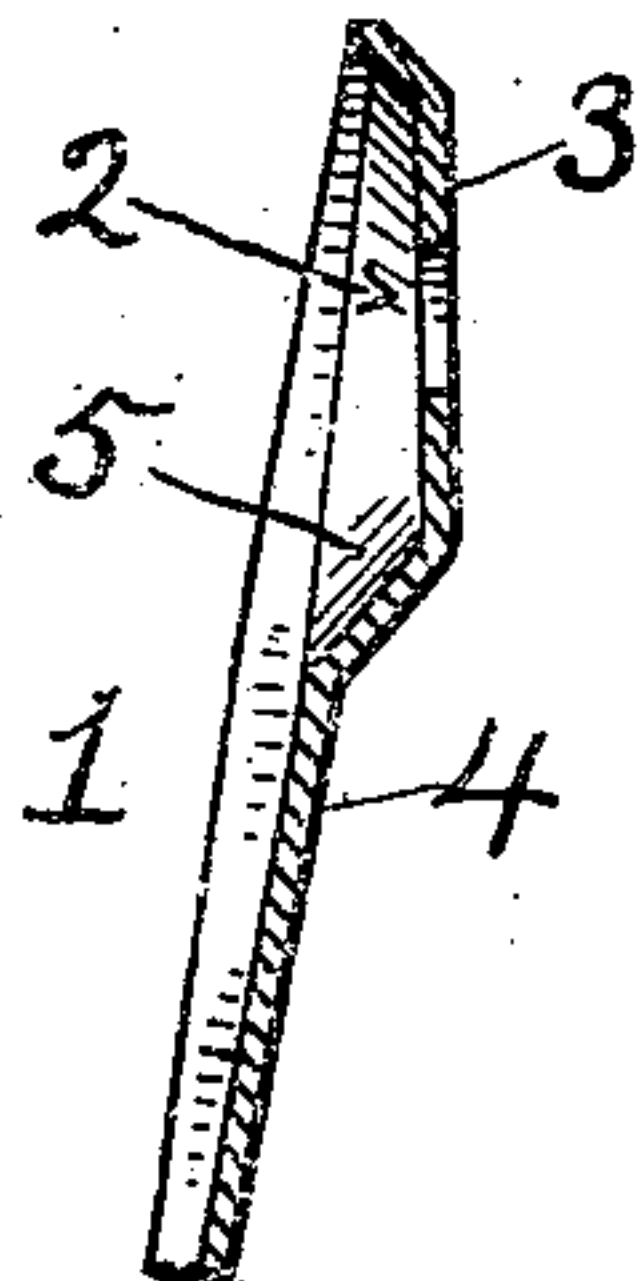


Fig. 5.



WITNESSES:

H. A. Lamb.  
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Homer Laughlin, Jr. INVENTORS  
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# UNITED STATES PATENT OFFICE.

HOMER LAUGHLIN, JR., OF LOS ANGELES, CALIFORNIA, AND DANIEL SCHUYLER, OF BRIDGEPORT, CONNECTICUT, ASSIGNORS TO THE PERFECT SLIDING DOOR COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

## HANGER-ARM.

955,599.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed June 30, 1904. Serial No. 214,725.

*To all whom it may concern:*

Be it known that we, HOMER LAUGHLIN, Jr., a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, and DANIEL SCHUYLER, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented new and useful Improvements in Hanger-Arms, of which the following is a specification.

This invention relates to improvements pertaining to a certain sliding door hanger patented to Augustus Newell, Mar. 26, 1901, No. 670640 in which patent the hanger arm is constructed of an integral member composed of a body, a circular plate, the edge of which is bent obliquely, and connecting members forming extensions of the oblique edge at opposite sides of the axis of the circular plate, and connecting said plate with said body.

An object of the present invention is to produce a hanger arm having with a given material and weight greater strength at the weakest part than has the patented hanger arm aforesaid; and this object is attained by providing in the arm in addition to the connecting members of the patented arm an additional reinforcing portion widened toward the axis of the body of the hanger arm. Said additional portion may or may not be in the form of extension of said connecting members and is desirably integral with the oblique edge of the circular plate and the body of the arm at the mid-width thereof.

It is an object of this invention to give greater strength to the hanger arm at the portion thereof which is desirably as small as possible in order to fit appropriately the center piece of the roller for which the hanger arm is constructed, and by our invention this object is attained and great strength of the hanger arm at this portion, is given.

Another object is to provide means for positively retaining the door normally on its hanger and yet allow ready detachment of the door therefrom when desired.

This invention includes a novel part for use in door hangers and in this relation comprises an arm composed of sheet metal having a perforated cup at one end thereof provided with a bottom which is oblique to the

body of the arm, and a wall connecting said bottom and body and widening toward the axis of said body. This novel part for door hangers is of especial use in the construction of door hangers because of the superior strength that is gained by the disposition of the metal in the hanger arm and there are other elements of novelty in said part in its preferred form, which constitute improvements in the art and will be pointed out more fully in the subjoined detailed description.

The accompanying drawings illustrate the invention.

Figure 1 is a side view of the hanger arm as it appears in use in an antifriction support for sliding doors. Fig. 2 is a section of said arm along the axis thereof on line II, Fig. 1; the antifriction roller and a rail and a support for the door are also shown in these two views. Figs. 3 and 4 are detached fragmental views of opposite sides of the hanger arm. Fig. 5 is a sectional view of the same on line V—V. Fig. 6 is a plan of the hanger arm detached.

This invention consists in a hanger arm composed of sheet metal and having a cup at one end thereof provided with a bottom or engaging portion which is oblique to the body of the arm, and a wall connecting said bottom or portion and body, and widening toward the axis of said body.

The lines II—II (Fig. 1), and V—V (Figs. 3 and 4) are drawn along the axis of said arm. The shaded portion covered by the curved shade lines at 5 in said figures, widening toward said lines II—II and V—V, indicates the widening of said wall toward the axis of the body, that is to say the curved wall of the cup is not so deep or wide at the edges of the arm as it is at the axis of the arm.

By widening the wall of the cup toward the axis of the body and forming it integral with the body of the arm at the midwidth thereof, and smooth, continuous and unbroken entirely around the cup, the arm is made peculiarly strong and rigid, the metal being thus disposed in a superior manner for strength.

The hanger arm may be constructed in various ways for attachment to the body which it is to support. The drawings illustrate a form of hanger preferred for use



with a trolley wheel 6 running on a rail 7 and sustaining a door support 8 by a single hanger arm. In this form the lower part of the hanger arm has an inward extension 9  
 5 provided at its end with an upward bend forming a retainer 10 and a slot 11 through which slot a door supporting bolt 8 may be entered to a point where its axis will be ver-  
 10 tically below the mid-plane of the trolley wheel. Said support is provided with a head or projection 12 to engage the shoulder 10 which fits against said shoulder 10 when the body of the bolt fits against the inner margin of the slot 11.

15 By the construction shown a door may be readily mounted on and dismantled from the overhead support or rail 7 and great rigidity and strength are secured. The re-  
 20 tainer 10 effectually holds the door support 8 normally in place but allows ready removal thereof. The cup is centrally perforated with a hole 13 to receive a bolt 14 for fasten-  
 ing the arm to a supporting wheel 6.

What we claim and desire to secure by  
 25 Letters Patent of the United States is:

1. A hanger arm composed of sheet metal having a perforated cup at one end thereof provided with a bottom which is oblique to the body of the arm, and a wall connecting  
 30 said bottom and body and widening toward the axis of said body.

2. The combination with a track and an antifriction wheel adapted to travel thereon, of a hanger arm having an oblique body portion provided at its upper end with means 35 for attachment of a bearing for said wheel and at its lower end with a horizontal extension having an upwardly extending flange at its edge and a slot cut through said flange into said extension, and an upright 40 bolt adapted to support a door, said bolt being in said slot and having its head supported by said extension.

3. The combination, with a door-supporting bolt, of a hanger arm provided with ex- 45 tension 9 retainer 10 and slot 11 adapted to receive said bolt.

4. The combination with a hanger-arm comprising an oblique body and a cup formed integral with the body, the bottom 50 of the cup being vertical and perforated, of a bolt for securing a wheel to the cup.

In testimony whereof we have signed this specification at Bridgeport, Connecticut, this 28th. day of June 1904, in the presence of 55 two subscribing witnesses.

HOMER LAUGHLIN, JR.  
 DANIEL SCHUYLER.

Witnesses:

JAMES R. TOWNSEND,  
 HUGH BRADY.