

March 7, 1944.

C. G. RIST

2,343,582

TIRE GAUGE

Filed Feb. 26, 1943

2 Sheets-Sheet 1

Fig. 2.

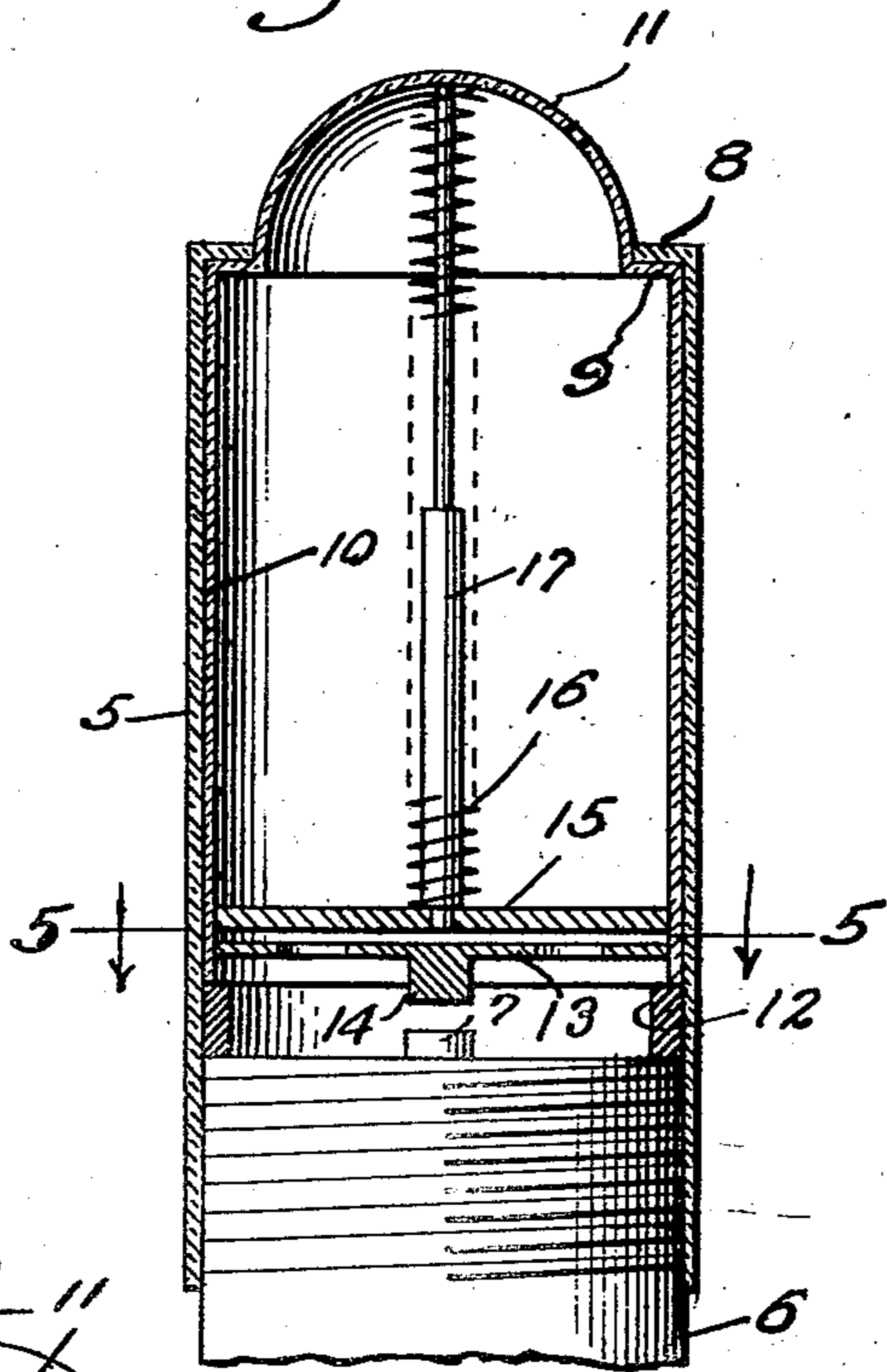


Fig. 1.

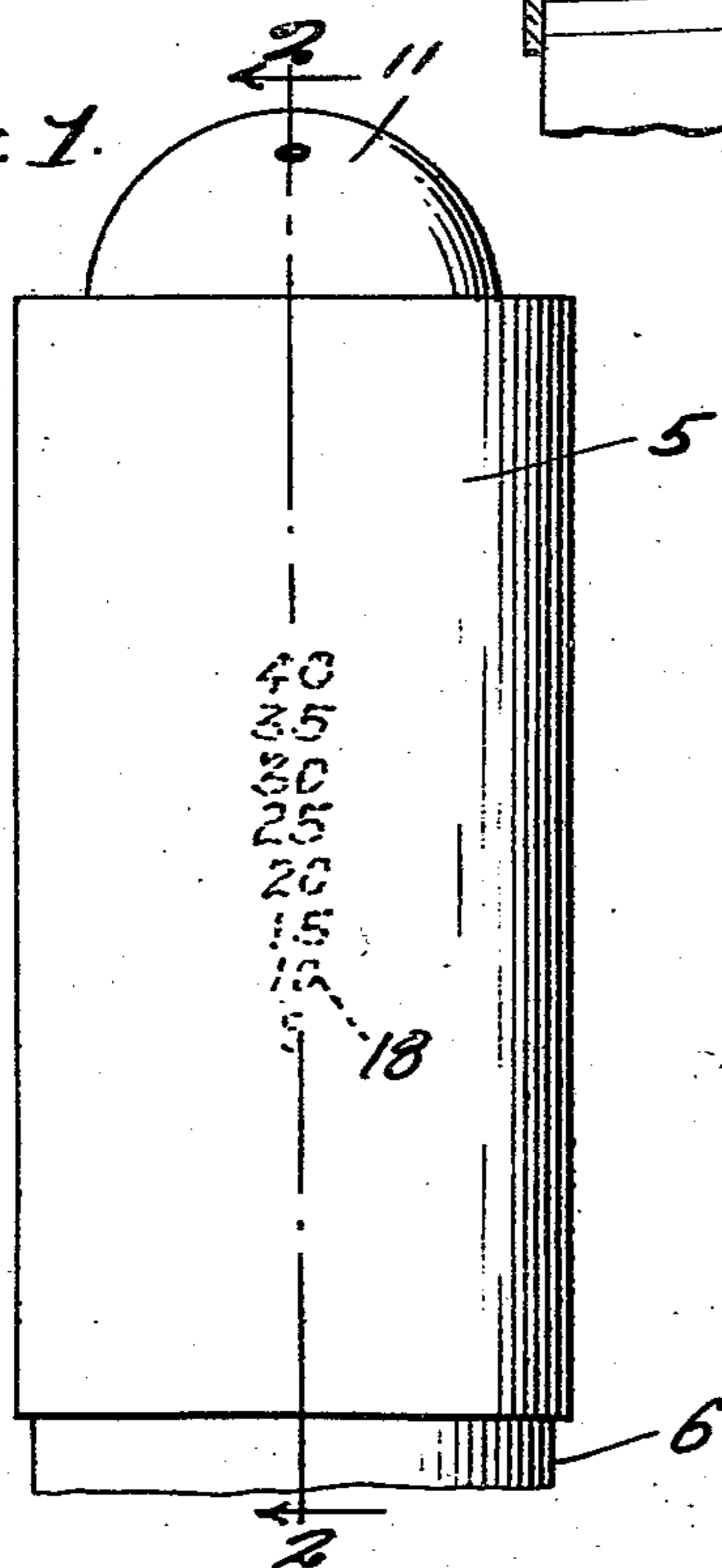
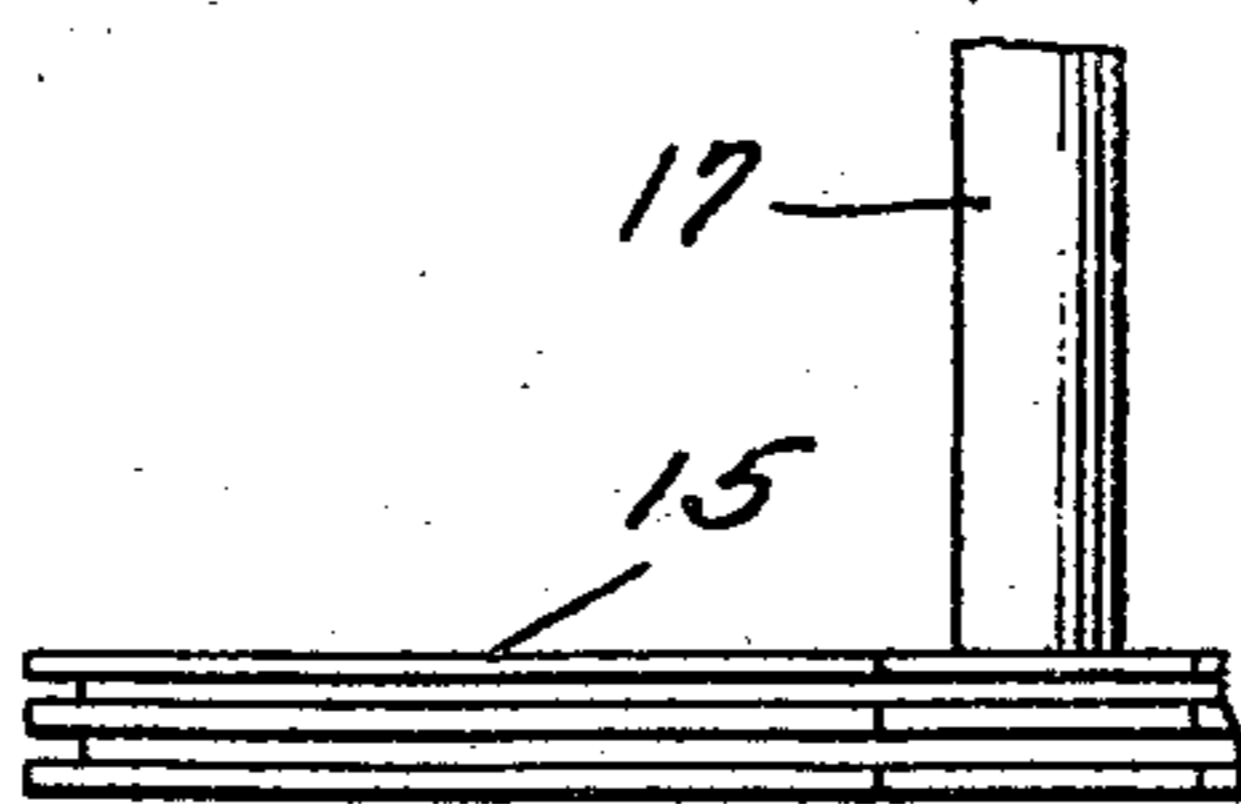


Fig. 6.



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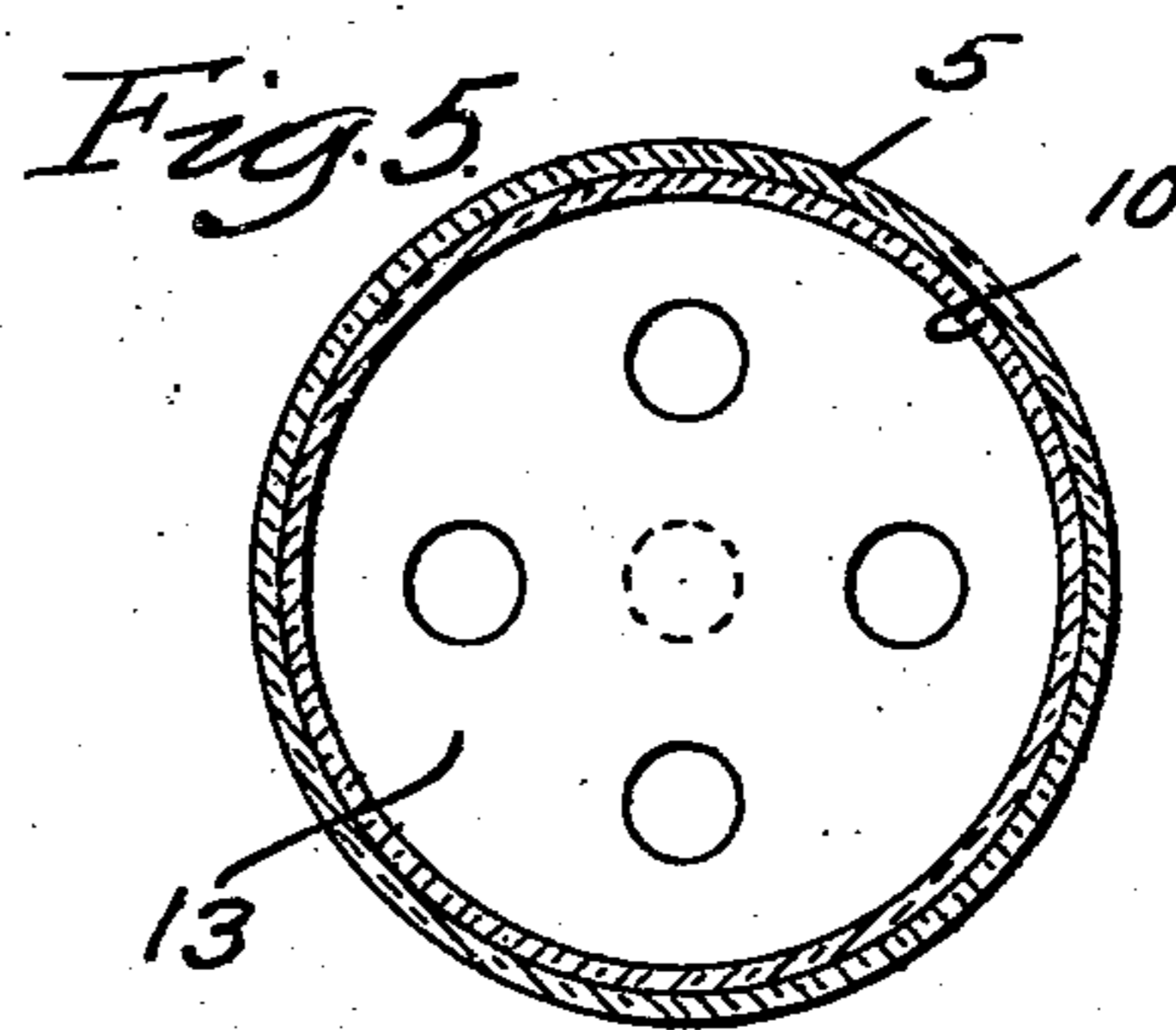
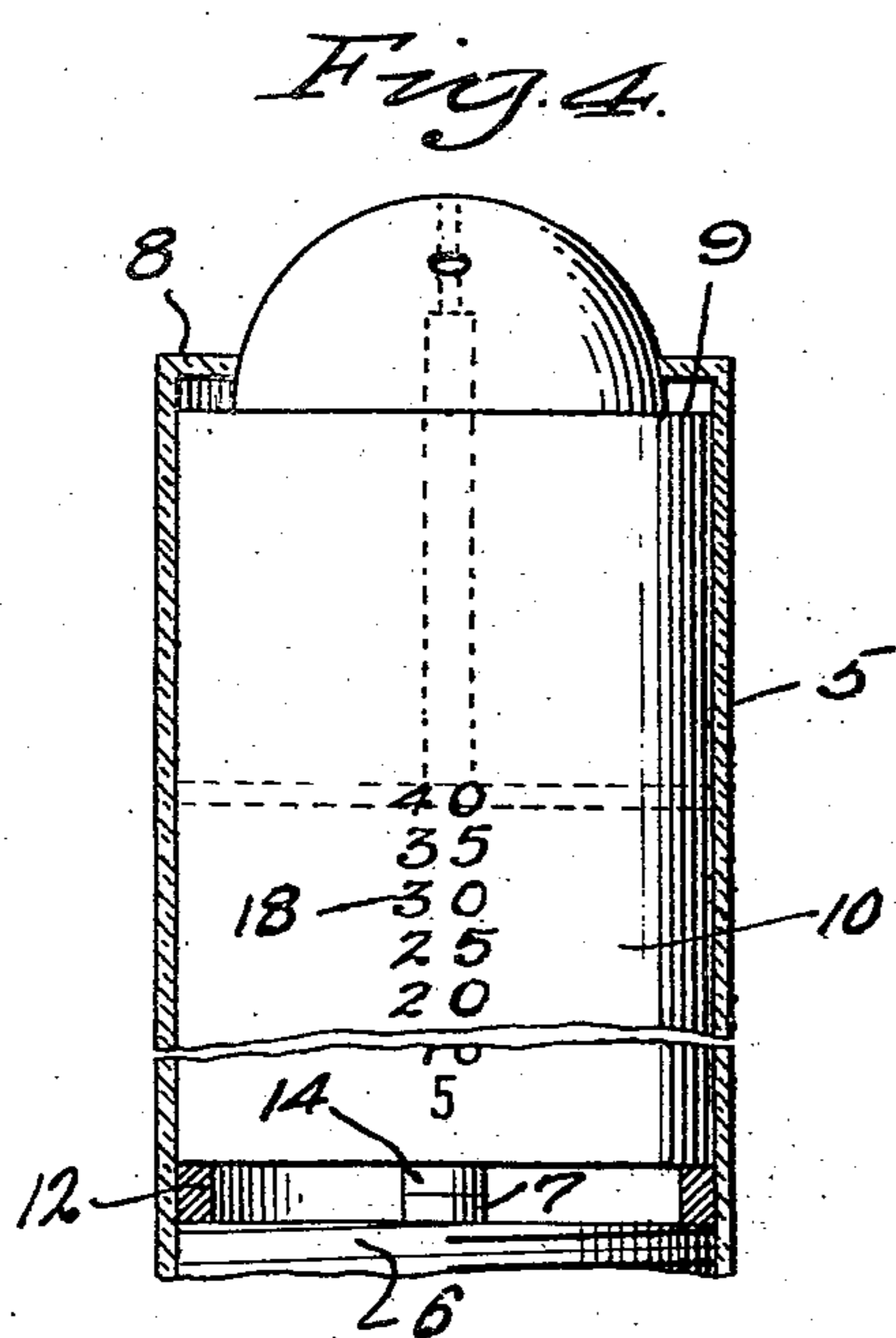
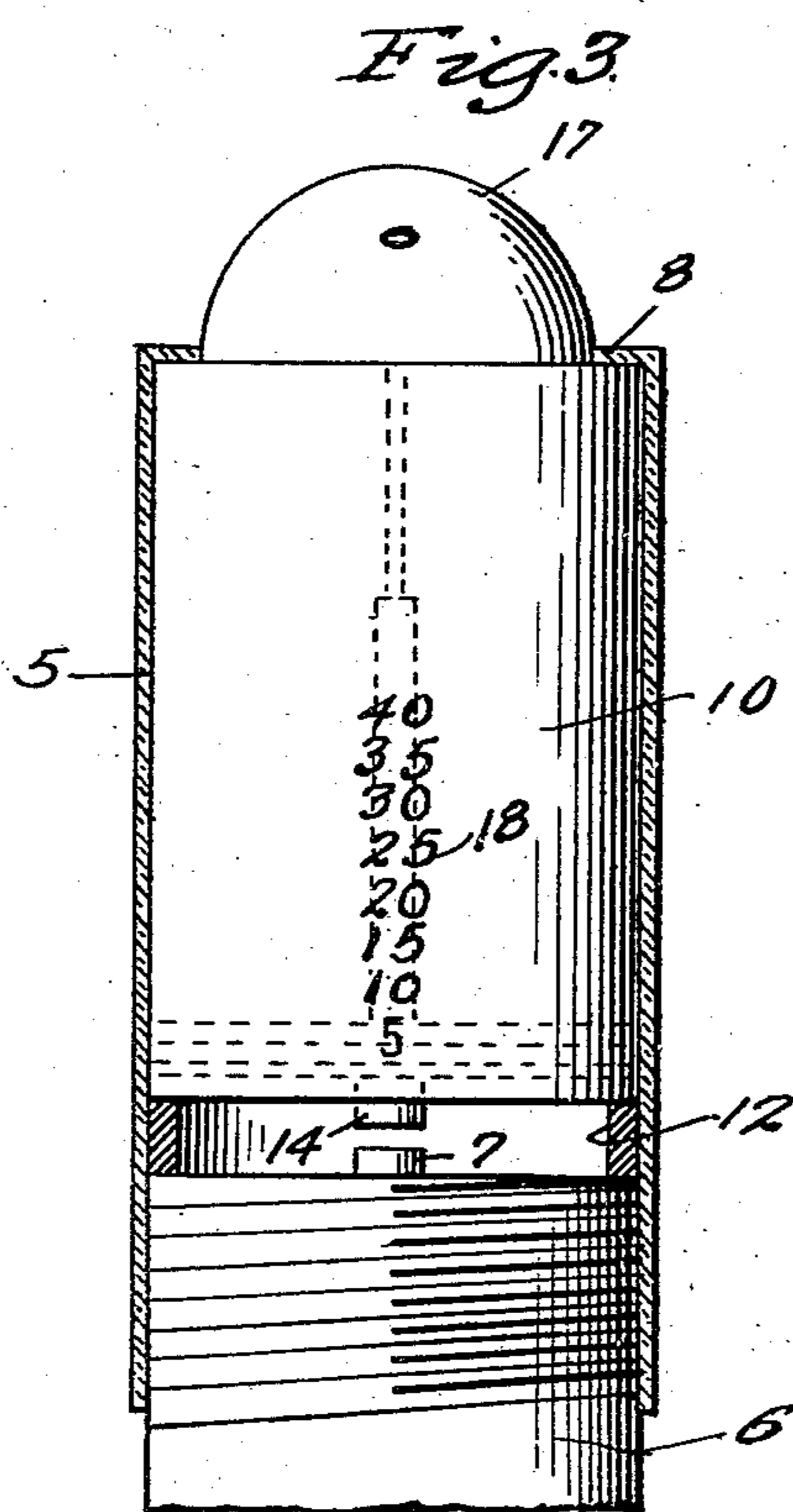
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UNITED STATES PATENT OFFICE

2,343,582

TIRE GAUGE

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Application February 26, 1943, Serial No. 477,278

3 Claims. (Cl. 73—111)

The present invention relates to new and useful improvements in tire gauges and has for its object to provide a device of this character of simple and practical construction, which is neat and attractive in appearance, inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout and in which:

Figure 1 is a side elevational view.

Figure 2 is a vertical sectional view taken on a line 2—2 of Figure 1.

Figure 3 is a vertical sectional view through the outer barrel showing the inner barrel in normal position out of contact with the valve of the tire.

Figure 4 is a similar view showing the inner barrel depressed for actuating the plunger of the gauge.

Figure 5 is a transverse sectional view taken on a line 5—5 of Figure 2, and

Figure 6 is a fragmentary detail of the plunger.

Referring now to the drawings in detail, the numeral 5 designates an outer barrel or casing having one end internally threaded for attaching to a tire valve stem 6 which is provided with the usual valve 7 operable upon a depressing movement to open the valve.

The other end of the casing 5 is formed with an internal flange 8 which overlies a shoulder 9 formed on one end of an inner barrel 10, said inner barrel having a close working fit in the outer casing 5.

The end of the inner barrel adjacent the shoulder 9 is dome-shaped as shown at 11 and projects outwardly beyond the adjacent end of the outer casing.

The other end of the inner barrel bears against a soft rubber ring 12 seated on the end of the valve stem and a perforated disk 13 is fixedly secured in the inner barrel at its end adjacent said ring and is formed with a lug 14 adapted to engage the valve 7 when the dome 11 is depressed. The ring 12 is sufficiently elastic to normally separate the lug from the valve.

A plunger 15 has a working fit in the inner barrel 10 and is normally held adjacent the disk 13 by a coil spring 16 having its ends bearing respectively against the inner side of the dome 11 and the plunger 15. A sectional telescoping rod 17 extends through the spring to support

the latter, one end of the rod being reduced and inserted through the plunger and the other end of the rod bearing against the dome.

The outer casing 5 and inner barrel 10 are formed of transparent plastic material and the inner barrel 10 on its outer surface is formed with a scale 18 indicating air pressure in pounds.

In the operation of the gauge, the dome 11 is depressed sufficiently to open the valve 7 and thus admit air from the tire into the inner barrel 10 against the bottom of the plunger 15. The pressure of air acting on the plunger will raise the latter in the inner barrel against the pressure of the spring 16 to register the air pressure on the scale. The spring 16 will return the plunger to its normal position upon release of the dome 11.

It is believed the details of construction, advantages and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having described the invention what I claim as new is:

1. A tire gauge comprising an outer barrel adapted for attaching to a tire valve stem, an inner barrel having a sliding fit in the outer barrel, one end of the inner barrel being closed and projecting from one end of the outer barrel for depressing the inner barrel, a valve actuating member carried by the inner barrel for opening the tire valve upon a depressing movement of the inner barrel, said inner barrel having communication with the valve stem, one of said barrels having a pressure indicating scale thereon, and a spring biased plunger mounted in the inner barrel in cooperating relation with the scale and responsive to air pressure entering the latter for actuating the plunger, said barrels being transparent to view the position of the plunger relative to the scale.

2. A tire gauge comprising a pair of transparent barrels one working within the other, the outermost barrel being adapted for attaching to a tire valve stem and the innermost barrel having means adapted for engaging the valve of a tire to open the valve upon a depressing movement of said inner barrel, said inner barrel being closed at one end and having communication with the valve stem at its other end to admit air from the stem into the inner barrel, one of said barrels having a scale thereon and spring biased air pressure responsive means in the inner barrel and cooperating with the scale to indicate pressure of air therein.

3. A tire gauge comprising a pair of transpar-

ent barrels one working within the other, the outermost barrel being adapted for attaching at one end to a tire valve stem and the innermost barrel having means adapted for engaging the valve of a tire to open the valve upon a depressing movement of said inner barrel, resilient means between the valve stem and the inner barrel to urge the latter out of valve engaging position, one end of said inner barrel being closed and the other end of the inner barrel having

communication with the valve stem, a shoulder on the inner barrel at its closed end, an intumed flange on the free end of the outer barrel overlying the shoulder to limit outward movement of the inner barrel, one of said barrels having a scale thereon and spring biased air pressure responsive means in the inner barrel and cooperating with the scale to indicate pressure of air therein.

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