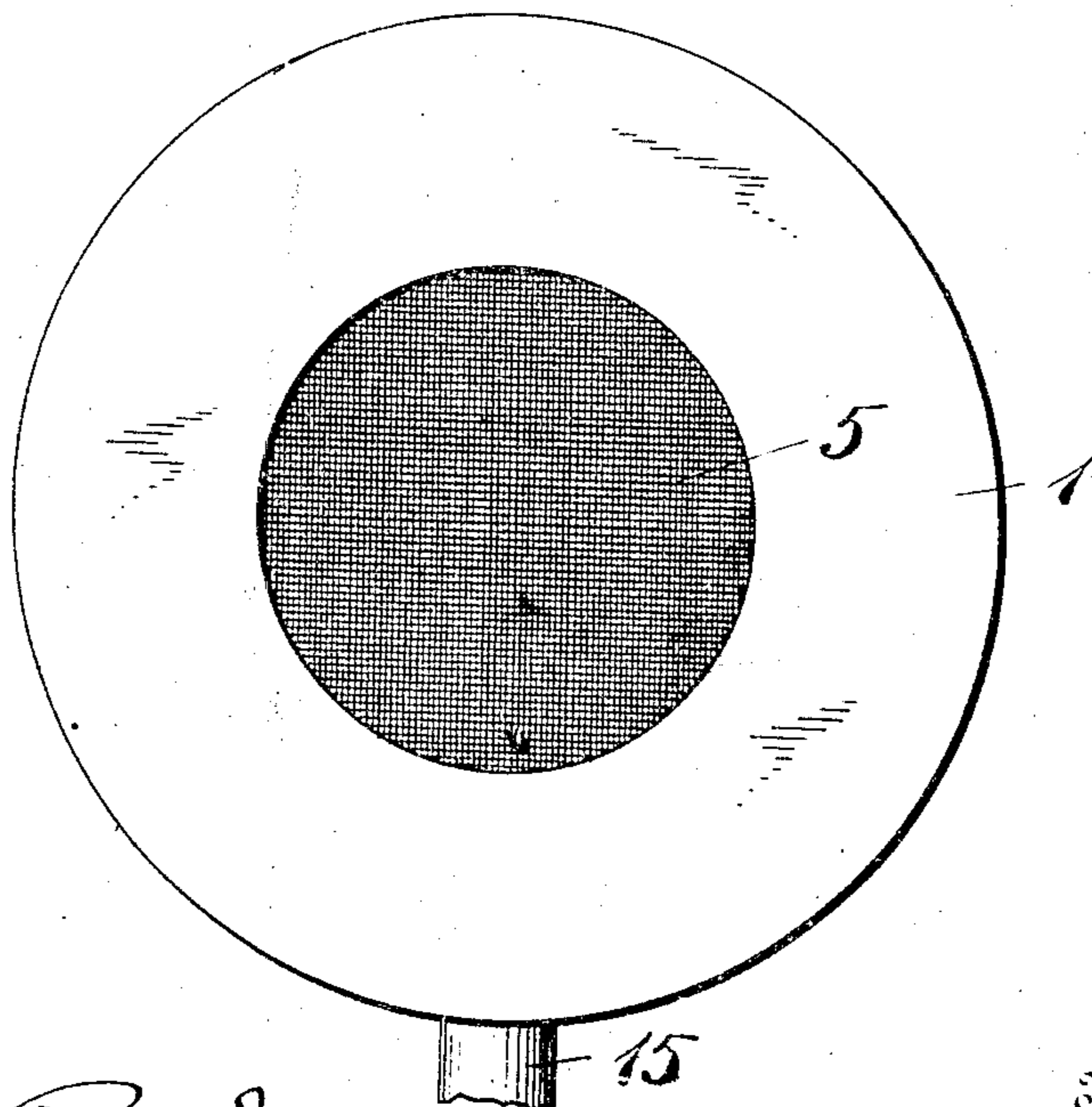
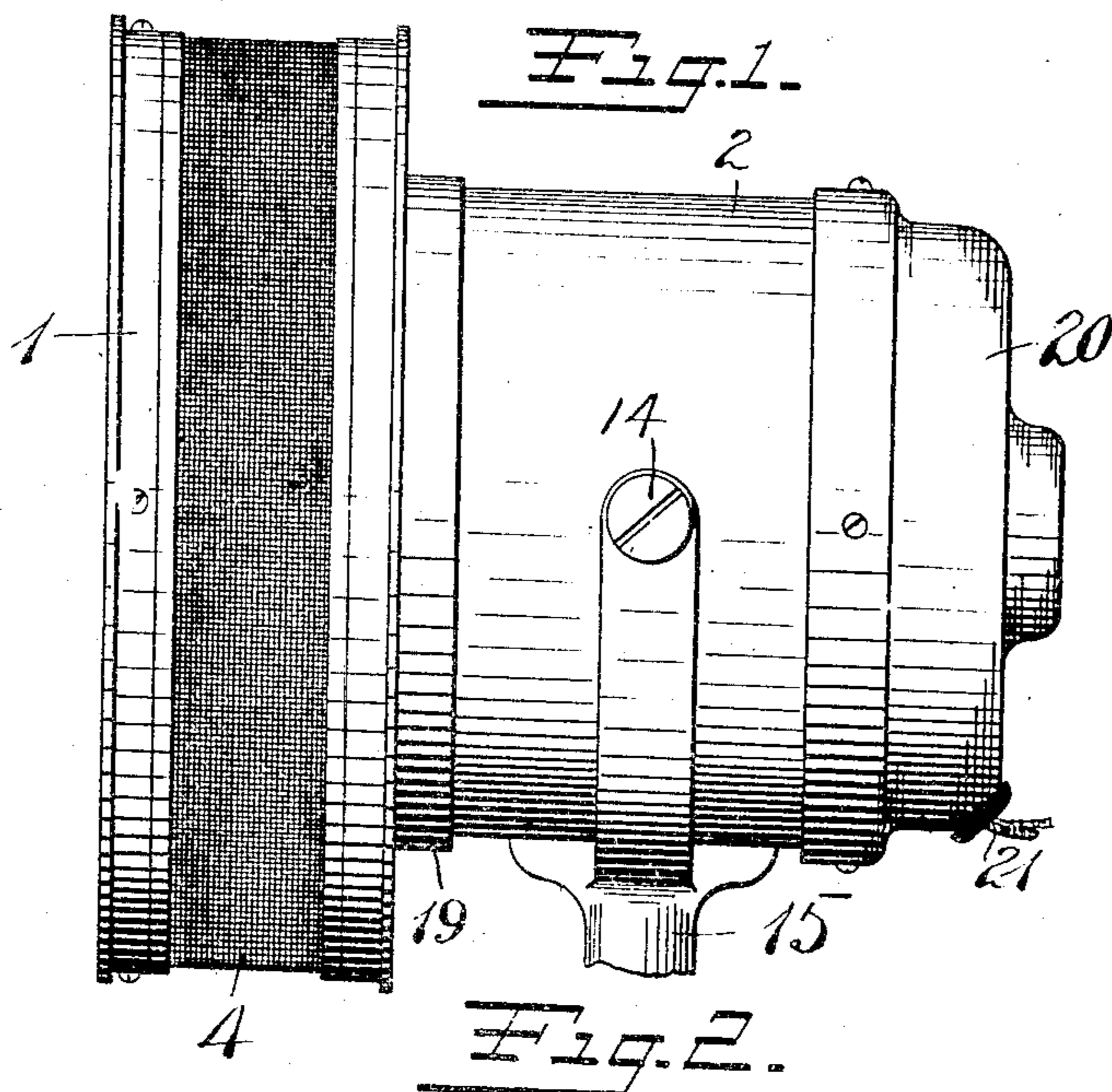


No. 894,321.

PATENTED JULY 28, 1908.

J. GORDON, JR.
ALARM WHISTLE.
APPLICATION FILED NOV. 26, 1907.

2 SHEETS—SHEET 1.



Witnesses:
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2 SHEETS—SHEET 2.

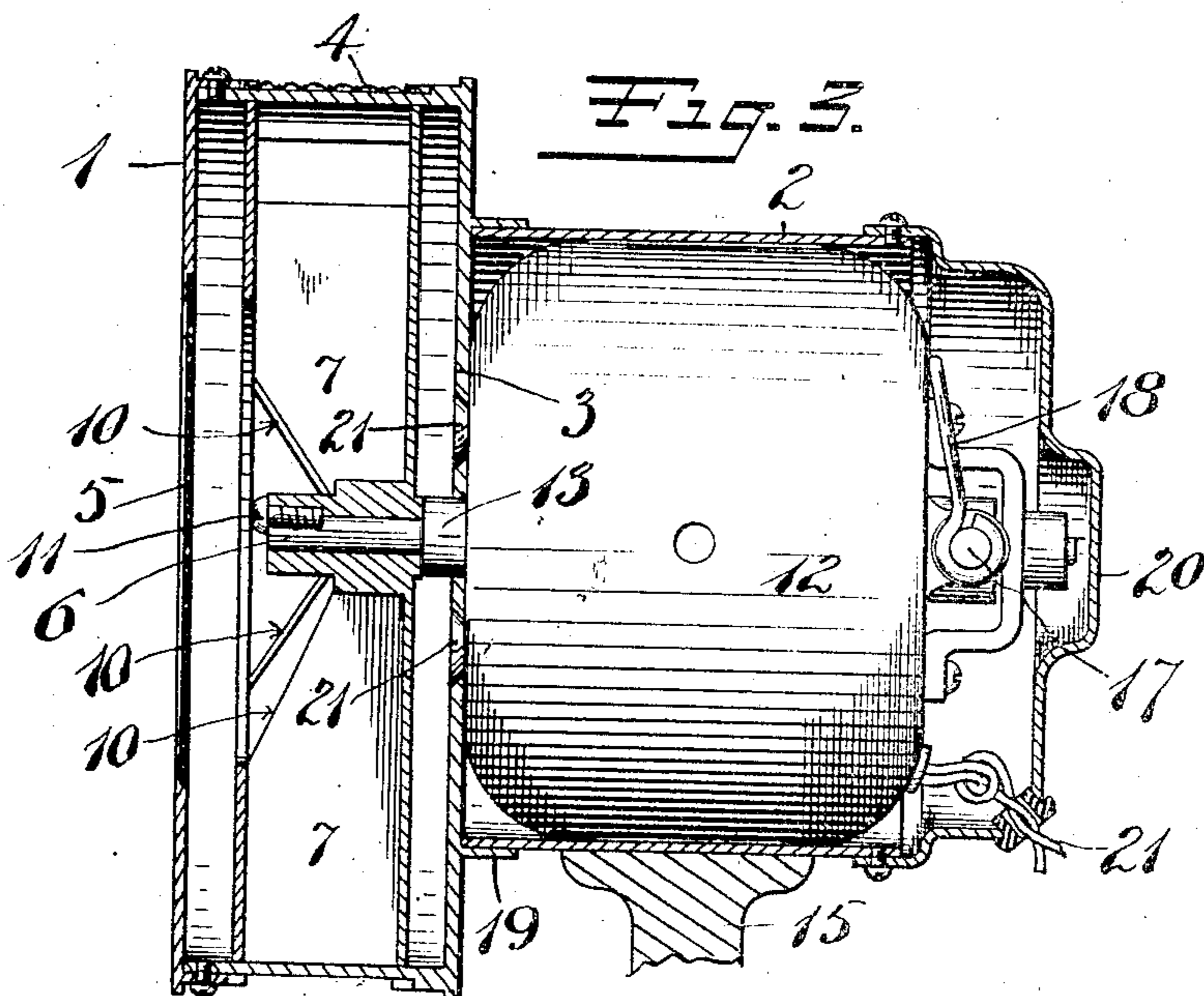


Fig. 3.

Fig. 4.

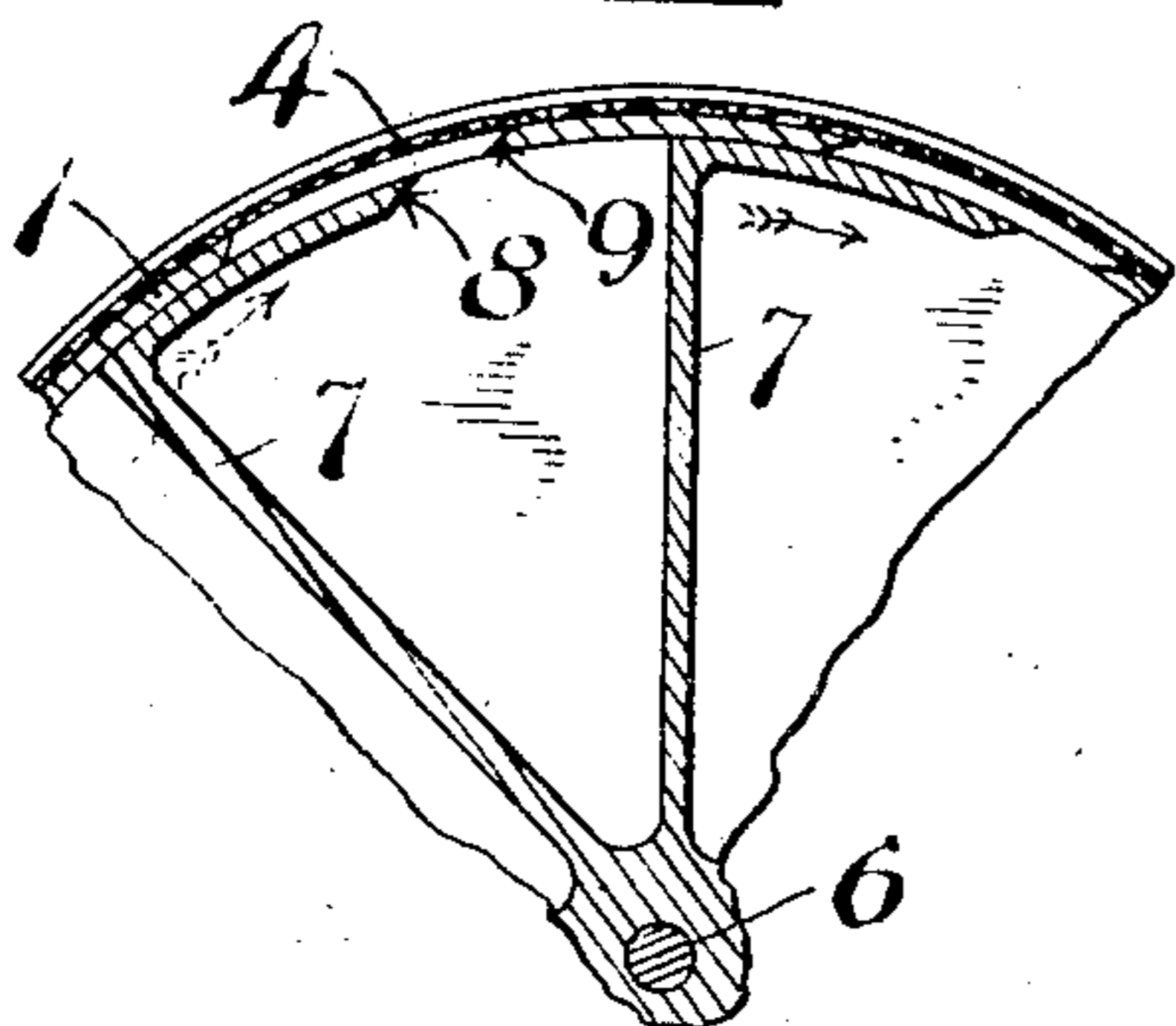
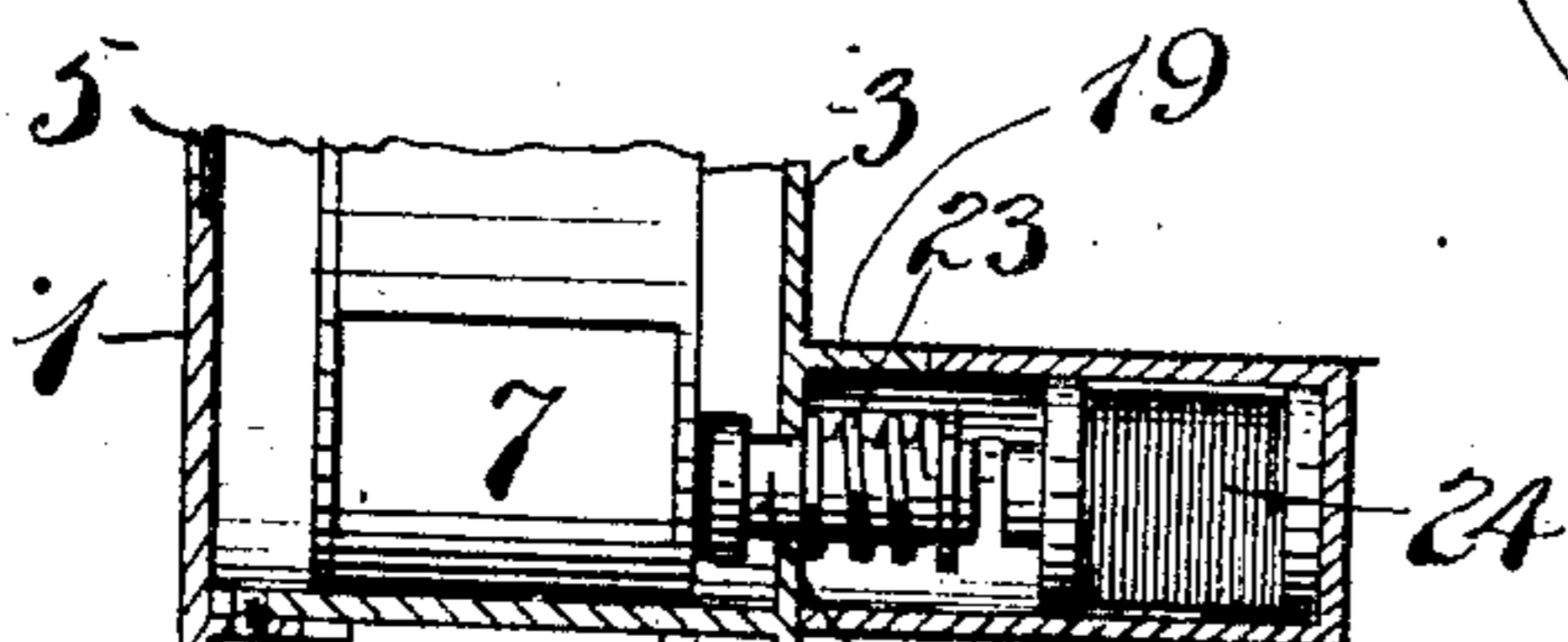
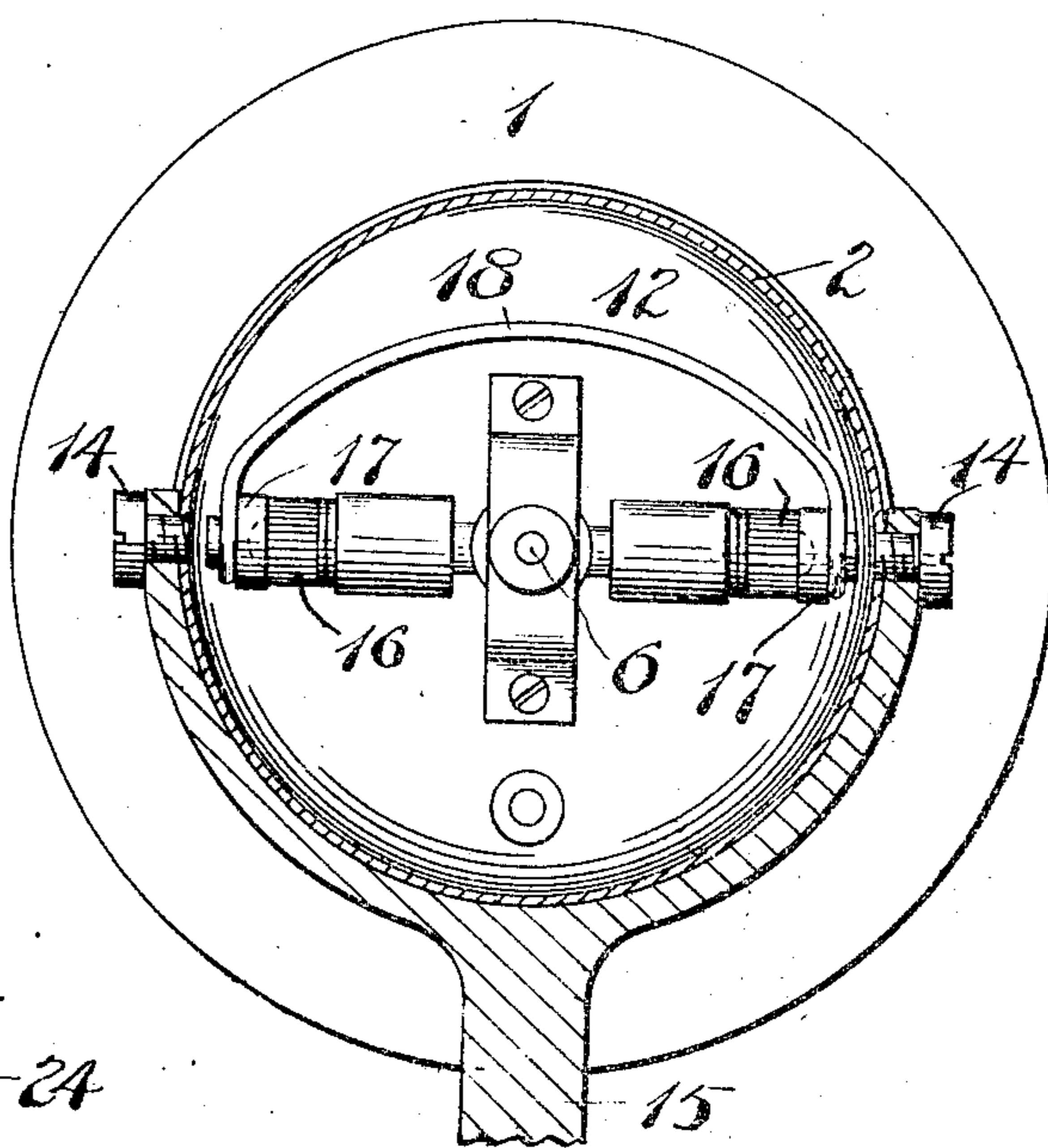


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN GORDON, JR., OF NEW ROCHELLE, NEW YORK.

ALARM-WHISTLE.

No. 894,821.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed November 26, 1907. Serial No. 492,893.

To all whom it may concern:

Be it known that I, JOHN GORDON, JR., a citizen of the United States, residing at New Rochelle, Westchester county, New York, have invented certain new and useful Improvements in Alarm-Whistles, of which the following is a full, clear, and exact description.

My invention relates to improvements in mechanical alarm whistles.

The object of the invention is to furnish an alarm device which may be conveniently used in any connection where an alarm is necessary, for example, on an automobile or vessel.

Several advantages are gained by my improved construction, among which are compactness, economy of space occupied, and protection from the elements of such parts as require such protection. The construction of the whistle proper is improved in several details, and in the preferred form I may employ braking mechanism whereby the whistle will be more perfectly under control.

Other advantages will be apparent from a reading of the following description.

In the drawings, Figure 1 is a side elevation of my invention; Fig. 2 is a front elevation; Fig. 3 is a longitudinal section, partly in elevation; Fig. 4 is a section through the bracket, showing certain parts in rear end elevation; Fig. 5 is a detail view mainly in section; Fig. 6 is a similar view of another detail.

The apparatus is held in a casing which is divided by a dust and moisture proof partition to form two sectional chambers, one of which I will term the whistle or siren section, indicated at 1, and the other a motor section, indicated at 2.

3 is the dust and moisture proof partition between said chambers, the same being best seen in Fig. 3. The peripheral wall of the section 1 is provided with air outlet ports, while the front wall thereof is provided with an air inlet port. The outlet ports are protected by a ring of wire gauze 4, while the air admission port in front is protected by a wire gauze disk 5. Inside of the casing 1 is the turbine, which is mounted upon a central shaft 6. This turbine may be constructed after any approved manner, but in its preferable construction comprises a circular casing having a central air opening in front. 7-7 are radial partitions therein. In the peripheral wall of the casing and between each pair of partitions is an outlet port (see Fig. 5).

The turbine rotates in the direction of the arrow (Fig. 5) and the rear edge of each opening in the periphery thereof is beveled or sharpened, as indicated at 8. The opposite edge of each peripheral opening in the section 1 is also beveled, as indicated at 9 (Fig. 5), so that the two edges 8 and 9 will coact to sharply cut off any air escaping through the ports when the turbine is rotated sufficiently far to bring said edges into juxtaposition. The forward edge of each radial partition 7 at the central air opening is cut back, as indicated at 10 (Fig. 3), since by this arrangement superior results are obtained.

11 is a screw acting as a key to lock the hub of the turbine on shaft 6.

12 is an electric motor mounted in chamber 2, said shaft 6 being said motor shaft. The shaft 6 projects through the partition wall 3 and has a suitable bearing therein.

13 is a combined bearing and spacer washer to give the proper offset of the turbine from the partition 3. The motor is secured in any desired way, but preferably by means of screws 14-14, which pass through the external wall of the section 2, which screws also preferably pass through the bifurcated arms of a bracket 15, so that said screws will at once perform the function of holding the motor 12, section 2 and bracket 15. The bracket may, of course, be of any desired design, so long as it will properly support the mechanism.

16-16 represent brush holders adapted to the motor.

17-17 are washers or caps of insulating material mounted, one on each brush holder, both caps 17 being held by a single bow spring 18. This spring may have two eyes formed at opposite ends which overstand the central projections on caps 17-17, so as to steady the brush holders 16.

19 is a flange, preferably on section 1, and designed to make a cover fit with the section 2. By providing means of disconnection at this point, the parts 1 and 2 may be readily separated to gain access to the motor. Other fastening screws may be employed to connect said parts. At the rear of section 2 is a cap-like cover 20 adapted to overstand the rear end of the motor.

21 represents circuit wires leading in through cover 20 in making proper connection with the motor 12.

The battery and circuit closer are not shown, since any suitable form of generator

may be employed, as well as circuit-closing mechanism.

As shown in Fig. 6, a braking mechanism is preferably employed, the same comprising a plunger 22 suitably mounted in the case, with its forward end arranged to press against some part of the turbine, so as to frictionally check the rotation of the same when it is desired to stop the alarm. 23 is a spring normally operating to press the plunger 22 into a position to check the turbine. 24 is an electro magnet. This magnet is suitably connected in circuit with the motor 12, with the result that when the circuit through the motor is closed, it will also be closed through the magnet 24 and the plunger 22 will be withdrawn to release the turbine at the instant the motor 12 starts to rotate. It is by the rapid rotation of the turbine and the quick cutting off of the escaping air at the peripheral openings that produces the sound or whistle. The instant the circuit is broken through the motor 12, it is like-wise broken through the magnet 24; whereupon the plunger 22 is forced ahead and the turbine, instead of being permitted to come slowly to rest, is brought quickly to a standstill, checking the alarm in a very short space of time, a feature of substantial importance.

The size of the opening in the central forward part of the section 1 corresponds by preference substantially to the size of the central air opening at the front of the turbine. The section 1 may be secured to section 2 in any well known manner, but preferably by screws 26 which pass directly through the dust and moisture proof partition 3, thus rigidly clamping the parts 1, 2 and 12 together, for, as will be seen, if the part 1 is secured to motor 12, it follows that it will be secured with equal firmness to the section 2, because the section 2 and motor 12 are rigidly connected by the transverse screws 14. By this arrangement great strength and rigidity is imparted to the structure, which is of material advantage, because, to get the most successful results, there should be no looseness between the parts, otherwise the efficiency of the turbine would be materially reduced.

The alarm may be applied wherever a source of electricity is available, such as, for example, a battery. The means of control may be placed at any point remote from the alarm itself, for example, in an automobile the alarm may be placed on the front, while the circuit closer may be located on the

steering handle. In a vessel the alarm can be placed outside, while the controlling means may be located in the pilot house or other shelter. All flexible connections between the operating parts are avoided, so that wear and breakage are reduced to a minimum. By the arrangement shown great compactness is afforded, for in a very small space both the motor and sound producer may be inclosed.

It is of great importance to have an effective partition, such as 3, because in practice the turbine chamber 1 is exposed to the elements, and were it not that an effective dust and moisture proof partition is arranged between the turbine chamber and the motor chamber, the motor would in a very short time become injured or completely disabled. The frame of the motor is preferably cylindrical in outline, and the wall of the section 2 is preferably of such a diameter as to fit snugly thereon, so that said parts will mutually reinforce and support one another.

What I claim is:

1. In an alarm of the character described, a unitary casing including a turbine section, a motor section and a dust-proof partition separating the same.
2. In an alarm of the character described, a unitary casing including a turbine section, a motor section, a dust-proof partition separating the same, a motor, a motor shaft penetrating said partition centrally, and the turbine carried thereon at the opposite side of said partition from said motor.
3. In an alarm of the character described, a unitary casing including a turbine section, a motor section, a partition separating the same; a motor, a motor shaft penetrating said partition centrally, a turbine carried thereon and on the opposite side of said partition from said motor, a fastening means to secure said parts together comprising side connections between one part of said casing and the frame of said motor, and end connections between the partition and the end of said motor.
4. In an alarm of the character described, a unitary casing, a motor therein, a bracket, a single means for tying together the bracket, casing and motor at one point, a whistle driven by the motor, and a partition between said whistle and motor.

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Witnesses:

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