

No. 677,374.

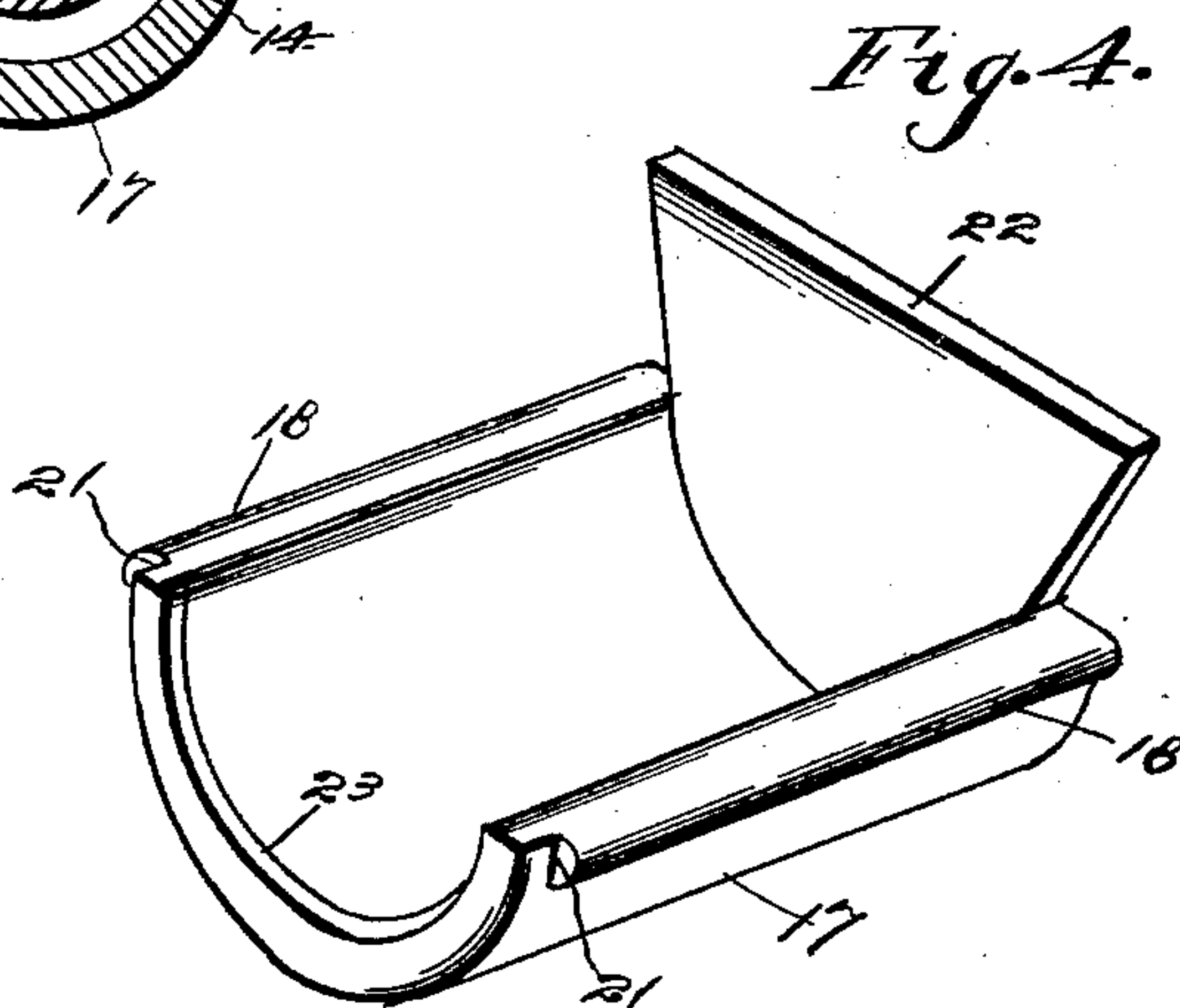
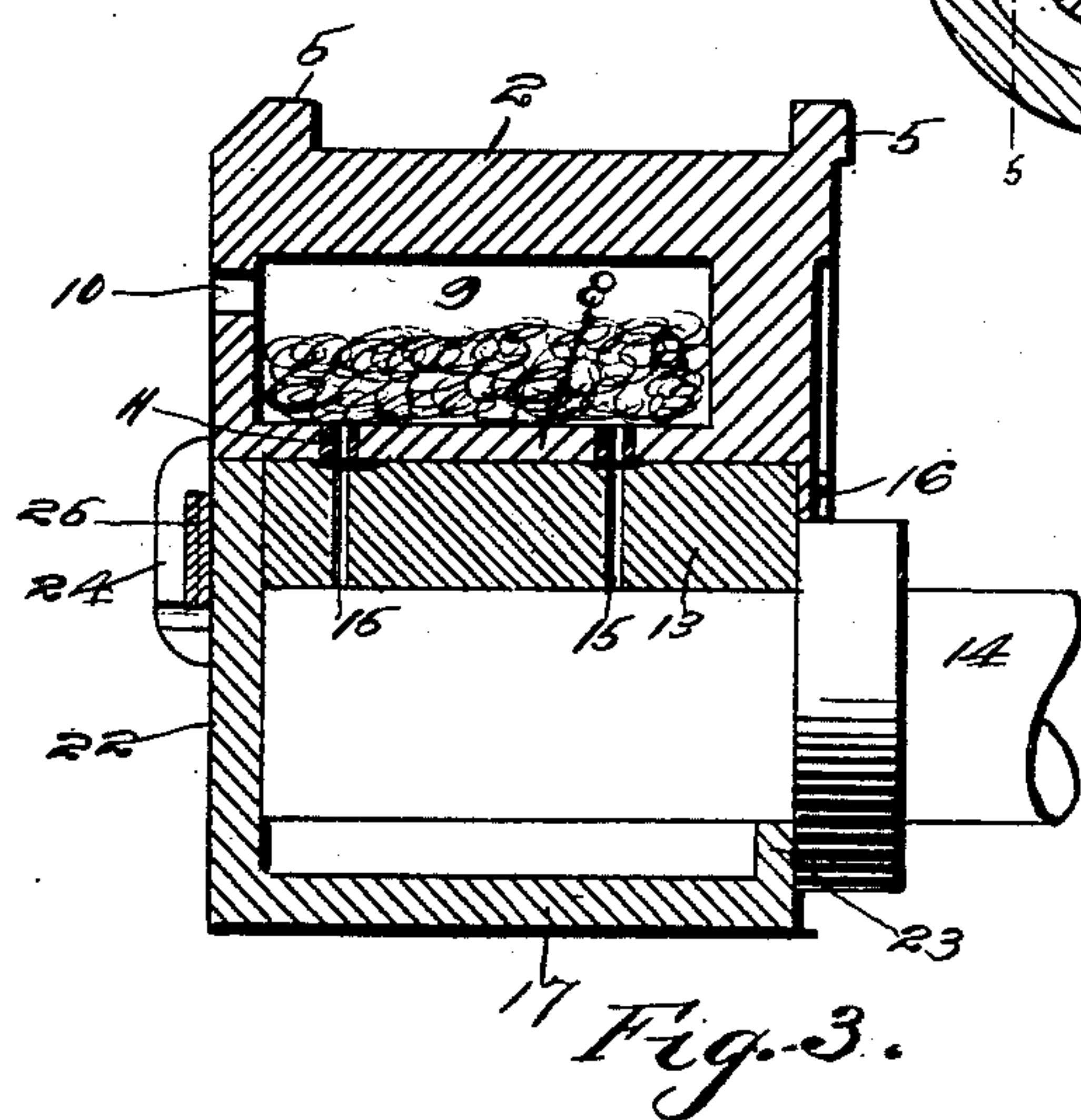
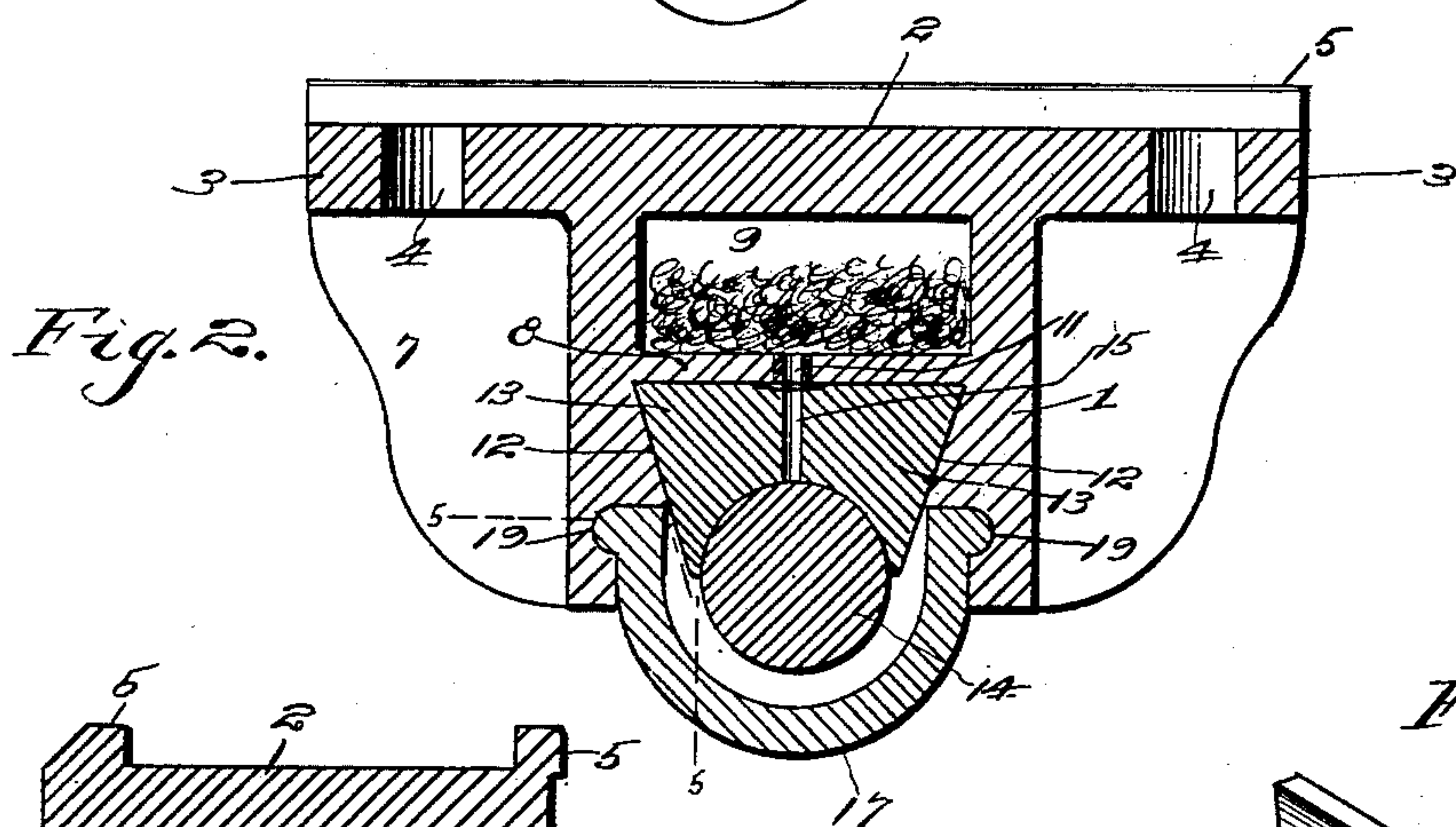
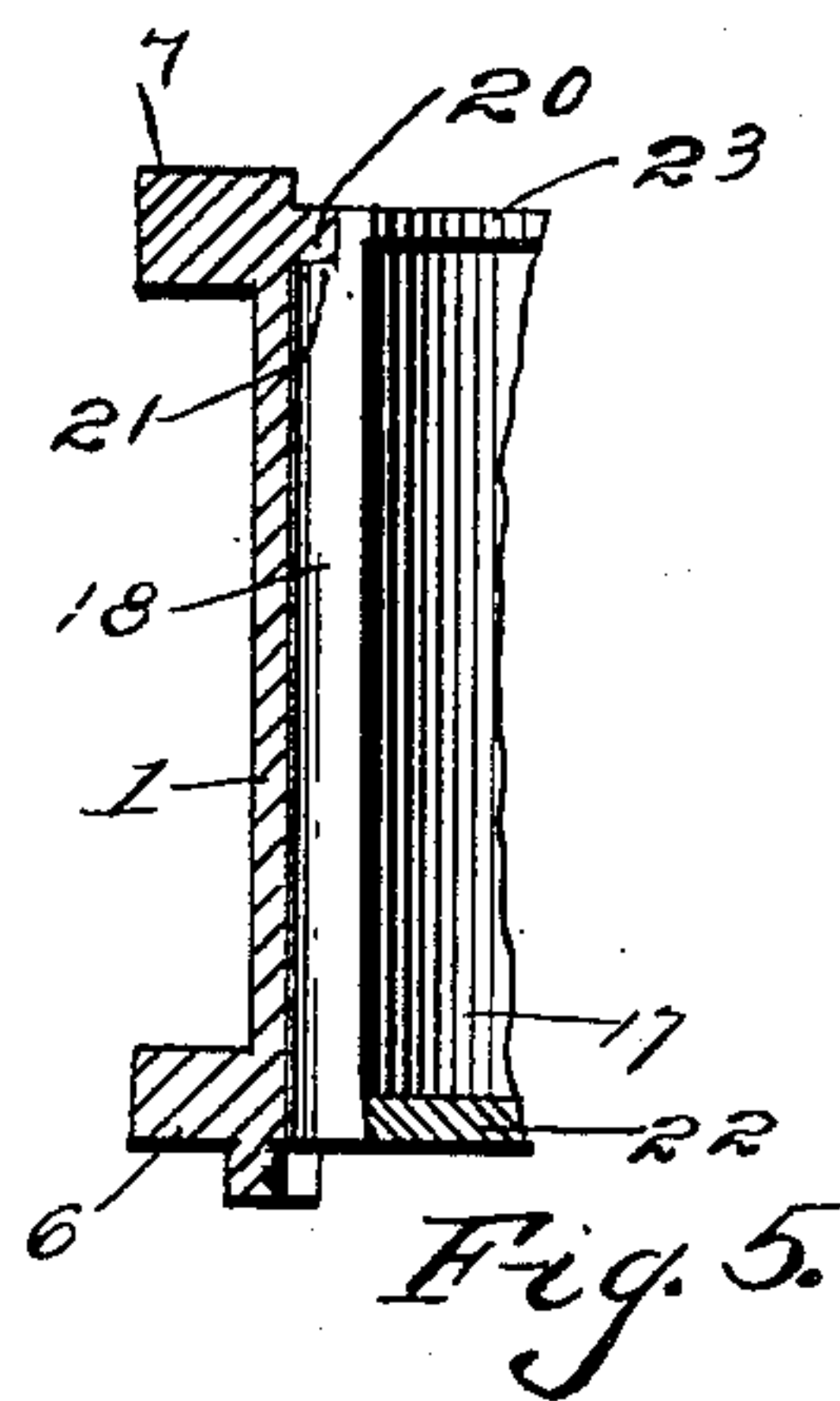
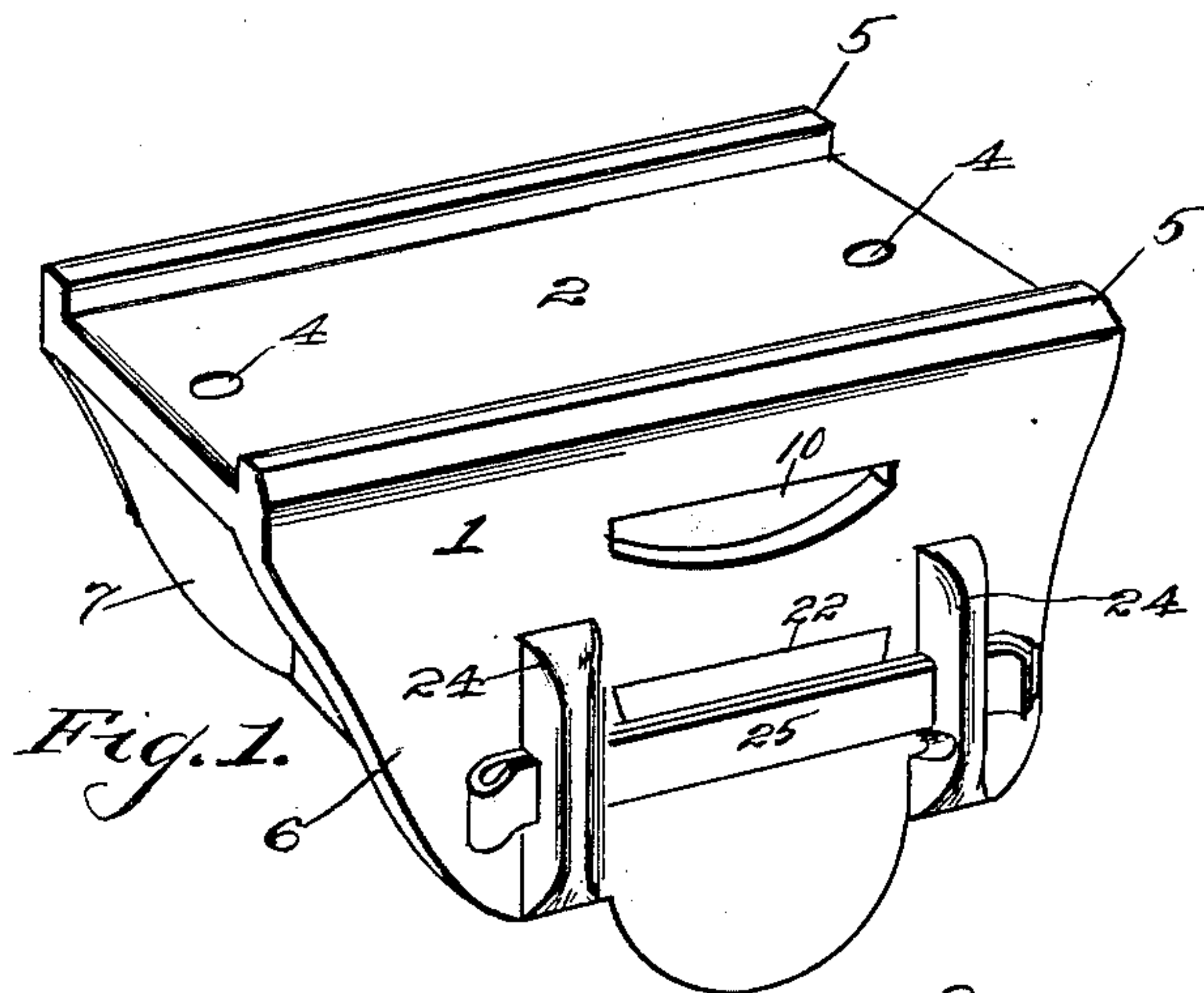
Patented July 2, 1901.

S. & S. J. REYNOLDS.

JOURNAL BOX.

(Application filed Feb. 25, 1901.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL REYNOLDS AND SAMUEL JOHN REYNOLDS, OF PLYMOUTH,
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JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 677,374, dated July 2, 1901.

Application filed February 25, 1901. Serial No. 48,829. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL REYNOLDS and SAMUEL JOHN REYNOLDS, citizens of the United States, residing at Plymouth, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Journal-Box, of which the following is a specification.

This invention relates to journal-boxes, and has for its object to provide an improved device of this character for use in connection with the axles of cars, so as to be readily secured to the bottoms of cars, and also arranged for the convenient replacing of the bearing-block or brass which comes in contact with the axle. It is furthermore designed to arrange for the convenient application of a lubricant to the interior of the box and to effectively feed the lubricant to the bearing, the surplus lubricant being caught and retained, so as to be taken up by the revolving axle and applied to the bearing, thereby insuring the use of all of the lubricant.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of the improved journal-box. Fig. 2 is a central transverse sectional view thereof. Fig. 3 is a central longitudinal sectional view. Fig. 4 is a detail perspective view of the combined oil and brass retainer. Fig. 5 is a detail sectional view taken on the line 5 5 of Fig. 2.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, 1 designates the body of the box, which is substantially rectangular in shape and is open throughout its bottom and the lower portions of its front and rear sides. The top 2 of the box is flat and is projected in opposite directions at the closed sides of the box, so as to form the

flanges 3, that are provided with the bolt-openings 4, whereby the box is to be bolted to a car-truck. At the opposite longitudinal edges of the top of the box are the respective longitudinal upstanding ribs or ledges 5 to snugly embrace the beam to which the box may be applied. The front and rear sides of the box are extended in opposite directions, respectively, so as to form the respective wings 6 and 7, which form braces for the top flanges.

The interior of the box is divided into a top and a bottom section by means of a transverse partition 8, the upper chamber 9 forming an oil-reservoir which is reached through a slot or opening 10, formed in the front of the box. Suitable packing or waste is placed in the oil-chamber to absorb the oil, and thereby prevent the same from running directly to the bearing. Perforations 11 are formed through the partition 8 or bottom of the oil-chamber to permit of the oil escaping to the journal-bearing, which is beneath the oil-chamber.

As best shown in Fig. 2 of the drawings, the opposite sides of the upper portion of the lower chamber are inclined inwardly and downwardly in opposite directions, as at 12, so as to form a dovetailed groove for the removable reception of a dovetail-shaped bearing-block or brass 13, which is inserted through the outer open end of the groove. The lower side of this block or brass is concaved so as to fit upon the top of the axle 14, inserted through the inner open side of the box, and through the top of the brass there is provided a plurality of perforations 15, corresponding to the perforations in the bottom of the oil-chamber, so as to conduct the oil to the top of the axle, and thereby lubricate the bearing-surfaces of the axle and the brass. As shown in Fig. 3, there is a pendent stop-shoulder 16 at the inner end of the dovetailed groove, or, in other words, at the top of the inner open side of the box, so as to limit the inward movement of the brass and stop the same at the proper point.

To close the open bottom of the box, there is provided a hollow slide 17, preferably of semitubular shape and provided with the outwardly-directed longitudinal flanges 18 at

the upper open side of the slide, which are received within corresponding grooves 19, formed in the sides of the axle-chamber and at the lower edges of the inclined portions of said sides. As shown in Fig. 5, the inner end of each groove terminates short of the inner side of the box in a stop-shoulder 20, and each flange of the slide also terminates short of the inner end of the slide, as at 21, to form a shoulder for engagement with the shoulder 20, and thereby stop the inward movement of the slide. The outer end of the slide is provided with a transverse plate or end piece 22, that rises above the top of the slide, so as to cover the outer end of the axle and also lie against the outer end of the brass or bearing-block, as shown in Fig. 3. At the inner end of the slide there is provided an upstanding flange 23, conforming to the curvature of the slide and designed to fit the under side of the axle, so as to prevent the escape of the surplus oil which is collected in the bottom of the hollow slide.

To prevent accidental displacement of the slide, the vertical slotted ribs or projections 24 are provided upon the front face of the box and at opposite sides of the opening therein for the reception of a transverse fastening device 25, which is thrust through the slots of the ribs and transversely across the outer end of the slide, the ends of the device being laterally bent to prevent endwise displacement thereof. Preferably this fastening is formed from a flat metal strap doubled upon itself, so as to form spring members, which tightly hug the walls of the slots, and thereby prevent looseness of the fastening.

From the foregoing description it will be apparent that the slide 17 forms a brass-retainer and an oil-collector and may be readily removed for the purpose of replacing the brass when worn. Moreover, the lubricant may be conveniently applied to the box, and the parts of the device are few in number, there being no complicated arrangement of parts, whereby the box may be cleaned and repaired in a convenient manner.

What is claimed is—

1. A journal-box, which is open at its bottom and the lower portions of opposite sides, there being a partition dividing the interior of the box into an upper oil-chamber and a bottom journal-receiving chamber, which are in mutual communication, a removable bottom closing the open lower side of the box, and having an upwardly-directed terminal projection closing the adjacent open side of the box, and a bearing-block removably inserted into the lower chamber.

2. A journal-box, having an open bottom and opposite open lower side portions, an intermediate horizontal partition dividing the interior of the box into an upper oil-chamber and a lower journal-receiving chamber, the walls of the latter being provided with pairs of upper and lower grooves a bearing-block removably inserted into the upper pair

of grooves and through one open side of the box, and a removable bottom inserted into the lower grooves from the same open side of the box, and having an upwardly-directed projection closing said open side of the box and retaining the bearing-block in place.

3. A journal-box, having an intermediate horizontal partition dividing the interior of the box into an upper oil-chamber, and a lower journal-receiving chamber, there being perforations formed in the partition, the lower chamber having an open bottom and open sides at opposite ends of the open bottom, there being corresponding inwardly and downwardly inclined opposite wall portions in the lower chamber forming an upper dovetailed groove, and corresponding grooves formed below the lower edges of the inclined wall portions, a dovetailed bearing-block removably inserted into the dovetailed groove through one open side of the chamber, and having a concaved under side for the reception of an axle, and a concaved bottom removably inserted into the lower grooves, and having an upwardly-directed terminal plate or projection closing one end of the chamber and both grooves.

4. A journal-box, having an upper oil-chamber, and a lower journal-receiving chamber, which are in mutual communication, the lower chamber being open at opposite ends, and at the bottom thereof, the inner walls of the lower chamber having pairs of upper and lower grooves formed therein, a bearing-block inserted removably into the upper grooves, and a removable bottom inserted into the lower grooves.

5. A journal-box, having an upper oil-chamber, and a lower journal-receiving chamber, which is open at its bottom and at opposite ends, there being perforations formed through the wall between the two chambers, one side of the box having an opening communicating with the upper chamber, the upper portions of opposite inner walls of the lower chamber being inclined inwardly in opposite directions and downwardly to form a dovetailed groove, there being other corresponding grooves formed below the dovetailed groove, a dovetailed bearing-block removably fitted into the dovetailed groove, and having perforations registering with those of the box, a removable concaved bottom having opposite outwardly-directed longitudinal flanges received within the respective lower grooves, and provided with an outer terminal upstanding end piece which closes the adjacent open end of the box, and means for fastening the bottom against accidental displacement.

6. A journal-box, having an upper oil-chamber, and a lower journal-chamber, which is open at opposite ends the two chambers being in mutual communication, perforate projections upon the outer side of the box and at opposite sides of one open end thereof, a removable bearing-block fitted in the jour-

nal-chamber, and a transverse key or fasten-
ing removably passed through the perforate
projections and extending transversely across
the adjacent open end of the box and also
5 across the bearing-block.

7. A journal-box, having an upper oil-
chamber, a lower journal-chamber which is
open throughout its bottom and also at oppo-
site ends, there being perforations formed
10 through the division-wall between the two
chambers, a removable bearing-block fitted
in the upper portion of the lower chamber, a
removable bottom for said chamber, and hav-
ing a terminal plate or end piece rising across

the outer end of the bearing-block, there be- 15
ing perforate projections upon the outer side
of the box and at opposite sides of the bottom
end plate, and a key or fastening passed
through the perforate projections and lying
across the outer side of said bottom end plate. 20

In testimony that we claim the foregoing as
our own we have hereto affixed our signatures
in the presence of two witnesses.

SAMUEL REYNOLDS.

SAMUEL JOHN REYNOLDS.

Witnesses:

JOHN SHEER,

WILLIAM HOOPER.