

No. 614,444.

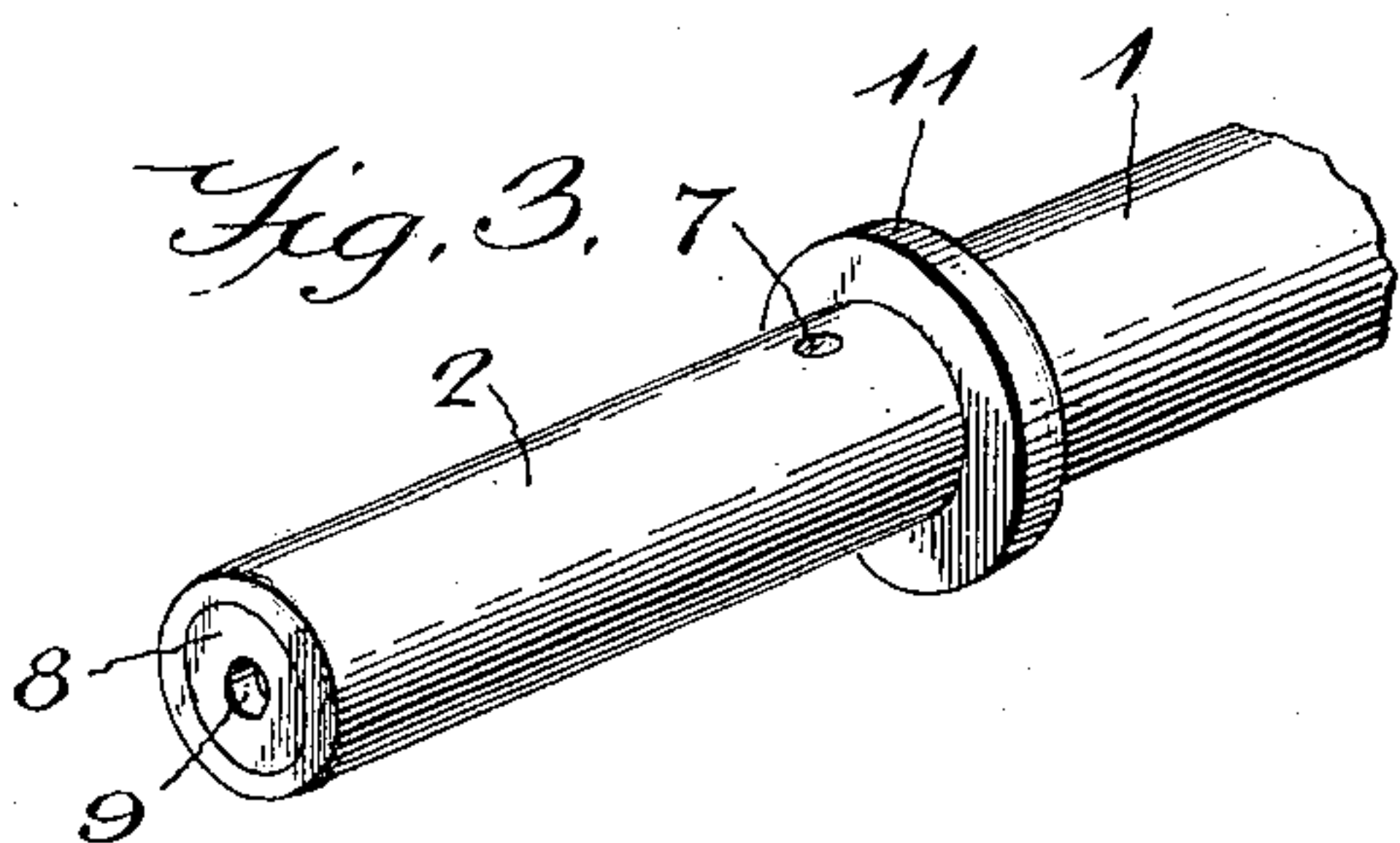
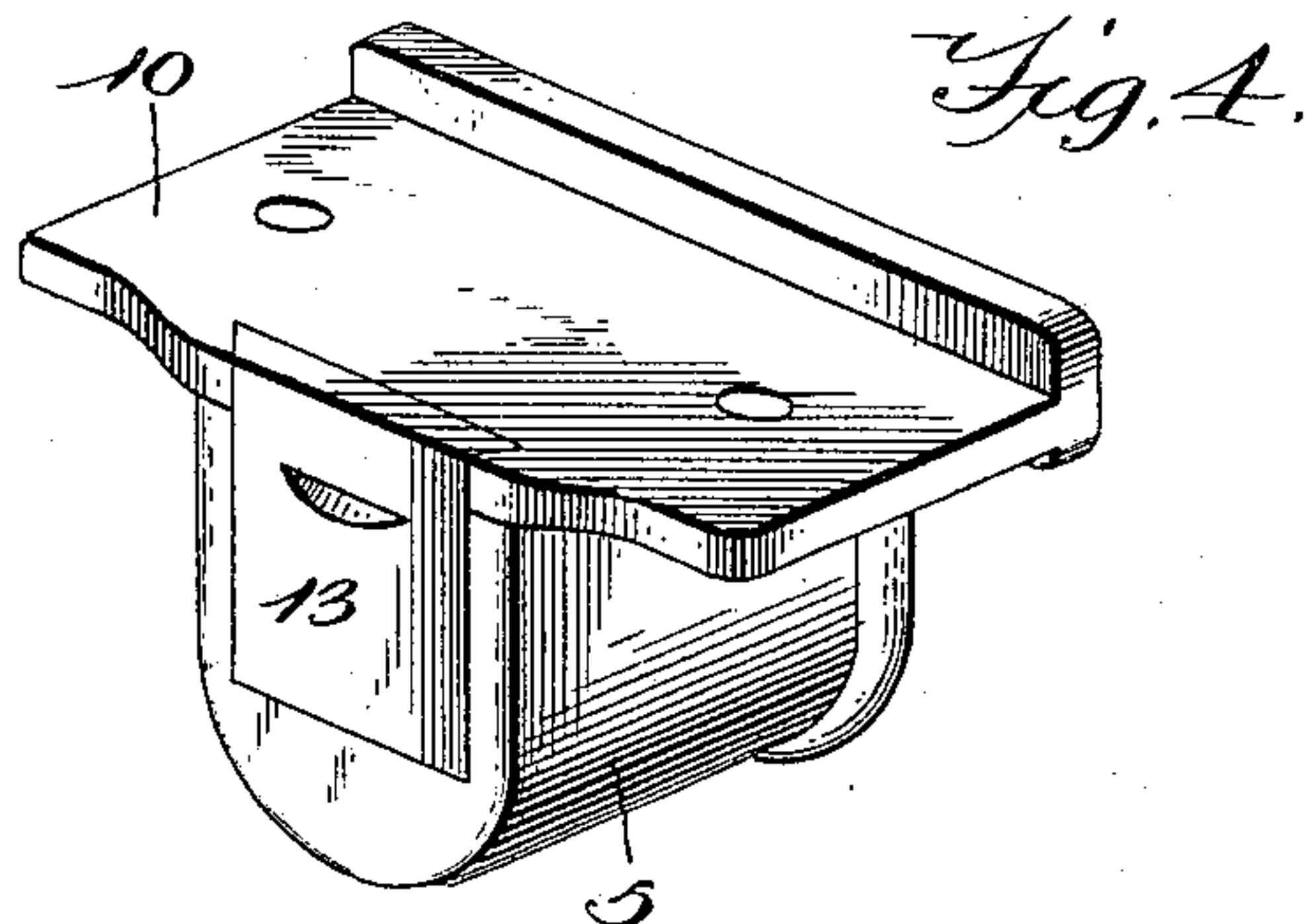
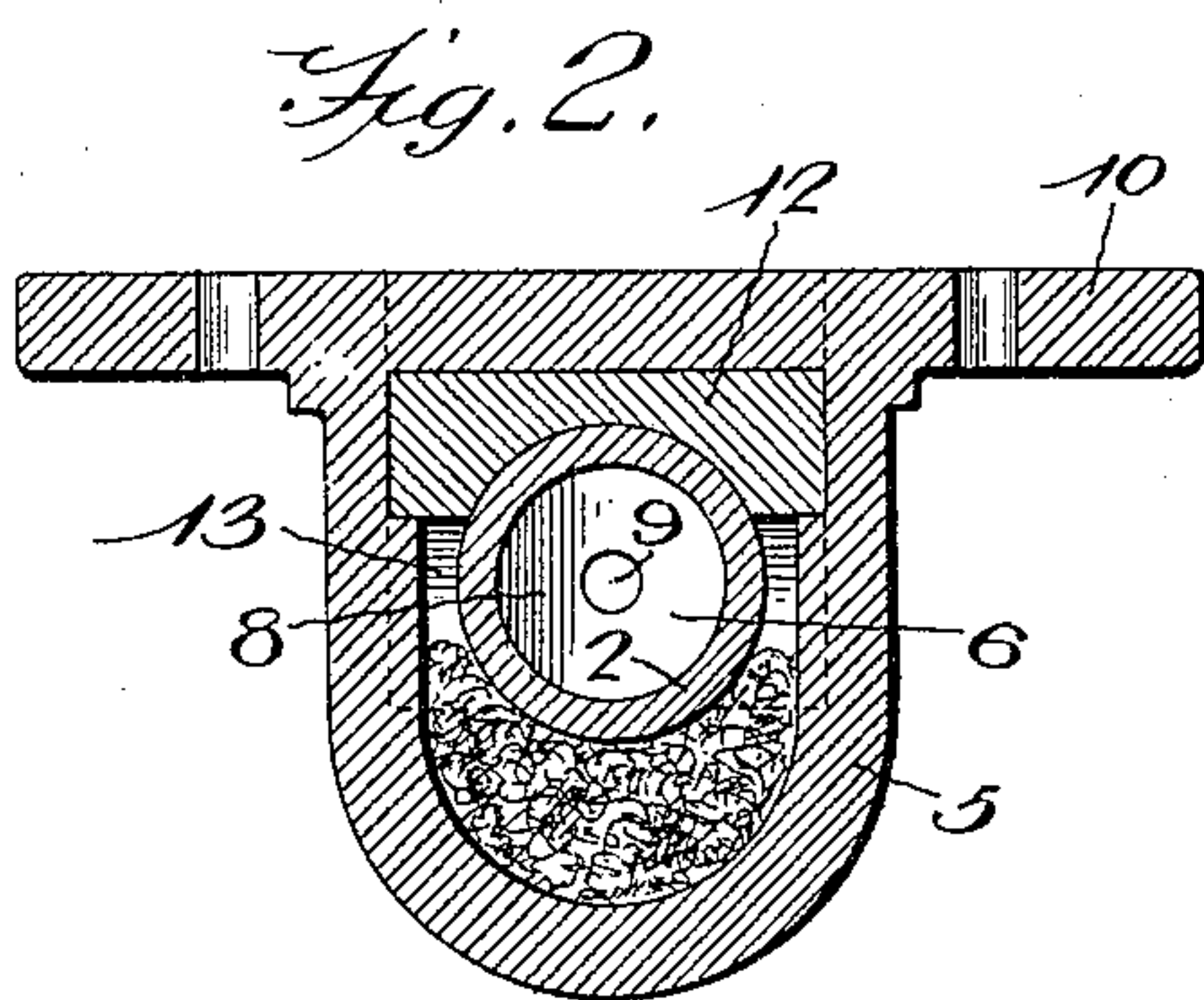
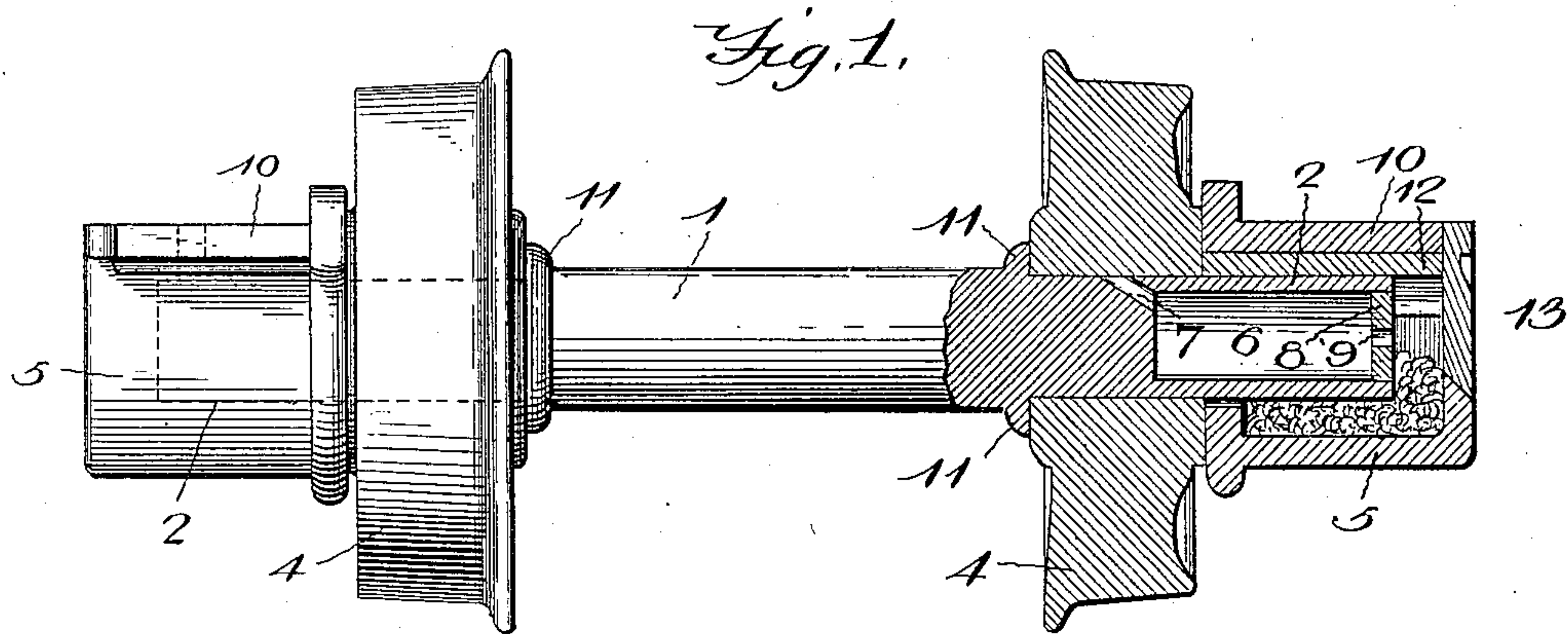
Patented Nov. 22, 1898.

A. CONWELL, Z. H. TINKLEPAUGH & P. SHERDAN.

MINE CAR AXLE.

(Application filed Feb. 28, 1898.)

(No Model.)



Witnesses

Gauleverwell,

H. F. Riley

By their Attorneys,

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*Anthony Conwell,
Ziba H. Tinklepaugh and
Phillip Sheridan, Inventors.*

UNITED STATES PATENT OFFICE.

ANTHONY CONWELL, ZIBA H. TINKLEPAUGH, AND PHILLIP SHERDAN, OF
PECKVILLE, PENNSYLVANIA.

MINE-CAR AXLE.

SPECIFICATION forming part of Letters Patent No. 614,444, dated November 22, 1898.

Application filed February 28, 1898. Serial No. 672,072. (No model.)

To all whom it may concern:

Be it known that we, ANTHONY CONWELL, ZIBA H. TINKLEPAUGH, and PHILLIP SHERDAN, citizens of the United States, residing at Peckville, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Mine-Car Axle, of which the following is a specification.

The invention relates to improvements in mine-car axles.

The object of the present invention is to improve the construction of mine-car axles and to enable them to be conveniently and thoroughly lubricated without loss of the lubricant.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation, partly in section, of a mine-car axle and box constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a perspective view of one end of the axle. Fig. 4 is a similar view of one of the axle-boxes.

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

1 designates a mine-car axle provided at its end with spindles 2, receiving wheels 4 and arranged within axle-boxes 5, and the outer portions of the spindles 2 are hollow to provide oil-receptacles 6, which communicate with the hubs of the wheels by perforations 7, and as the axle rotates at times independently of the wheels the latter are thoroughly lubricated and are prevented from wearing out prematurely. The outer ends of the hollow spindles are partially closed by disks or heads 8, provided with central perforations 9, adapted to receive the nozzle of a syringe or other device for injecting oil into the journals.

The axle-box 5, which is provided at its top with an attachment-plate 10, receives the outer portion of the spindle, the wheel being located between the same and a collar 11. The attachment-plate is provided at its inner longitudinal edge with a vertical flange and

is adapted to fit against the frame of a mine-car, and the axle-box is provided at its top with a removable journal bearing or brass 12, arranged in a suitable recess and introduced into the axle-box from the inner face thereof, whereby it is retained in place when the axle-box is mounted on a car.

The outer end of the axle-box is provided with a slide 13, arranged in suitable ways and adapted to be readily raised to expose the perforation 9 at the outer end of the spindle. The side edges of the slide 13 are beveled, and the ways preferably consist of vertical grooves, the outer face of the slide being provided with a suitable recess or grip to enable it to be readily lifted when desired.

The bottom and outer portion of the axle-box are designed to receive a quantity of waste, which absorbs any superfluous oil and assists in lubricating the spindle.

The invention has the following advantages: As the hollow outer portions of the spindle terminate short of the collars 11, the axle is not materially weakened, as it has been found by experience that axles are usually break at that point, the wheels are thoroughly lubricated and are prevented from wearing out prematurely, the oil is conveniently supplied to the axle without wasting it, and any superfluous oil is absorbed by the waste and assists in lubricating the axle. Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. In a device of the class described, the combination of an axle provided with a spindle having a hollow outer portion terminating short of the inner end of the spindle, the latter being provided with a perforation extending from its outer face to its interior, a head fitting in the outer end of the spindle and provided with a perforation, an axle-box receiving the outer portion of the journal, and a wheel arranged on the inner portion of the journal and located over the said perforation, substantially as described.

2. In a device of the class described, the combination of an axle provided with a journal having a hollow outer portion to form an oil-chamber, said journal having a perforation communicating with the oil-chamber, a wheel arranged on the journal over the perforation, a disk or head fitting in the outer end of the spindle and provided with a perforation, and an axle-box receiving the outer
5 end of the spindle and provided at its outer end with a slide adapted to uncover the end
10

of the spindle and expose the perforation of the head or disk, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses. 15

ANTHONY CONWELL.

ZIBA H. TINKLEPAUGH.

PHILLIP SHERDAN.

Witnesses:

S. W. ARNOLD,

WILLIAM GUNN.