

A. C. AICHMAN.
SCREW.
APPLICATION FILED OCT. 1, 1908.

922,072.

Patented May 18, 1909.

Fig. 1.

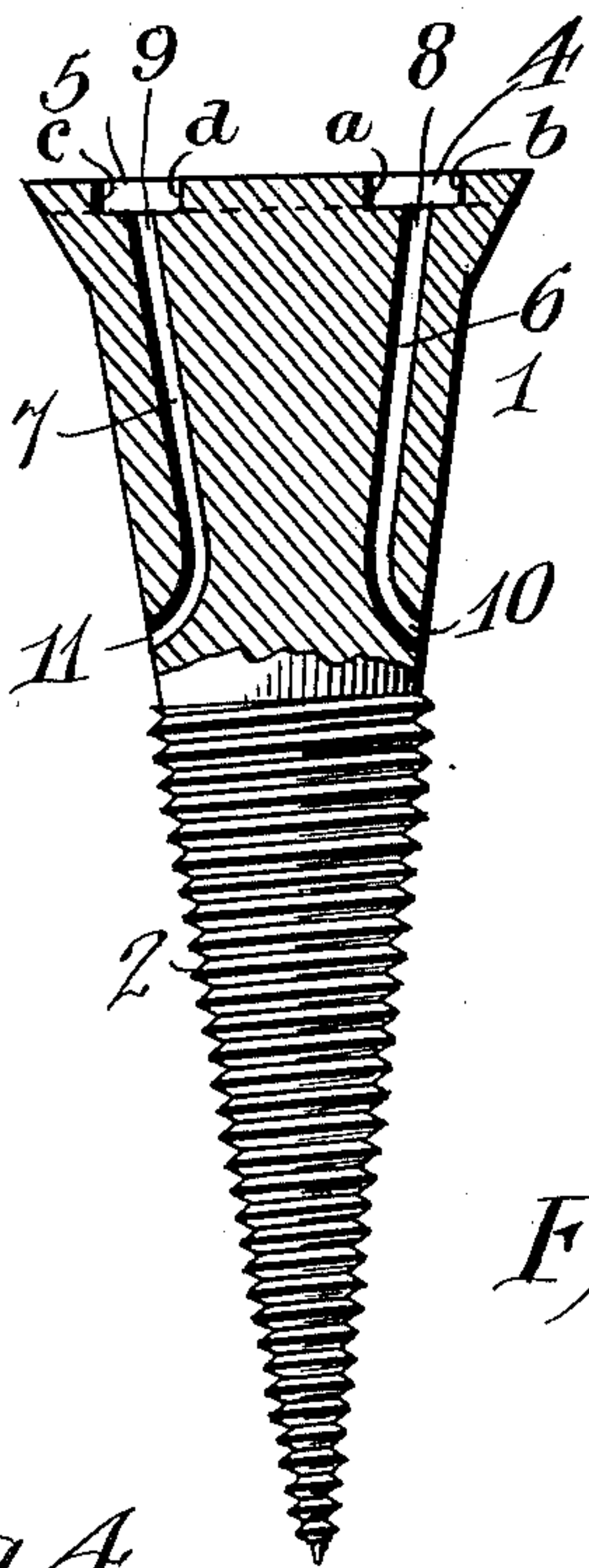


Fig. 2.

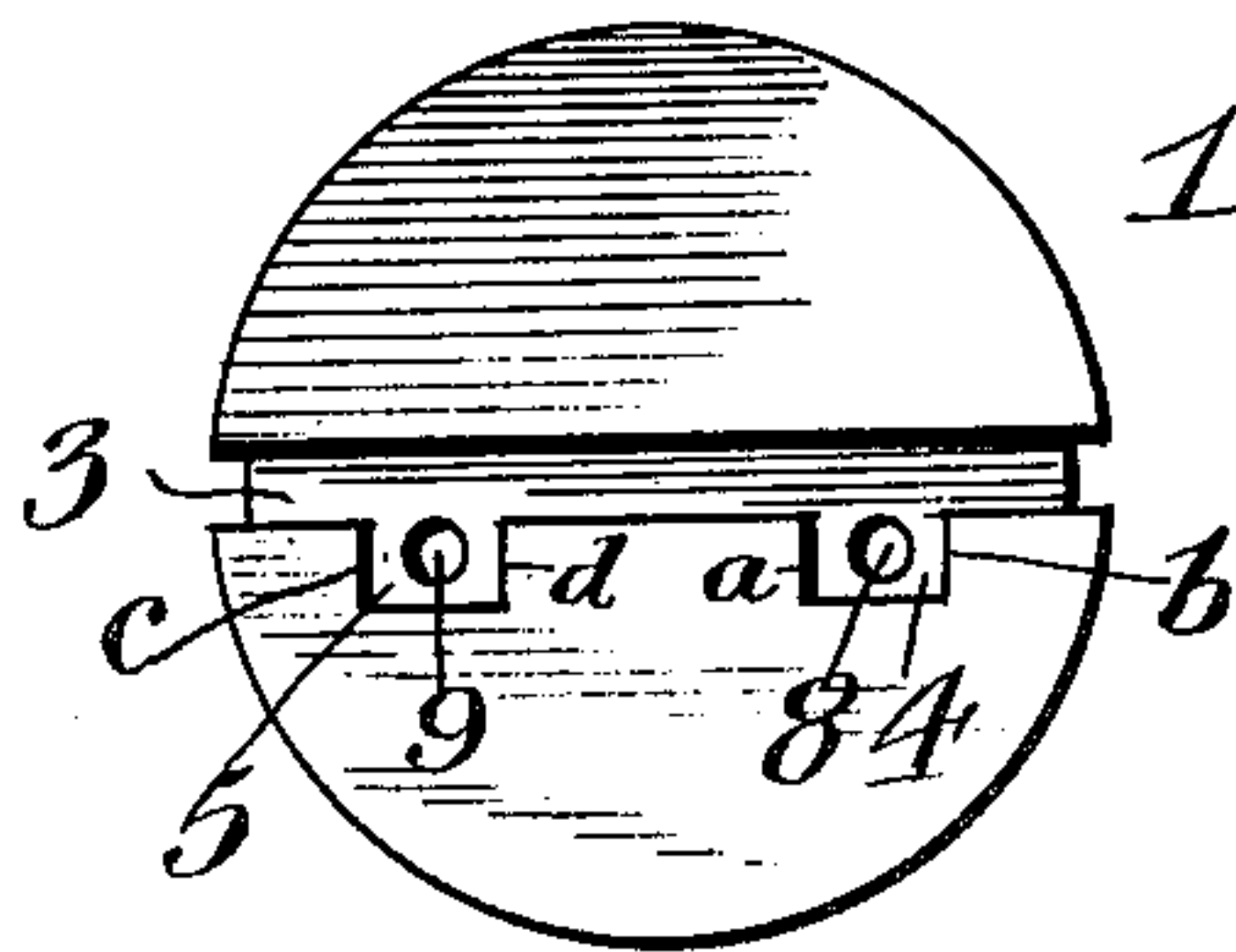


Fig. 3.

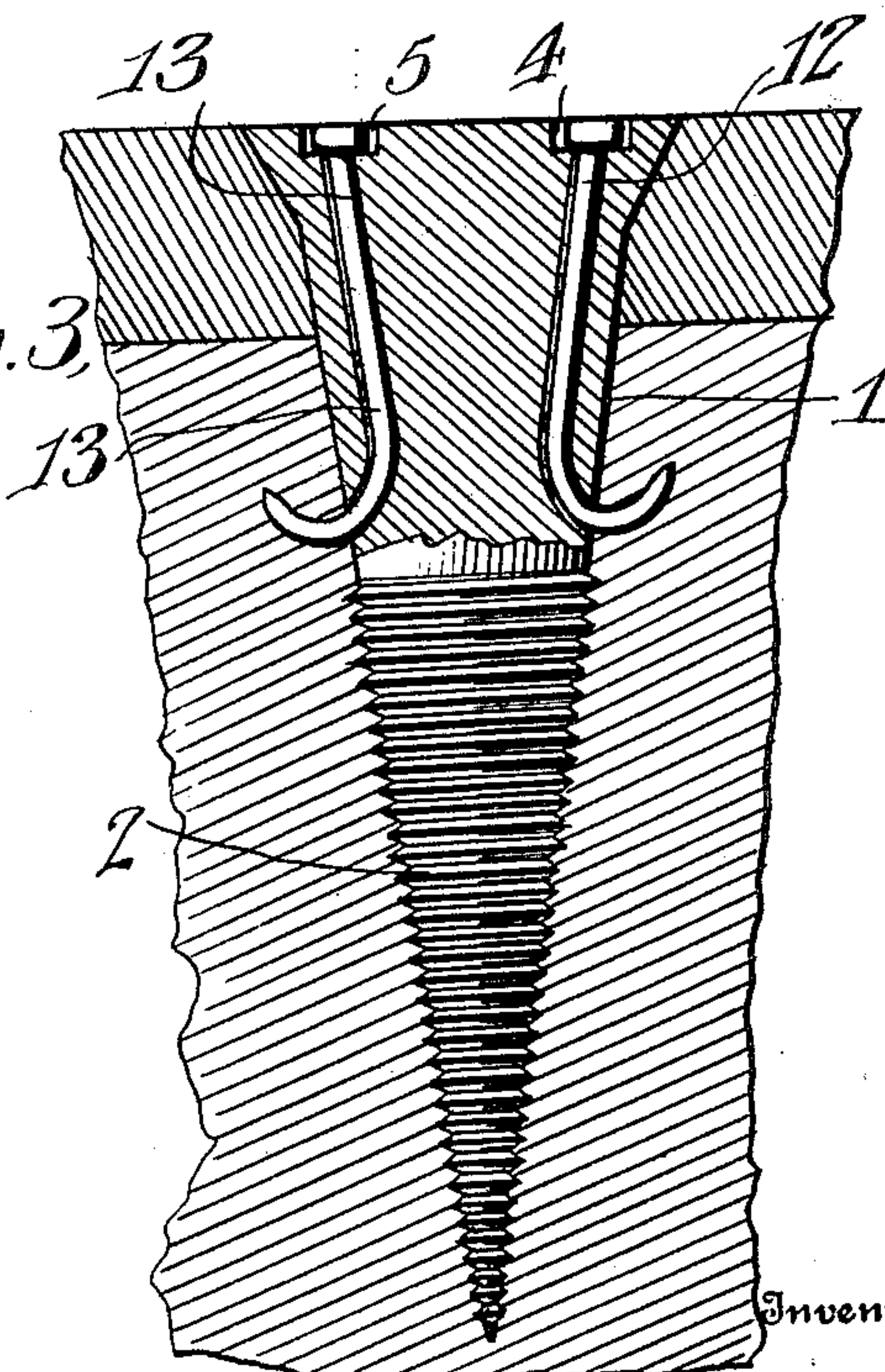
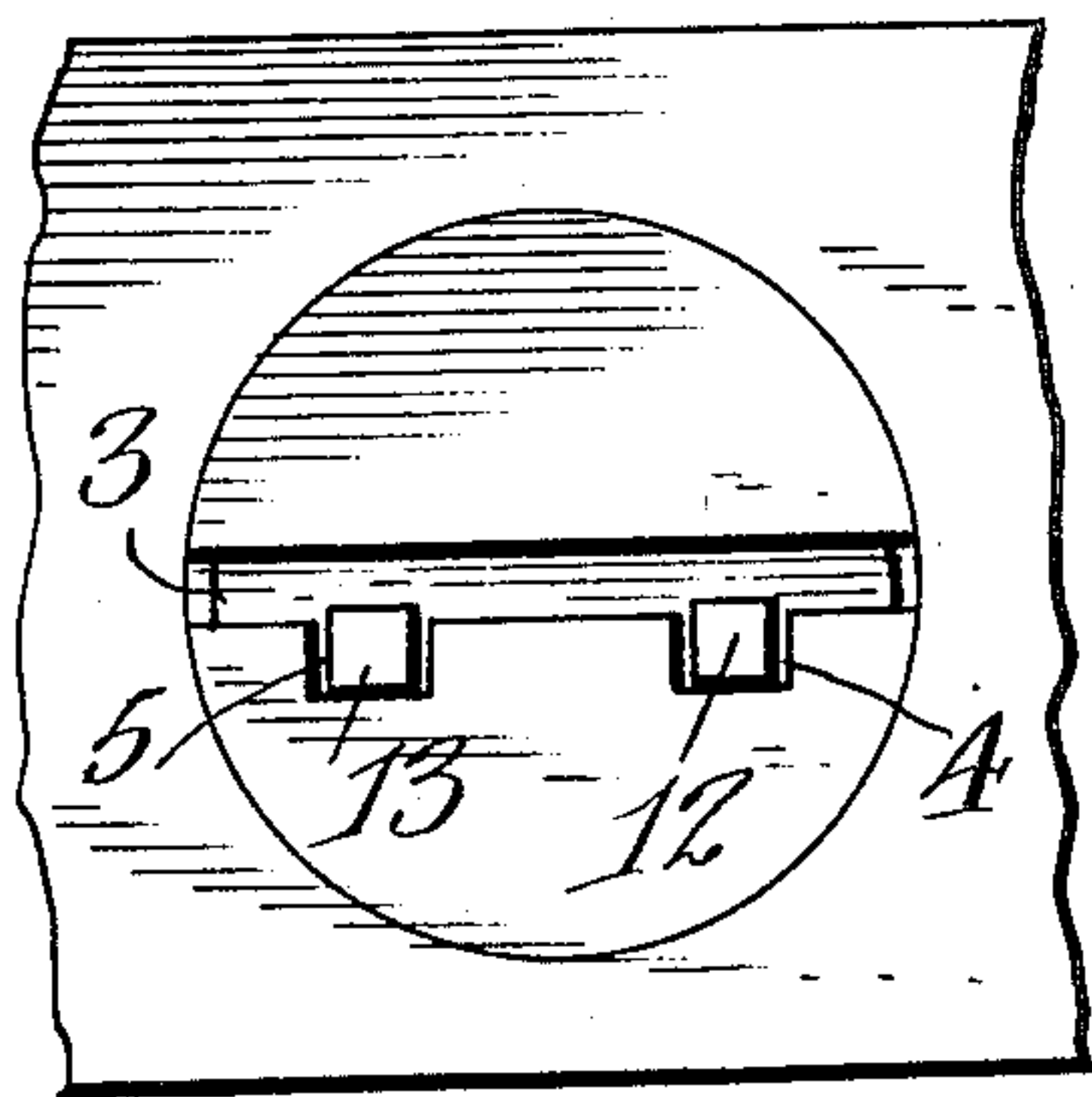


Fig. 4.



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Witnesses

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UNITED STATES PATENT OFFICE.

AUGUST C. AICHMAN, OF KALISPELL, MONTANA.

SCREW.

No. 922,072.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed October 1, 1908. Serial No. 455,775.

To all whom it may concern:

Be it known that I, AUGUST C. AICHMAN, a citizen of the United States, residing at Kalispell, in the county of Flathead and State of Montana, have invented certain new and useful Improvements in Screws, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in locking-screws, and has for its object, the provision of a screw, which, after it has been embedded in woodwork, or the like, can be effectually locked therein to prevent it from accidentally loosening or working out. Screws of this type will prove very useful, when used in the construction of railway cars, steamships, wagons, and the like, which are subjected in use to a great amount of straining and vibration, which causes the ordinary screws to work loose and fall out.

A further object of the invention is to so locate the heads of the locking device, with respect to the slot in the head of the screw, that they will not ordinarily be noticed, and can be removed easily, if necessary, without the employment of a specially constructed tool. In the manufacture of my locking-screws, it will be preferable, to make the screws and locking devices of the same material, as this will render the heads of the locking-devices less noticeable.

Other objects and advantages of this invention will appear in the course of the following specification.

In the drawings: Figure 1 is a side view, partly in section, of my improved locking-screw. Fig. 2 is a top plan view of the head of the locking-screw. Fig. 3 is a side view, partly in section, showing the locking-screw embedded in woodwork, with the locking devices in position; and Fig. 4 is a top plan view of the head of the locking-screw, with the locking-devices in position.

Referring to the drawing, which illustrates the preferred form of my invention, 1 designates the screw, which is provided with the usual threaded portion 2, and the transverse slot 3 in the head thereof. Laterally disposed with relation to the slot 3, and opening into the same, are two countersinks 4 and 5, which are, preferably, slightly oblong in shape, as shown.

Formed in the screw, on opposite sides thereof, are two longitudinal, circular passages 6 and 7. The entrance 8 of the passage

6 opens into the countersink 4, and the entrance 9 of the passage 7 opens into the countersink 5. The entrances 8 and 9 of the passages are located equi-distant from the sides *a, b, and c, d* of their respective countersinks, and while said entrances lie wholly within their respective countersinks, yet they are far enough forward to be substantially in line with the wall of the slot 3, through which said countersinks open. The lower ends of the passages 6 and 7 are, as illustrated, curved outwardly to the points of their respective exits, 10 and 11, through the sides of the screw. The points of exit of the passages 6 and 7 are preferably located above the threaded portion 2 of the screw.

After the screw has been embedded in the woodwork or the like, locking devices as nails 12 and 13 which are of a diameter slightly less than that of the passages 6 and 7 are driven through said passages. The nails, which are of greater length than the passages, on striking the curved lower ends of said passages are caused to enter the surrounding material in which the screw is embedded, and will assume an upwardly curved position therein as illustrated in Fig. 3. It will be noted that I have shown the locking devices or nails, as being provided with square heads, as that will greatly facilitate their removal over nails with any other shape of head, as they would present a broader bearing for the edge of the screw driver, when the same is used to start the lifting of the nails from their locking position.

Of course the shape of the counter-sinks, as well as the shape of the heads of the locking devices could be varied but it is, of course, desirable that they should be, in each locking-screw of a conforming design. The heads of the locking device should be so proportioned as regards the counter-sinks as to fit therein, but not closely, and should blend with the head of the screw so as not to be ordinarily noticeable.

As has been previously stated, the entrances 8 and 9 of the passages 6 and 7 are so located that they are equidistant from the sides of their respective counter-sinks, and lie wholly within the same, yet they are far enough forward to be substantially in line with the wall of the slot 3, through which said counter-sinks open. The object for so locating these entrances is that, when the locking devices or nails are driven into place, one side of the heads thereof will project

slightly into the transverse slot 3 in the head of the screw, where the edge of the screw-driver can be readily inserted under them, when it is desired to raise said locking nails a little, in order they may be removed by an ordinary nail extractor, preparatory to removing the screw.

What I claim is:

1. A locking screw having a slot in its head one side of which is provided with countersinks and having longitudinal passages extending through the screw body and communicating with the countersinks, the lower ends of said passages being outwardly curved and having their exit through the side of the screw, and a locking device for each longitudinal passage the penetrating end of which is upwardly curved when forced through the passage, said locking devices being provided

with heads fitting the countersinks in the head of the screw. 20

2. As an improved article of manufacture, a locking screw provided with a transverse slot in its head, and one side of said slot being provided with counter-sinks, each of said counter-sinks having one side opening into the slot, said screw provided with longitudinally-extending passages communicating with the counter-sinks, and the lower ends of said passages being outwardly curved and having their exit through the side of the screw. 25 30

In testimony whereof I hereunto affix my signature in presence of two witnesses.

AUGUST C. AICHMAN.

Witnesses:

THEODOR HEINS,
RICHARD BEST.