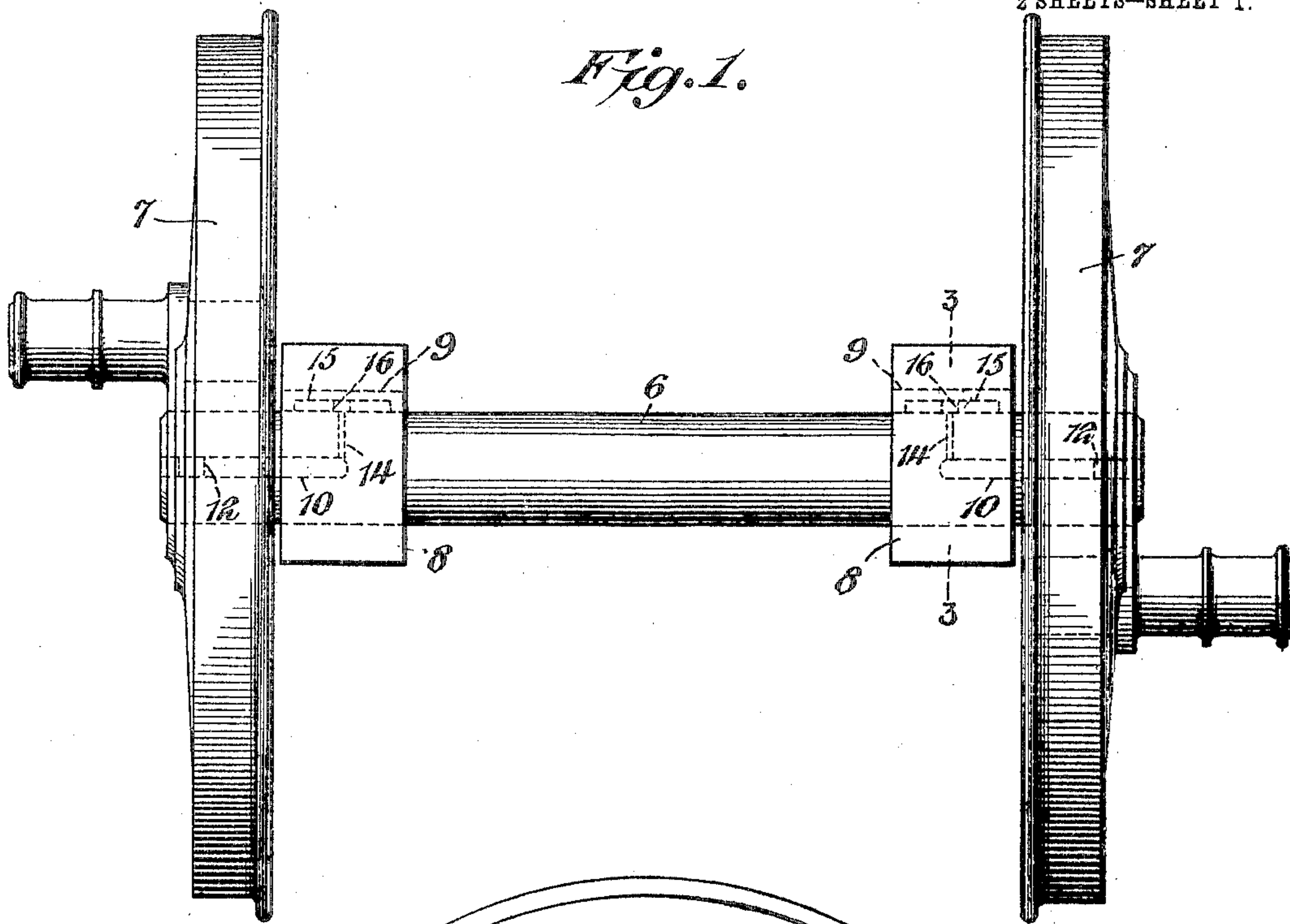


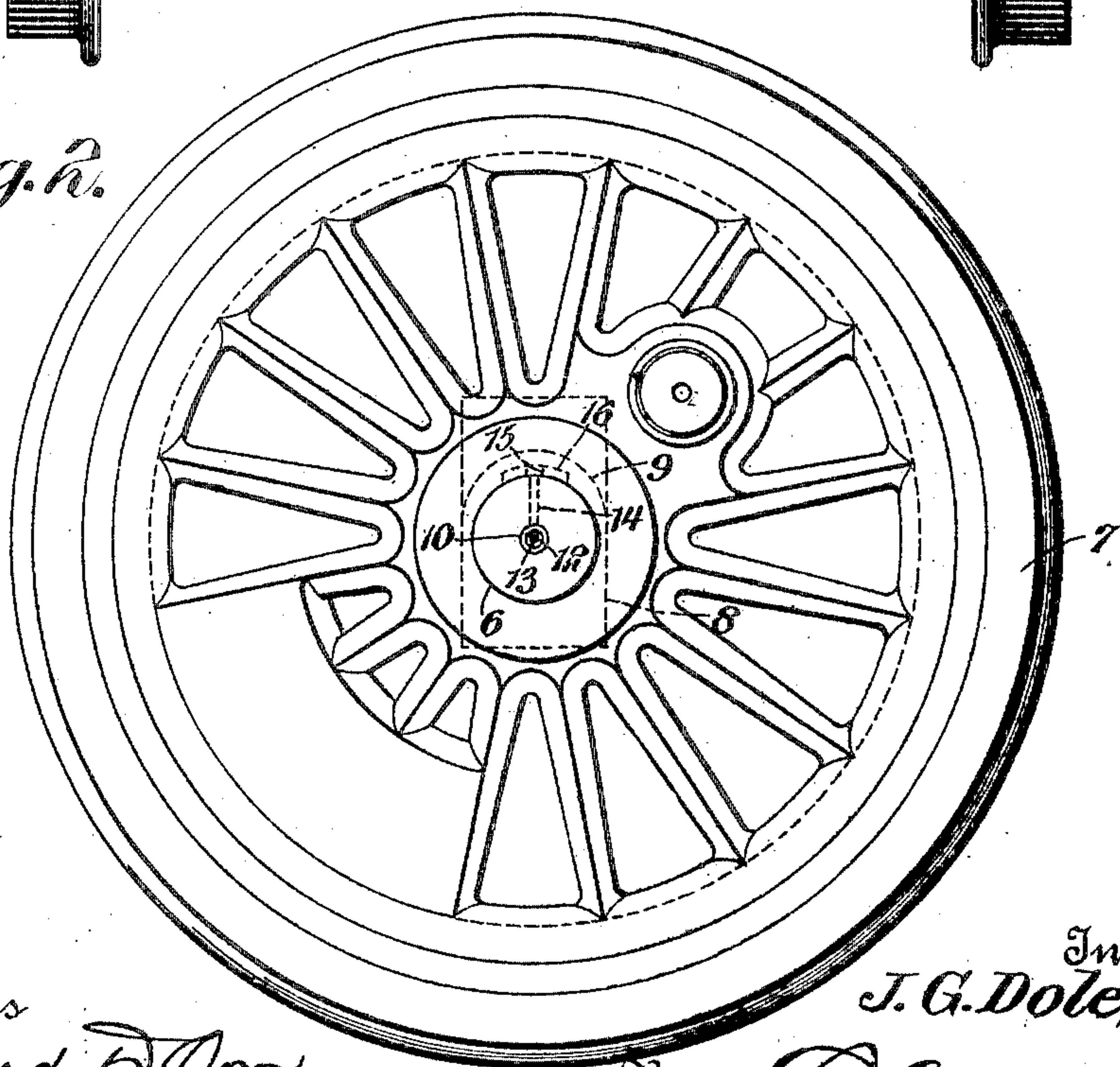
J. G. DOLE.  
AXLE LUBRICATING MEANS.

APPLICATION FILED MAY 31, 1905.

2 SHEETS—SHEET 1.



*Fig. 2.*



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

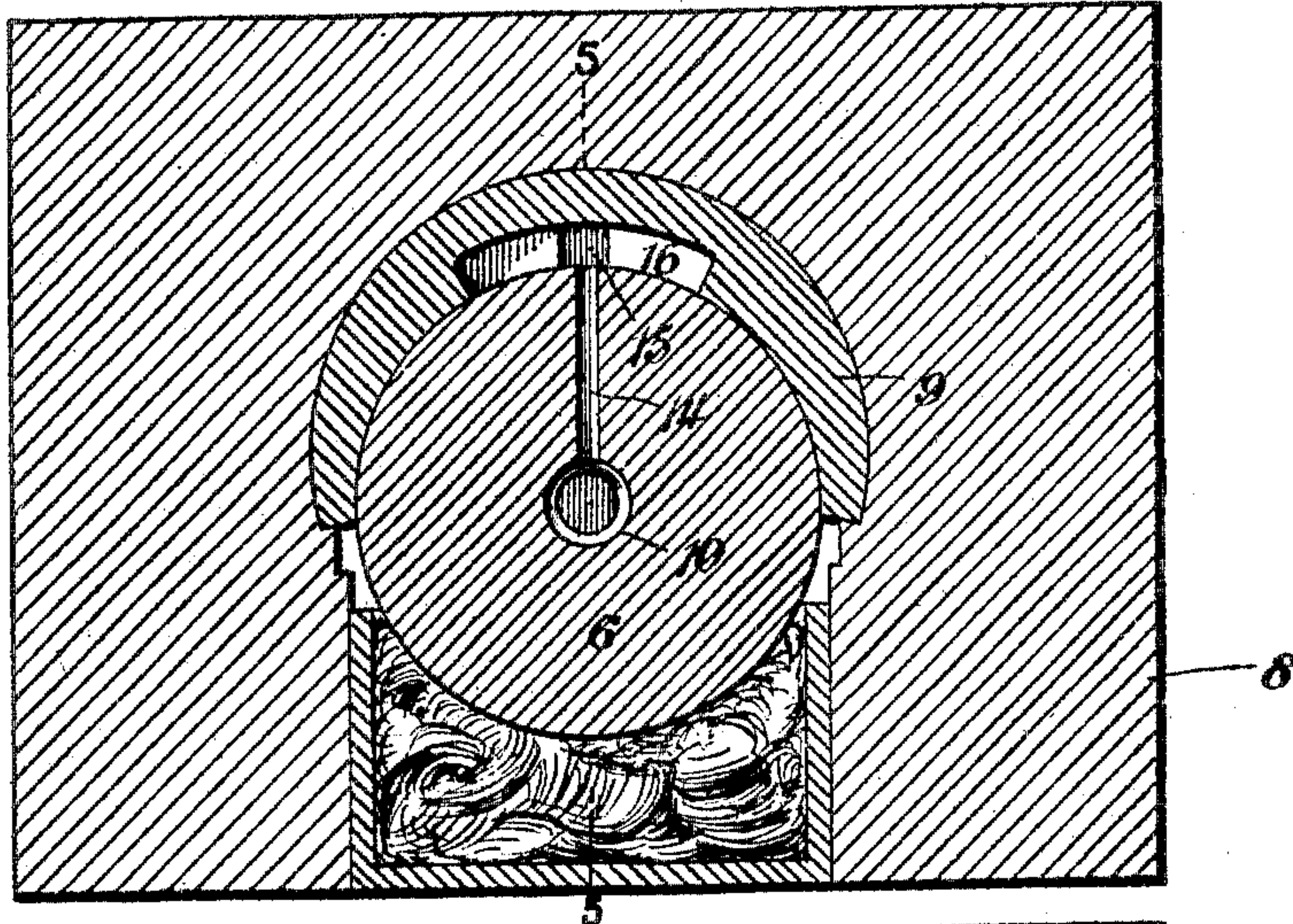


Fig. 4.

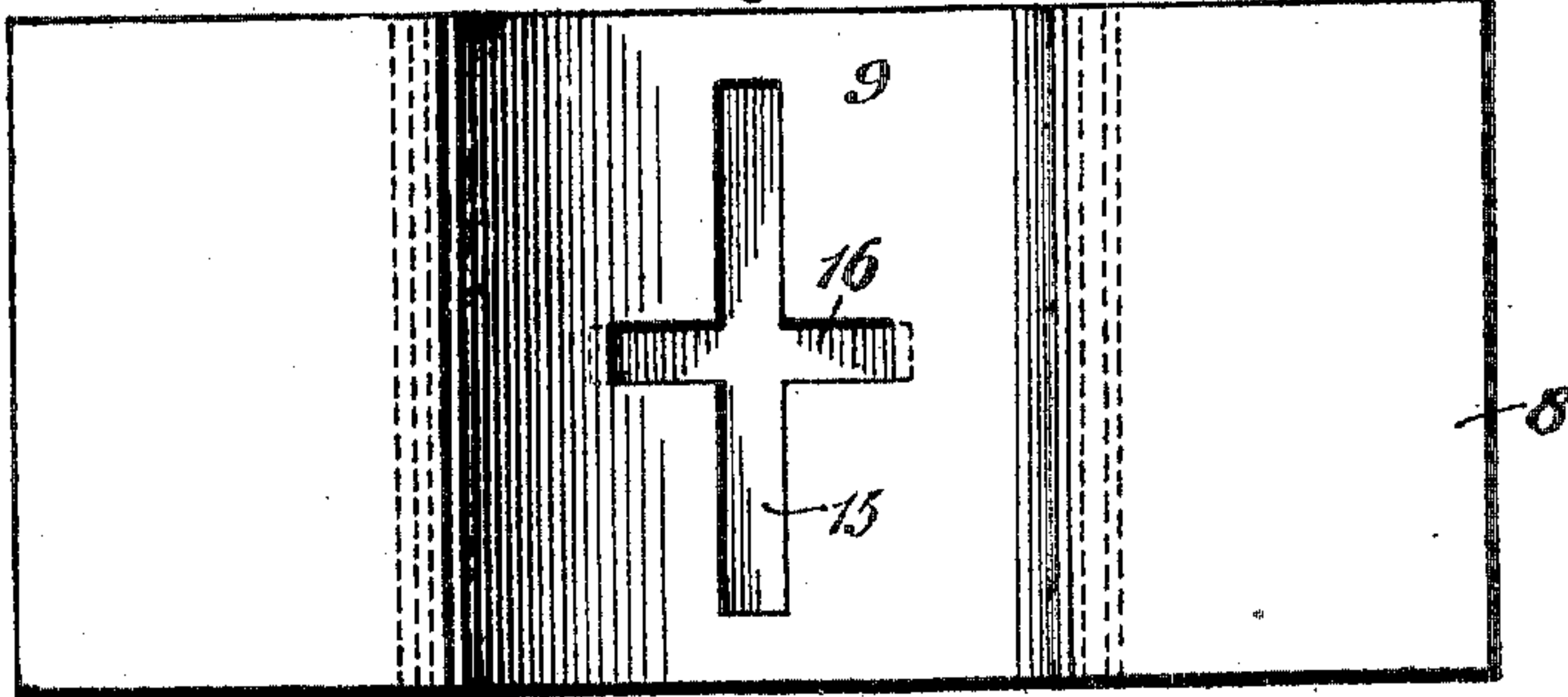
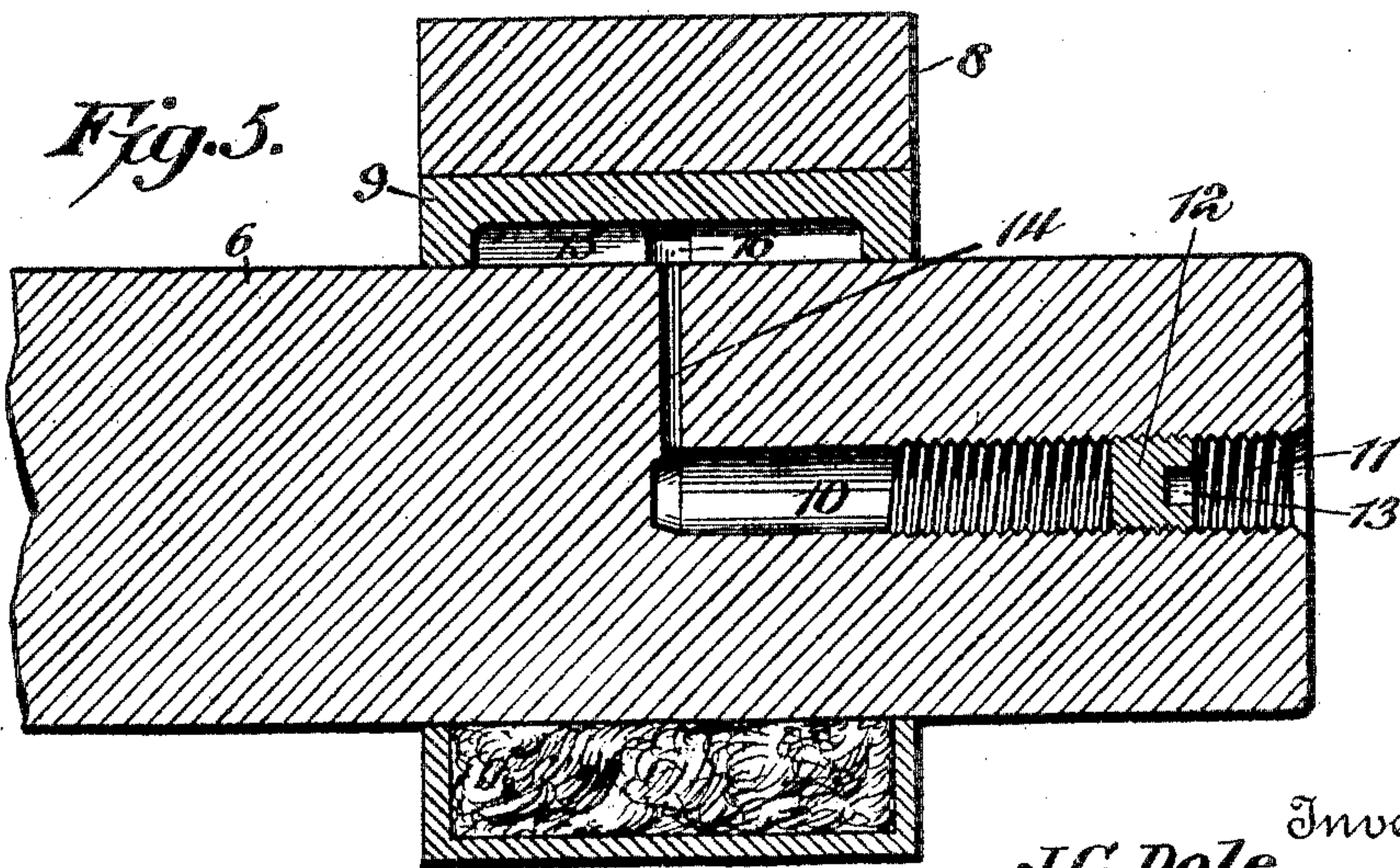


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## AXLE-LUBRICATING MEANS.

No. 797,564.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed May 31, 1905. Serial No. 263,130.

*To all whom it may concern:*

Be it known that I, JAMES G. DOLE, a citizen of the United States, residing at Missouri Valley, in the county of Harrison and State of Iowa, have invented a new and useful Axle-Lubricating Means, of which the following is a specification.

The present invention relates to means for lubricating car or locomotive bearings where-in a rotatable axle is employed that has a bearing against a fixed brass.

The principal object is to provide simple means of a novel nature that will permit the use of sticks of dope in bearings of the above character, said dope being a solid lubricant well known to the art and highly effective for lubricating purposes.

A further object is to provide means of the above nature that is capable of use in connection with the ordinary bearings without material alteration or change of the same and that is applicable thereto without the necessity of removing the axle from the locomotive or car.

A still further object is to provide means that will thoroughly lubricate the bearings and will prohibit the entrance of grit and dust thereto.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a view in elevation of a locomotive axle and drivers, together with the bearings therefor, and indicating the lubricating means. Fig. 2 is an end elevation of the same. Fig. 3 is a cross-sectional view on the line 3 3 of Fig. 1. Fig. 4 is a bottom plan view of the brass. Fig. 5 is a sectional view on the line 5 5 of Fig. 3.

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

In the embodiment illustrated the axle is designated 6 and has the usual drivers 7 on the ends thereof. This axle is journaled in boxings 8 and bears against fixed brasses 9, located therein. Thus far the structure is well known to the art. The axle is provided with axial bores 10, extending from the opposite ends of the same and constituting sockets for the lubricant, said lubricant preferably being in the form of sticks of dope well known as articles of commerce. The outer portions of the sockets are threaded, as shown at 11, and

screwed thereinto are plungers 12, having seats 13 in their outer ends to receive a suitable wrench for turning said plungers. At the inner ends of said sockets are located laterally-disposed outlet-orifices 14, the inner ends of which communicate with the inner ends of the sockets, the outer ends opening through one side of the axle. The brasses 9 are provided with lubricant-receiving pockets, each of which consists of crossed slots 15 and 16, the former extending longitudinally of the brass and the latter extending transversely thereof and in line with the path of movement of the outlet-mouth of the orifice 14.

In operation a stick of dope is inserted into the socket 10, followed by the screw-plunger, which is driven inwardly by a suitable wrench. As the plunger advances the lubricant is forced through the orifice 14 into the pocket of the brass, filling the same completely and afterward lubricating the bearing by frictional warming. By having the longitudinally-disposed slot the lubricant thus extends substantially the length of the brass, whereas the cross-slot, extending about one-sixth of the circumference of the journal, allows that degree of revolution of the axle before the orifice is closed. It will be clear that this arrangement is very simple and cheap, that the axles may be readily bored, and that by the means disclosed efficient lubrication of the bearings is secured. Furthermore, as there are no openings left after the lubricant is in place there are no places to permit the entrance of dust and grit.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a stationary journal-brass having a pocket in its under side, of a rotatable axle bearing against the brass, said axle having a threaded socket extending into the same from one end and an outlet-orifice



extending from the socket and opening through one side of the axle, said orifice periodically communicating with the pocket of the brass during the rotation of the axle, and a plunger threaded into the socket.

2. The combination with a fixed journal-box having a pocket in its under side, of a rotatable axle bearing against the brass, said axle having a socket extending into the same from one end and being provided with a lateral outlet opening through one side of the axle, the pocket of the brass including a portion extending transversely of said brass and in line with the path of movement of the outlet and said orifice repeatedly communicating with said portion on the rotation of the axle, and a plunger movably mounted in the bore.

3. The combination with a journal-box having a pocket in its under side, said pocket comprising crossed slots or recesses, one of which extends transversely of the brass, of a rotatable axle bearing against the brass, said axle having a threaded socket extending into the same from one end, an outlet-orifice extending laterally therefrom at its inner end and opening through one side of the axle, said orifice having its outer end movable in the plane of the transverse slot of the pocket and communicating therewith upon the rotation

of the axle, and a plunger threaded into the socket.

4. The combination with a stationary journal-brass having a pocket in its under side, of a rotatable axle bearing against the brass, said axle having a socket extending longitudinally into the same from one end, and an outlet-orifice extending from the socket and opening through one side of the axle, said orifice periodically communicating with the pocket of the brass during the revolution of the axle.

5. The combination with a journal-brass, having a pocket in its under side, said pocket comprising crossed slots or recesses, of a rotatable axle bearing against the brass, said axle having a socket extending into the same from one end, and an outlet-orifice extending laterally from the socket and opening through one side of the axle, said orifice having its outer end movable in the plane of one of the slots or recesses of the pocket and communicating therewith upon the rotation of the axle.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES G. DOLE.

Witnesses:

J. B. BARRETT,

J. J. AMEN.