

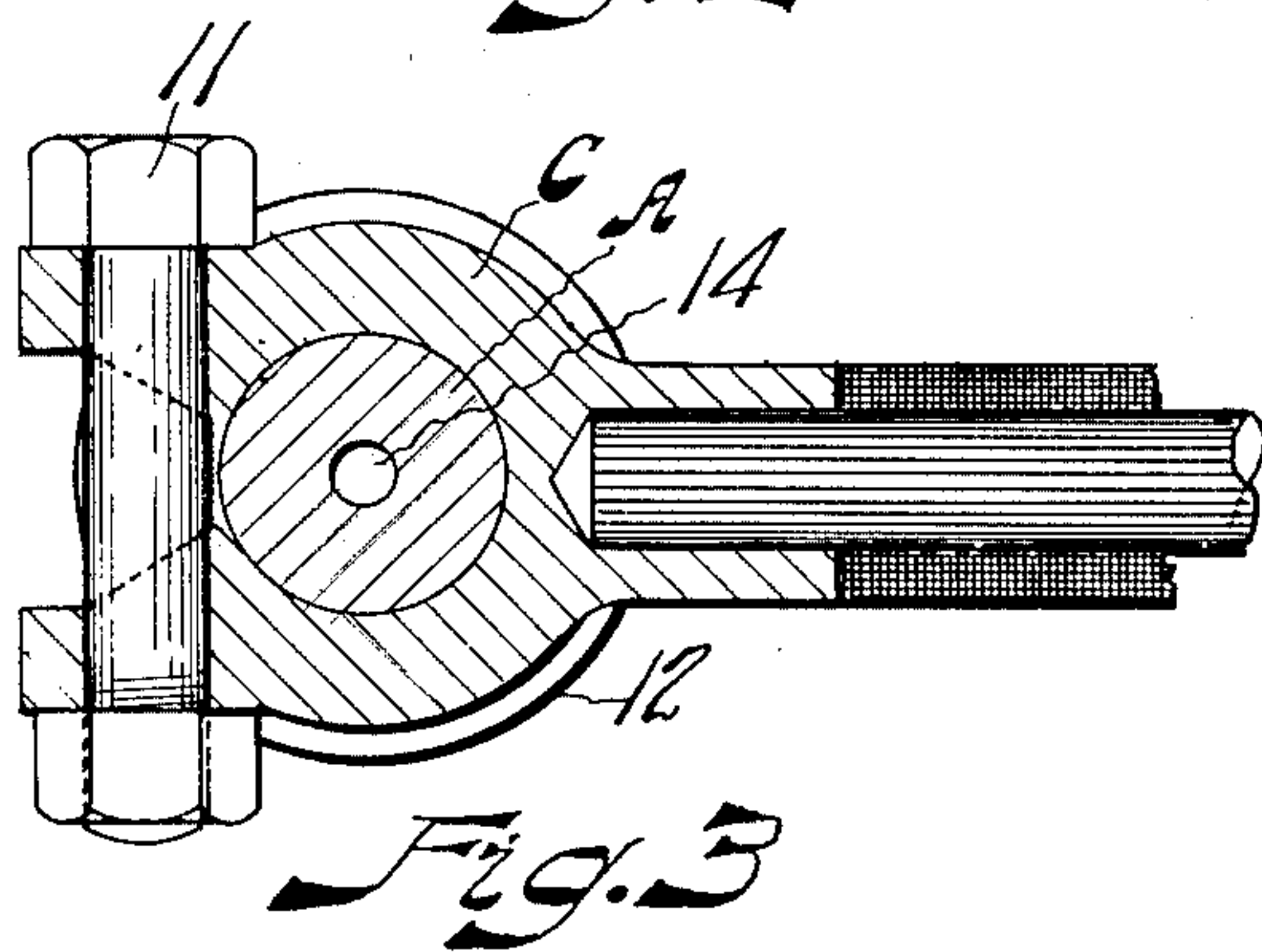
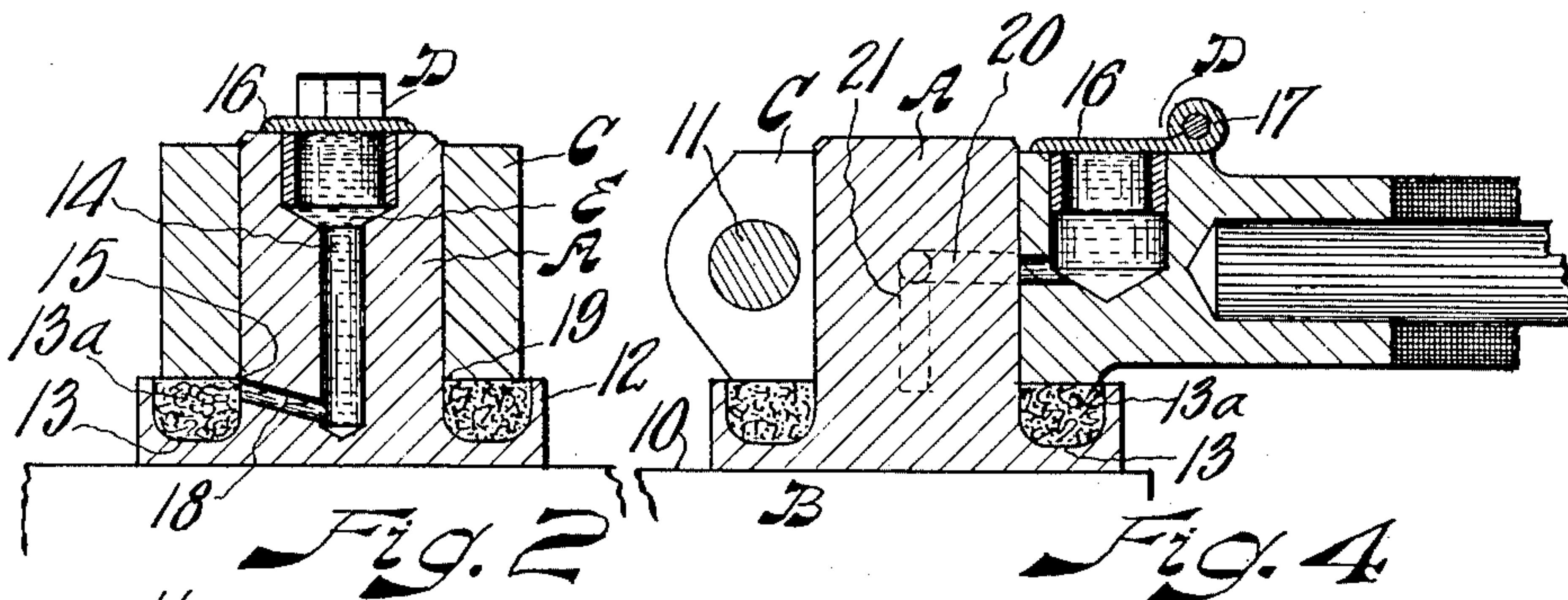
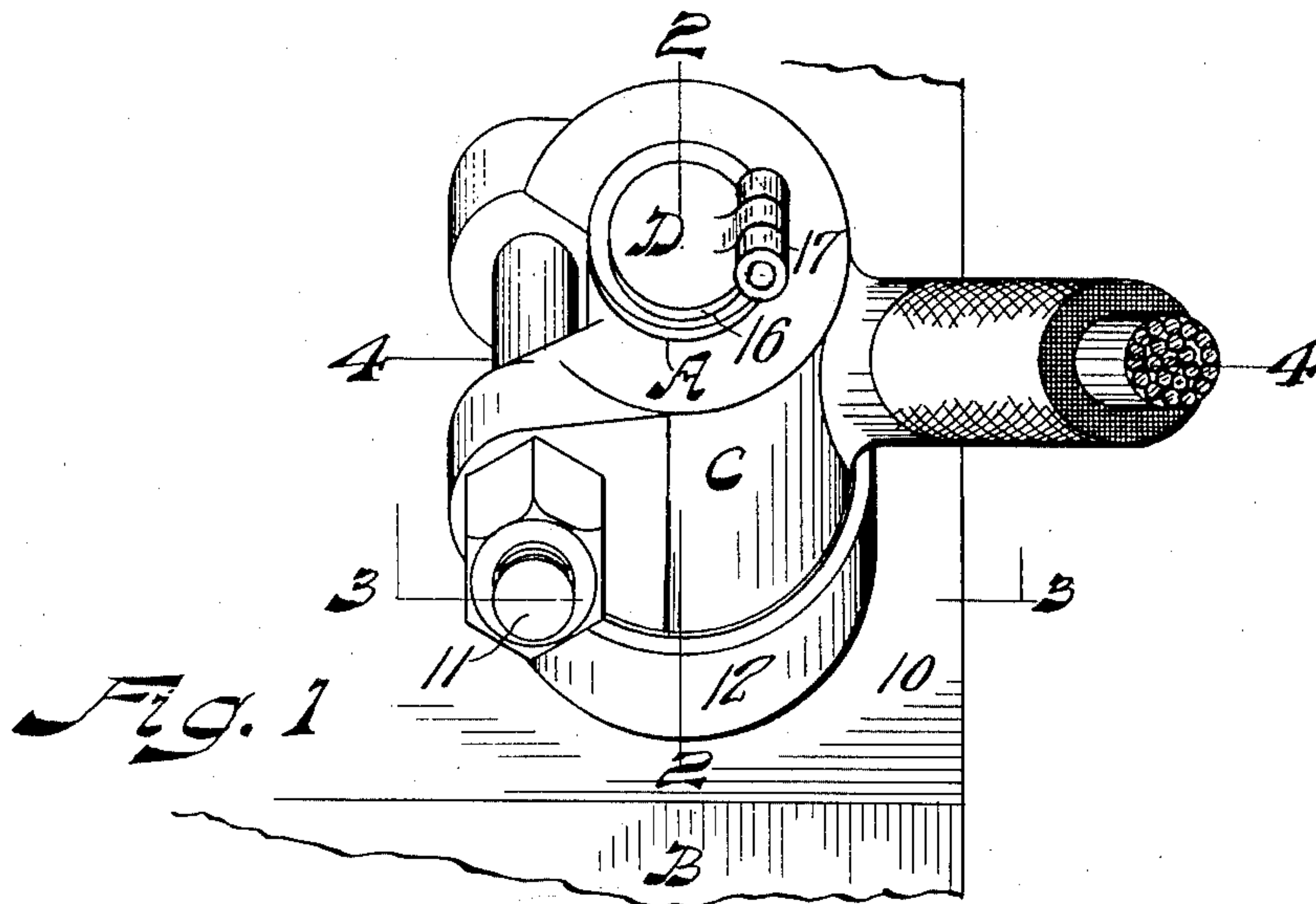
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TERMINAL CONNECTION

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## TERMINAL CONNECTION

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11 Claims. (Cl. 173—259)

My invention pertains to prevention of corrosion of terminal connections.

The object of my invention is to provide a connection which complies with the usual standard dimensions for such connections but has means thereon to prevent corrosion thereof.

A feature of my invention is to apply and to retain a corrosion preventing substance in such a contact with the connecting parts of a connection that there is always a head of such substance in communication with the parts and in such a manner that the substance can creep along the contacting surfaces but does not flood them too freely or be otherwise wasteful of substance or overflow to other parts of a device with possible danger thereto.

I attain my object by the mechanism illustratively shown in the accompanying drawing in which:

Fig. 1 is a perspective view of the top of a battery and a connection thereof embodying my invention.

Fig. 2 is a section taken in a plane vertical and transversely of the connection indicated by the line 2—2 in Fig. 1.

Fig. 3 is a section taken in a plane transversely of and longitudinally of the connection indicated by the line 3—3 in Fig. 1.

Fig. 4 is a section taken in a plane vertical and longitudinally of the device indicated by the line 4—4 in Fig. 1 but showing a modification of Fig. 1.

Similar reference characters refer to similar parts throughout the views.

The battery terminal post A is connected to the interior of a battery in any usual or special manner and projects above the top of the battery B.

The lead terminal C, shown as a clamping terminal, is clamped onto the post by means of the bolt 11 for good electrical connection thereon.

The post A has the usual collar 12 thereon.

I provide in this collar the groove 13, in this instance extending all the way around and open around the post, and place into this groove the washer 13a of porous material and as felt, cork or any other suitable material which will convey substance but will not permit free flow thereof.

The bottom of the lead terminal C contacts the washer and the washer can be compressed to any desired degree by this terminal upon pressing the terminal along the post as far as desired for desired compression and restriction of flow of corrosion preventing substance through the

washer and then tightening the bolt 11 and thereby effect or attain and retain the compression of the washer and tightening to lead terminal onto the post.

As one manner of applying a corrosion preventing means, I provide a cavity or reservoir 14 in the post open at the outer end thereof and extending inwardly thereof and terminating in the groove at 15.

The closure device D is supported in the outer end of the cavity and has the lid 16 hinged thereon at 17 to protect the substance in the cavity against foreign matter getting therein.

As a means to assist impediment of the flow of substance into the groove I provide the cavity with the angular duct 18 leading from the lowest part of the cavity upwardly and terminates at the bottom of the joint between the post and the terminal in addition to the impediment offered by the washer against the opening at 15 although it is quite obvious that the cavity could more directly lead to the groove and may be an advantage in some instances especially when the substance itself is not very free flowing.

The cavity is preferably made deeper than the width thereof, as clearly shown in Fig. 2 for the purpose of providing a head of corrosion preventing substance to exert a pressure on the substance passing through the duct for better feeding of substance to the joint. The impediment mentioned above and the washer substantially closing the outer end of the duct prevents excessive flow of substance to the washer and thereby prevents overflow thereof while still feeding substance to the joint.

Common oils such as commercial lubricating oils, or even the more freely flowing oils such as kerosene oil can be used for the substance E for corrosion preventing as well as to loosen a joint after it has corroded.

Anti-corrosion substances can also be used. Oils mixed with anti-corrosion substances in suitable proportions can also be used. Oils or other substances may also be mixed with ingredients which cause the oils or substances to creep more freely along the surfaces of the joints. I use the term "corrosion preventing substance" in the claims and mean thereby the substances explained above.

As to operation:

When substance is present in the cavity it contacts the washer. The washer does not permit the substance to flow freely therethrough but it does absorb substance and becomes saturated with the substance and presents that substance to the



terminals at 19 to creep upwardly between them.

The now saturated washer is in contact with the post and also with the bottom of the connector C and the substance creeps along the contacting surfaces as well as over the outsides thereof and renders them sufficiently unctuous to prevent corrosion.

The substantially sealed feature of the structure prevents overflow or loss of substance and thereby also prevents substance from flowing into or onto the battery with possible detrimental results.

In Fig. 4 I have transferred the cavity and the closure device D to the lead terminal C and provide the channels 20 and 21 to convey the substance E to the joint and to the washer.

I am aware that changes can be made in the structure as well as in the arrangement of parts shown and described within the scope and intent of my invention and the appended claims; therefore, without limiting myself to the precise structure and arrangement of parts as shown and described,

I claim:

1. A terminal connection comprising a terminal post member, a wire lead connector member clamped onto said post member, a porous compressible washer around said post member and contacting the same and the lower end of said terminal member and partially inclosed thereby and free of contact with a part extraneous of said connection, an outwardly open cavity in one of said members, a duct leading from the bottom of said cavity to the upper portion of said washer, corrosion preventing material in said cavity, and a lid for the open end of said cavity adapted to be opened and closed respectively for access to said cavity and prevention of foreign substance from entering said cavity.

2. A battery connection comprising a lead wire terminal connected to a battery terminal, a normally covered cavity in the connection for storing corrosion preventing substance for the joint between said terminals, an absorbent means between said terminals longitudinally adjacent to and abutting an end of the joint, and duct means to restrictively feed corrosion preventing substance from said cavity to said absorbent means.

3. A terminal connection comprising a lead wire terminal connected to a terminal post, a normally covered cavity in the connection for storing corrosion preventing substance for the joint between said terminals, an absorbent, porous, compressible means between said terminals longitudinally adjacent to and abutting an end of the joint, duct means to restrictively feed corrosion preventing substance from said cavity to said absorbent means, and means to compress said absorbent means to limit the flow of corrosion preventing substance to and from said absorbent means.

4. A terminal connection comprising connected terminals, a cavity for corrosion preventing substance in one of said terminals, and a duct of restricted area leading from the bottom of said cavity to and terminating at an end of the joint between said terminals.

5. A terminal connection comprising connected lead wire and post terminals, an open top groove in said post terminal around the post thereof and located below said lead wire terminal thereon, a substantially sealed washer of acid resisting material in said groove and impregnated with

corrosion preventing substance, and the bottom of said lead wire terminal contacting said washer and substantially closing said open top of said groove and thereby substantially sealing said washer against leakage of corrosion preventing substance therefrom.

6. A terminal connection comprising connected lead wire and post terminals, an open top groove in said post terminal around the post thereof and located below said lead wire terminal thereon, a washer of compressible acid resisting material in said groove and impregnated with corrosion preventing substance, and the bottom of said lead wire terminal contacting said washer and compressing the same and thereby substantially closing said open top of said groove and thereby substantially sealing said washer against leakage of corrosion preventing substance therefrom.

7. A terminal connection comprising connected lead wire and post terminals, a cavity in one of said terminals, corrosion preventing substance in said cavity, an open top groove in said post terminal around the post thereof and located below said lead wire terminal thereon, a washer of acid resisting material completely within said groove, the bottom of said lead wire terminal contacting said washer and substantially closing said groove thereby, and a duct leading from the bottom of said cavity to the upper part of said washer.

8. A terminal connection comprising connected lead wire and post terminals, a flange integral with said post terminal and located below said lead wire terminal thereon, a groove in the upper face of said flange, a washer of acid resisting material completely within and substantially filling said groove and impregnated with corrosion preventing substance, and the bottom of said lead wire terminal contacting said washer and substantially closing said groove thereby.

9. A terminal connection comprising connected lead wire and post terminals, a flange integral with said battery terminal and located below said lead wire terminal thereon, a groove in the upper face of said flange, a washer of compressible acid resisting material in said groove, a cavity in one of said terminals, corrosion preventing substance in said cavity, a duct leading from the bottom of said cavity to the upper part of said washer, and the bottom of said lead wire terminal contacting and compressing said washer and thereby substantially closing said groove.

10. A terminal post having a reservoir for corrosion preventing substance in the top thereof and an open top groove around the same at the bottom thereof, an absorbent element within said groove and contacting said post, and a lead wire terminal on said post and having the bottom thereof in contact with said element and closing the open top of said groove, and said post having a duct means leading from the bottom of said reservoir to said element.

11. A terminal post having an open top groove around the same at the bottom thereof, an absorbent element within said groove, a lead wire terminal on said post and having a reservoir for corrosion preventing substance therein and the bottom thereof closing the open top of said groove, and said lead wire terminal having a duct means leading from the bottom of said reservoir to the juncture of said post and said terminal.

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