J. R. FLANNERY & E. I. DODDS.

STAY BOLT STRUCTURE.

APPLICATION FILED MAY 3, 1918.

1,298,320. Patented Mar. 25, 1919.

FIG. 1.

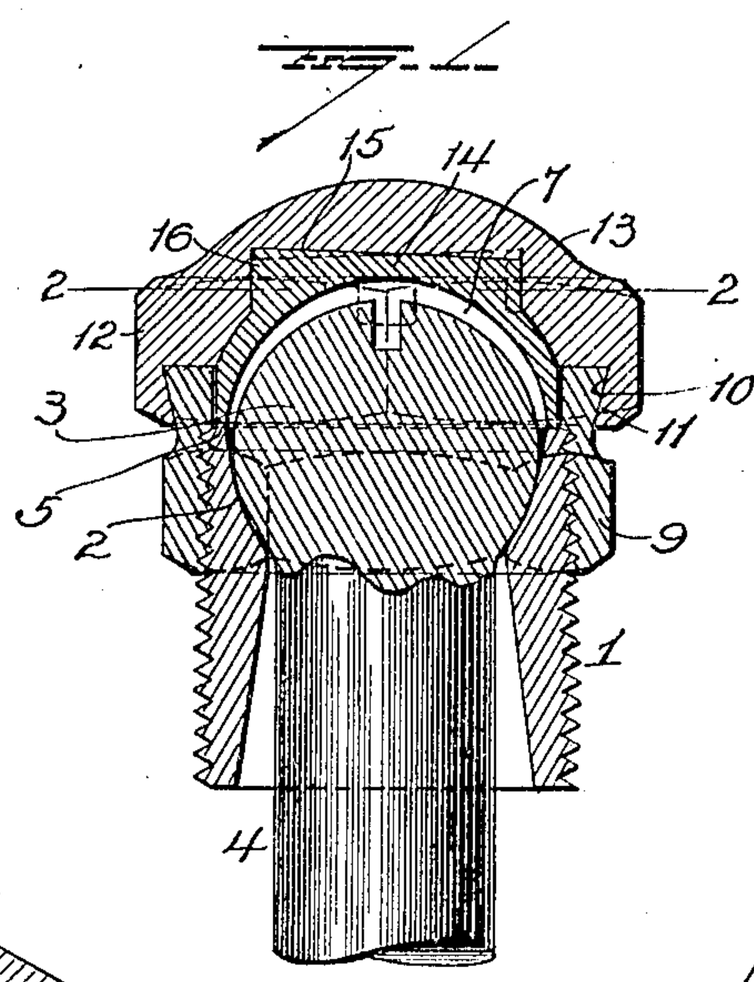


FIG. 2.

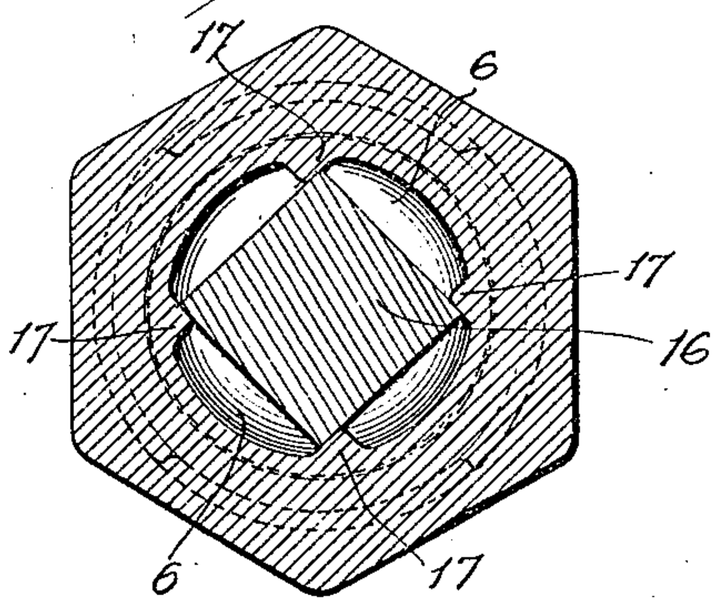


FIG. 3.

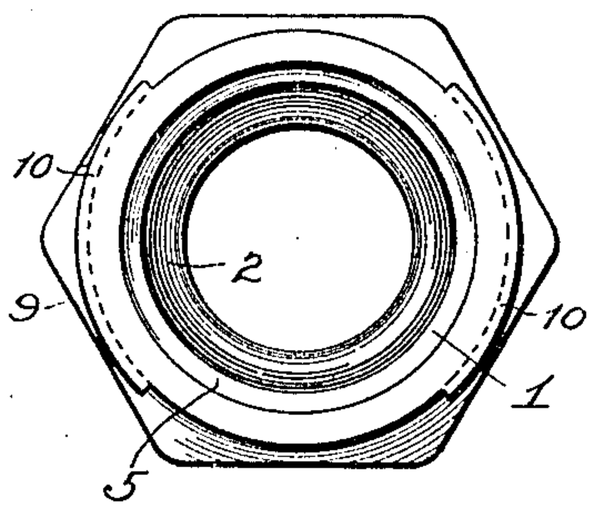
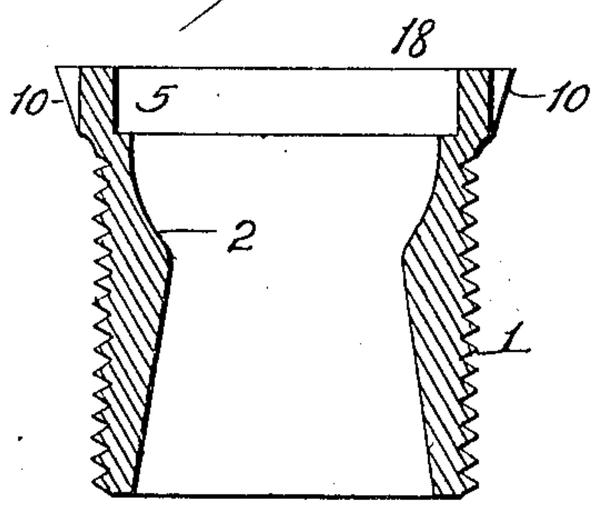


FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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STAY-BOLT STRUCTURE.

1,298,320. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed May 3, 1918. Serial No. 232,305.

To all whom it may concern:

Be it known that we, JOHN ROGERS FLANNERY and ETHAN I. DODDS, citizens of the United States, and residents of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Stay-Bolt Structures; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in staybolt structures and more particularly to the closure devices for the bearing member,—the object of the invention being to provide a simple and efficient closure for the bearing member of a staybolt and which shall be so constructed that it may be quickly removed to permit access to the head of the staybolt and thus facilitate testing of the same.

With this and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal sectional view showing an embodiment of our invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a detail view, and Fig. 4 is a view of a modification.

1 represents a bearing sleeve or member adapted for connection with a boiler sheet and provided interiorly with a curved face 2 forming a bearing for the rounded or spherical head 3 of a staybolt 4. A seat 5 is provided at the outer end of the bearing sleeve for the edge portion of a cap or closure 6,—the latter being made with a concavity having such form and dimensions as to provide a suitable clearance space 7 for the head of the staybolt.

A ring or sleeve 9 is threaded on the bearing sleeve 1 and extends beyond the outer end of the latter. This ring or sleeve 9 is made with external outwardly-beveled segmental shoulders 10 to be engaged by inwardly beveled segmental shoulders 11 formed within the apron portion 12 of a head 13. The head 13 thus encircles the shouldered portion of the ring or sleeve 9 and it also incloses the cap or closure 6. The inner face of the head 13 is made with cams 14 to cooperate with cams 15 on an angular enlargement 16 formed on the cap or closure 6 so that when the head is turned relatively to the cap or closure, the latter will be pressed against its seat and the beveled shoulders 11 within the head will tightly bind against the beveled shoulders 10 on the ring or sleeve 9. The head 13 is provided with lugs 17 so disposed that when the head is turned to lock the parts in place as above described, said lugs will engage the corners of the angular enlargement 16 on the cap and thus the turning movement of said head will be limited.

It will be seen that the cap and head may be further tightened by turning the ring or sleeve 9, for which purpose the latter may be made with a hexagonal or other angular external configuration for the accommodation of a wrench.

If desired, the sleeve or ring 9 may be dispensed with and the bearing sleeve provided with an integral annular extension 18, as shown in Fig. 4.

With our improvements the cap or closure will be normally tightly clamped to its seat, but it is apparent that by a slight turning movement of the head the parts will be released and may be removed from the bearing sleeve to expose the head of the staybolt for testing purposes. It is equally apparent that the cap or closure and its head may be as quickly replaced on the bearing sleeve and secured in position.

Having fully described our invention what we claim as new and desire to secure by Letters-Patent, is:

1. In a staybolt structure, the combination with a bearing member provided with a part having external outwardly beveled segmental shoulders, of a cap or closure to seat against said bearing member, and a head having a part provided with internal inwardly beveled segmental shoulders to engage the beveled shoulders on the bearing member.

2. In a staybolt structure, the combination with a bearing member having a part provided with external outwardly beveled segmental shoulders, of a cap or closure, a head encircling the shouldered part on the bearing member and having internal inwardly beveled segmental shoulders to en-

gage the shouldered portion on the bearing member, and cams between said head and cap or closure.

3. In a staybolt structure, the combination with a bearing member and a ring or sleeve threaded thereon, said ring or sleeve provided with external outwardly beveled segmental shoulders, of a cap or closure, a head inclosing the cap or closure and provided with a part having internal inwardly beveled segmental shoulders to engage the shoulders on the sleeve, and lugs within the head coöperable with the cap or closure to limit the turning movement of said head.

In testimony whereof, we have signed this specification in the presence of two subscribing witnesses.

JOHN ROGERS FLANNERY.
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Witnesses:
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