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STAYBOLT STRUCTURE.

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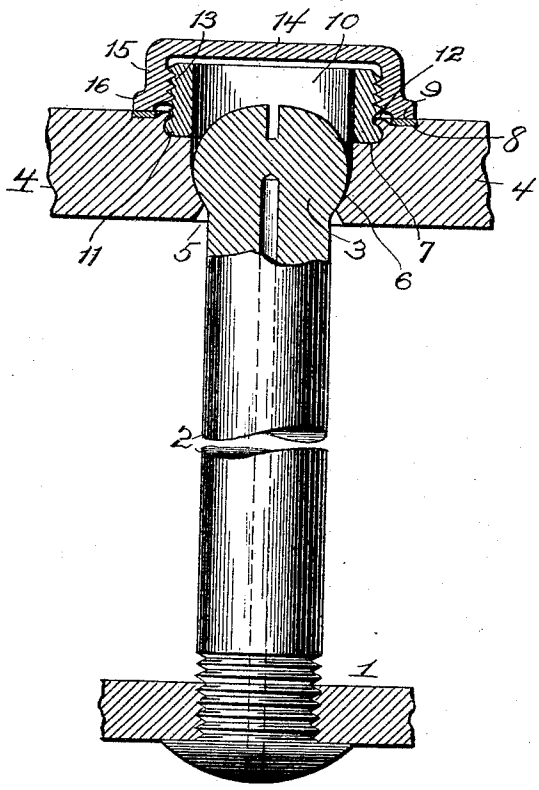
1,366,722.

Patented Jan. 25, 1921.

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# UNITED STATES PATENT OFFICE.

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## STAYBOLT STRUCTURE.

1,366,722. Specification of Letters Patent. **Patented Jan. 25, 1921.**

Application filed November 25, 1919. Serial No. 340,491.

*To all whom it may concern:*

Be it known that I, ETHAN I. DODDS, a citizen of the United States, and a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Staybolt Structures; and I 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 for boilers,—the object of the invention being to provide simple and efficient means for effecting a closure for the opening in the boiler sheet in which the head of a staybolt has its mounting.

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.

The accompanying drawings is a sectional view partly in elevation showing an embodiment of my invention.

1 represents the inner sheet of a boiler with which the inner end of a staybolt 2 is connected in any suitable manner. The outer end of the staybolt is provided with a rounded head 3 and the outer sheet 4 of the boiler is provided with an opening 5, a portion of the wall of which is rounded to afford a seat 6 for the rounded head of the staybolt.

The opening in the outer boiler sheet is enlarged near the outer face of said sheet and forms an annular shoulder 7. The boiler sheet 4 is provided in its outer face with an annular groove 8 spaced somewhat from the enlarged portion of the opening in the boiler sheet and affords a seat for a gasket 9.

A ring or sleeve 10 is seated on the shoulder 7 and is provided at at its inner end with a rib or flange 11 which may be rounded. When the ring or sleeve 10 shall have been seated on the shoulder 7 in the boiler sheet, the metal indicated at 12 between the enlarged portion of the opening in the boiler sheet and the groove 8, will be spun over the rib or flange 11 at the inner end of the ring or sleeve 10, thus securing said ring or sleeve to the boiler sheet. That portion of the ring or sleeve 10 which projects outwardly beyond the boiler sheet 4 is threaded exteriorly as at 13.

A closure 14 is disposed over the end of the sleeve or ring 10 and is made with a peripheral portion 15 which is threaded interiorly to engage the exterior threads of the ring or sleeve and the edge portion of the cap or closure may be off-set somewhat as shown at 16. The gasket 9 is interposed between the off-set edge portion of the cap or closure and the boiler sheet 4,—said gasket being located within the groove 8 in the outer face of said boiler sheet as previously stated.

It will be evident that by turning the cap or closure on the ring or sleeve, both of said members will be firmly clamped to the boiler sheet and leakage will be prevented.

Having fully described my invention what I claim as new and desire to secure by Letters-Patent is:—

1. In a staybolt structure, the combination with a boiler sheet and a staybolt having a head mounted in an opening in said boiler sheet, of a ring or sleeve secured to the boiler sheet coincident with said opening and provided with an exterior threaded portion, and a cap or closure engaging the threaded portion of said ring or sleeve and clamped to the boiler sheet.

2. In a staybolt structure, the combination with a boiler sheet provided with a bearing for the head of a staybolt, and a staybolt having a head mounted on said bearing, of a ring or sleeve secured to the boiler sheet and projecting outwardly beyond the same, the outwardly projecting portion of said ring or sleeve being threaded exteriorly, a cap or closure over the end of said ring or sleeve and over the head of the staybolt, said cap or closure having an internally threaded peripheral part engaging the threaded portion of the ring or sleeve, and a gasket interposed between the edge portion of said peripheral cap or closure and the outer boiler sheet.

In testimony whereof, I have signed this specification in the presence of a subscribing witness.

ETHAN I. DODDS.

Witness:
EDWIN S. RYCE.