No. 637,239. Patented Nov. 21, 1899.

W. E. DAVIS.

BAND FASTENING.

(Application filed Nov. 21, 1898.)

(No Model.)

Fig. 1.

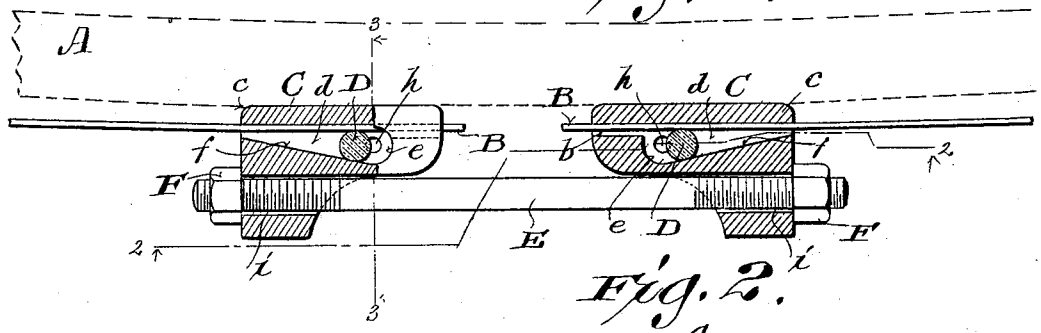


Fig. 2.

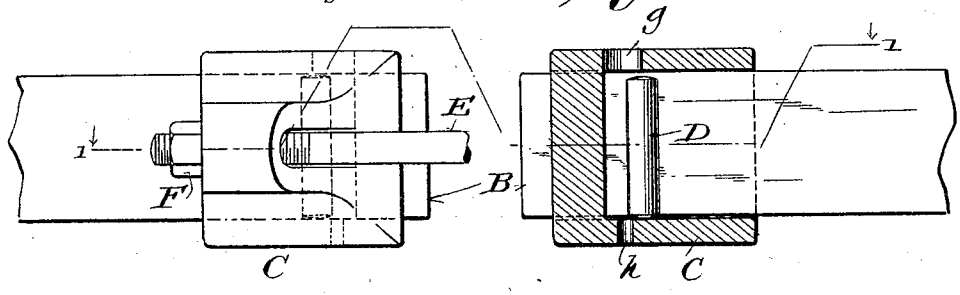
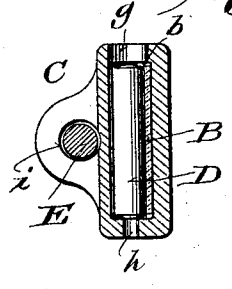


Fig. 3.



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM E. DAVIS, OF RACINE, WISCONSIN, ASSIGNOR OF ONE-HALF TO GEORGE B. FREEMAN & CO., OF SAME PLACE.

BAND-FASTENING.

SPECIFICATION forming part of Letters Patent No. 637,239, dated November 21, 1899.

Application filed November 21, 1898. Serial No. 697,002. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. DAVIS, a citizen of the United States, and a resident of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Band-Fastenings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has especial reference to that class of fastening devices which are used for securing the ends of bands or hoops which surround tanks, casks, and other cylindrical staved vessels; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter and subsequently claimed.

In the drawings, Figure 1 is a sectional view, on the line 1 1 of Fig. 2, showing my improved devices in the position they occupy when clamping or holding a band around a tank or cask. Fig. 2 shows my said device, partly in elevation and partly in section, on the line 2 2 of Fig. 1. Fig. 3 is a detail sectional view on the line 3 3 of Fig. 1.

Referring to the drawings, A represents in dotted lines a section or portion of a tank or cask, and B B the ends of a band or hoop surrounding the same.

C C represent a pair of clamping-heads, which are preferably simple metallic castings and each of which is formed with a longitudinal opening *b* therethrough for the passage of one end B of the said band or hoop. The surface of the part *c* of the head C, which rests against the tank or other vessel, is substantially flat, and the wall of the opening *b* next this part is similarly preferably flat and parallel therewith; but said opening *b* merges into a recess *d*, whose end wall is preferably rounded, as shown at *e*, from which point the wall of said recess gradually tapers or converges toward the wall of the opening *b* at the outer end of the head, as shown at *f*. The top of each head C (in the position shown in Figs. 2 and 3) is further provided with a round opening *g*, leading into the described recess *d* and of proper size to permit a metallic cylinder D or other revoluble body to be dropped therethrough into said recess, there being another hole *h* of less diameter than that of the hole *g* through the bottom of said head and in line with the hole *g* above. Each head C is further provided with a longitudinal hole *i* for the reception of the tie-bolt E, which latter is threaded at each end to receive tightening-nuts F F, as shown.

The operation of my device will be readily understood from the foregoing description of its construction, taken in connection with the accompanying drawings. The band or hoop of proper length is placed around the tank or other vessel, with the ends of said band or hoop passed through the openings *b* in the heads C, the latter resting against the vessel, as shown in Fig. 1, and with the cylinders D dropped into the recesses *d* of said heads, as already described. The tie-bolt E is passed through the longitudinal openings *i i* in said heads C C and the nuts F F tightened to place, bearing against the outer ends of said heads, which will serve to force the inner ends of the said heads nearer together and cause the cylinders D D to clamp the band ends B B tightly in place by the rolling frictional contact of said cylinders against the adjacent surfaces of said band ends and the tapered walls *f f* of the recesses *d d*.

Should it be desired at any time to release the band, the nut F on one end of the tie-rod E is removed, and then the inner end of the adjacent head C is driven outwardly, which will cause the cylinder D to be received against the rounded end wall *e* of the recess *d* and loosen the hold on the band, and if it is desired to remove said cylinder then a rod or pin of suitable size may be inserted through the hole *h* and the cylinder D readily driven out through the hole *g*.

My invention will be found to be very cheap in manufacture and effective in use, and its simplicity and the fewness of its parts render it an extremely desirable form of band-fastening.

In some instances in order to give additional bearing-surface to the tie-bolt E the inner ends of the clamping-heads C may be enlarged and provided with longitudinal openings in line with the described openings *i* in the outer ends of said heads. Further, while ordinarily I prefer the use of the described revoluble cylinders D, it is practical to employ a number of balls of proper size to

take the places of said cylinders, and hence I do not limit myself to the particular form of revoluble bodies shown and described.

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

1. In a band-fastening, the combination with a pair of heads having longitudinal openings therethrough for the reception of the band ends, said openings merging into recesses whose walls taper and converge toward the walls of said longitudinal openings at the outer ends of said heads, and form rounded stops adjacent to the inner ends of said heads, revoluble bodies located within said recesses, and adapted to engage with said rounded stops to prevent longitudinal escape therefrom, and a coupling device uniting said heads.

2. In a band-fastening, the combination with a pair of heads having longitudinal openings therethrough for the reception of the band ends, said openings merging into recesses whose walls taper and converge toward the walls of said longitudinal openings at the outer ends of said heads, transverse openings communicating with said recesses, for the vertical admission or withdrawal of revoluble bodies, and other longitudinal openings for the reception of a tie-bolt, revoluble bodies located within said recesses, and a tie-bolt and tightening-nuts.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

WILLIAM E. DAVIS.

Witnesses:
J. C. LUND,
GEO. B. FREEMAN.