March 29, 1932. C. V. STEWART 1,851,067

OIL REFINING TUBE STILL

Filed Nov. 14, 1930

Fig. 1

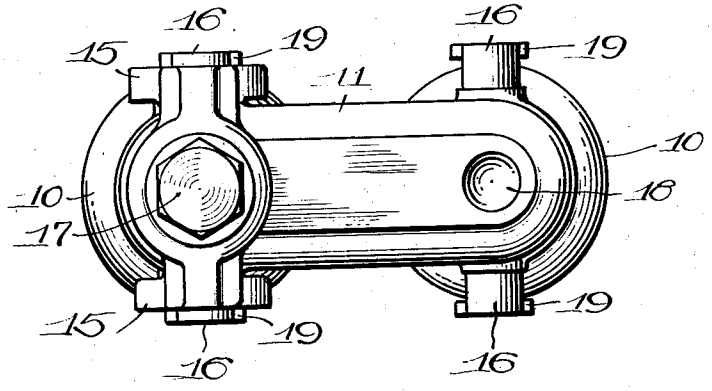


Fig. 2

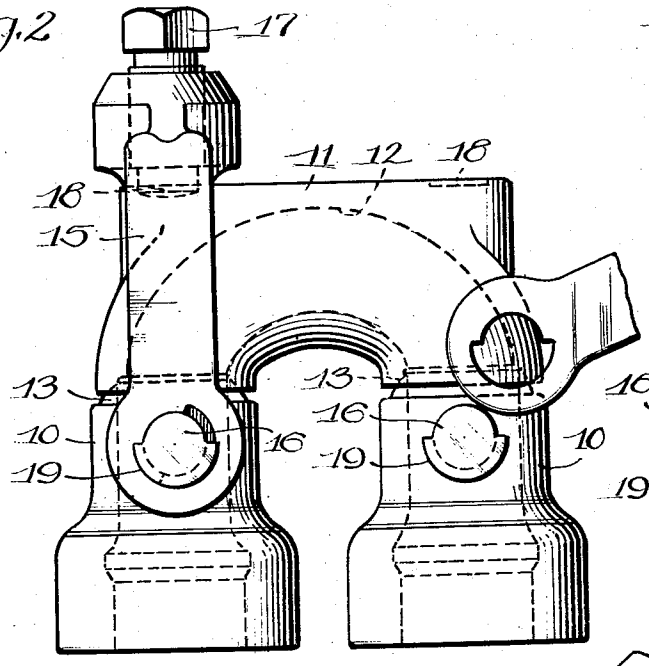


Fig. 3

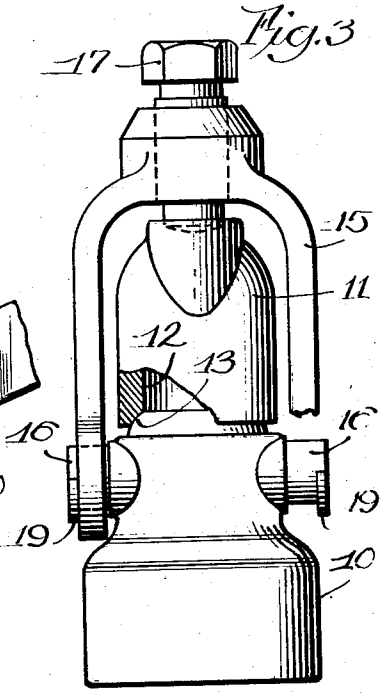
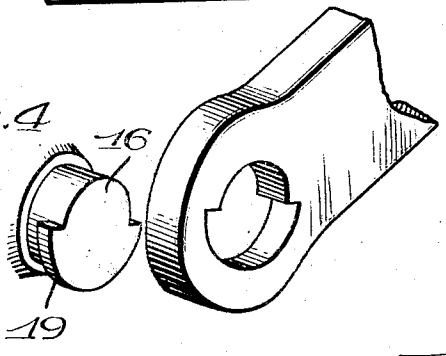


Fig. 4



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Patented Mar. 29, 1932

1,851,067

UNITED STATES PATENT OFFICE

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OIL REFINING TUBE STILL

Application filed November 14, 1930. Serial No. 495,721.

This invention relates to improvements in return bends for oil refining stills.

The principal object of the invention is to provide an improved construction for return bend fittings of the character described, including a readily removable return bend casting connecting adjacent ends of the pipe sections, and to provide a simple and efficient construction detachably maintaining said return bend casting in its proper position.

The invention may best be understood by reference to the accompanying drawings, in which

Figure 1 is a plan view of a return bend fitting constructed in accordance with my invention.

Figure 2 is a side view of the fitting shown in Figure 1, showing one of the clamping yokes removed therefrom.

Figure 3 is an end view.

Figure 4 is an enlarged detail of the yoke locking means in perspective.

Referring to details of the drawings, 10, 10 indicate two associated end fittings of the type utilized in tube stills or the like, adapted to have tubes (not shown) attached thereto in parallel relation.

Connecting the two end pieces 10, 10 together is a casting 11 having a semi-circular passage 12 therein, the ends of which register with the end pieces 10, 10 preferably by means of ball joint connections of the usual form indicated at 13, 13.

The casting 11 is held in place by a pair of U-shaped yokes 15, 15, the open ends of which are pivotally connected on trunnions 16, 16 mounted on opposite sides of each of the end pieces 10, 10, and preferably cast integrally therewith.

Each of said yokes is provided with a set screw 17 at its upper end which engages with a recessed portion 18 formed in the casting 11 in axial alignment with the adjacent end piece 10.

The ends of each yoke 15 may be secured to the trunnions in any suitable manner, for instance, in the form shown in Figure 4, each of the trunnions is provided with a collar 19 at its outer end, which collar is of such shape as to permit the yoke to be sprung upon the trunnions when swung outwardly at an angle to its normal upright position, but retaining the ends of said yoke when the latter is in locking position as shown in Figures 2 and 3.

Although I have shown and described one particular embodiment of my invention, it will be understood that I do not wish to be limited to the exact construction shown and described, but that various changes and modifications may be made without departing from the spirit and scope of my invention.

I claim as my invention:

1. In a return bend fitting, a pair of tube end pieces, a connecting piece having a semi-circular passage communicating with opposite ends of said tube end pieces, a pair of trunnions on opposite sides of said tube end pieces, securing means comprising a yoke pivotally connected to said trunnions and spanning said connecting piece, clamping means on said yoke disposed centrally of said connecting piece in substantial axial alignment with its respective tube end piece, said yoke and clamping means being arranged to swing laterally as a unit when said clamping means is disengaged, lugs on the ends of said trunnions for retaining the respective ends of said yoke thereon while the latter is in clamped position on said return bend fitting, the said yoke ends having apertures therein registering with said lugs so as to permit endwise removal of said yoke ends when the yoke is swung out of locking position.

2. In a pipe fitting, a tube end piece and a connecting piece having a curved passage communicating with the end of said tube end piece, a pair of trunnions on opposite sides of and integral with said tube end piece, securing means comprising a yoke spanning said connecting piece and pivotally connectible to said trunnions by flexing said yoke, clamping means on said yoke for engaging said connecting piece, said yoke and clamping means being arranged to swing laterally as a unit when said clamping means is disengaged, lugs integral with the ends of said trunnions for retaining the respective ends of said yoke thereon while the latter is in clamped position on said connecting piece, and said yoke ends having apertures therein

registering with said lugs when the yoke is swung out of locking position so as to permit endwise removal of said yoke ends from said trunnions.

Signed at Springfield, Ohio, this 12th day of November, 1930.

CARLYLE V. STEWART.