

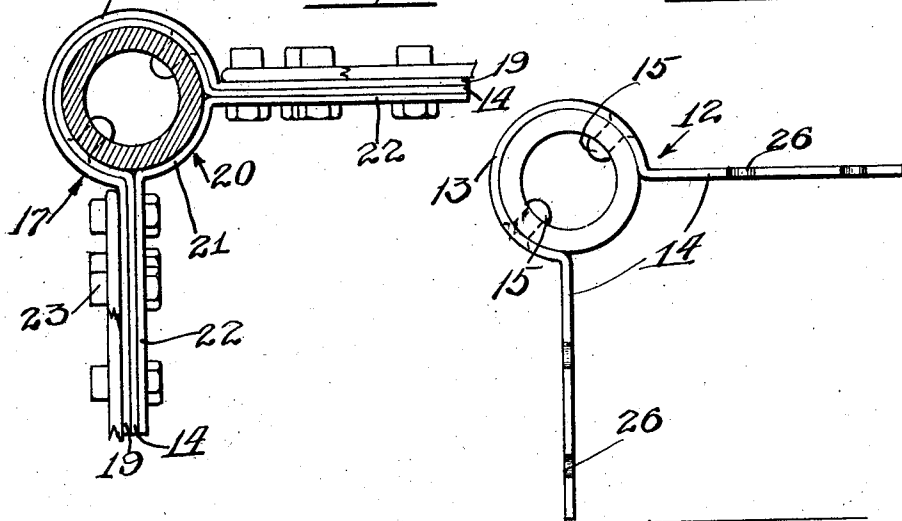
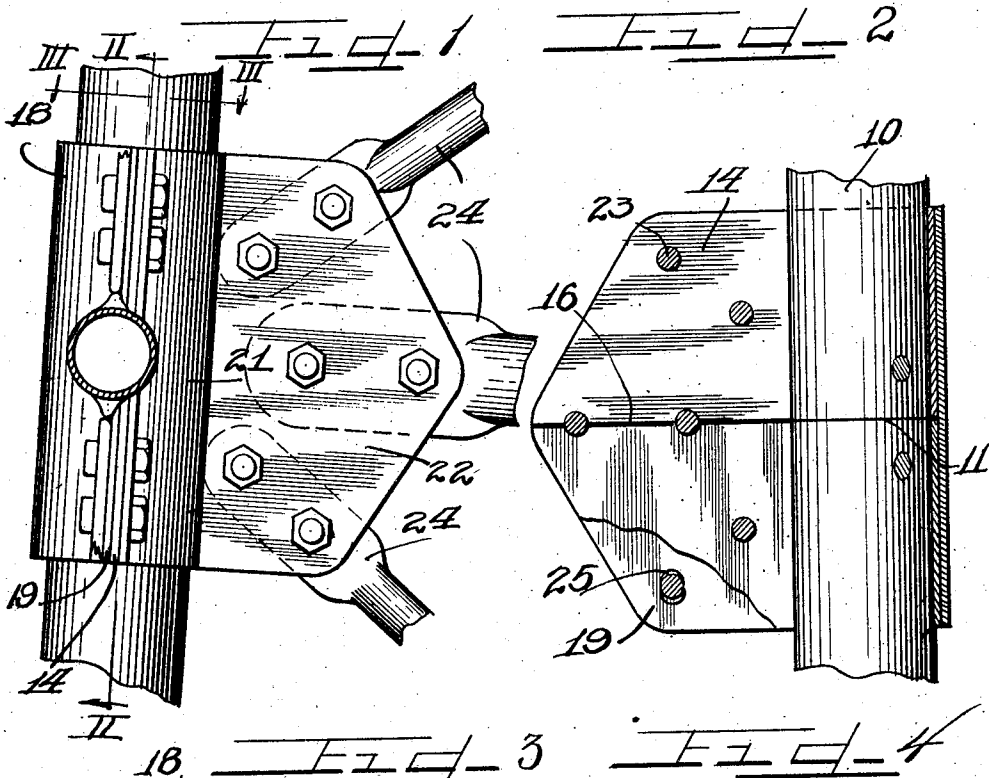
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W. F. SPEAKMAN ET AL

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DERRICK LEG CLAMP

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INVENTORS  
Walter F. Speakman  
Guy E. Crockett

BY Charles M. Viles ATTYS.

# UNITED STATES PATENT OFFICE

WALTER F. SPEAKMAN AND GUY E. CROCKETT, OF DRUMRIGHT, OKLAHOMA

## DERRICK-LEG CLAMP

Application filed December 16, 1929. Serial No. 414,340.

Our present invention relates to an improved and simplified derrick leg clamp of the same general type as that disclosed in our Patent No. 1,703,369, issued February 26, 1929.

The object of our invention is to provide a derrick leg clamp of a more simple construction than that disclosed in our above noted patent and which consists of less parts than our patented clamp.

In our patented derrick leg clamp, the shim of the clamp on each leg section of the derrick leg was sectionalized thus necessitating the use of four shim parts. We propose in accordance with the features of our present invention to provide a derrick leg clamp construction in which each shim comprises a single part and in which the space formerly occupied by the shim parts omitted is filled by a splicing plate common to both of the leg section ends and disposed in direct contact with the portion of these ends not covered by the shims.

In accordance with the general features of our present invention there is provided a four part clamp for sectional derrick legs comprising a pair of open sided shims adapted to be secured to the abutting ends of a pair of the sections of the derrick leg and a clamping construction enclosing the shims comprising two parts, namely, a tubular member common to both of the shims and adapted to overlap and enclose both of the shims and a splicing plate common to both shims extending longitudinally of the derrick leg in the open sides of both the shims and the tubular member.

Other objects and advantages of our invention will more fully appear from the following detailed description taken in connection with the accompanying drawing which illustrates a single embodiment thereof and in which:

Figure 1 is a fragmentary side elevational view of a clamp for sectional derrick legs connected thereto with parts in section;

Figure 2 is a sectional view taken on the line II—II of Figure 1;

Figure 3 is a view partly in section taken on the line III—III of Figure 1; and

Figure 4 is a plan view of one of the shims showing it applied to a section of the derrick leg.

As shown on the drawings:

The reference character 10 designates generally a rod which may take the form of a sectionalized derrick leg. The associated ends of a pair of sections of this leg 10 abut each other as indicated at 11 in Figure 2. Secured to each of these ends is a shim 12 comprising a curved or tubular portion 13 disposed about the curved surface of the derrick leg and a pair of laterally extending flanges 14 disposed at substantially right angles to each other. The tubular portion 13 of each shim is secured to the corresponding end of the sectional derrick leg 10 by means of rivets 15. It will, of course, be understood that the shims may be secured to the derrick leg by any other suitable means. In fact the shims may be welded to the derrick leg if a welded joint is desired.

It should be noted that when the shims are in place on the derrick leg (Figure 2) the flanges 14 of the shims abut each other as indicated at 16 thus increasing the bearing surface between the abutting ends of the sections of the derrick leg. That is to say, the bearing surface 11 is in reality supplemented by the bearing surface 16. This feature is advantageous in that it increases the vertical load bearing capacity of the leg sections.

Disposed about and common to both shims is a clamping member 17 comprising a tubular portion 18 encircling the tubular portions 13 of the shims and flanges 19 adapted to engage the outer surfaces of the flanges 14 of the shims 12.

The clamping member 17 as well as each of the shims 12 are provided with open sides as is readily evident from Figures 3 and 4. The open sides of the shims 12 are disposed in vertical alignment with each other.

Positioned between the flanges 14 of the shims and common to both shims is a splicing or clamping plate 20 having a curved portion 21 for engagement with the curved surface of the derrick leg 10 in the open sides of the shims 12. This construction results in the plate 20 comprising in part a continua-

tion of the shims as far as the encircling of the derrick leg is concerned.

The clamping plate 20 is provided with laterally extending flanges 22 disposed at substantially right angles to each other and adapted to engage the inner surfaces of the flanges 14 of the shims 12.

The contacting flanges 19, 14 and 22 are adapted to be secured together by means of bolts and nuts 23 which also serve to anchor to the flanges girths and braces 24 such as are commonly used in derrick construction.

Attention is directed to the fact that the holes in the flanges 19 and 22 through which the bolts extend are elongated as indicated at 25 in Figure 2. We purposely elongate these openings in order to facilitate the alignment of these holes with the bolt apertures 26 in the flanges 14 of the shims.

In the setting up of a derrick the shims are first secured to the ends of the sections of the derrick leg which are to be connected together. The tubular member 17 is secured to the shim on the lower section of the derrick leg. In this position the tubular member 17 forms a socket into which the end of the upper leg section carrying its shim 14 may be dropped and bolted in place. The elongated holes 25 in the flanges 19 and 22 facilitate the alignment of these openings 25 with the openings 26 in the flanges 14 of the shims as previously explained. Thus it will be evident that when the clamping or splicing plate 20 is properly aligned with the full length flanges 14 of the shims the flanges may all be bolted together by the bolts and nuts 23 which also serve to secure the girths and braces 24 to the flanges.

The full length flanges of tubular members 17 and 20 not only greatly strengthen the joints of the sections of the derrick leg 10, but are thus utilized for the attachment of girths and braces thereto. Then too, as previously pointed out, the vertical load carrying capacity of the leg sections is greatly increased owing to the additional contact surface 16 between the cooperating flanges 14 of the shims.

Now, it is, of course, understood that although we have illustrated and described in detail the preferred embodiment of our invention, the invention is not to be thus limited but only in so far as defined by the scope and spirit of the appended claims.

We claim as our invention:

1. A clamp for a sectional derrick leg comprising shims adapted to be secured in fixed relation upon respective abutting ends of the sections of said leg and to enclose only a portion of said ends, a tubular member common to both of and overlapping said adjacent shims, said shims and tubular member being formed with cooperating flanges adapted to be secured together and intermediate

clamping means adapted to contact the unenclosed portion of said derrick leg disposed between the sides of each of said shims for clamping said shims and tubular member to the derrick leg.

2. A clamp for a sectional derrick leg comprising shims adapted to be secured in fixed relation upon respective abutting ends of the sections of said leg and to enclose only a portion of said ends, a tubular member common to both of and overlapping said adjacent shims, said shims and tubular member being formed with cooperating flanges adapted to be secured together and intermediate clamping means adapted to contact the unenclosed portion of said derrick leg disposed between the sides of each of said shims for clamping said shims and tubular member to the derrick leg, said intermediate clamping means comprising a clamping plate common to and overlapping both of said shims and adapted to fill in the space between the flanges of the shims and the tubular member.

3. A four-part clamp for sectional derrick legs comprising a pair of open sided shims adapted to be secured to the abutting ends of a pair of the sections of the derrick legs and an open sided tubular member common to both of said shims and adapted to overlap and enclose both of said shims, and a splicing plate adapted to be secured to said member common to both shims extending longitudinally of the derrick leg in the open sides of both the shims and the tubular member for completing the clamp.

4. A clamp for sectional derrick legs comprising shims adapted to be secured in fixed relation upon respective abutting ends of sections of the derrick leg, a tubular clamping member adapted to be mounted over said shims and means for interconnecting said tube and said shims comprising a splice plate having a curved portion for contact with a portion of a derrick leg not covered by said shims.

5. A clamp for sectional derrick legs comprising cooperable shims adapted to be secured in fixed relation upon the abutting ends of sections of the derrick leg, a sectional outer tube construction adapted to be mounted over said shims, each of said shims comprising a member having a cylindrical portion for encircling a portion of the end of the derrick leg and full length flanges extending laterally from the sides of said portion, said tube having flanges adapted to cooperate with the flanges of said shims and to be secured thereto.

6. A clamp for a sectional rod comprising a pair of open sided shims adapted to be mounted on the abutting ends of sections of said rod, an open sided clamping tube disposed over said shims and curved clamping means comprising in part a continuation of

said shims adapted to fit in the open sides  
of said shims and said tube to be connected  
to said clamping tube.

In testimony whereof, we have hereunto  
subscribed our names at Drumright, Creek  
County, Okla.

WALTER F. SPEAKMAN.  
GUY E. CROCKETT.

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