Dec. 19, 1944. H. J. WOOLSLAYER ET AL 2,365,370

MAST BASE

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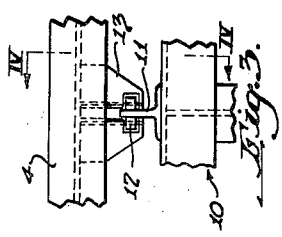


Fig. 3.

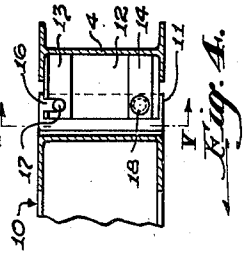


Fig. 4.

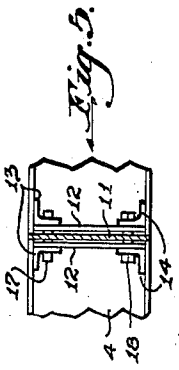


Fig. 5.

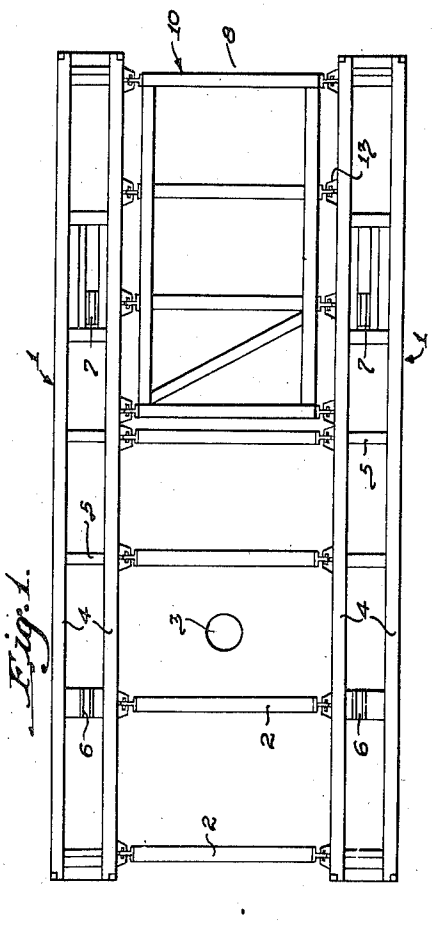


Fig. 1.

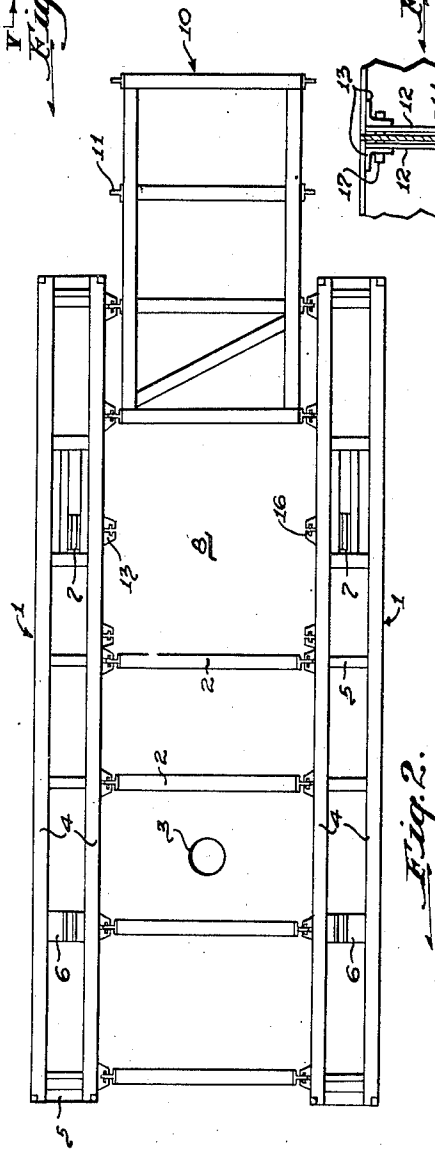


Fig. 2.

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2,365,370

MAST BASE

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10 Claims. (Cl. 189—21)

This invention relates to bases for oil well masts and the like.

At the present time, due to the different sizes of rotary rigs or draw-works, the general practice is to build oil well mast bases in a great variety of lengths. This lack of standardization increases the cost of producing the bases and requires many sizes to be kept in stock.

It is among the objects of this invention to provide an oil well mast base which can be used with rigs of several different sizes, which can be readily taken apart for transportation, and which, more specifically, is extendible to different lengths.

These and other objects are accomplished by providing a horizontal framework with an inwardly extending recess at one end. This framework forms the major portion of the base which is completed by a separate base section that is adapted to fit in the recess in the framework. This separate base section is adjustable or movable lengthwise of the framework to project it from the recess in order to lengthen the base. The separate section may be detachably connected to the framework in any one of several predetermined positions. Preferably, the framework comprises two parallel side members on which the legs of a mast rest, and a plurality of cross members that detachably connect the side members together so that the framework can readily be taken apart for transportation.

The preferred embodiment of the invention is illustrated in the accompanying drawing in which Fig. 1 is a plan view of our base in normal unextended position; Fig. 2 is a similar view showing the base extended; Fig. 3 is an enlarged fragmentary plan view of the connection of one of the cross members to one of the side members of the framework; Fig. 4 is a vertical section taken on the line IV—IV of Fig. 3; and Fig. 5 is a vertical section taken on the line V—V of Fig. 4.

Referring to the drawing, the base is made from structural steel members, such as channels, I-beams, and angles, and is designed for supporting a mast and its associated draw-works in the general manner shown in our Patent No. 2,300,480. In that patent, however, the base can not be increased in length to accommodate draw-works of larger size, thereby requiring in such a case that a different base be used. The major portion of the base disclosed herein consists of a rigid horizontal framework formed from a pair of laterally spaced, parallel side members 1 connected at intervals along about the front half of their length by laterally spaced cross members 2 between two of which the well 3 appears. The length of the side members is equal to the minimum length of base desired. Each side member is fabricated from a pair of parallel horizontal I-beams 4 rigidly connected at intervals by intermediate bracing members 5. Near the front end of the base conventional shoes 6 are mounted on the side members for supporting the front legs of a mast, and near the rear end of the base another pair of shoes 7 are mounted on the side members for receiving the rear legs of the mast. These shoes may each be in the form of an upright pair of plates to which the lower end of one of the legs can be connected in any suitable manner. Cross members 2 may be connected to the side members in any suitable manner, but preferably in such a way that they can readily be disconnected so that the framework can be broken down into separate side members and cross members for transportation to a new location. The preferred way of connecting these members together will be described hereinafter.

It is a feature of this invention that the rear end portion of the framework, where the side members are not connected by cross members 2, thus forms an inwardly extending open area or recess 8 as best shown in Fig. 2. This recess normally contains a separate rigid base section 10 which completes the base by connecting the rear end portions of the framework's side members. This separate base section is formed from structural members arranged in a rectangle with its opposite sides provided at uniformly spaced intervals with lateral projections formed, for example, by vertical T-bars 11 secured to the section. As shown in Figs. 3, 4, and 5, these projections extend into vertical slots formed by pairs of parallel vertical plates 12 connected to upper and lower angle brackets 13 and 14 which are secured to the flanges of inner I-beams 4.

Although the base section 10 will stay in place by reason of the interengagement of projections 11 and the slots between plates 12, it is more satisfactory if the base section is detachably secured to side members 1 of the framework. For this purpose projections 11 and plates 12 may be provided with aligned transverse openings through which removable fastening members extend. Preferably, the tops of vertical plates 12 and brackets 13 are provided with a pair of downwardly extending notches 16 that receive a pin 17 extending through an opening in the upper part of the projection 11 between them. This

pin may be permanently mounted in the projection, or it may be removable therefrom. In putting the separate base section into place in the framework recess 8, it is lowered into the recess in such position that its lateral projections 11 slide down into the slots between the different pairs of vertical plates 12 until pins 17 rest on the bottoms of notches 16. The pins and notches center the base section and assure alignment of other transverse openings with which brackets 14 and the lower portions of projections 11 are provided. Bolts 18 (Figs. 4 and 5) or other removable fastening elements are then inserted in these lower openings to rigidly connect the base section and framework together.

In case it becomes necessary to use a longer base, such as for supporting twin engines for a draw-works, the separate base section 10 is removed from its normal position shown in Fig. 1 by first removing bolts 18 and then lifting the section out of recess 8. This disconnected base section is then moved rearwardly relative to the framework to project it from the recess for increasing the length of the base the necessary amount. In its new position the base section is lowered again to insert its front end in the recess, as shown in Fig. 2, where its front projections 11 are detachably connected to the rear framework brackets 13 and 14 and plates 12 by pins 17 and bolts 18 in the same manner as described above. As projections 11 are uniformly spaced apart along the base section, there are several different positions lengthwise of the base in which this separate section can be fastened. The extended portion of the base section need not be as wide as the main frame-work of the base because the draw-works, that it supports, is not as wide as the foot of the mast that rests on side members 1.

As indicated above, cross members 2 preferably are connected to side members 1 in the same manner as base section 10. When it is desired to move the base to a new location, the cross members can therefore be readily disconnected from the side members, and the separate base section can be entirely removed from the framework. This breaks the base down into several separate parts the widest of which is base section 10. Consequently, the disassembled base can easily be handled, and load width limitations on highways will not be exceeded.

According to the provisions of the patent statutes, we have explained the principle and construction of our invention and have illustrated and described what we now consider to represent its best embodiment. However, we desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

We claim:

1. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, and means for detachably connecting said section to the framework in different positions lengthwise of said recess.

2. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, and means for detachably connecting said section to the framework in any one of a plurality of predetermined positions spaced lengthwise of said recess.

3. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, and a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, and the sides of said section and recess being provided with a plurality of longitudinally spaced and interengageable projections and slots for positioning said section in different locations lengthwise of the recess.

4. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, the sides of said section and recess being provided with a plurality of longitudinally spaced and interengageable projections and slots for positioning said section in different locations lengthwise of the recess, said projections and the walls of said slots being provided with aligned transverse openings, and removable fastening members extending through said aligned openings.

5. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, and means spaced uniformly along the adjacent sides of said recess and base section for detachably connecting said section to the framework in different predetermined positions lengthwise of the recess.

6. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, the sides of said base section being provided with a plurality of longitudinally spaced projections, and the sides of said recess being provided with a plurality of longitudinally spaced members projecting into the recess and forming vertical slots for receiving said projections.

7. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, the sides of said base section being provided with a plurality of longitudinally spaced projections, the sides of said recess being provided with a plurality of longitudinally spaced members projecting into the recess and forming vertical slots for receiving said projections, said projections and slot-forming members being provided with aligned transverse openings, and fastening members removably mounted in said openings.

8. A base for oil well masts, comprising a horizontal framework provided at one end with an

inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, the sides of said base section being provided with a plurality of longitudinally spaced projections, the sides of said recess being provided with a plurality of longitudinally spaced members projecting into the recess and forming vertical slots for receiving said projections, the tops of said members being provided with notches and the tops of said projections having transverse openings therethrough alignable with said notches, and pins disposed in said openings and projecting into said notches.

9. A base for oil well masts, comprising a horizontal framework provided at one end with an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of the framework to project it from the recess for increasing the length of the base, the sides of said base section being provided with a plurality of longitudinally spaced projections, the sides of said recess being provided with a plurality of longitudinally spaced members projecting into the recess and forming vertical slots for receiving one of said projections, the tops of said members being provided with notches and the tops of said projections having transverse openings therethrough alignable with said notches, pins disposed in said openings and projecting into said notches, the lower portions of said projections and members having aligned transverse openings therethrough, and fastening members removably mounted in said openings.

10. A base for oil well masts, comprising a pair of laterally spaced mast-supporting members, a plurality of transverse members detachably connected at their ends to said mast-supporting members, the transverse members being omitted at one end of the mast-supporting members to provide an inwardly extending recess, a separate base section adapted to fit in said recess to complete the base, said section being movable lengthwise of said mast-supporting members to project it from the recess for increasing the length of the base, and means for detachably connecting said section to the mast-supporting members in different positions lengthwise of said recess.

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