March 24, 1942. G. G. BROWN 2,277,386

MASTHEAD

Filed July 22, 1940

Fig. 1

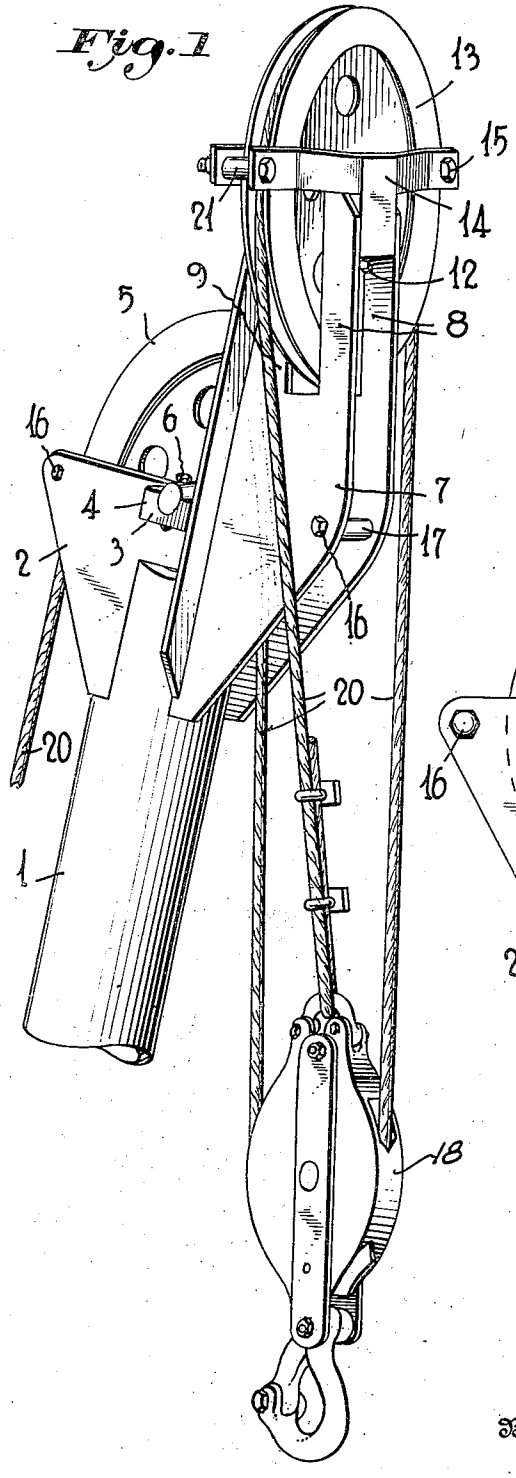
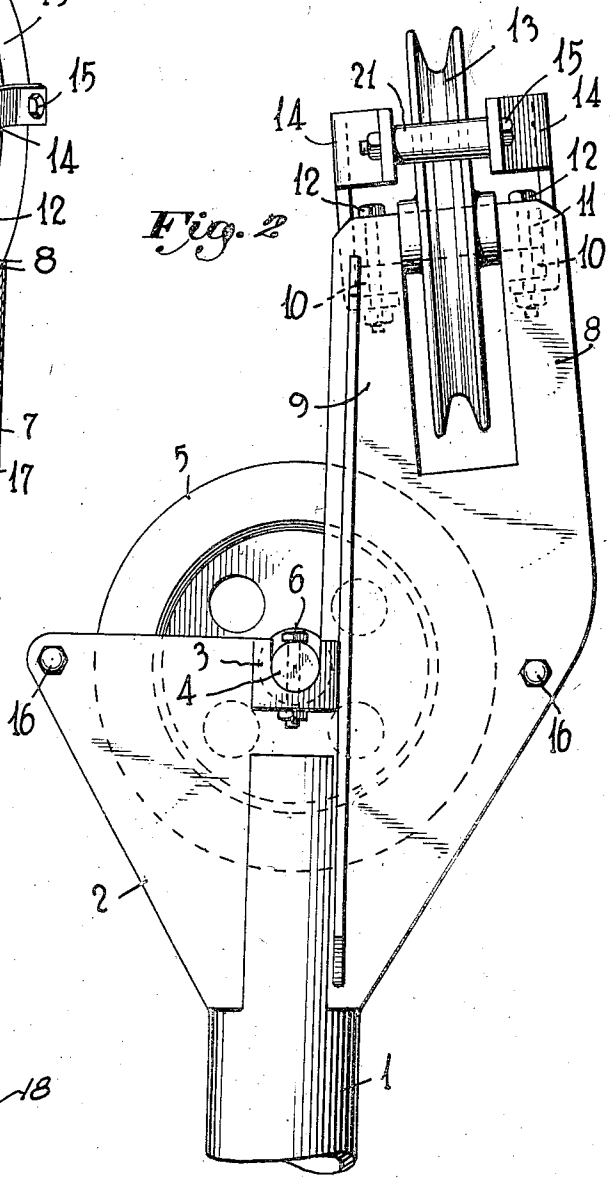


Fig. 2



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MASTHEAD

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5 Claims. (Cl. 254—139)

This invention relates to a masthead for hoisting machines, and is particularly adapted for use on masts used in a substantially vertical position.

In the past it has been customary to build mastheads with a plurality of pulleys atop the mast with ropes passing thereover supporting a movable block pulley. When such masts are used in a vertical or nearly vertical position they have been subject to the disadvantage that, when it is attempted to raise the block to the top of the mast, the block comes in contact with the mast and accordingly only a small proportion of the height of the mast can be effectively used.

It is an object of my invention to provide a masthead which can be used to take advantage of the full length of the mast.

My invention relates to a masthead having a plurality of pulleys at the top in which one of the pulleys is disposed at an angle to the other pulley so that the rope passing over it and to which the movable block is attached is suspended out from the mast so that the full height of the mast can be used effectively since the block can be raised substantially to the top of the mast.

This is illustrated in the drawing in which

Fig. 1 represents a perspective view of a masthead made according to my invention mounted upon a mast and showing the rope with a movable block; and

Fig. 2 is a front elevation of Fig. 1.

With reference to the drawing, 1 represents the mast upon which the masthead is mounted. The mast illustrated is tubular but any suitably shaped mast may be used. Mounted upon the mast is a bracket 2 which may be fastened to the mast in any suitable manner as, for example, by welding. Bracket 2 carries a bearing block 3 into which is placed shaft 4 which carries a pulley 5. As shown in the drawing, the shaft 4 is fixed to the block 3 by means of bolts 6 but any other arrangement may be used at this point. Bracket 2 has upwardly extending portion 7, having arms 8 and 9 which carry a bearing surface 10. Mounted in this bearing surface 10 is a shaft 11 which is shown as bolted to the bearing surface 10 by means of bolts 12. A pulley 13 is mounted upon the shaft 11 by means of suitable bearings not shown. A guard 14 is fastened beneath the bearing surface 10 by means of bolts 12. This guard serves to prevent the rope from falling off the pulley 13. The two halves of the guard are bolted by means of bolts 15 passing through spacers 21. The bracket 2 is composed of two sheets which are bolted together by means of bolts 16 upon which are spacers 17. A block 18 of conventional design is suspended by means of rope 20 from the pulley 13. The drawing rope 20 passes first over pulley 5, then through the block 18 and finally over pulley 13 and is fixed on the block 18.

It is apparent from the drawing that the block 18 may be raised substantially to the masthead without coming in contact with the mast 1. This is due to the fact that the pulley 13 is disposed at an angle to the pulley 5 and is situated slightly off to one side of the mast.

The pulley 13 has been illustrated as being in a plane at right angles to the plane of the pulley 5. In this position it is evident that the block 18 will be disposed as far as possible from the mast. It is quite evident, however, that if the planes of the pulleys are at some angle other than a right angle some advantage will accrue, since the block 18 will be disposed out from the mast 1 a distance depending upon the angle between the two planes.

As shown in the drawing, the masthead is designed for use in a vertical or substantially vertical position of the mast. However, it may be modified so that it can be used in positions other than substantially vertical, as, for example, when the hoist is used for pulling in a direction other than vertical. In use the ropes passing over the upper pulley should preferably approach the pulley in the plane of the pulley. Some slight deviation therefrom is, of course, permissible.

While I have illustrated a single pulley in each position on the masthead, it is quite evident that any number may be placed in either position, depending on the number required for use with the particular block.

While the specific embodiment has been disclosed it is evident that various modifications may be made without departing from the spirit of the invention, and it is understood that the invention is not to be limited by the specific embodiment but merely by the appended claims.

What I claim is:

1. A hoist comprising a mast, a support mounted on the extremity of said mast, a bearing carried by said support, a second bearing carried by said support disposed higher than and to one side of said first-mentioned bearing, a shaft mounted in each of said bearings, a pulley on each of said shafts, the plane of the pulley mounted in said second bearing forming a small angle with the plane which is parallel to the mast and which passes through the axis of said first-

mentioned shaft so that the lower portion of said pulley is farther from a line passing through the axis of said mast than the upper portion of said pulley, the plane of the pulley mounted in said first-mentioned bearing being at substantially right angles to the plane of the pulley mounted in said second bearing.

2. A hoist comprising: a mast; a bracket secured to the upper end of said mast; a shaft carried by said bracket and extending transversely of said mast above the end of said mast; a pulley mounted upon said shaft; a second shaft carried by said bracket on one side of said mast at a height above said first shaft, said second shaft extending in a direction substantially transverse to said first shaft and being inclined in a direction downwardly toward the longitudinal axis of said mast; and a pulley on said second shaft.

3. A hoist comprising: a substantially cylindrical mast; a bracket secured to the upper end of said mast and including two plates arranged upon opposite sides of the axis of said mast; spacers between said plates to maintain the same a predetermined distance apart; a shaft carried by said bracket above the end of said mast and extending transversely of the axis of said mast; a pulley mounted upon said shaft between said plates; a second shaft carried by said bracket on one side of said mast at a height above said first shaft, said second shaft extending in a direction substantially transverse to said first shaft; and a pulley carried by said second shaft, said plates being recessed to receive said last-mentioned pulley.

4. A hoist comprising: a mast; pulley-supporting means mounted upon the upper end of said mast; a shaft carried by said supporting means above the end of said mast; a pulley mounted upon said shaft; a second shaft carried by said supporting means and extending in a direction substantially transverse to said first shaft at a height above and to one side of said first shaft and said mast; a second pulley carried by said second shaft; and a pulley block and a line, one end of said line being fastened to said pulley block and said line passing over said second pulley, through the said pulley block and then over said first pulley, said second shaft and pulley being arranged so that said pulley block can be raised to a point adjacent said first pulley and to approximately the top of said mast without hindrance by said mast.

5. A hoist comprising: a mast; pulley-supporting means mounted upon the upper end of said mast; a shaft carried by said supporting means above the end of said mast; a pulley mounted upon said shaft; a second shaft carried by said supporting means and extending in a direction substantially transverse to said first shaft at a height above said first shaft and being inclined in a direction downwardly toward the longitudinal axis of said mast; a second pulley carried by said second shaft; and a pulley block and a line, one end of said line being fastened to said pulley block and said line passing over said second pulley, through the said pulley block and then over said first pulley.

GERALD G. BROWN.