Jan. 24, 1928. 1,657,187

J. E. WHITTLESEY

MAST AND PULLEY STRUCTURE

Filed Dec. 3, 1923

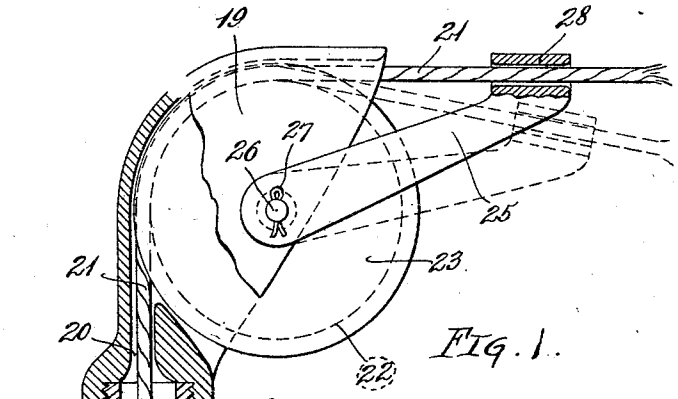


FIG. 1.

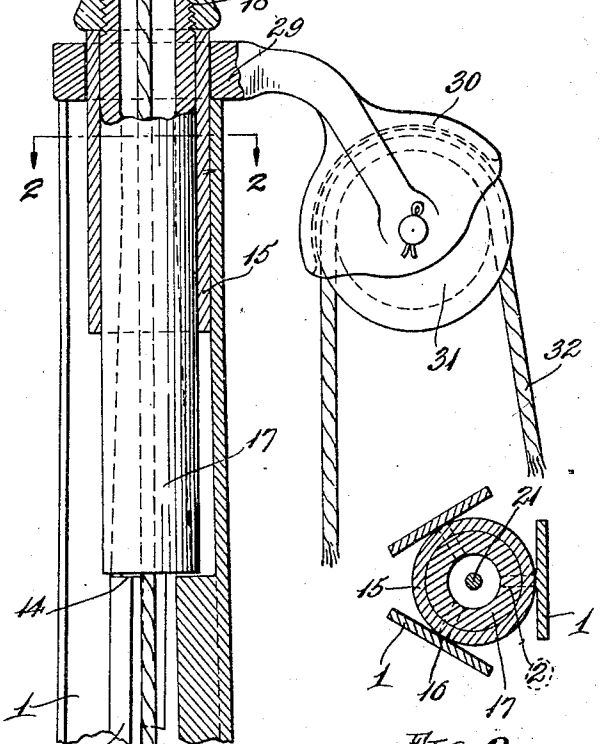


FIG. 2.

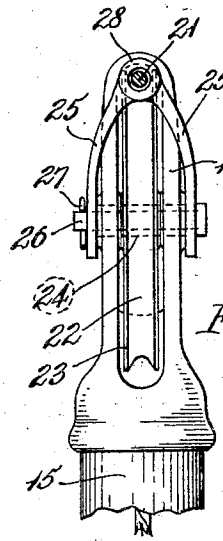


FIG. 3.

Inventor

John E. Whittlesey

By Brockett, Hyde & Milburn

Attorneys

Patented Jan. 24, 1928. 1,657,187

UNITED STATES PATENT OFFICE.

JOHN E. WHITTLESEY, OF CLEVELAND, OHIO.

MAST AND PULLEY STRUCTURE.

Application filed December 3, 1923. Serial No. 678,227.

This invention relates to metal mast and pulley structures, especially adapted for use in suspending radio antennas, although suitable for general use.

The object of the present invention is to provide an improved metal mast and pulley structure wherein the mast is provided at its upper end with rotatably mounted main and auxiliary pulley housings, the main pulley housing being provided with simple and improved means for guiding the rope or cable to and from the pulley, thereby precluding the possibility of the rope or cable being accidentally caught and held between the pulley and the pulley housing; and finally, to provide a mast and pulley structure which is of neat and pleasing appearance.

Further objects of the invention are in part obvious and in part will appear more in detail hereinafter.

In the drawings, which represent one suitable embodiment of the invention, Fig. 1 is a vertical sectional view on an enlarged scale of the upper end portion of the mast and illustrating the pulley housings; Fig. 2 is a cross sectional view on the line 2—2, Fig. 1; and Fig. 3 is a front elevation of the main pulley housing.

The mast structure of the present invention comprises a plurality of suitably connected corner post members, usually three or four. In the present embodiment of the invention, there are three corner post members, which are in the form of fabricated steel T-bars, each of which comprises the usual base portion 1 and web portion 2. Said bars are arranged in triangularly spaced, upwardly converging relation, with the web portions thereof extending inwardly for convenience in securing the connecting and bracing members to said bars and also to present a more pleasing external appearance.

At the top of the mast, the web portions 2 of the corner post members 1 are cut away, as at 14, to provide the necessary space for the insertion of a metal pipe 15, the cutting away of said portions being necessary due to the upward convergence of the corner post members. Said pipe is of relatively short length and is non-rotatably secured, such as by welding, to the middle contacting portions 16 of the base portions of the corner post members, as clearly shown in Fig. 2. Rotatably mounted in said pipe is a tube 17, upon the upper end portion of which is threaded or otherwise removably mounted, as at 18, a pulley housing 19, although if desired, said tube and housing may be formed integral. Said housing seats upon the upper edge portion of pipe 15 and is provided above the tube 17 with a restricted opening or passage 20 tracking with and therefore adapted to guide a rope or cable 21 to the groove 22 of a pulley or sheave 23. Said pulley is rotatably mounted on a bushing 24 extending through and suitably mounted in the pulley housing, the end edges of said bushing being substantially flush with the outer side wall surfaces of said housing, as clearly shown in Fig. 3.

Said pulley housing is also provided with suitable guide means for the rope or cable 21 upon leaving the pulley, said guide means being here shown as comprising a pair of arms 25 having their inner ends pivotally mounted on the end portions of a pin 26 extending through the bushing 24, said pin being prevented from escaping by the cotter pin 27. The outer or free ends of said arms are provided with a tubular guiding member 28, preferably formed integral therewith and tracking with the pulley groove. The arms 25 of said guiding member are so constructed and the tubular guiding portion 28 thereof is so arranged on said arms that the rope or cable 21 will at all times be held in a position substantially tangent to the pulley groove. The lower restricted opening 20 of the pulley housing and this swingingly mounted guiding member effectively preclude the possibility of the rope or cable being accidentally caught and held between the pulley and the pulley housing, such as might occur, for example, when lowering the aerial wires or the like connected to the upper end of the rope or cable if it were not so supported by the swinging guiding member. The rope or cable extends through the tubes 15 and 17 of the pulley housing and through the central portion of the mast to the foot thereof, at which point it may be secured to a hoisting windlass (not shown) for controlling the aerial wires or the like connected to the other or upper end of the cable. The aerial wires or the like may therefore be readily lowered for inspection or repair so that it is unecessary at any time to climb to the top of the mast.

As indicated in Fig. 1, pipe 15 projects above the corner post members to receive a

collar 29 rotatably mounted thereon and provided with an integrally formed pulley housing 30. Within said housing is suitably mounted a pulley 31 over which is adapted to travel a rope or cable 32 to which may be secured a flag, emblem or the like.

Having described my invention, I claim:

1. A metal mast, comprising a plurality of upwardly converging corner post members each having an inwardly extending longitudinal portion, the upper end portion of the longitudinal portion of each of said members being cut away, a metal tube non-rotatably secured within the upper end portion of said members, and a pulley housing having a hollow tubular portion rotatably mounted in said tube.

2. A metal mast, comprising a plurality of corner post members, a metal tube non-rotatably mounted within the upper end portion of said members and projecting above the same, a main pulley housing having a hollow tubular portion rotatably mounted in and supported by said tube, and auxiliary pulley housing rotatably mounted on that portion of said tube which projects above said corner post members.

In testimony whereof I hereby affix my signature.

JOHN E. WHITTLESEY