

BOOM NO. 6

1 BOLT PAD, 4" X 4" X 9/16" CHORDS

HANDLING SUGGESTIONS:

Sections of this boom should be handled with a reasonable amount of care to prevent flattening of the tubular lacings. As with any other type boom, unnecessary roughness could cause abrasion damages. Hemp rope is not suggested for use when handling the sections. Instead, use a chain or wire rope. Hemp rope may fatigue if wrapped around the inverted angle used as the main chord. Wire rope or chain could cause abrasion damage to the tubular lacings - so, when attaching slings, stay clear of the tubular lacings.

When storing boom sections, or when lowering the boom onto blocking, the blocking should be placed at the ends of each section. Placing the blocking at the ends (near the flanges) will eliminate the loading of unsupported sections which would occur if the blocking were placed at the center of each section.

BOOM ASSEMBLING:

NOTE: To prevent mixing inserts of one type boom with those of another, the boom number is stamped on the two diagonal pads of all angle type booms as of May 1962. (Fig. 416)

The minimum boom length of this boom is 60 feet. Inserts (Fig. 415) may be added to the basic boom to increase the boom length to 180 feet plus jib. The correct boom sequence is: 30 foot butt, 10 foot insert (A), (if required) - see jib backstay paragraph - 20 foot insert (B), (2) 30 foot inserts (C), 30 foot insert (D), and the 30 foot boom top.

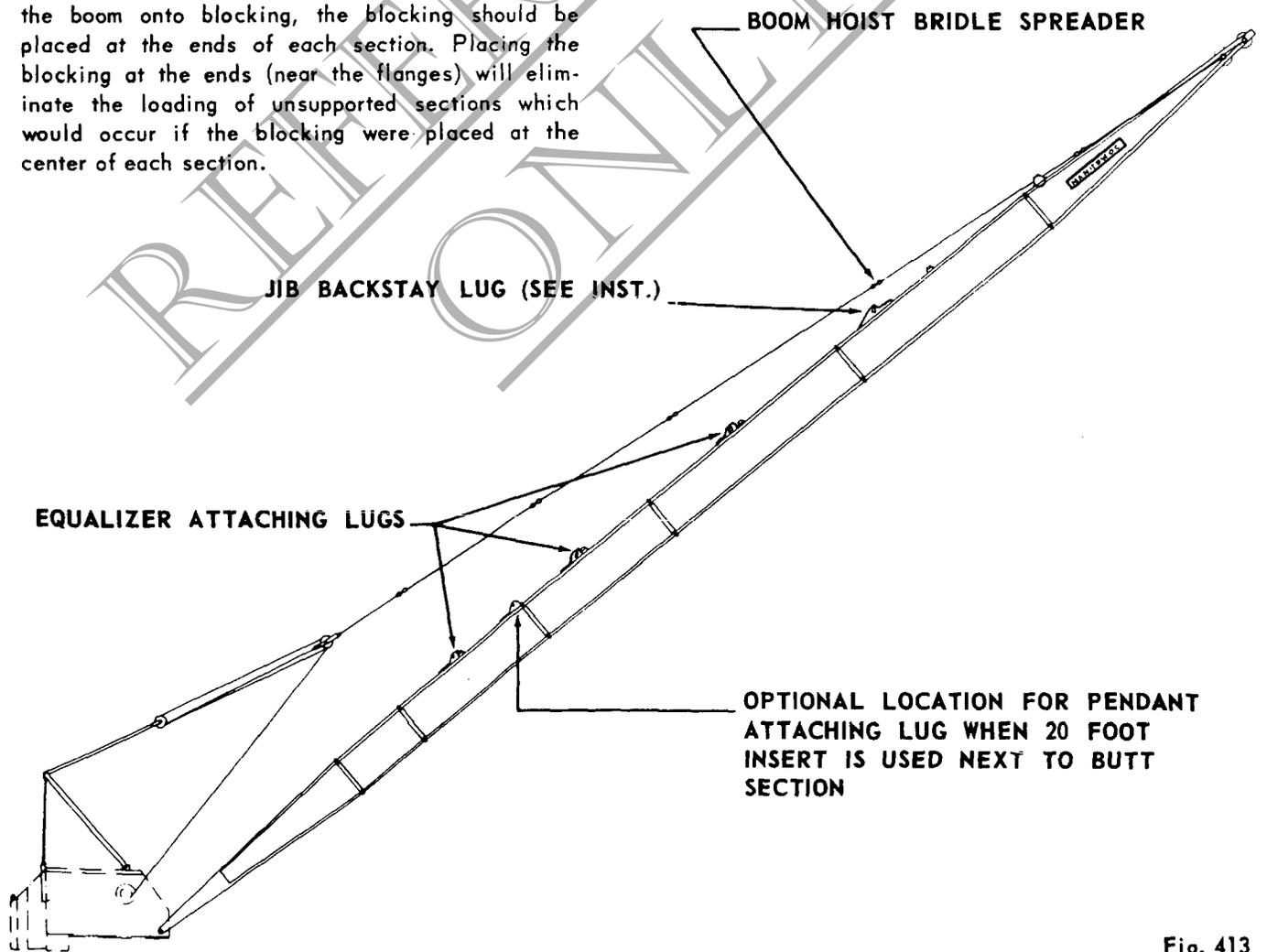


Fig. 413

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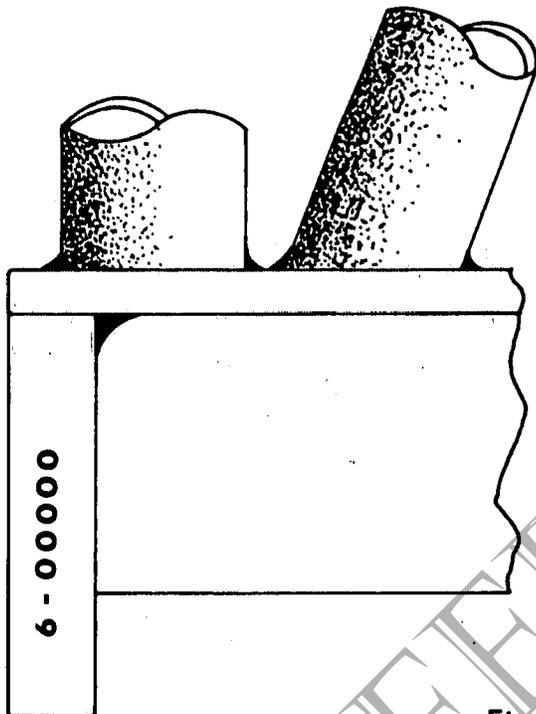


Fig. 416

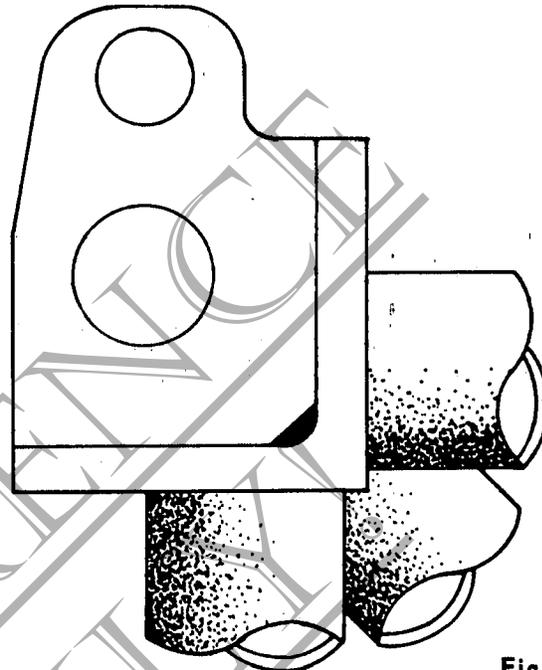


Fig. 417

BOOM BUTT EQUALIZER ATTACHING LUGS:

The equalizer lugs (A) Fig. 414 were designed for carrying the butt section and a 10 foot insert with the gantry down. It is permissible to attach or "cantilever" (suspend an insert beyond the insert of equalizer attachment) only one ten foot insert when supported in this way. It is not permissible, however, to lift a load with this cantilevered insert other than for "juggling" the next insert into position for assembly, because of strength limitations.

- A
- B
- C
- D

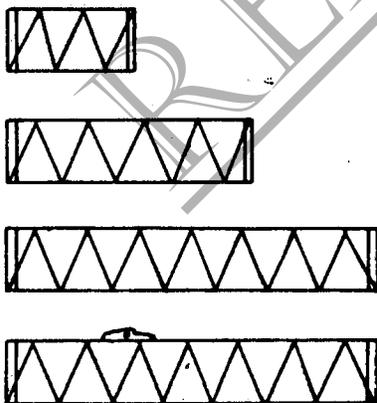
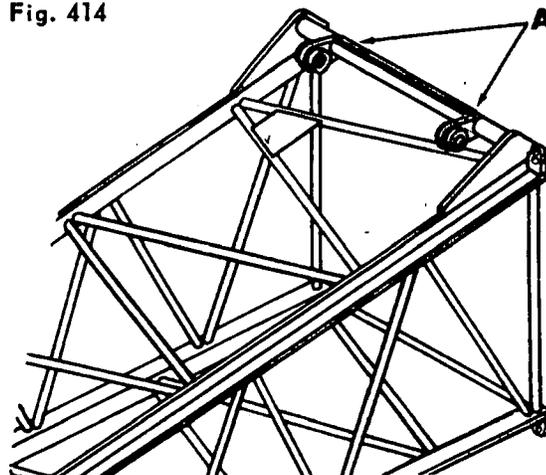


Fig. 415

Angle clips are welded to the top chords of the boom for mounting the cable guides. These clips can be used to identify the top side of the boom at the time of assembly.

Eyelets (Fig. 417) on the boom flanges should be used for spud wrench aligning of boom sections only. These eyelets are not jig drilled and therefore should not be used with drift pins for lining up the sections.

Fig. 414



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When assembling the boom, with the equalizer attached to the lugs, the following procedure should be used: Lift each insert with a sling and starting from the tip and working back, place the inserts in their proper sequence. (See Boom Assembling) Block up the partially assembled boom in a manner which will permit the butt to be lowered into alignment with the last section. After the boom is assembled, the crane should be walked into position and the butt then connected to the assembled boom.

CAUTION NOTE: When using the boom butt alone, or with a partially assembled boom - with the equalizer pinned at the lug connections - the gantry must be pinned down.

PENDANT ATTACHING LUGS:

For extended boom assembling, pendants are installed between the equalizer and the insert with the attachment lug. (Fig. 413) The lug quantity per boom is optional per customer's request. The basic pendant length is 21'-1 $\frac{3}{4}$ " in length.

NOTE: The maximum length of boom to be carried with the pendants hooked between the equalizer and the attachment lugs - gantry up - is 150 feet. (Butt and inserts only)

The maximum length of boom to be carried with the gantry down is 100 feet. (Butt and inserts only).

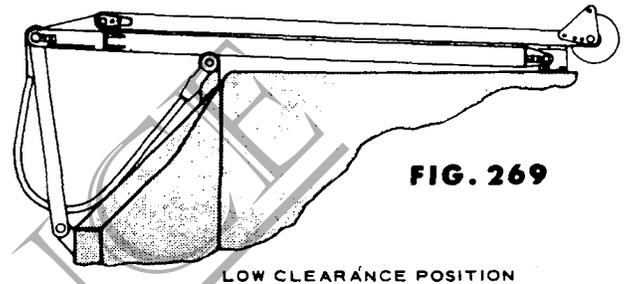
JIB BACKSTAY LUGS:

The jib backstay cables fasten to the lugs on insert (D) (Fig. 415) on booms 90 feet to 180 feet in length. If insert (D) (Fig. 415) is not furnished the lug is located on a 20 foot insert (B), 10 feet from the centerline of the lug hole to the face of the boom joint flange. When the jib backstay lug is located on the 20 foot insert, the 10 foot insert must always be used between the boom top and 20 foot insert. For 60 feet of boom, use the jib backstay lugs on the boom butt.

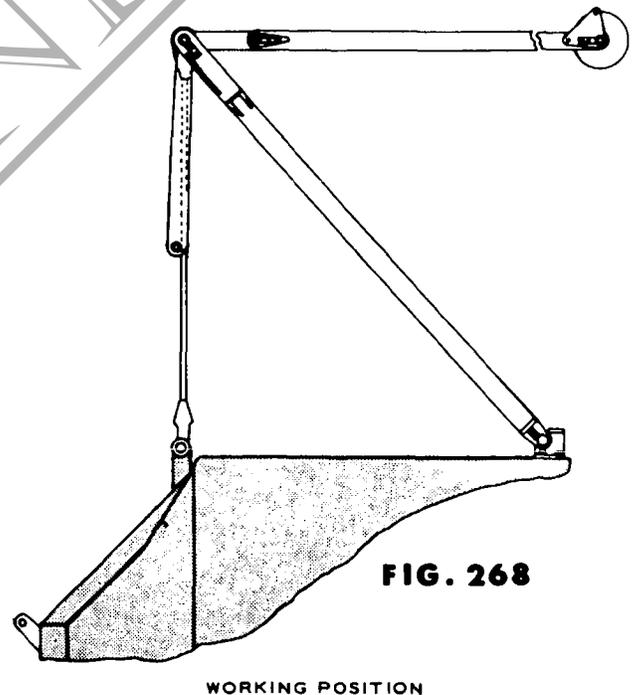
GANTRY USE:

The gantry has been provided with a low position for clearance under obstructions. This position is illustrated in Fig. 269. Figure 268 shows the normal working position which must be used for all

lifting work or for raising a long boom.



While the gantry is being folded down, watch the gantry bridles to prevent the possibility of their being folded under the gantry on the cab roof. The bridles should loop down over the counterweight. (See Fig. 269) If the bridles are persistent in laying on the roof, it may help to remove the connecting pin and turn the bridles 180° to overcome the problem.



LOW CLEARANCE GANTRY (OPTIONAL):

A low clearance gantry is available for machines requiring additional clearance under low obstructions.

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GANTRY HOLD UP DEVICE (OPTIONAL):

A gantry hold up device is available which prevents the gantry from folding – falling down – while changing boom lengths or whenever the boom hoist lines become slack.

are not considered practical. Of course, Manitowoc Engineering Co. cannot be held responsible for field repairs of the boom.

BOOM HOIST BRIDLE SPREADER:

The boom hoist bridle spreader is used on long booms (130 feet or more) to keep the bridles from fouling the boom top. The spreader is located 51 feet from the lower boom point shaft.

OPERATING A LONG BOOM:

When operating a long boom, care should be exercised to prevent damage to the boom. A crane with a long boom must be completely level before lifts are attempted. The load cable should not be allowed to hang outside the width of the boom. When this occasion arises, it means the machine is not completely level and therefore causes one side of the boom to take more than its share of the load. Re-level the machine before making a lift, either by using timbers or by leveling the ground.

Long booms are not designed to take excessive side loads. The boom must be directly over the load before an attempt is made to hoist. Swing the load slowly, carefully, and do not skid the load sideways. Using two machines for lifting one load is not recommended except with extreme care so as not to throw side load into either boom.

TRAVELING A LONG BOOM:

When traveling with a long boom, excessive bounce of that low boom can create stresses with resulting fatigue. When carrying the boom in a low position, it should be carried above horizontal whenever possible. Travel slowly to minimize bouncing, especially over rough terrain.

BOOM REPAIR RECOMMENDATIONS:

Boom lacings (only) can be replaced in the field, if – the lacings are ordered from the Manitowoc Engineering Co., and the welding procedures in Bulletin 96B are followed, and the work is performed by a competent firm. Repairs to main chord members