



Weights and Measures
(National Standards)
Act 1960-1966

Weights and Measures
(Patterns of Instruments)
Regulations

COMMONWEALTH OF AUSTRALIA

NATIONAL STANDARDS COMMISSION

Certificate of Approval

CERTIFICATE NUMBER 6/10A/6

This Certificate replaces Certificate No 6/10A/6 dated 15 July 1970. *

In respect of the pattern of

International Non-self-indicating Weighing Instrument of 25 tons Capacity and Variants.

Submitted and
manufactured by: International Weighing Co. Pty Ltd,
425 Macaulay Road,
Kensington,
Victoria. 3031.

This is to certify that the pattern and variants of the instrument illustrated and described in this Certificate have been examined by the National Standards Commission under the provisions of the abovementioned Regulations and have been approved as being suitable for use for trade.

The pattern and variants were approved on 10 July 1970, in respect of a limited number of instruments; on 10 October 1972 approval was granted without this limitation.

The pattern and variants are marked "NSC No 6/10A/6", and comply with the General Specifications for Measuring Instruments

* NOTE: Figures 6/10A/6 - 1 to 11 of the previous issue form part of the Certificate and must be retained.

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Cont'd over

to be Used for Trade.

This Certificate comprises:

Pages 1 to 4 dated 20 October 1972.

Figures 6/10A/6 - 1 to 11 dated 15 July 1970.

Date of issue 20 October 1972.

Signed



A person authorized by the Commission
to sign Certificates under the
abovementioned Regulations.

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DESCRIPTION OF PATTERN

The pattern is of a non-self-indicating weighing instrument of 25 tons capacity. It comprises a three-lever, two-section basework which is connected to a steelyard resistant through a headwork intermediate lever and two pullrods (see Figure 1).

The basework lever system consists of two main second-order levers and a second-order transfer lever. Each main lever is constructed from a steel tube to which one long and two short arms are welded. Each short arm (see Figure 2) consists of two side plates which carry the load and fulcrum knife-edge holders. The long arm carries the nose-end knife-edge fitting (see Figure 3) which, on the main levers, is welded in position after adjustment. The transfer lever is of similar construction except that the long arm is bolted to a fixing plate welded to the tube (see Figure 3) and the nose-end knife-edge fitting is adjustable and locked in place by two hardened set screws (see Figures 4 and 5).

Each main lever is supported on two floor-mounted fulcrum stands (see Figure 2) fitted with bearings which are curved on the bottom to permit self-alignment. Square section knife-edges are secured in machined grooves in the knife-edge holders (see Figure 6). Each load knife-edge holder has a bar welded to one end which provides adjustment of the lever ratio (see Figure 2). Movement of the bar is limited by the adjusting screws, each of which is fitted with a locknut. The holders are additionally secured in position by a set screw and a clamping sector which fits in the groove at the other end. The fulcrum knife-edge holders are welded in position (see Figure 2). Hardened friction pins are fitted to limit the lateral movement of the knife-edges in the bearings.

The platform is fitted at each corner with a roller-bearing type support unit (see Figure 6) which comprises a pad piece and a main member, both of which have matching hardened inserts and between which contact is made through two hardened steel rollers. The main members are fitted with the self-aligning main load bearings. The pad pieces are held in position by structural clamps during assembly, after which they are welded to the girder (see Figure 7). The rollers allow free longitudinal movement of the platform.

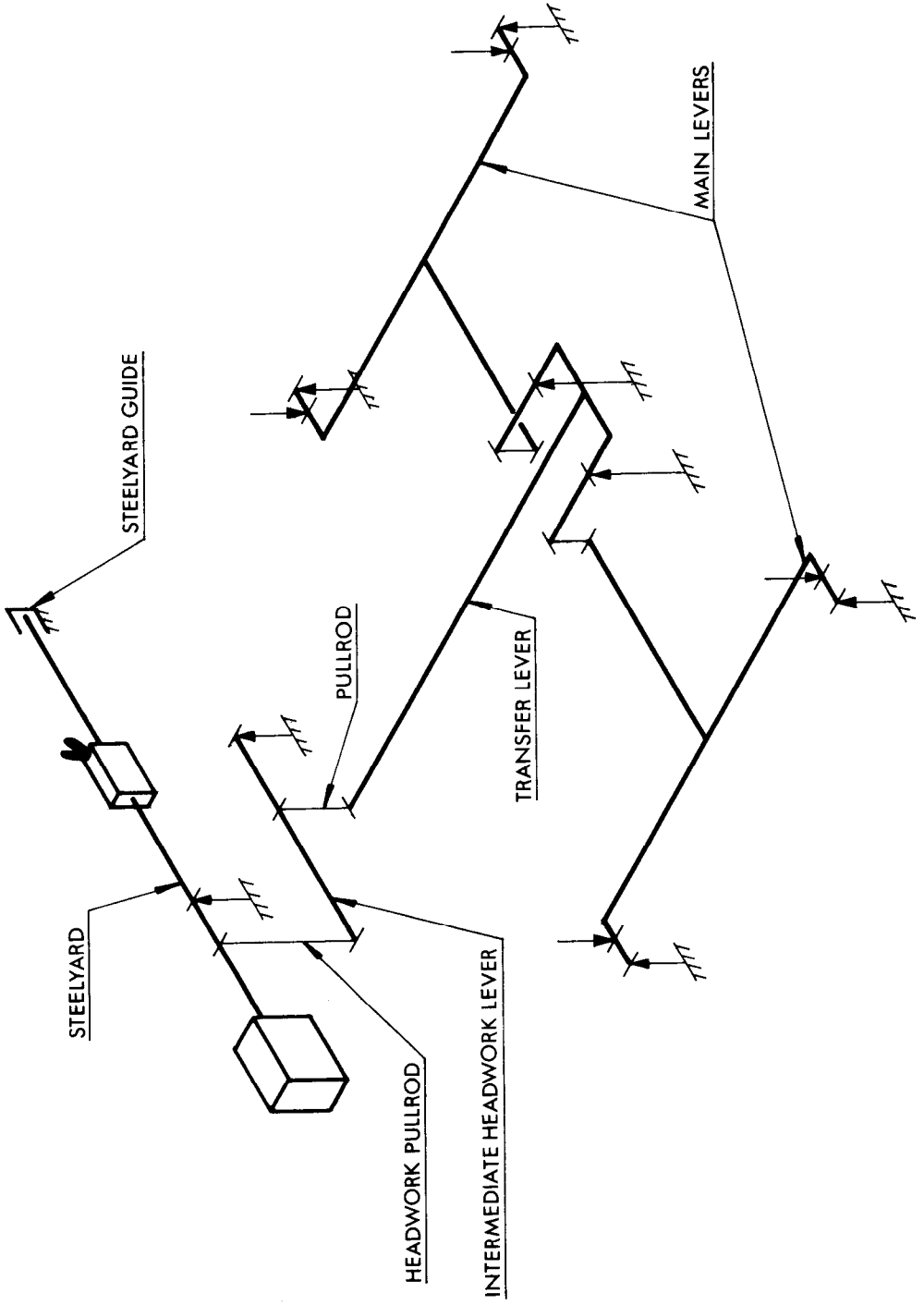
The headwork consists of a cabinet which houses the intermediate lever (see Figure 8) and is surmounted by a full-capacity steelyard as

described in Certificate No 6/9C/11. The steelyard is graduated from zero to 24 tons on the main bar in 1-ton intervals and from zero to 1 ton on the minor bar in 14-lb intervals.

DESCRIPTION OF VARIANTS

1. Having a basework of 2, 4 or 5 sections, each section being limited to 25 tons capacity (see Figure 9), provided that there are not more than 4000 graduations on the steelyard resistant.
2. Having the basework self-contained, in which case the fulcrum stands are mounted in a steel framework.
3. Having the basework fitted with vehicular rails, provided that buffers limit the longitudinal movement of the basework.
4. Having the headwork located in any reasonable position in relation to the basework, in which case one or more transfer levers may be used, provided they are fully protected.
5. Having the basework fitted with any other headwork approved by the Commission.
6. Having the adjustable nose-end knife-edge fittings as shown in Figure 10.
7. Having the suspension unit fitted with an additional pair of rollers at right angles to the first pair to provide free transverse movement of the platform. The second pair of rollers is contained between matching hardened inserts fitted to the top of the pad piece containing the other pair of rollers and another pad piece fixed to the platform girder (see Figure 11).

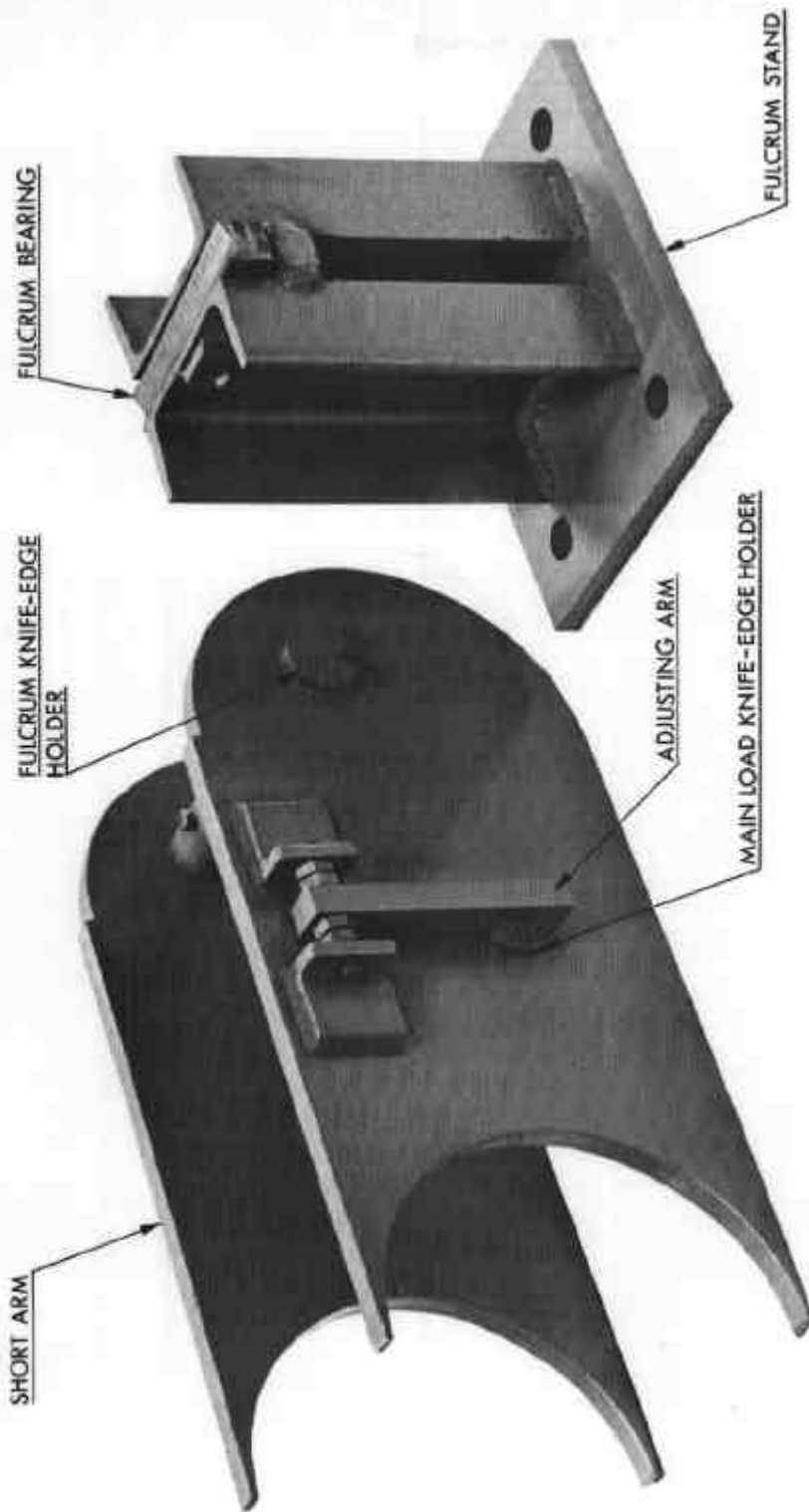
FIGURE 6/10A/6 - 1



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Basework and Headwork Lever Mechanism

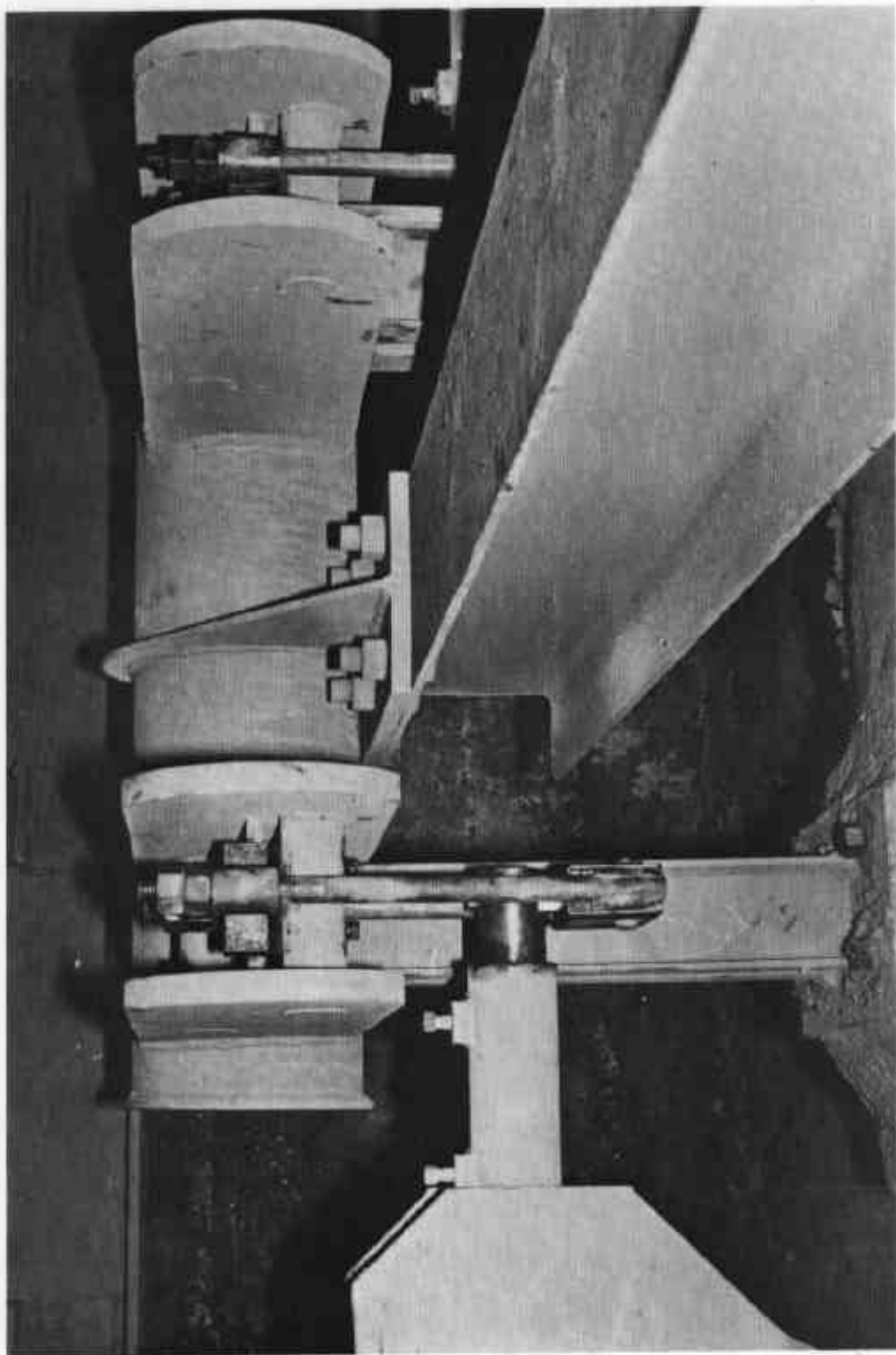
FIGURE 6/10A/6 - 2



Main Lever Short Arm and Fulcrum Stand

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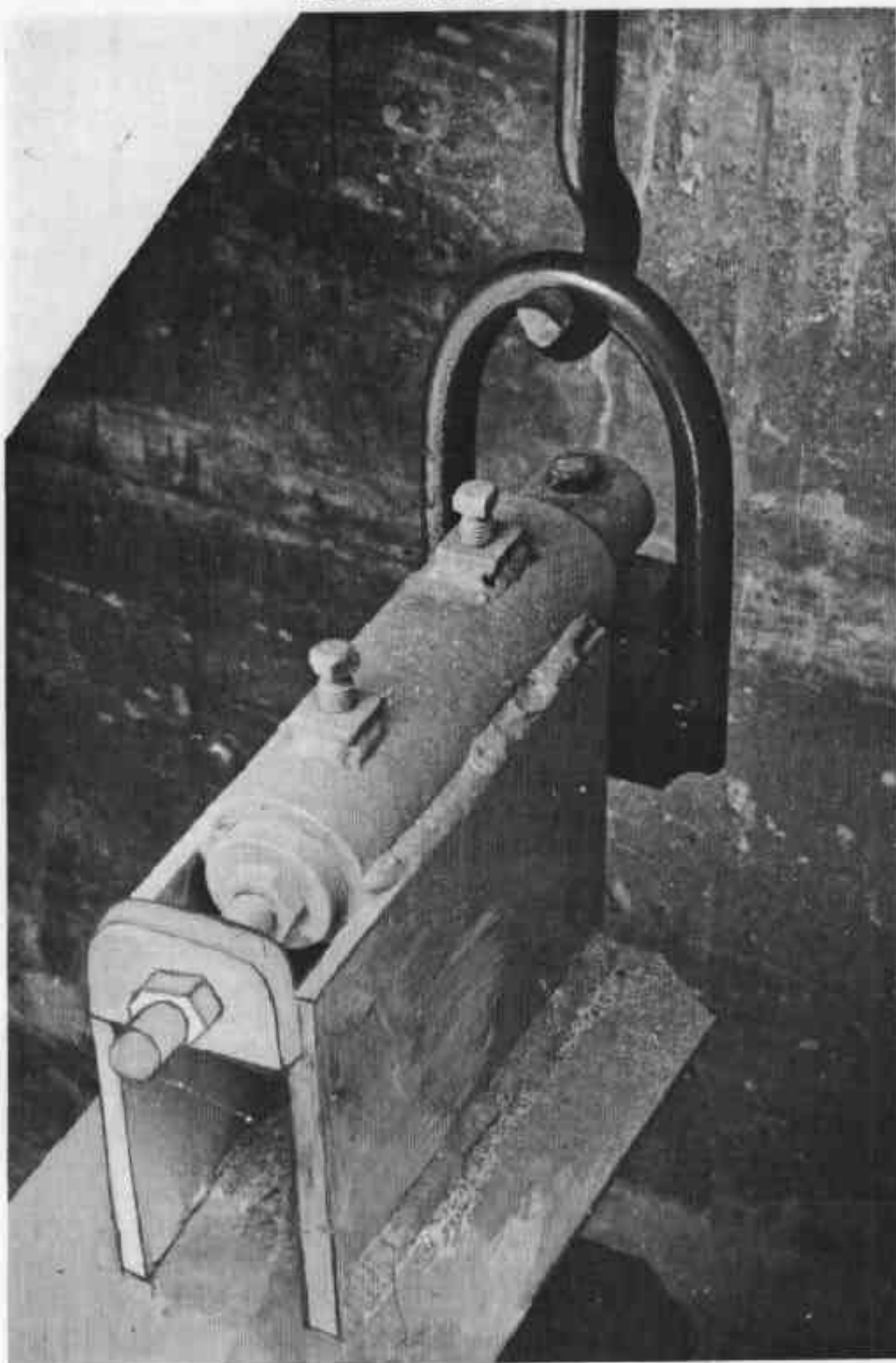
FIGURE 6/10A/6 - 3



Main Lever Nose-end and Transfer Lever

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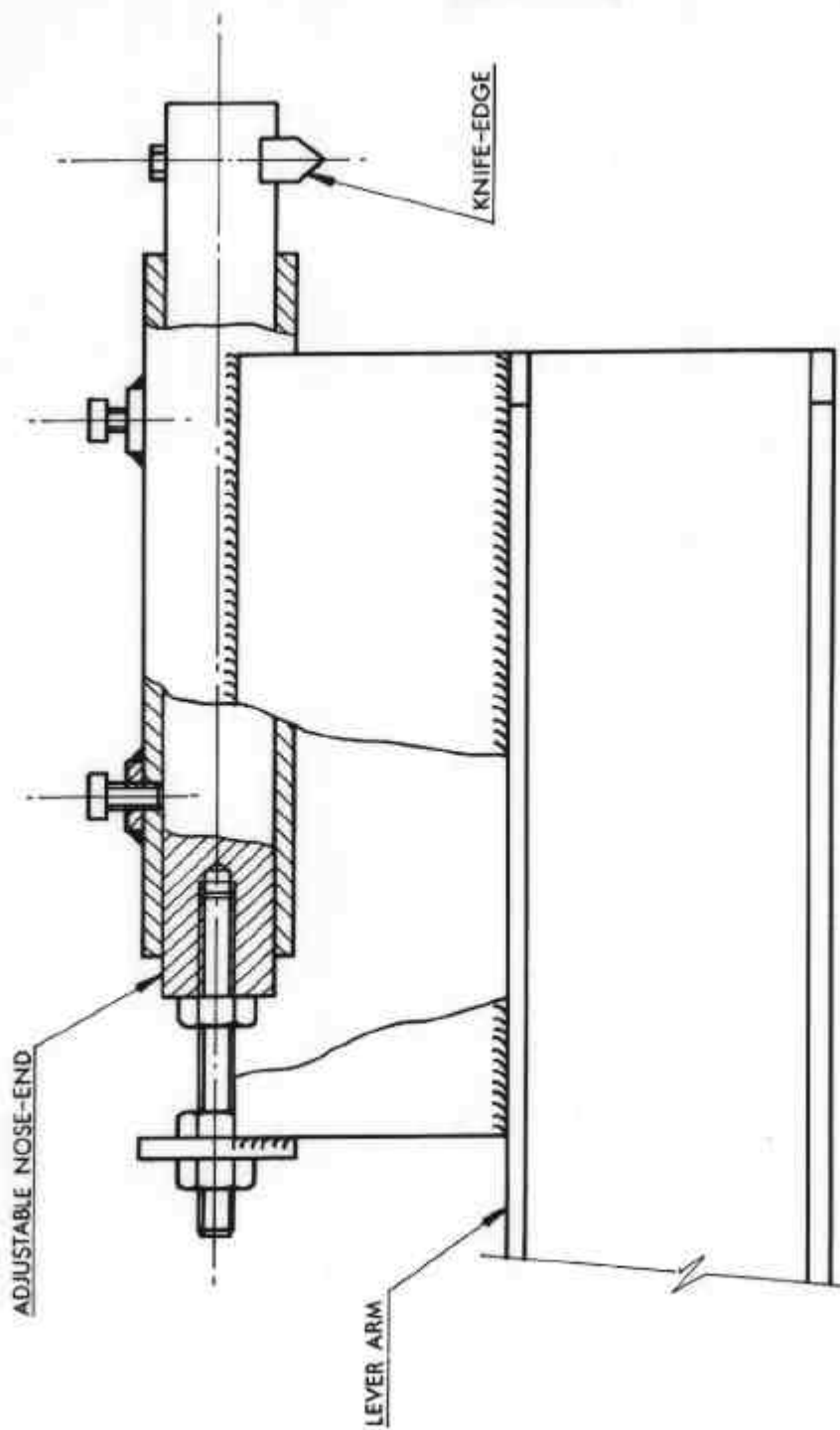
FIGURE 6/10A/6 - 4



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Transfer Lever Nose-end

FIGURE 6/10A/6 - 5



Transfer Lever Nose-end

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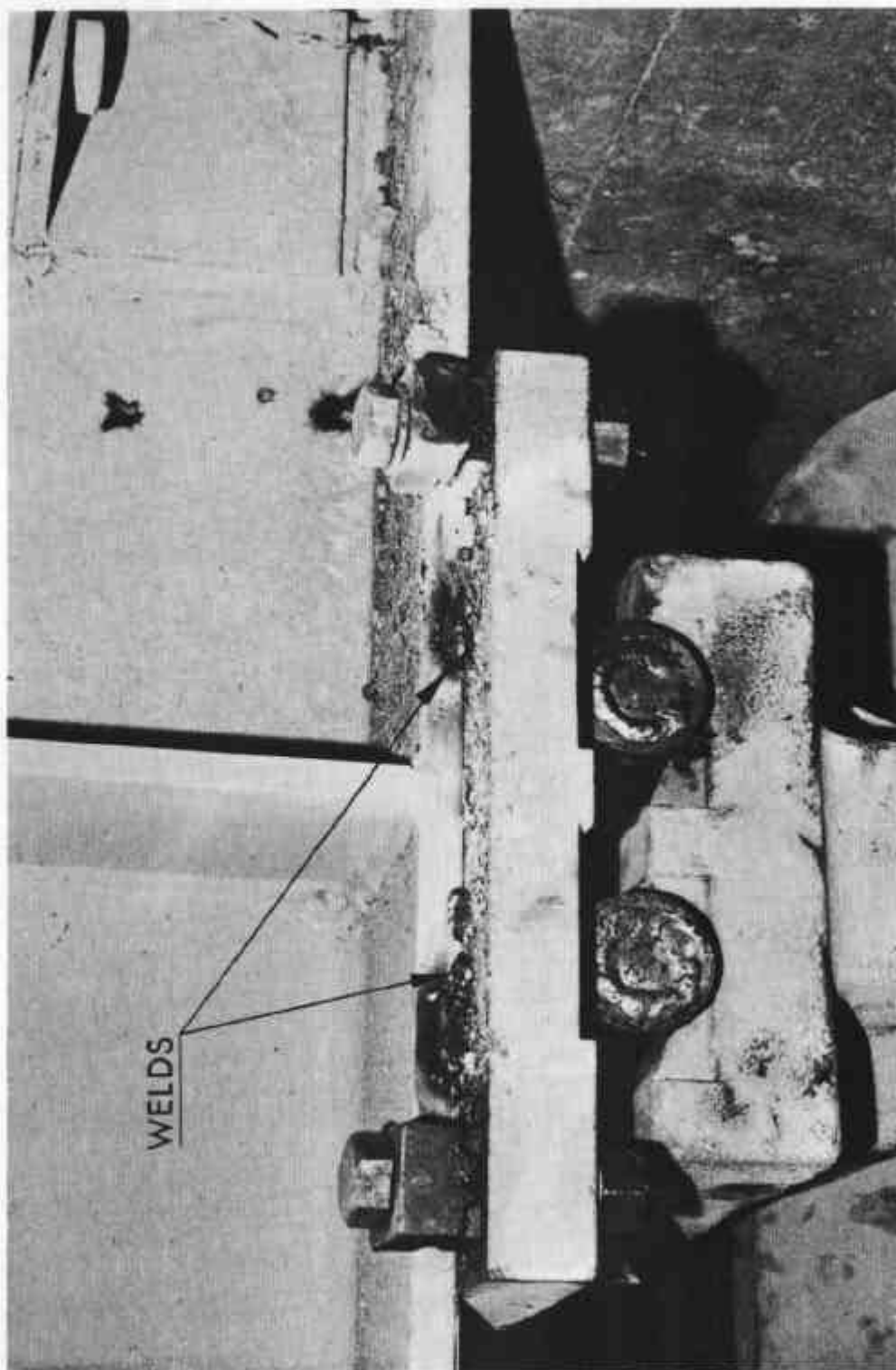
FIGURE 6/10A/6 - 6



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Two-roller Platform Suspension Unit

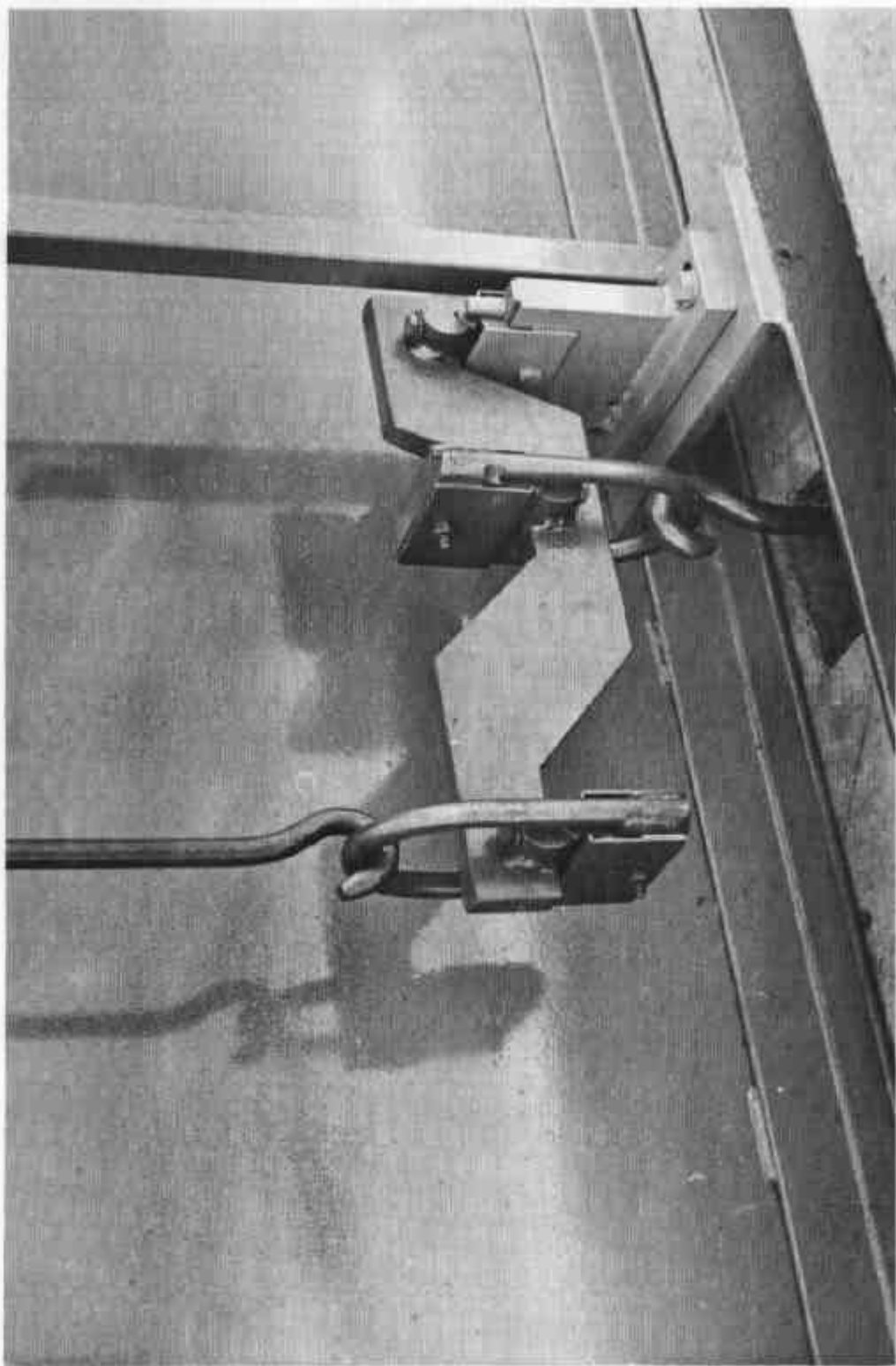
FIGURE 6/10A/6 - 7



Platform Suspension - Method of Fixing

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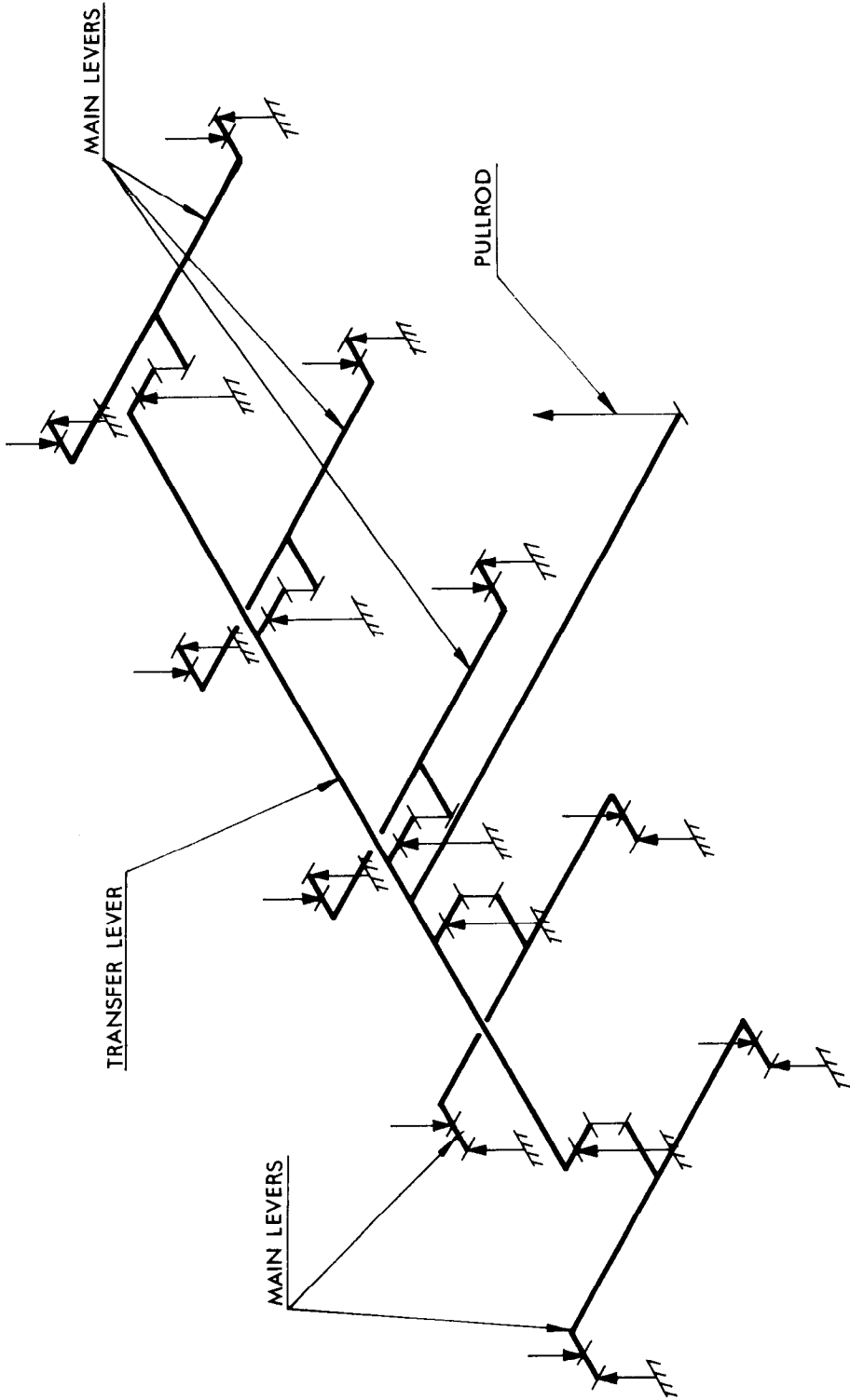
FIGURE 6/10A/6 - 8



Headwork Intermediate Lever

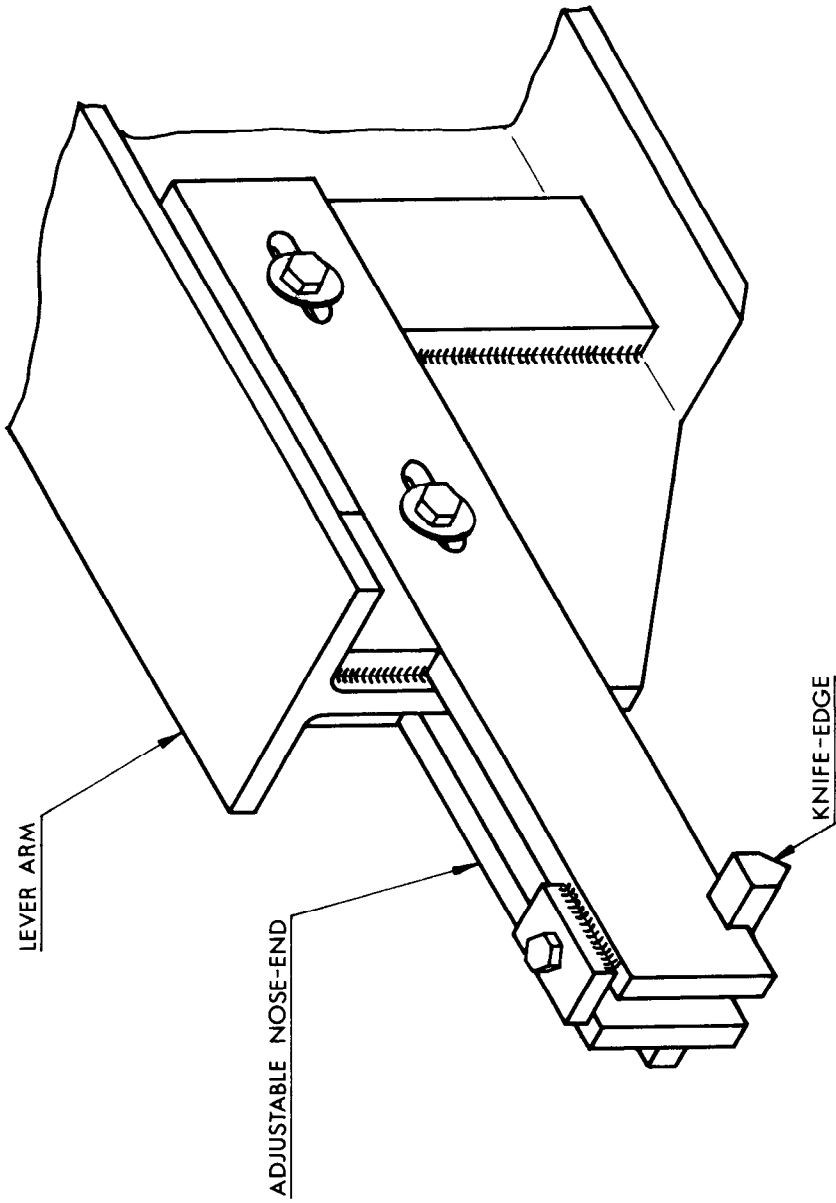
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FIGURE 6/10A/6 - 9



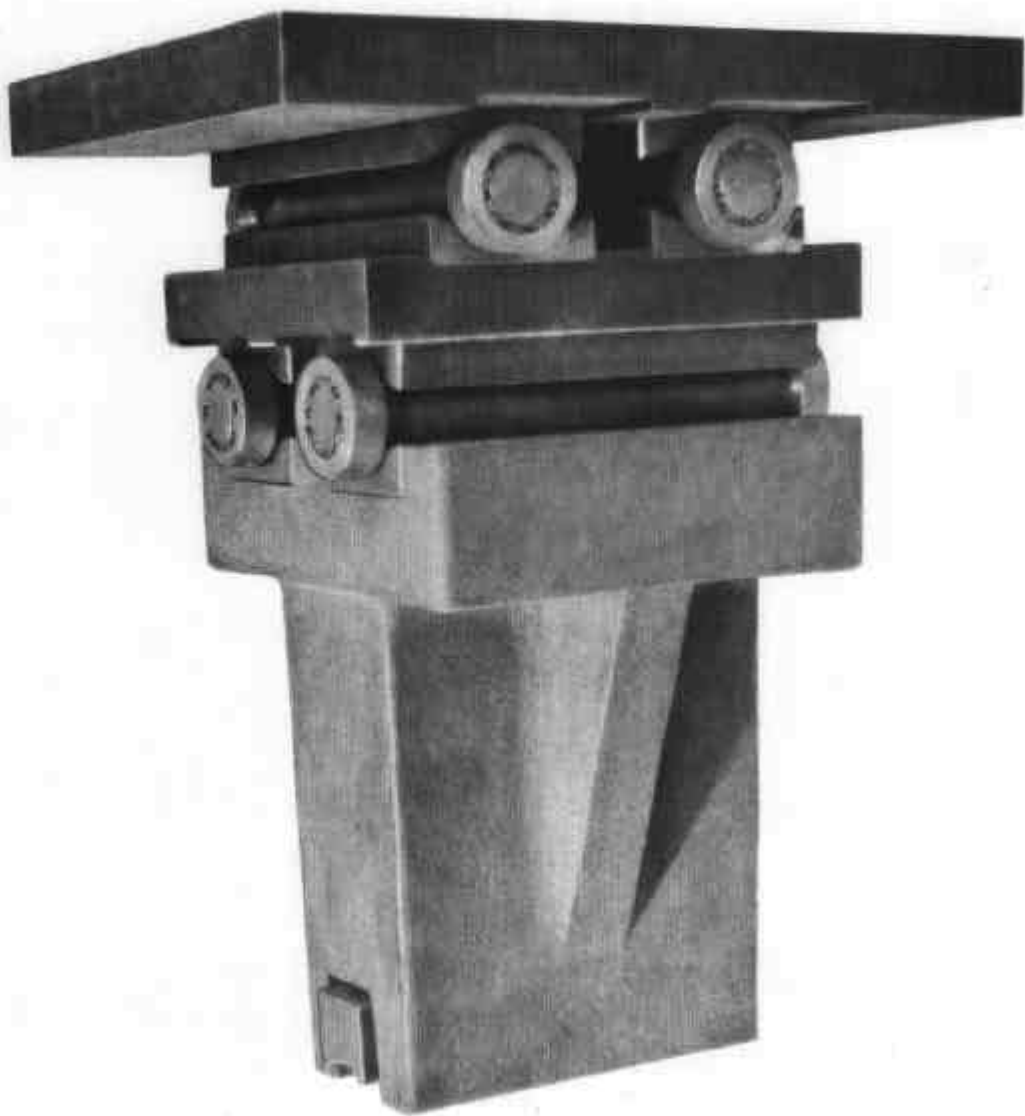
Five-section Basework Lever Mechanism

FIGURE 6/10A/6 - 10



Main and Transfer Lever Nose-end Fitting

FIGURE 6/10A/6 - 11



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Four-roller Platform Suspension Unit