

CERTIFICATE OF APPROVAL No 6/9C/24

VARIATION No 1

This is to certify that the following modifications of the pattern and variants of the Toledo Self-indicating Platform Weighing Instrument

approved in Certificate No 6/9C/24 dated 28 May 1973

submitted by Toledo-Berkel Pty Ltd, 525 Graham Street, Port Melbourne, Victoria, 3207,

have been approved under the Weights and Measures (Patterns of Instruments) Regulations as being suitable for use for trade.

The approved modifications are:

- (a) fitting a modified transfer lever; and
- (b) increasing the maximum capacity to 21 tonnes.

Approval was granted on 17 May 1974.

This variation is described in Technical Schedule No 6/9C/24, Variation No 1, and in drawings and specifications lodged with the Commission.

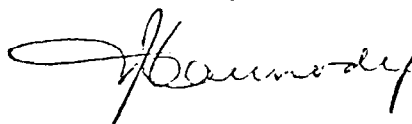
The submitter shall notify the Commission of the location of the first ten instruments conforming to the pattern and variants submitted to State or Territorial Weights and Measures Authorities for verification. *

Variants of State-approved patterns are approved only in those States in which the State approval is applicable.

The approval is subject to review on or after 31 December 1976.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/9C/24".

Signed



Executive Officer

* Inspectors should not verify any instrument conforming to this Certificate until advised in writing by the Pattern Approval Laboratory that the Commission has been so notified.

17/5/74

Interch



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 6/9C/24

In respect of the pattern of

Toledo Self-indicating Platform Weighing Instrument of 20-tonne Capacity and Variants.

Submitted and
manufactured by:

Toledo-Berkel Pty Ltd,
525 Graham Street,
Port Melbourne,
Victoria. 3207.

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 23 May 1973.

The pattern and variants:

1. are marked "NSC No 6/9C/24" and, where required by State legislation, with the State approval number also; and
2. comply with the General Specifications for Measuring Instruments to be Used for Trade in respect of that part which was not previously approved by a State.

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Cont'd over

The submitter shall notify the Commission of the location of the first ten instruments conforming to the pattern and variants submitted to State or Territorial Weights and Measures Authorities for verification. ‡

The Commission reserves the right to examine the abovementioned instruments after verification.

This Certificate comprises:

Pages 1 to 4 dated 28 May 1973.

Figures 6/9C/24 - 1 to 8 dated 28 May 1973.

Pursuant to regulation 12 of the abovementioned Regulations, variants incorporating components marked ** are approved only in those States in which a State approval of a pattern incorporating that component is in force.

Date of issue 28 May 1973.

Signed



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

‡ Inspectors should not verify any instrument conforming to this Certificate until advised in writing by the Pattern Approval Laboratory that the Commission has been so notified.

DESCRIPTION OF PATTERN

The pattern is of a self-indicating platform weighing instrument, the capacity of which is 20 tonnes (see Figure 2). The dial is graduated to 10 tonnes x 10 kg, the minor tare bar to 1000 kg x 10 kg, and the major tare to 9000 kg x 1000 kg.

The pattern comprises the components tabulated in Column 5 of Figure 1.

DESCRIPTION OF VARIANTS

The columns marked "Variants" in Figure 1 tabulate the combinations of components which make up variants of the pattern, the capacities of which are limited by the capacities of the lever systems described.

DESCRIPTION OF COMPONENTS

1. Three-lever system (see Figures 3 and 4) — two second-order main levers each consist of a tubular cross-member to which two short arms and an I-section long arm are welded. The short arms have two side-plates which support each end of the fulcrum and load knife-edges. In capacities over 6 tonnes backing plates are used to support the knife-edges along their lengths. The adjustable nose-ends of the main levers have similar knife-edges which couple to the transfer lever by vertical links fitted with self-aligning bearings.

The second-order transfer lever is also of I-section and has a double-box end in which the load and fulcrum knife-edges and their backing plates are fitted. The nose-end is adjustable.

The capacity of the lever system is limited to 20 tonnes.

2. Lever supports (see Figures 5 and 6) — the main and transfer levers are supported in self-aligning bearings fitted to floor-mounted fulcrum stands.
3. Double-ball load-receptor supports (see Figures 5 and 6) — the load receptor is supported on the four load knife-edges of the main levers by double-ball-bearing support units which permit free lateral movement of the load receptor. Each support unit

comprises a pad-piece and a main member, both of which have matching concave hardened steel inserts. Contact between the inserts is made through two hardened steel balls. The main members are fitted with fixed load bearings. The pad-pieces are bolted to the underside of the load-receptor framework.

4. Parallel-link load-receptor supports (see Figure 7) — the load receptor is supported on the four load knife-edges of the main levers by parallel-link support units which permit free lateral movement of the load receptor. Each support unit has an upper and a lower main member, which are coupled together by O-shaped links. The upper member is bolted to the underside of the load-receptor framework. The lower member carries a fixed load bearing.
5. Two baseworks (see Figure 8) — the nose-ends of the transfer levers of two baseworks are each connected to a series of additional transfer levers as described in Certificate No 6/10B/13. The transfer levers terminate at the pullrods to the combination headwork.
6. Headwork 1 (see Figure 2) — the headwork comprises the pendulum-resistant mechanism, single circular dial and indicator, cabinet and two tare bars, as described in Certificate No 6/9C/2.
7. Headwork 2 — the headwork comprises the pendulum-resistant mechanism and any one of the forms of indicators, cabinets, ticket printers and other headwork components as described in Certificate No 6/9C/2.
8. Headwork 3 — the headwork comprises the combination headwork as described in Certificate No 6/10B/13.
9. Headwork 4 — the headwork of any State-approved^{**} or Commission-approved pattern.

** See page 2.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/9C/24

VARIATION No 1

Pattern: Toledo Self-indicating Platform Weighing Instrument

Submittor: Toledo-Berkel Pty Ltd,
525 Graham Street,
Port Melbourne, Victoria, 3207.

Date of Approval of Variants: 17 May 1974

The modifications described in this schedule apply to the pattern and variants described in the following pages and figures of Certificate No 6/9C/24 dated 28 May 1973:

Pages 3 and 4 dated 28 May 1973

Figures 6/9C/24 - 1 to 8 dated 28 May 1973

Variants of the pattern incorporating components marked ** are approved only in those States in which a State approval of a pattern incorporating that component is in force.

The submittor shall notify the Commission of the location of the first ten instruments conforming to the pattern and variants submitted to State or Territorial Weights and Measures Authorities for verification. *

All instruments conforming to this approval shall be marked "NSC No 6/9C/24".

Description:

The approved modifications are as follows:

1. the transfer lever having fulcrum, load and nose-end knife-edge bearing arrangements as illustrated in Figures 9 to 11; and
2. the maximum capacity being 21 tonnes.

* Inspectors should not verify any instrument conforming to the Certificate until advised in writing by the Pattern Approval Laboratory that the Commission has been so notified.

National Standards Commission



NOTIFICATION OF CHANGE

VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for various approvals

submitted by Toledo Scale (Australia) Ltd
525 Graham Street
Port Melbourne VIC 3207.

In the Certificates and Technical Schedules listed overleaf, the following changes should be made: (Note: Only current approvals are listed.)

1. The submittor should be changed to read;

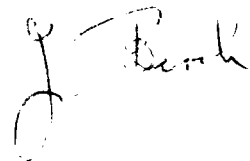
Mettler Toledo Limited

(the address remains unchanged)
2. All references to 'Toledo' instruments or components should be amended to read 'Toledo (or Mettler or Mettler Toledo)'.

NOTE: Any 'Toledo' instrument or component described in the approval documentation may now also be known as 'Mettler or Mettler Toledo'.

APPROVAL NUMBER	PATTERN
6/4C/65	8214 Weighing Instrument
6/4C/68	8215 Weighing Instrument
6/4D/242	8421 Weighing Instrument
6/9C/2A	2191 Weighing Instrument
6/9C/24A	2503 Weighing Instrument
6/9C/28	2020 Weighing Instrument
6/9C/24A	2985 Weighing Instrument
6/9C/76	2295 Weighing Instrument
6/9C/87	2375 Weighing Instrument
6/9C/97	2155 Weighing Instrument
6/9C/98	9118 Weighing Instrument
6/9C/206	6303 Weighing Instrument
6/9C/231	1938 Weighing Instrument
6/10B/46A	7560 Weighing Instrument
6/14B/9A	2352 Hopper Weighing Instrument
6/18/21	2299 Overhead Weighing Instrument
S253	8530 Digital Indicator
S266	8520 Digital Indicator
S283	8510 Digital Indicator
S111A	0721 Load Cell
S112A	0723 Load Cell
S143	0752 Load Cell
S172	0725 Load Cell
S211	0742 Load Cell
S252	0760 Load Cell
S264	0752 Load Cell
S268	RLC 5000 Load Cell

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



6/9C/24
31/8/84



NATIONAL STANDARDS COMMISSION

CANCELLATION CERTIFICATE FOR APPROVAL No 6/9C/24

This is to advise that the approval of the

Toledo Self-indicating Platform Weighing Instrument

submitted by Toledo Scale Australia Limited
525 Graham Street
Port Melbourne Victoria 3207

expired in respect of new instruments on 16/8/84.

Instruments which were verified before that date may, with the concurrence of the relevant verifying authority, be submitted for reverification.

Signed

A handwritten signature in black ink, appearing to read 'M. Kelly', written in a cursive style.

Executive Director

FIGURE 6/9C/24 - 1

1	2	3	4	5	6	7
	COMPONENTS	DATE APPROVED	FOOT-NOTES	PATTERN	VARIANTS	
	<u>BASEWORK COMPONENTS</u>					
1	Three-lever system (Figures 3 & 4)	23 MAY 73		*	*	
2	Lever supports (Figures 5 & 6)	23 MAY 73		*	*	
3	Double-ball supports (Figures 5 & 6)	23 MAY 73		*	A	
4	Parallel-link supports (Figure 7)	23 MAY 73			A	
	<u>BASEWORK</u>					
5	Two baseworks (Figure 8)	23 MAY 73				*
	<u>HEADWORKS</u>					
6	Headwork 1 (Figure 2)	23 MAY 73		*	B	
7	Headwork 2	23 MAY 73	1		B	
8	Headwork 3	23 MAY 73				*
9	Headwork 4	23 MAY 73			B	

* - indicates required component

A - indicates alternative component, one of which is required

B - as for A

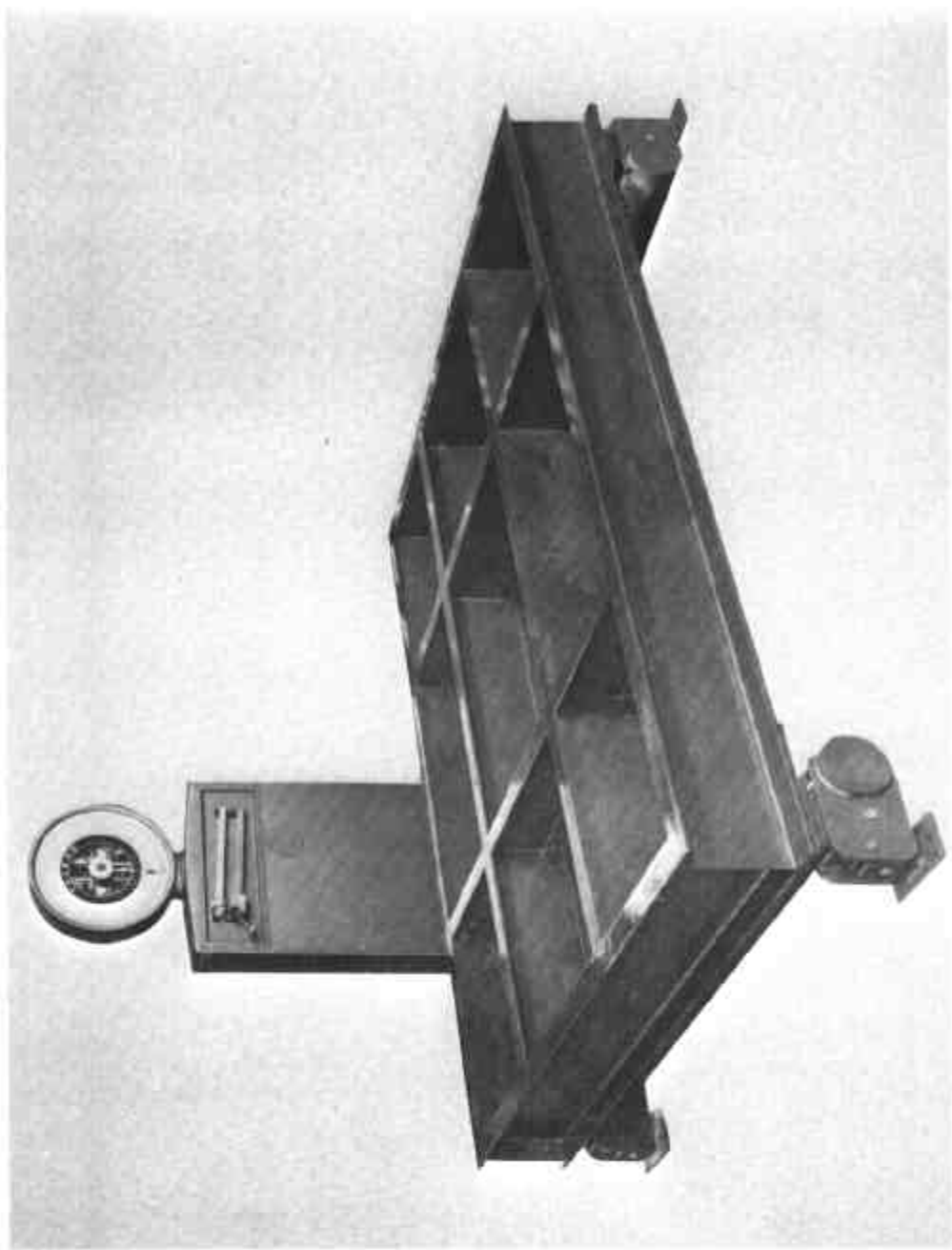
FOOTNOTE

1 - the limitations on compatibility of the headwork components tabulated in Figure 1 of Certificate No 6/9C/2 are also applicable to this Certificate

Compatibility Table for Components Described
in this Certificate

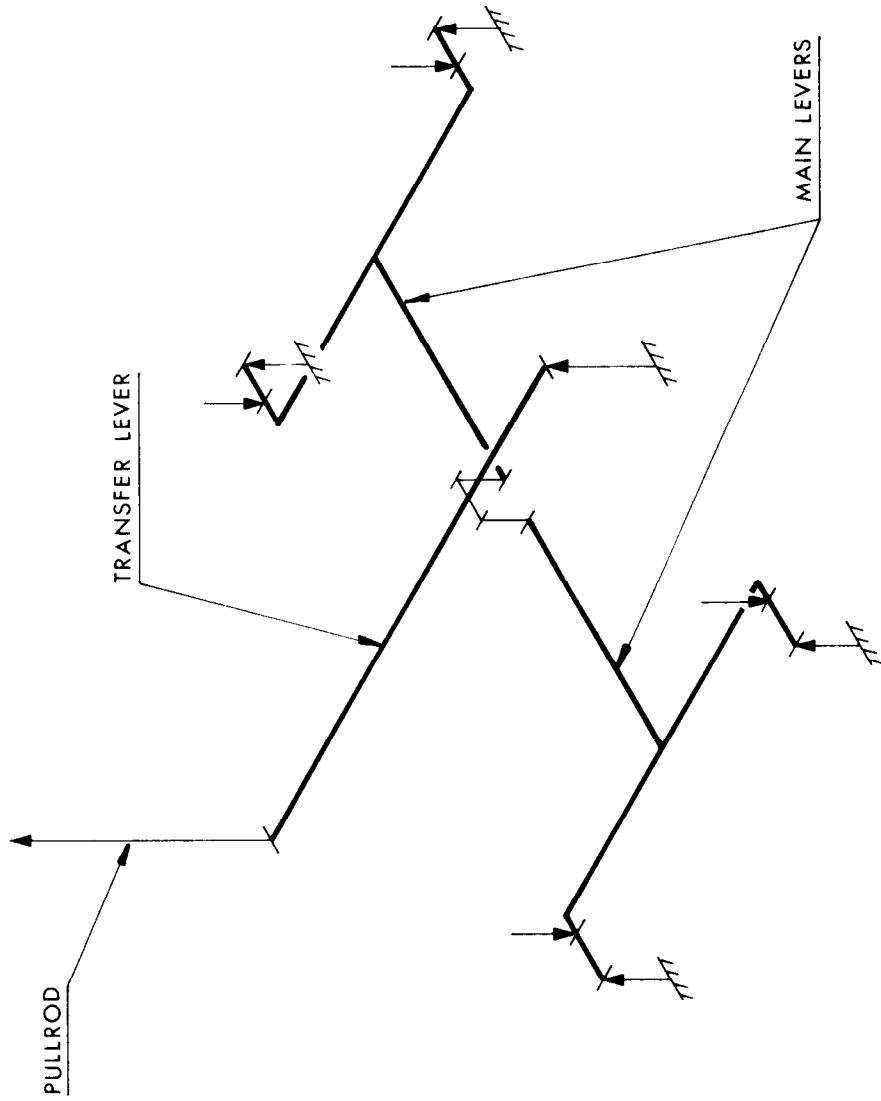
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FIGURE 6/9C/24 - 2



Toledo 20-tonne Platform Weighing Instrument
(with deck plates removed)

FIGURE 6/9C/24 - 3



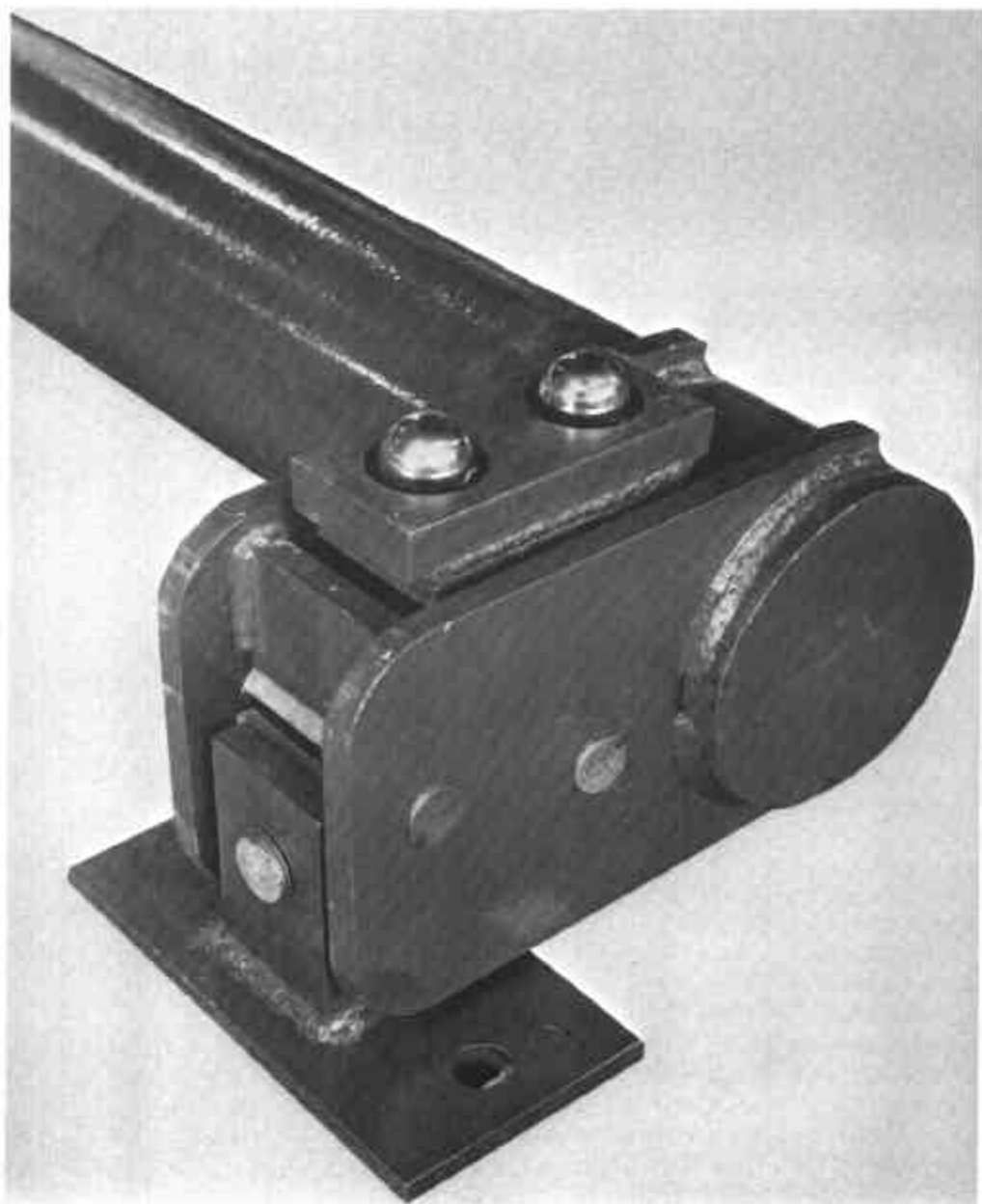
Three-level System --- Schematic Diagram

FIGURE 6/9C/24 - 4



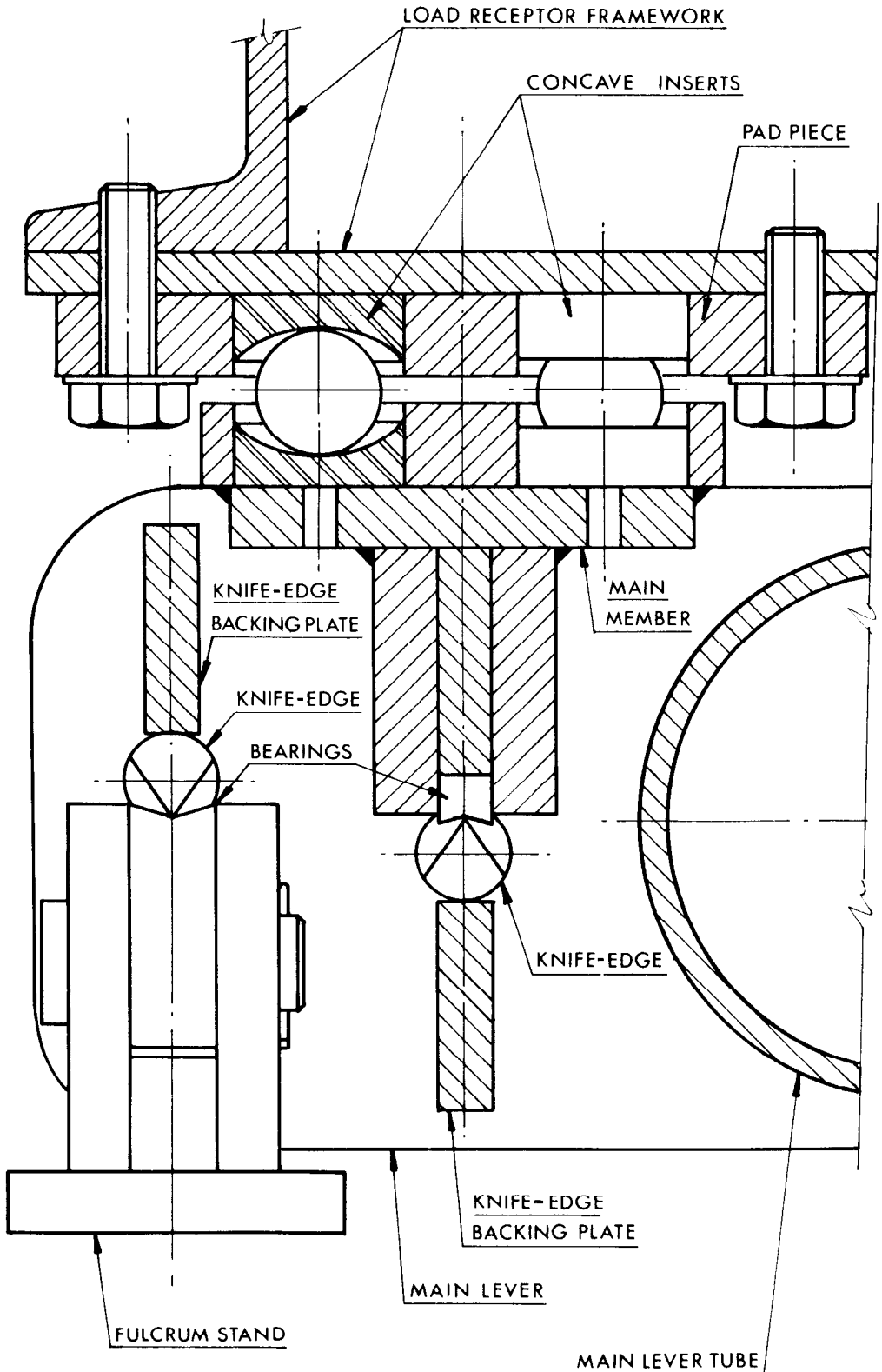
Three-lever System

FIGURE 6/9C/24 - 5



Lever Support and Double-ball Load-receptor Support
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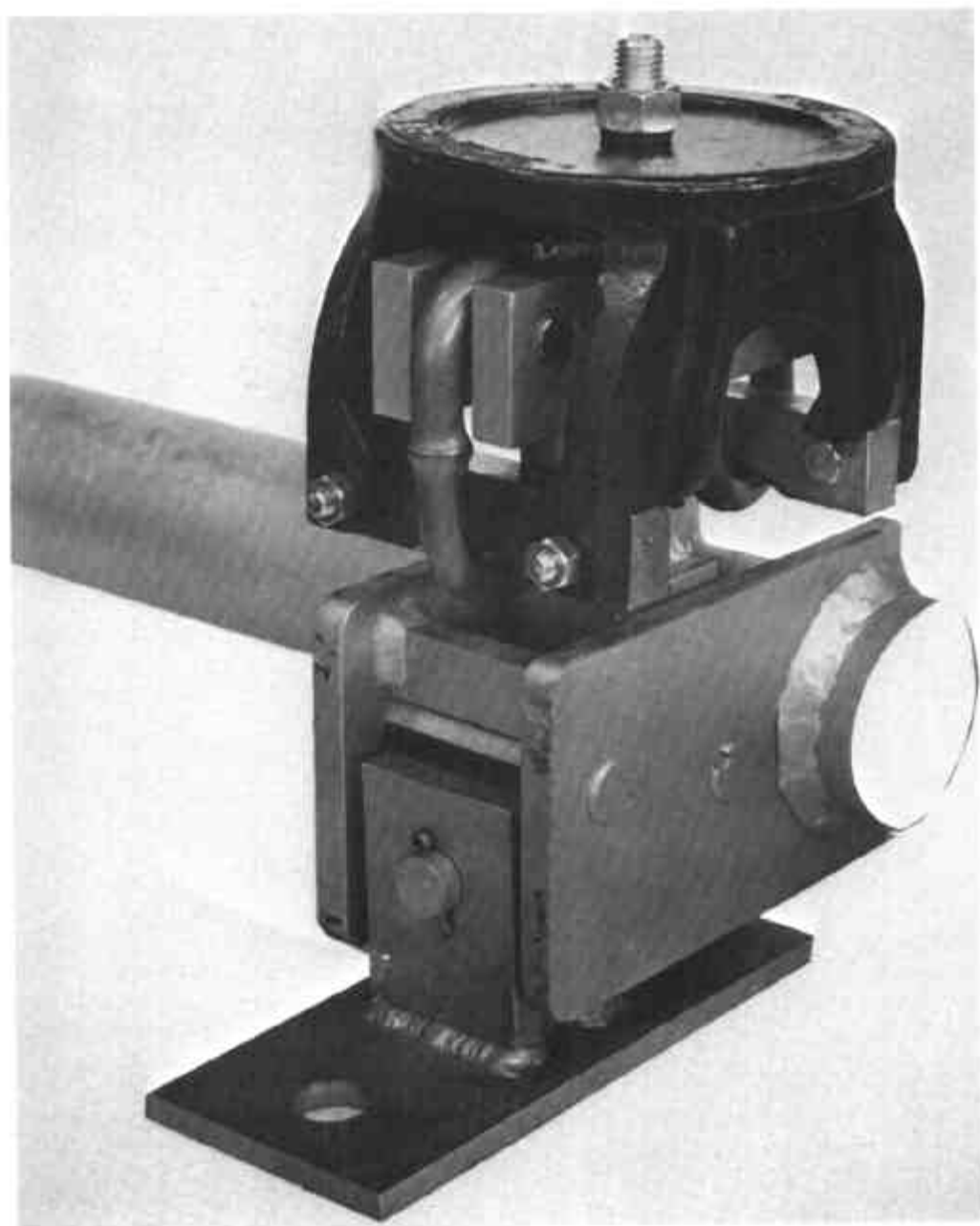
FIGURE 6/9C/24 - 6



Details of Lever Support and
Double-ball Load-receptor Support

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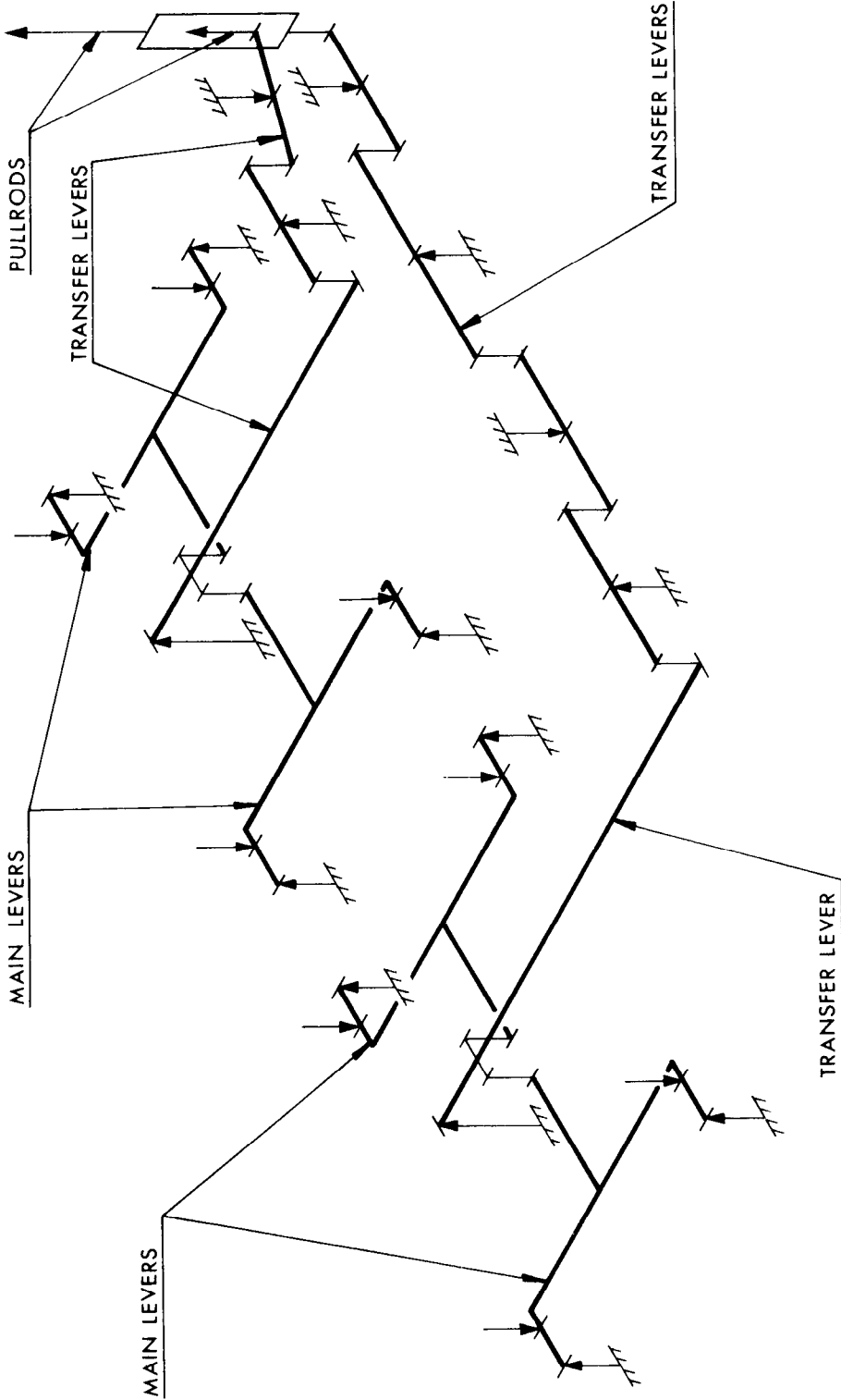
FIGURE 6/9C/24 - 7



Parallel-link Load-receptor Support

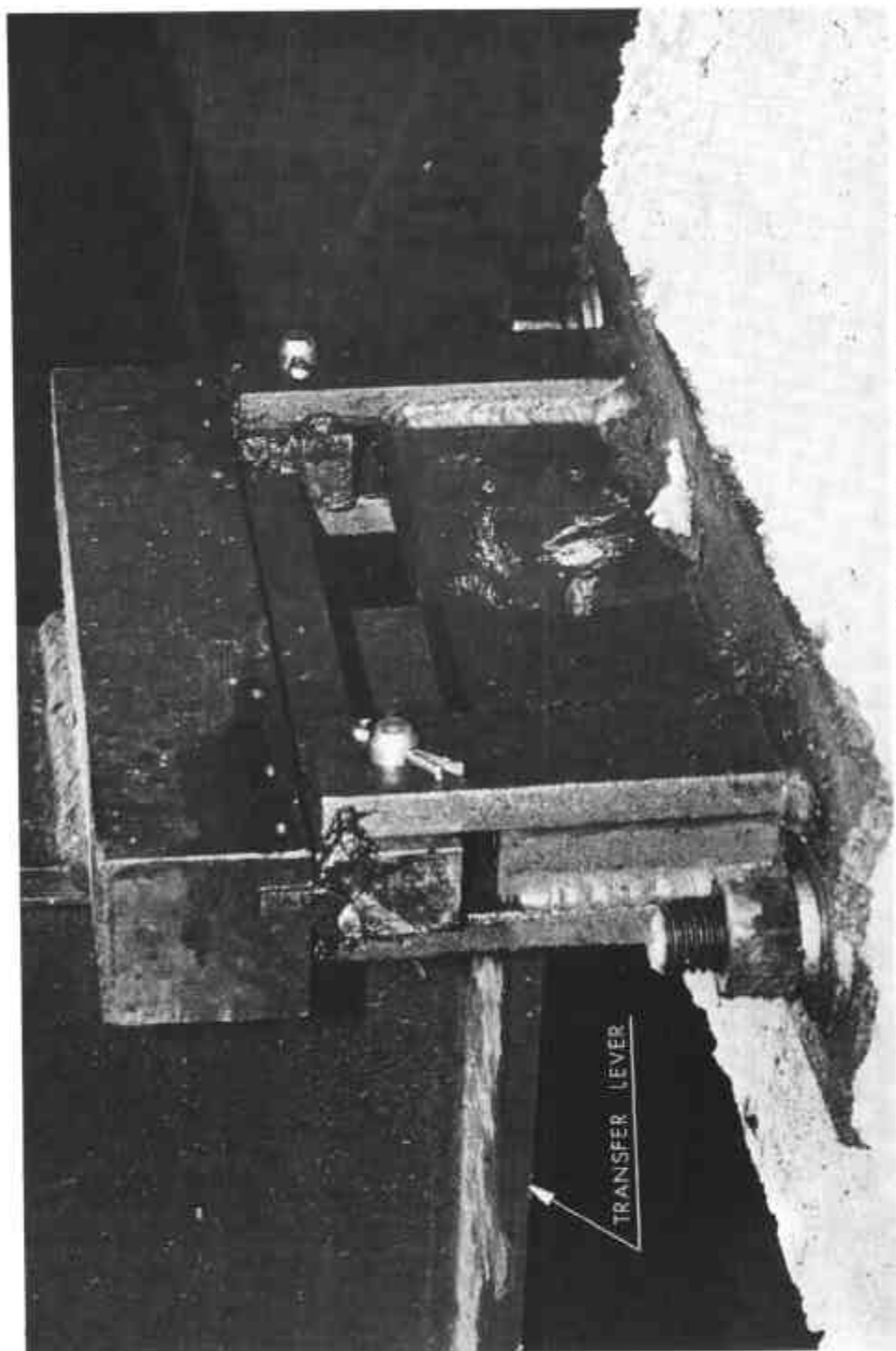
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FIGURE 6/9C/24 - 8



Combination Lever System — Schematic Diagram

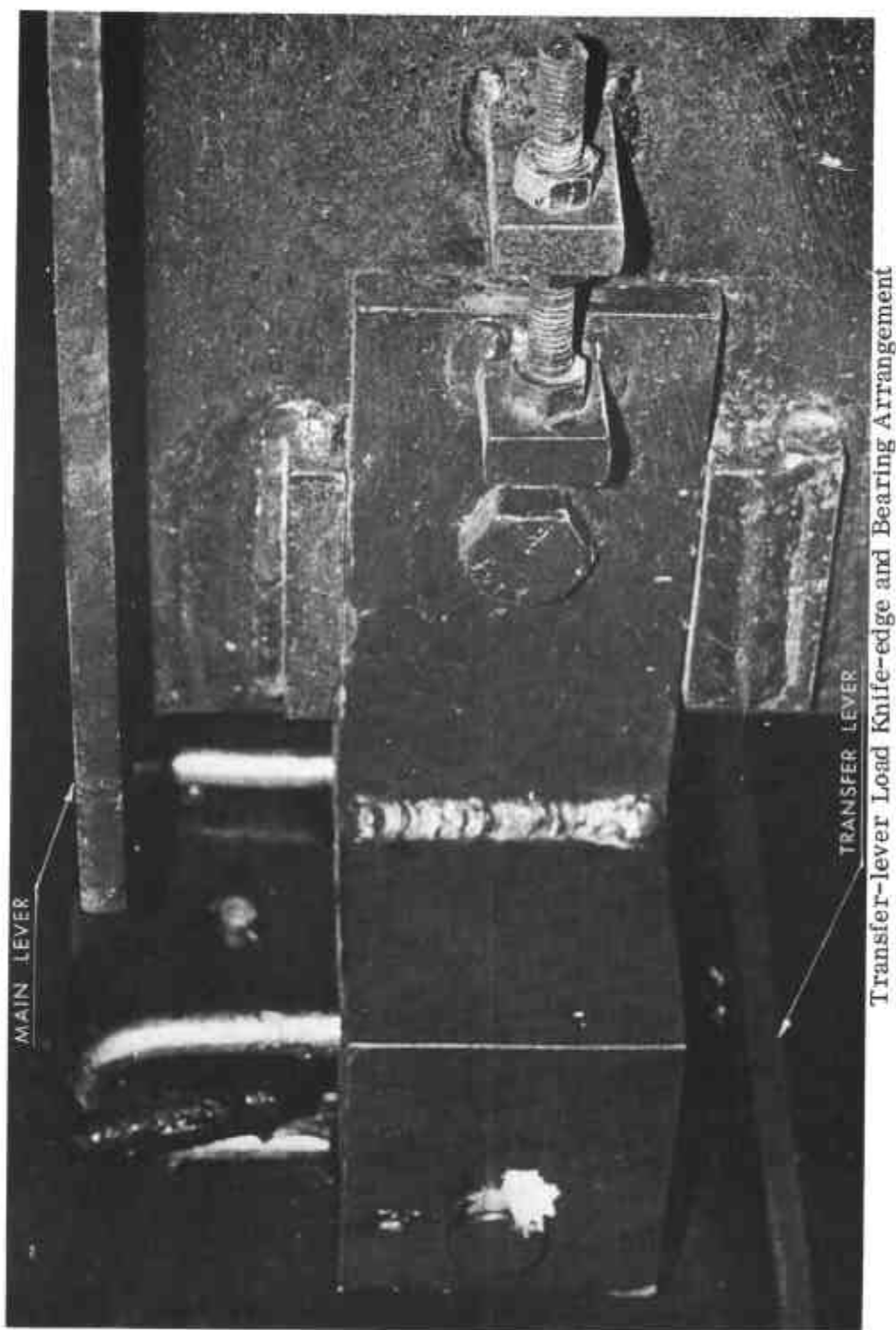
FIGURE 6/9C/24 - 9



Transfer-lever Fulcrum Knife-edge and Bearing Arrangement

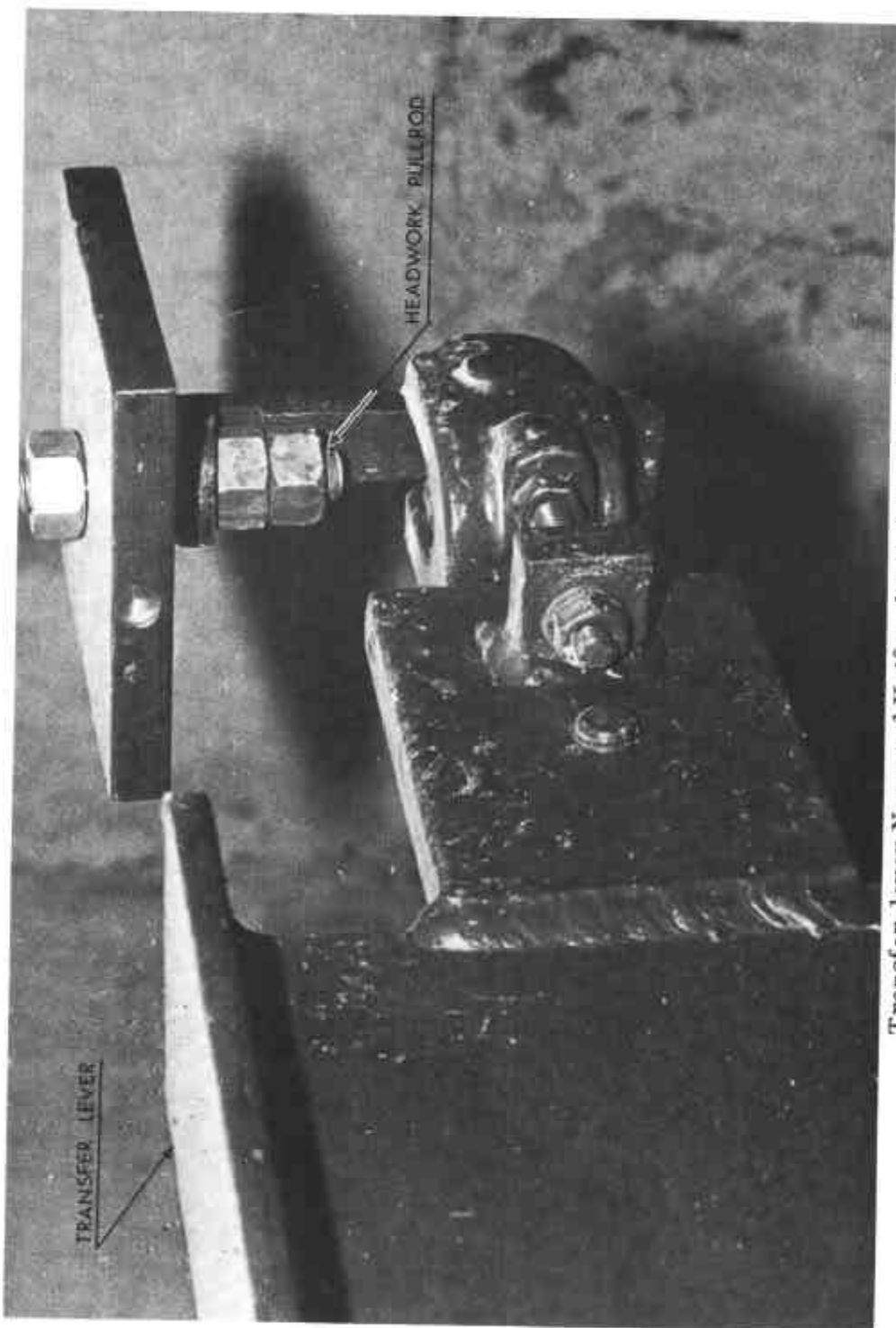
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FIGURE 6/9C/24 - 10



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FIGURE 6/9C/24 - 11



Transfer-lever Nose-end Knife-edge and Bearing Arrangement