

CANCELLED

cert. no. 0/3

31-12-90

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6/10B/23A
4/9/84



NATIONAL STANDARDS COMMISSION
WEIGHTS AND MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/10B/23A

This is to certify that an approval has been granted by the Commission that the pattern and variants of the

Toledo Model 840-8132 Weighing Instrument

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

are suitable for use for trade.

This Certificate is issued upon completion of reviews of approvals No 6/10B/23 and No 6/10B/12 which expired on 16/8/84 with the effect that no new instruments purporting to comply with those approvals will be accepted for verification after that date.

This approval is subject to review on or after 1/9/89.

Instruments purporting to comply with this approval shall be marked NSC No 6/10B/23A.

This approval may be withdrawn if instruments are constructed and used other than in accordance with the drawings and specifications lodged with the Commission.

Condition of Approval

The number of scale intervals applicable to the weighing instrument shall be no greater than the number of verification scale intervals approved for the load cell or the headwork, whichever is the smallest.

Signed

Executive Director

Descriptive Advice

Pattern: approved 16/8/84

. Toledo model 840-8132 weighing instrument of up to 100 t capacity.

Variants: approved 16/8/84

1. With an elliptical spring and oil dashpot fitted to the headwork lever.
2. With the load receptor in other configurations.
3. With the load cell mounting assembly used with any Commission-approved mechanical basework.
4. With two or more baseworks.

Technical Schedule No 6/10B/23A describes the pattern and variants.

Filing Advice

The documentation for this approval comprises:

Certificate of Approval No 6/10B/23A dated 4/9/84
Technical Schedule No 6/10B/23A dated 4/9/84
Test Procedure No 6/10B/23A dated 4/9/84
Figures 1 to 6 dated 4/9/84.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/10B/23A

Pattern: Toledo Model 840-8132 Weighing Instrument

Submitter: Toledo Scale (Australia) Limited
525 Graham Street
Port Melbourne Victoria 3207

1. Description of Pattern

A lever weighbridge of up to 100 t capacity (Figures 1 to 5) using a Toledo model 0721 load cell and a Toledo model 8132 digital indicator. The basework may have 2, 3, 4 or 5 lever sections in which a longitudinal lever is connected to the pullrod by a transfer lever. The load cell is connected to the pullrod through a main lever, the ratio of which is selected to suit the capacity of the load cell. The load cell and indicator are described in the documentation of NSC approval numbers S111 and S102 respectively.

The basework may be fitted with transverse or longitudinal stays.

Additionally, the pattern may be fitted with a supplementary lever to divide the pull from the basework connection, so that 2 load cell/ratio levers and indicators can be used.

1.2 Markings

The instrument is marked with the following data, together in one location:

Manufacturer's name or mark	
Serial number of the instrument	
NSC approval number	NSC No 6/10B/23A
Accuracy class	(III)
Maximum capacity in the form	Max*
Minimum capacity in the form	Min*
Verification scale interval in the form	e = d =*

*These should be repeated in the vicinity of each reading face.

1.3 Verification Provision

Provision is made for a verification mark to be applied.

2. Description of Variants

2.1 Variant 1

With an elliptical spring and oil dashpot fitted to the headwork lever (Figure 6).

2.2 Variant 2

With the load receptor in other configurations including rails for railway rolling stock.

2.3 Variant 3

The load cell mounting assembly of the pattern applied to any Commission-approved mechanical basework. A typical assembly is shown in Figure 2.

2.4 Variant 4

The outputs from two or more baseworks may be summed electrically, or may be connected together by transfer levers to a single pullrod to provide mass information to the digital indicator. A single or two separate load receptors may be used. The capacity of each basework in this combination is the same as if it were used singly and the total capacity is the numeric sum of each basework capacity.

TEST PROCEDURE 6/10B/23A

All load applications to the instrument should be in accordance with the Commission's recommended testing procedure for the elimination of rounding error as set out in Document 104.

The maximum permissible errors are:

- $\pm 0.5e$ for loads between 0 and 500e;
- $\pm 1.0e$ for loads between 501e and 2000e; and
- $\pm 1.5e$ for loads above 2000e

1. Zero Range

Check that the range of the zero adjustment is not more than 4% of the maximum capacity ($\pm 2\%$ approximately).

2. Zero Test

Check, by means of Document 104, that when the zero light illuminates, zero is set within 0.25e.

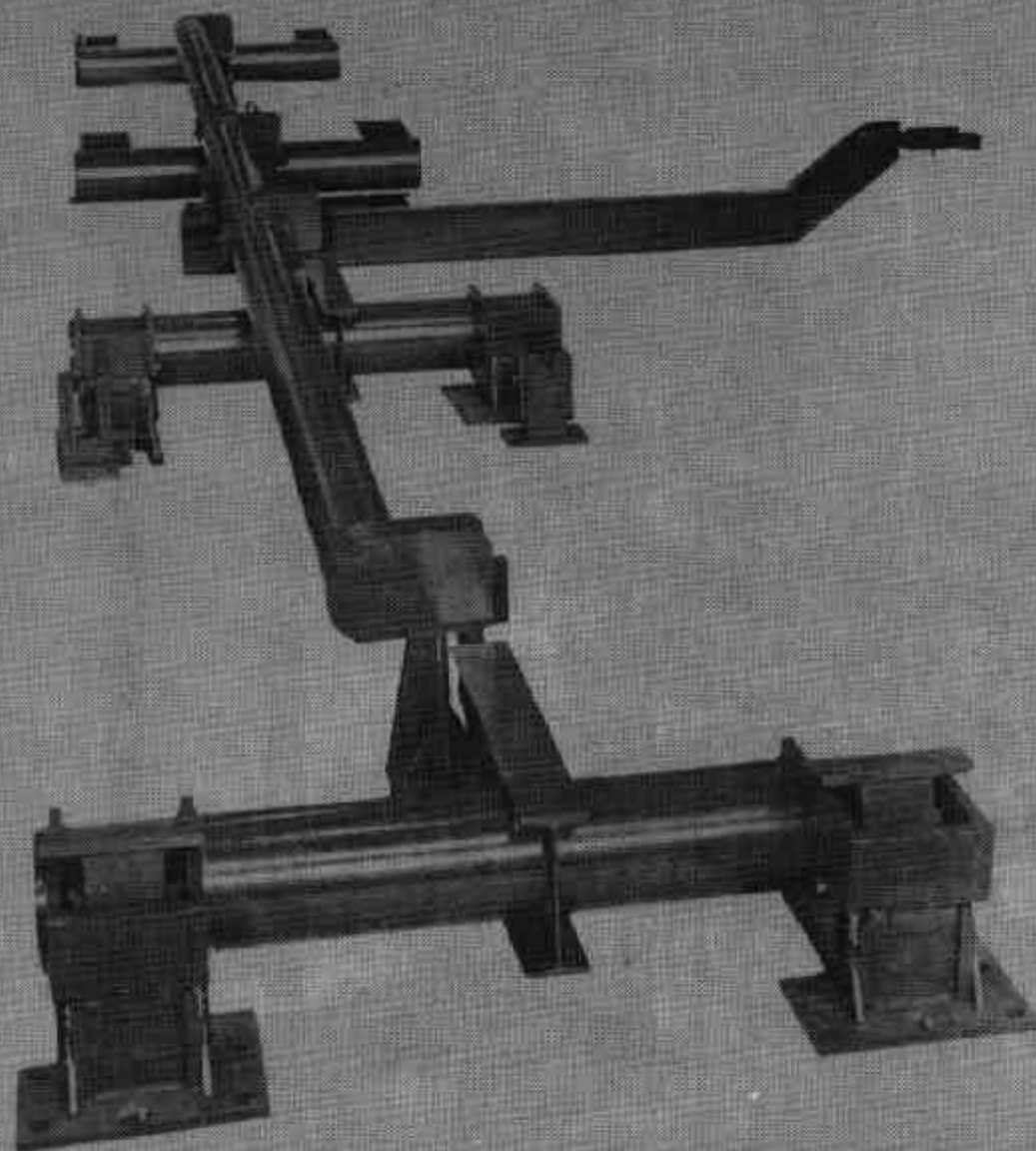
3. Range of Indication

- (a) The maximum mass indicated should not exceed the maximum capacity (Max) by more than 10 scale intervals; above this indicated mass the indicator should be blank or show non-numerical characters.
- (b) Below zero the indicator should display the mass prefixed by a minus sign or be blank.

4. Test Loads

- (a) Test loads are to be applied to the complete weighing instrument increasing in not less than 5 approximately equal steps to maximum capacity, followed by decreasing loads in not less than 5 approximately equal steps to zero load.
- (b) Carry out a rolling-load test as set out in Document 103 of the Inspector's Handbook.

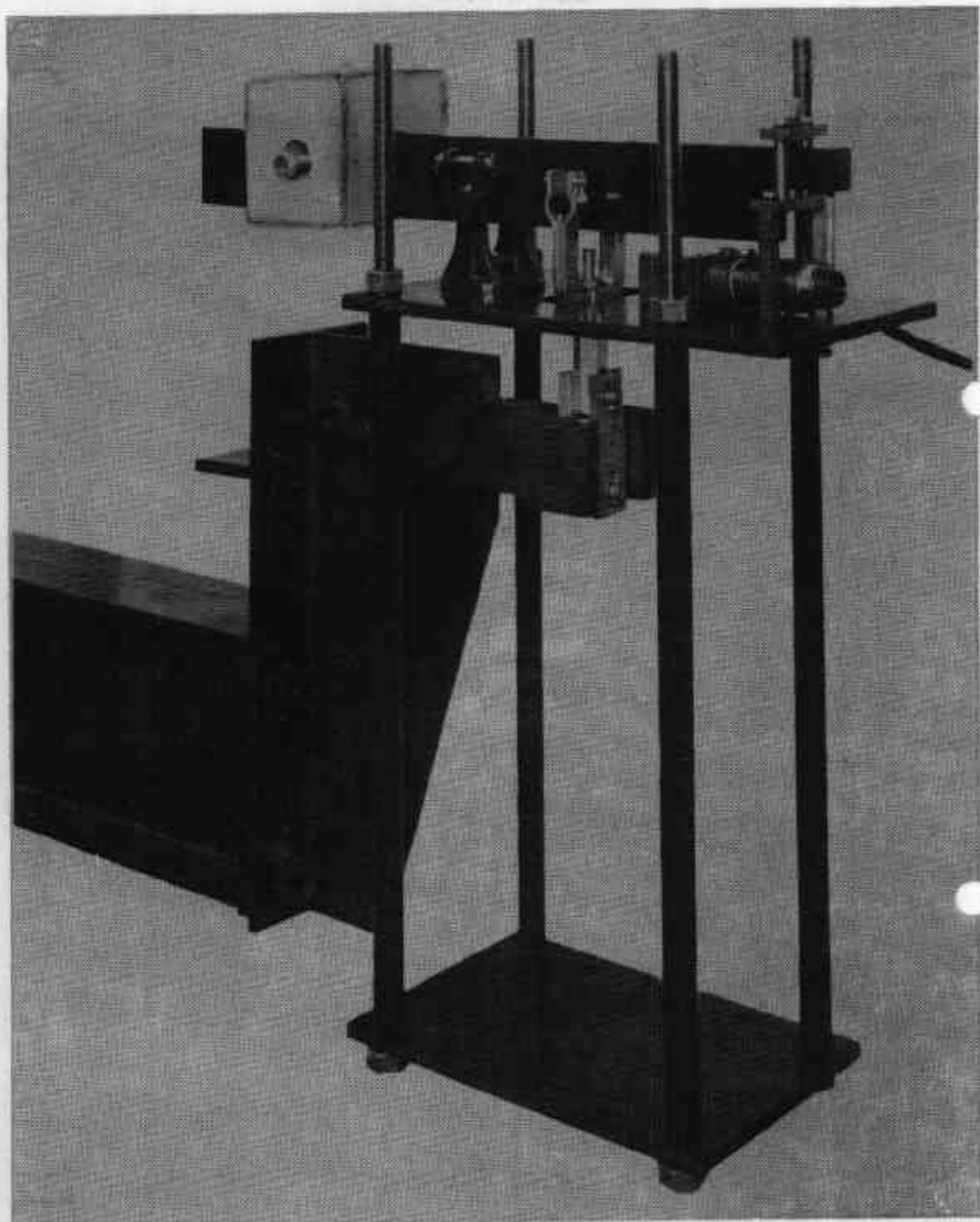
FIGURE 6/10B/23A - 1



4-section Lever Mechanism

4-section Lever Mechanism

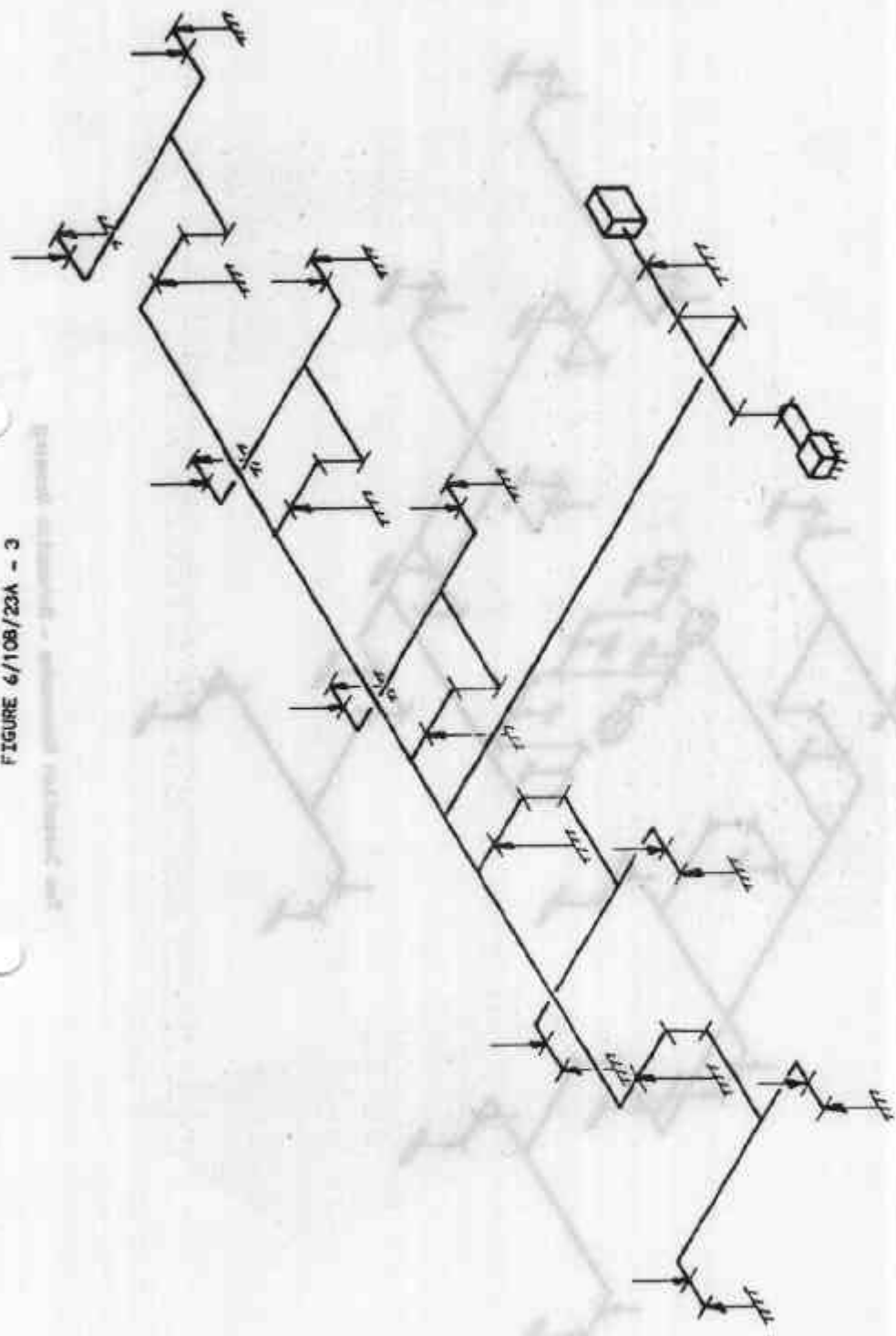
FIGURE 6/10B/23A - 2



Typical Load Cell Mounting Assembly

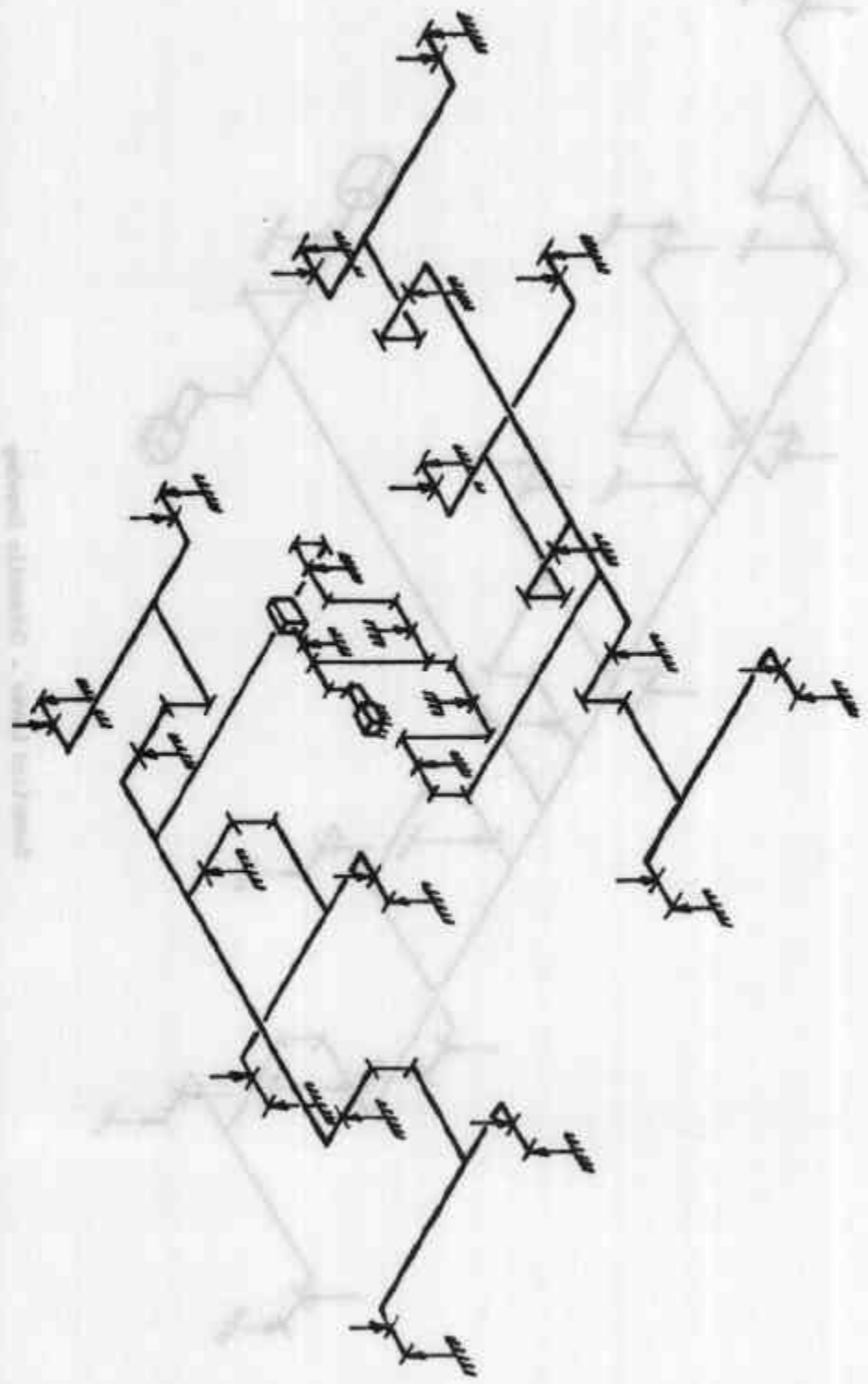
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FIGURE 6/10B/23A - 3



5-section Lever - Schematic Drawing

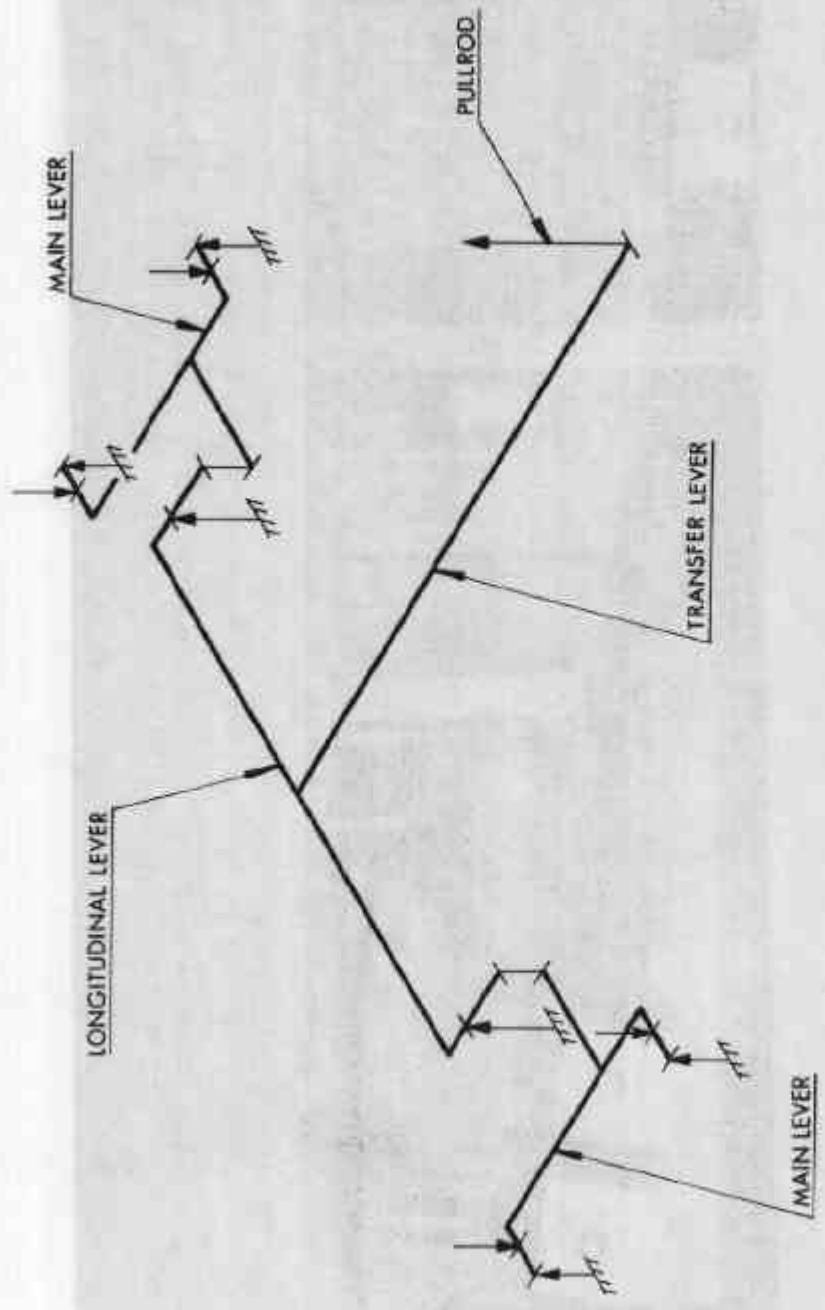
FIGURE 6/108/23A - 4



Two 3-section Baseworks - Schematic Drawing

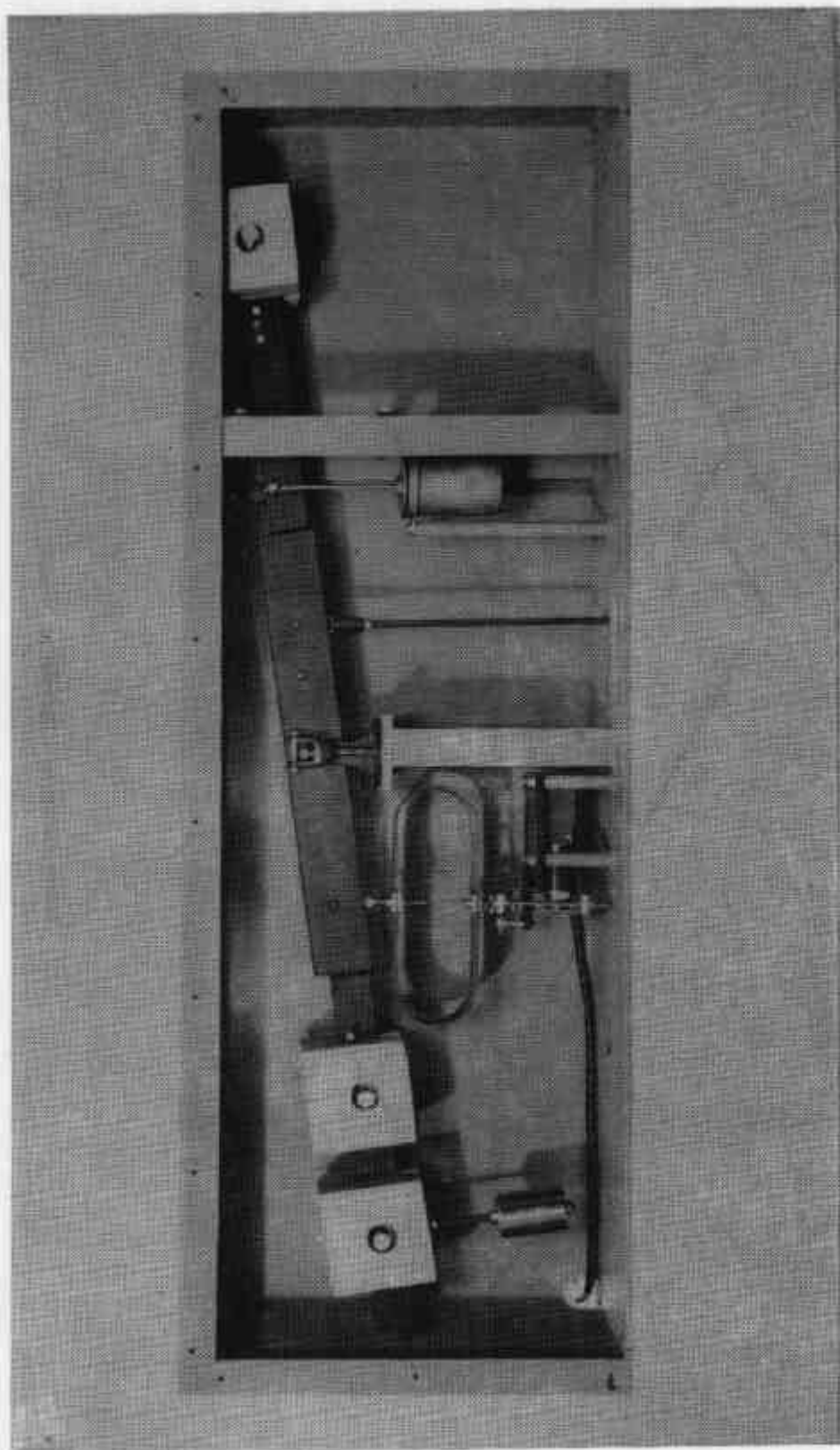
FIGURE 6/108/23A - 5

REVISION: (none) - 4/9/84



2-section Lever - Schematic Drawing

6/108/23A - 5



Headwork Lever With Elliptical Spring