P.O. Box 282 NORTH RYDE
N.S.W. 2113
Telegrams: NATSTANCOM SYDNEY
Telephone: 888 3922

CERTIFICATE OF APPROVAL No 6/18/8

CANCELLED
6/3

This is to certify that the patterns of the

Ultra (Overhead-track) Weighing Instrument with Busch Model 7001 Headwork

submitted by Ultra Scales Pty Ltd,
33-35 Judge Street,
Sunshine, Victoria, 3020,

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

Date of Approval: 20 July 1976

The patterns are described in Technical Schedule No 6/18/8, and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 1 August 1981.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/18/8".

Signed

Executive Officer

26/8/77

CANCELLED 0/3 31-12-90

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/18/8

Pattern: Ultra (Overnead-track) Weigning Instrument with Busch Model 7001 Headwork

Submittor: Ultra Scales Pty Ltd,
33-35 Judge Street,
Sunshine, Victoria, 3020.

Date of Approval: 20 July 1976

All instruments conforming to this approval snall be marked "NSC No 6/18/8".

Description:

The pattern (see Figure 1) is a self-indicating (overnead-track) weigning instrument. It comprises an overnead-track lever mechanism and a neadwork with a double-pendulum-resistant mechanism and optically projected weight scale.

The neadwork comprises:

1. Headwork cabinet installed in a fixed position.

2. Double-pendulum-resistant mechanism (see Figures 2 and 3). One pendulum carries a transparent graticule marked with up to 3000 graduations which are projected on to a ground-glass reading face (see Figure 4). A pointer on the other pendulum passes over an undenominated scale.

3. Main neadwork lever (see Figures 5 and 6). A zero-adjustment device comprising a string threaded through several small balls is connected between the end of the main lever and a take-up spool on the cabinet.

4. Taring device (see Figures 5 and 6). The poise is moved by a threaded shaft which is rotated through a series of universal joints by a handle on the side of the cabinet. The tare reading face has a maximum of 400 graduations and is on the same side of the headwork as the weight reading face.

5. Intermediate lever(s) between tne main neadwork lever and tne basework pullrod (see Figure 7).

Tne basework (see Figures 8, 9 and 10), wnicn is for loads up to 700 kg, comprises a live weigning rail of up to 1,2 metres in lengtn attacned to a yoke at eacn end suspended from a single first-order or second-order main lever, wnicn in turn is suspended by links from an overnead support. Two links at eacn end of tne live rail connect to tne fixed rail and limit tne movement of tne live rail. A transfer lever coupled to tne main lever by a link transmits tne load to tne neadwork pullrod. More than one transfer lever may be used between tne neadwork pullrod and tne main basework lever.

Tne instrument is marked adjacent to tne weignt reading face, for example:

(III)

Max*	=	600 kg
Min*	=	10 kg
d = e	=	0,2 kg
T	=	+ 100 kg

Tne approval includes:

1. A two-lever overnead-track basework for loads up to 700 kg (see Figures 11 and 12). It comprises a live weigning rail of up to 1,2 metres in lengtn attacned to a yoke at eacn end and suspended from two levers wnicn in turn are suspended by links from an overnead support. Two links at each end of tne live rail connect to tne fixed rail and limit tne movement of tne live rail. A transfer lever coupled to tne nose-ends of eacn main lever by links transmits tne load to tne neadwork pullrod. More than one transfer lever may be used between tne neadwork pullrod and tne basework main lever.

2. Tne neadwork with one or two graduated or ungraduated tare bars; tne graduated tare bars nave up to 200 graduations (see Figure 13), and are on tne same side of tne neadwork as tne weight reading face.

3. Tne neadwork with or witnout taring devices. Wnen no taring

* Max (maximum capacity) plus T (additive tare capacity) should not exceed tne approved basework load (700 kg).
Min = 50e for e 50 g to 10 kg and Min = 1000 kg for e above 10 kg.

device is fitted tne optical-projection weight cnart may be on botn sides of tne neadwork; tne accuracy class, Max, Min, d, and e, will be marked adjacent to eacn weight reading face.

4. Tne neadwork witn additional intermediate levers arranged so tnat tne pullrod pulls upward or downward.

5. Otner Commission-approved baseworks replacing tne basework described in tne pattern, provided tnat -

(a) tne basework is of an instrument conventionally known as a platform weigning macnine, weighbridge or nopper scale, etc., wnere tne neadwork and basework are separate assemblies connected by a mecnanical linkage;

(b) tne capacity of tne instrument is not more than tne capacity approved for tne basework;

(c) a levelling device and an indicator are fitted, except for instruments installed in a fixed position, or instruments wnicn satisfy tne following accuracy requirements and indication limits:

Accuracy Requirements

(i) ± 0,5e for loads between zero and 500e inclusive;
(ii) ± 1e for loads between 500e exclusive and 2000e inclusive;
(iii) ± 1,5e for loads greater tnan 2000e.

Indication Limits

(i) Tilting at no-load — tne zero indication does not vary more tnan 2e wnen tilted to a slope of 1 in 20, tne zero being first adjusted in tne reference (level) position; and

(ii) Tilting when loaded — tne indication does not vary more tnan e wnen tilted to a slope of 1 in 20, tne indication at zero being adjusted in tne reference position before tilting and in tne tilted position before reloading;

(e) tne instrument is marked:

"Approval Numbers

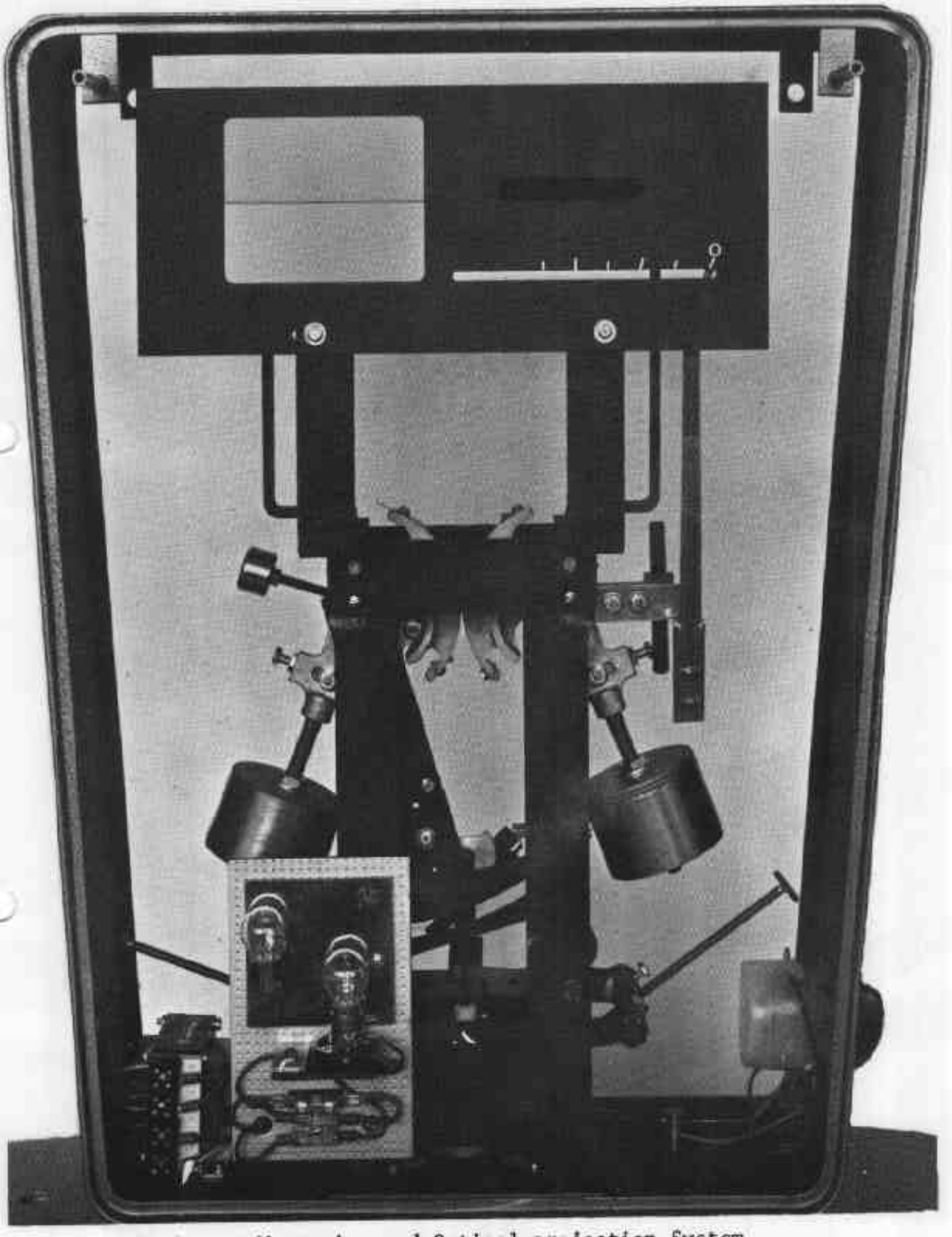
Headwork NSC No 6/18/8
Basework NSC No ....."

FIGURE 6/18/8 - 1

Busch Model 7001

26/8/77

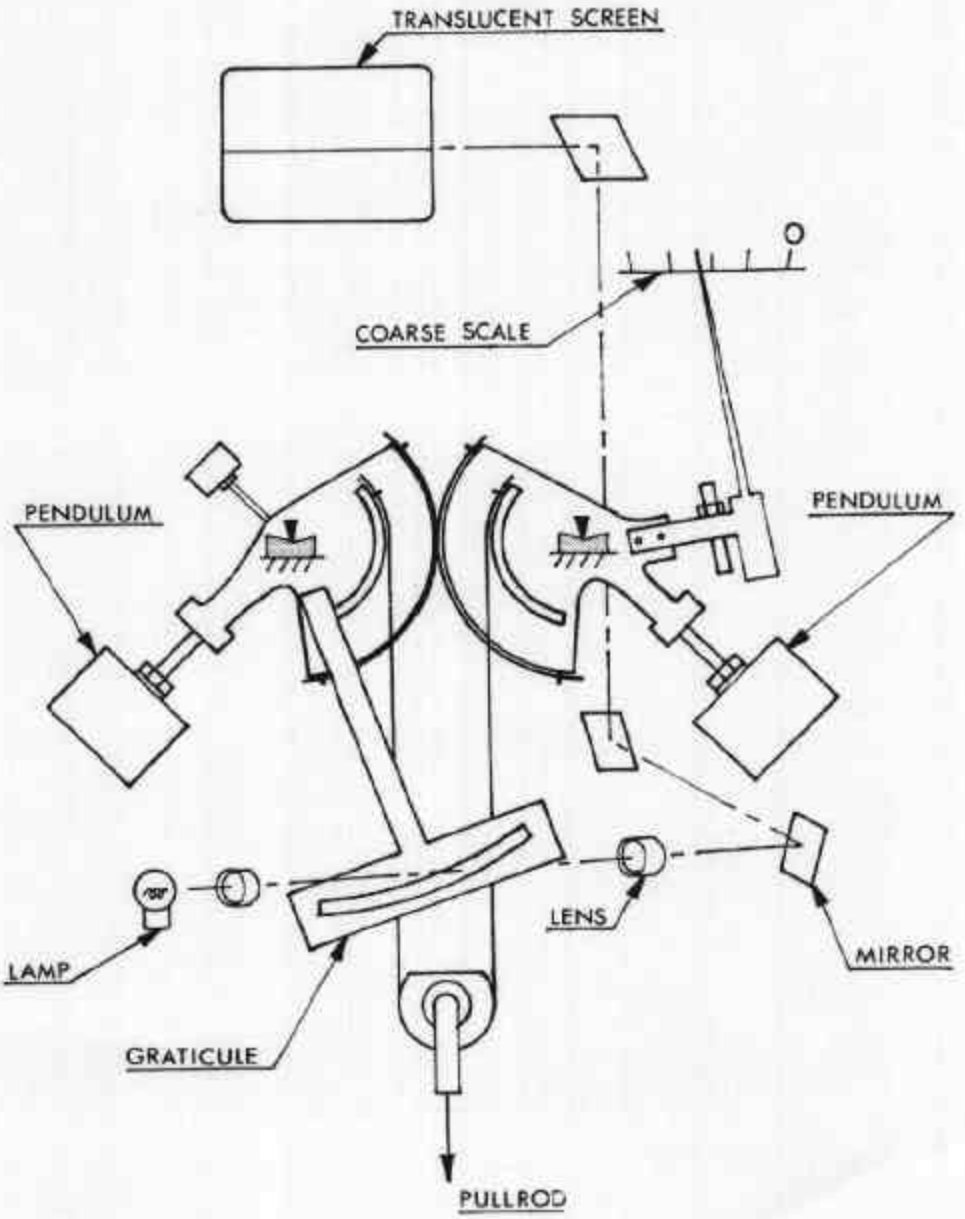
FIGURE 6/18/8 - 2



Resistant Mechanism and Optical-projection System

26/8/77

FIGURE 6/18/8 - 3



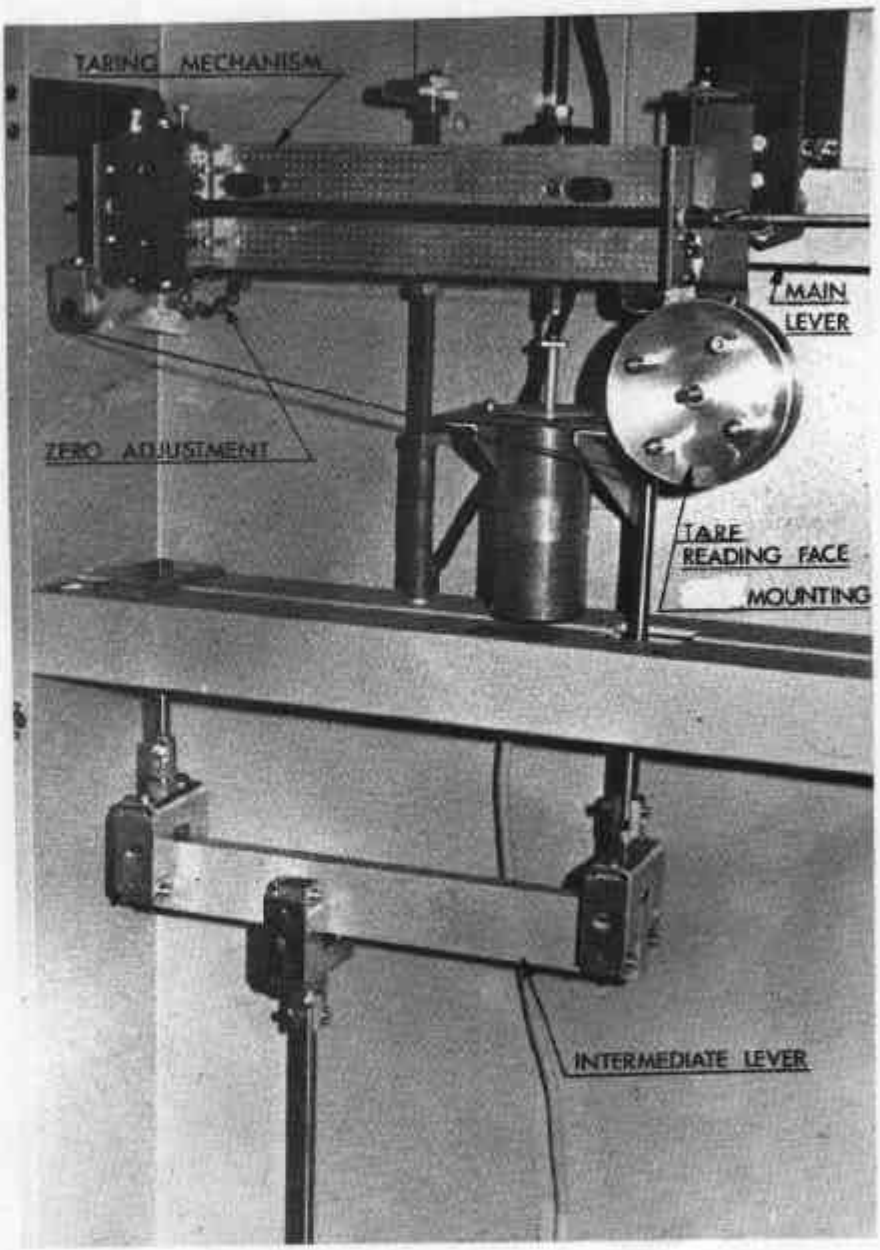
Resistant Mechanism and Optical-projection System — Schematic Diagram

26/8/77

FIGURE 6/18/8 - 4

Weight Reading Face

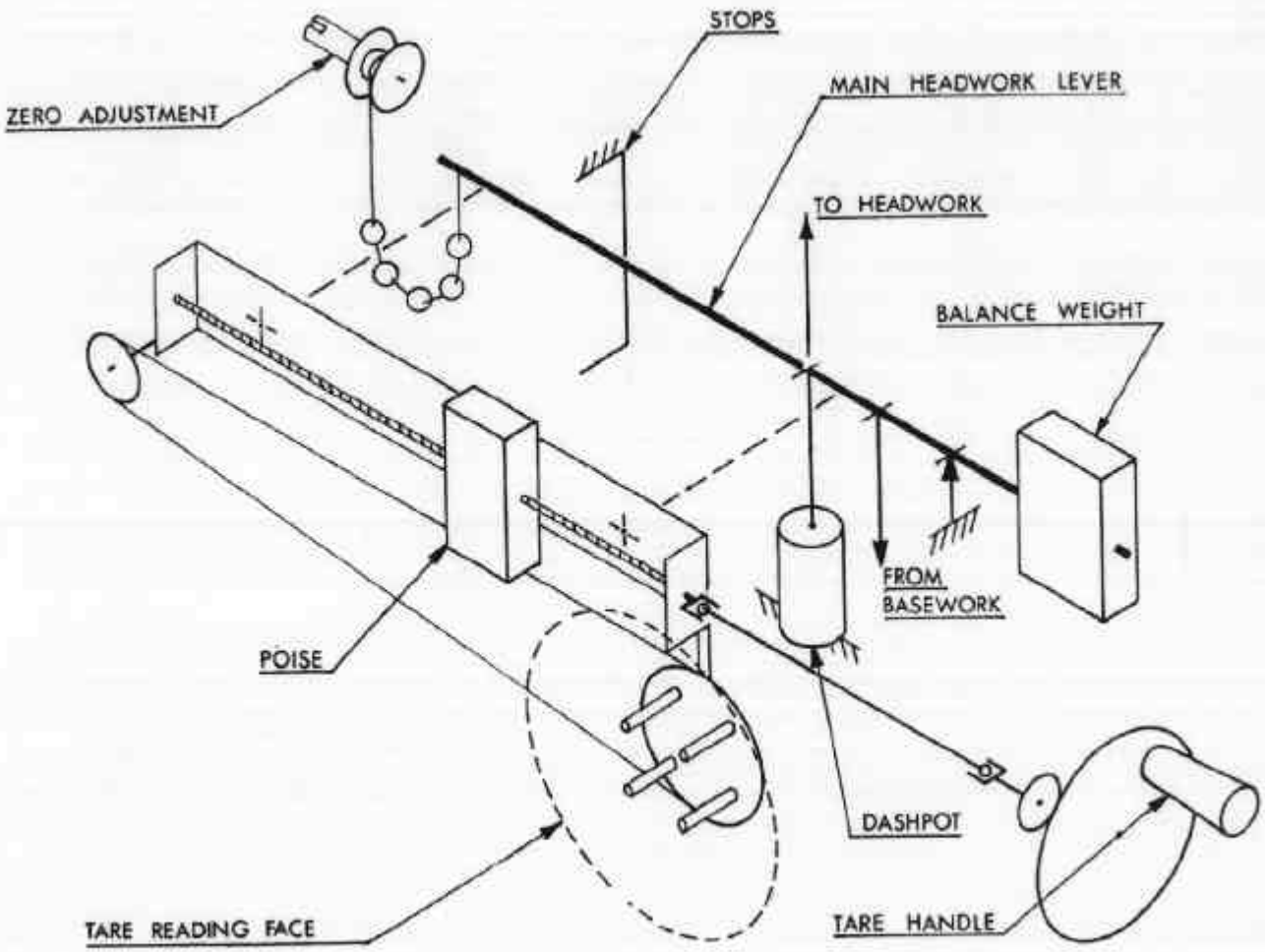
FIGURE 6/18/8 - 5



Taring Mechanism, Main Headwork Lever
and Intermediate Lever

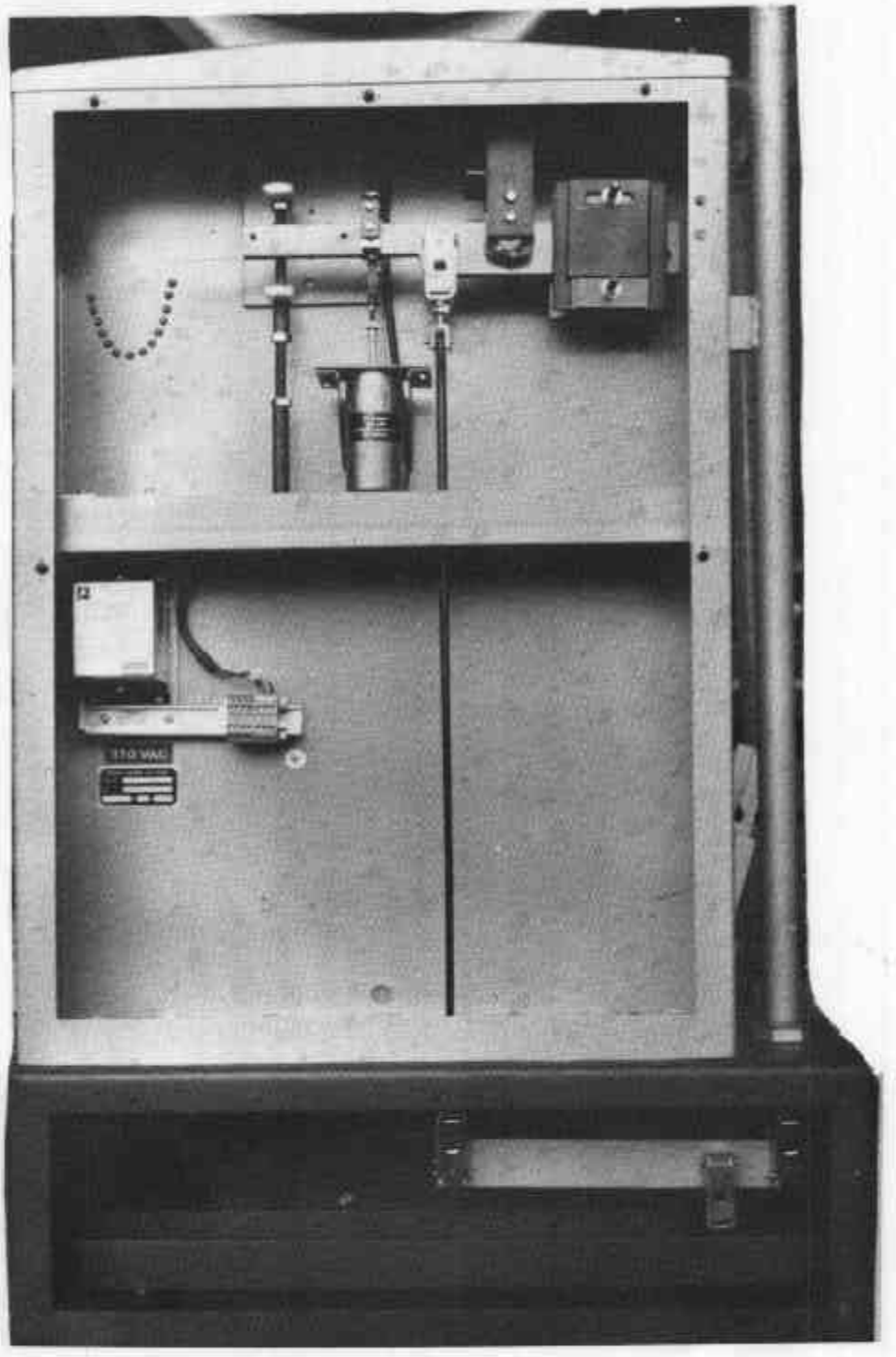
26/8/77

FIGURE 6/18/8 - 6



Taring Mechanism and Main Headwork Lever — Schematic Diagram

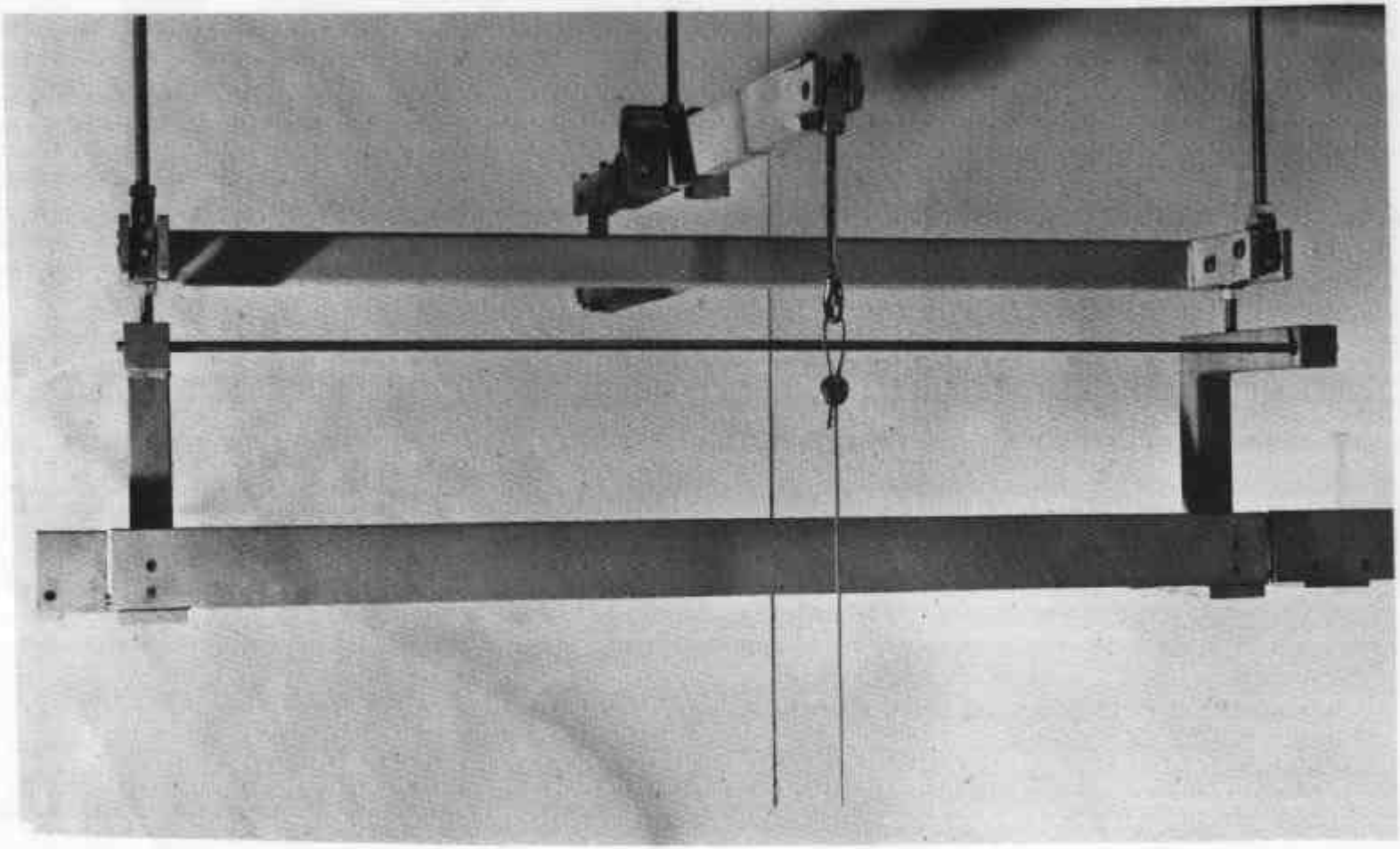
FIGURE 6/18/8 - 7



Lower Headwork with Intermediate Lever

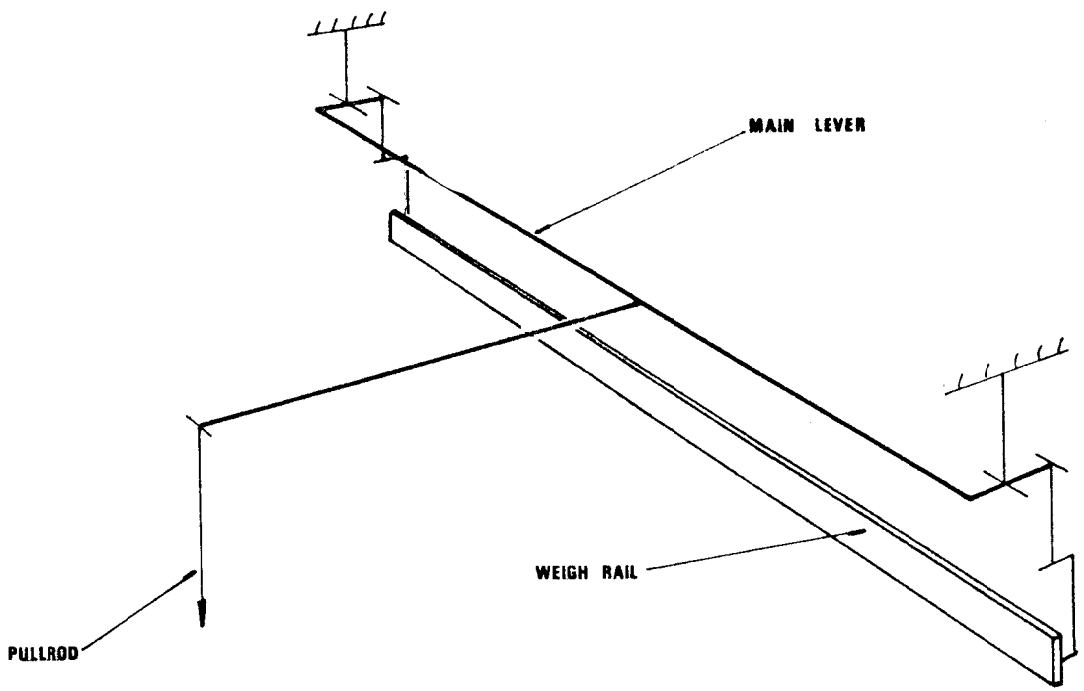
26/8/77

FIGURE 6/18/8 - 8



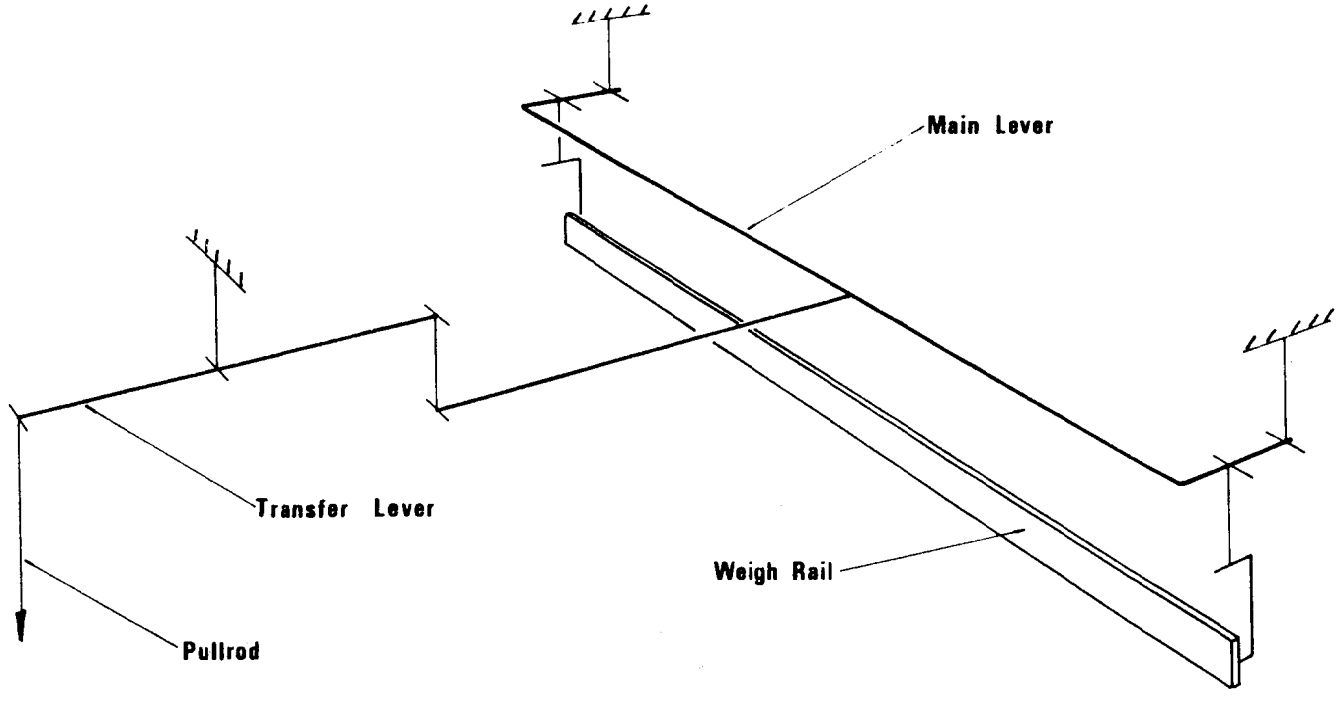
Single-lever Overhead-track Basework

FIGURE 6/18/8 - 9



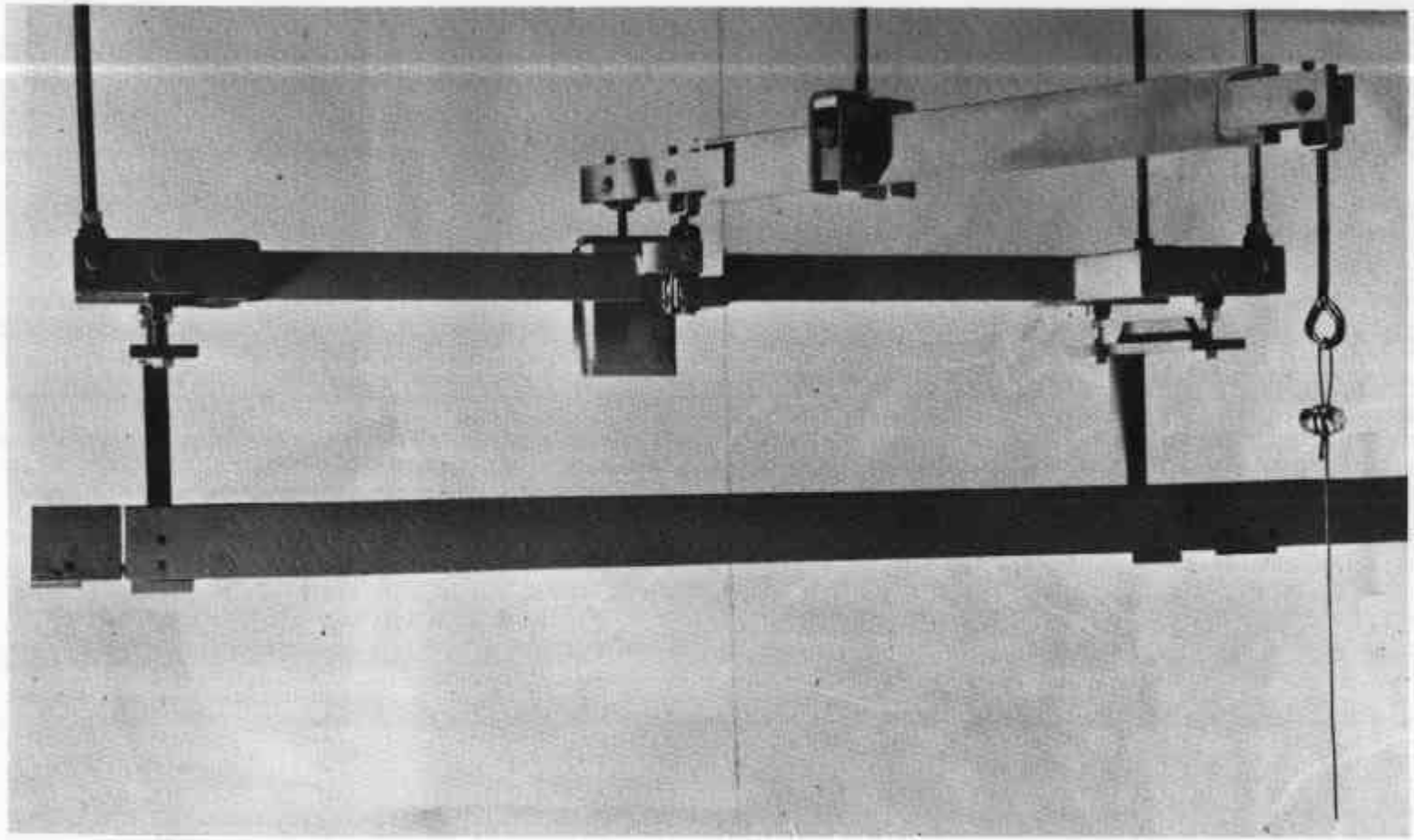
First-order Single-lever Basework — Schematic Diagram

FIGURE 6/18/8 - 10



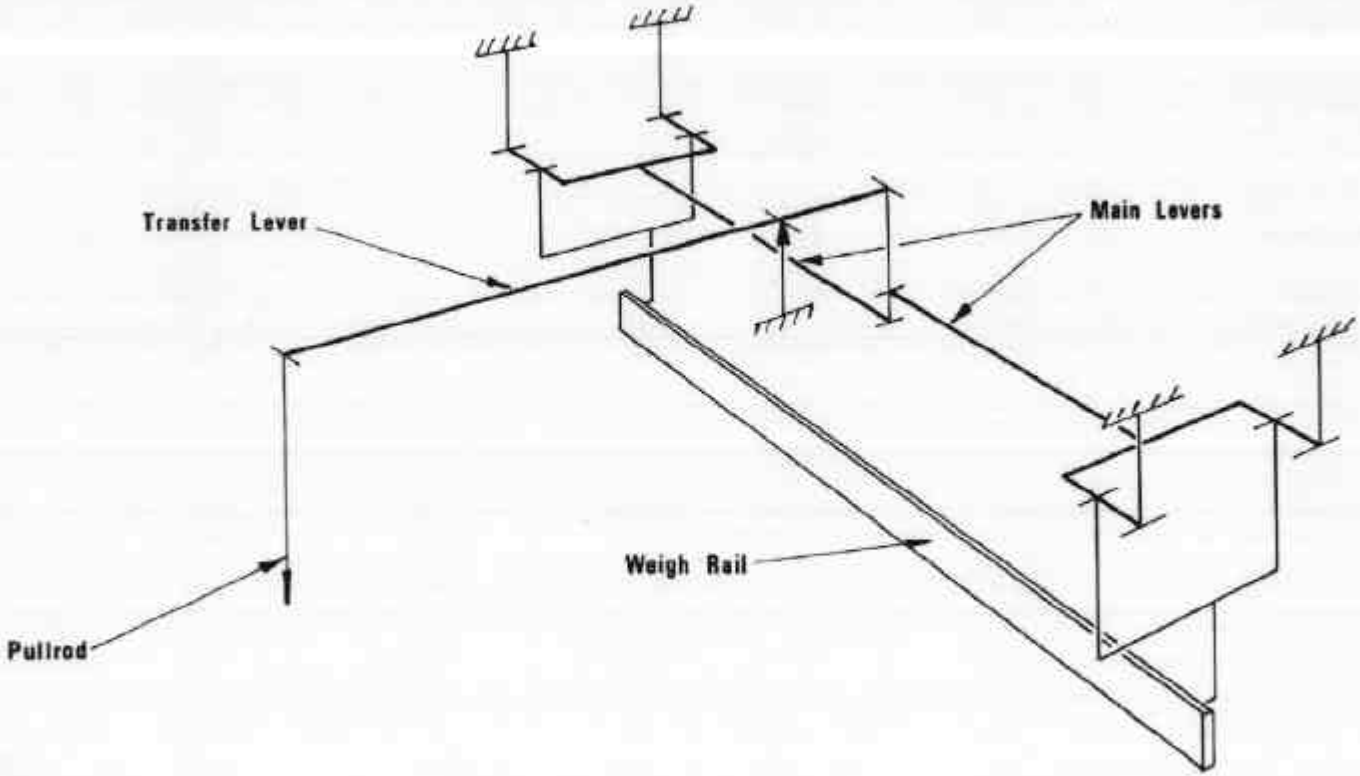
Second-order Single-lever Basework — Schematic Diagram

FIGURE 6/18/8 - 11



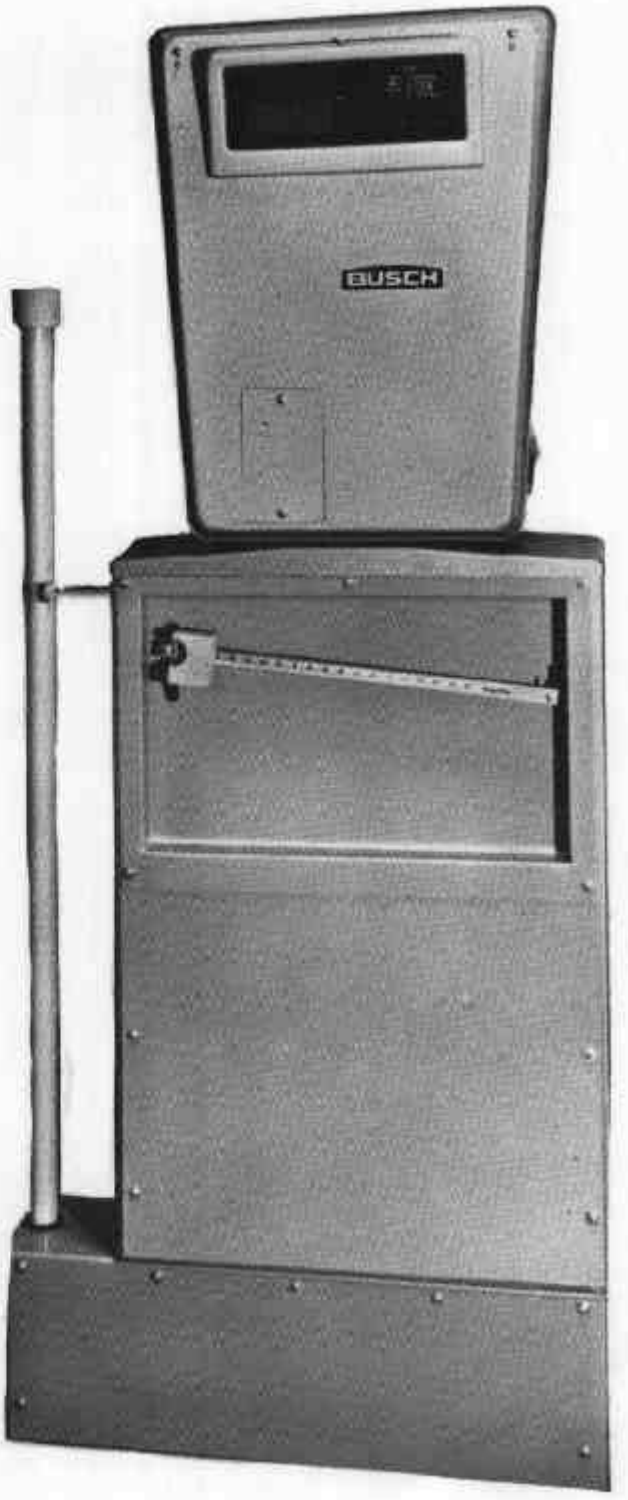
Two-lever Overhead-track Basework

FIGURE 6/18/8 - 12



Two-lever Basework — Schematic Diagram

FIGURE 6/18/8 - 13



Headwork with Single Tare Bar

26/8/77