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CERTIFICATE OF APPROVAL No 6/10B/20

This is to certify that the patterns of the

Schenck Weighing Instrument Model NS (Combination)

submitted by Fraser, Hrones & Co. Pty Ltd,
63 Alexander Street,
Crow's Nest, New South Wales, 2065,

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

Date of Approval: 21 October 1976

The patterns are described in Technical Schedule No 6/10B/20, and in drawings and specifications lodged with the Commission.

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

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/10B/20".

The approval of the basework described in the pattern is limited to two instruments operated by the NSW Department of Main Roads at Granville, New South Wales.

Signed

Acting Executive Officer

10/8/78

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/10B/20

Pattern: Scnenck Weigning Instrument Model NS (Combination)

Submittor: Fraser, Hrones & Co. Pty Ltd,
63 Alexander Street,
CROW'S NEST, New Soutn Wales, 2065.

Date of Approval: 21 October 1976

Conditions of Approval:

1. Tne approval of tne basework described in tne pattern is limited to two instruments operated by tne NSW Department of Main Roads at Granville, New Soutn Wales.

2. All instruments conforming to tnis approval snall be marked "NSC No 6/10B/20".

Description:

Tne pattern (see Figures 1 and 2) is a self-indicating combination weignbridge witn a Scnenck combination neadwork Model NS and two tnree-lever baseworks. Tne two baseworks eacn nave a maximum capacity of 40 tonnes wnen coupled to tne neadwork independently or a combined capacity of 50 tonnes wnen coupled to tne neadwork togetner.

Tne Scnenck NS combination neadwork comprises:

1. Headwork cabinet (see Figures 1 and 2).

2. Single-pendulum-resistant mecnanism (see Figures 3, 4 and 5) witn a steel ribbon drive from tne main neadwork lever. Tne pendulum carries a transparent graticule (see Figures 5 and 6) marked witn up to 3000 graduations wnicn are projected on to a ground-glass weignt reading face and a magnetic damping mecnanism in tne form of a copper blade wnicn passes tnrougn tne field of a permanent magnet (see Figure 6).

3. Main neadwork lever (see Figures 4 and 5). No zero adjustment or taring device is provided.

4. Seal — the rear cover of the upper headwork is sealed by stamping plugs.

5. Platform-combining unit (see Figures 2 and 7) — containing two balancing levers each with a motorised zero-adjustment weight, a compensating weight and a common intermediate lever. The pullrod from each basework is coupled to a balancing lever. The balancing levers are in turn coupled to a common intermediate lever and by a pullrod to the main lever in the upper headwork. A selector lever allows the left basework, both baseworks, or the right basework, to be connected to the headwork. The compensating weight will be engaged when only one basework is selected.

   The instructions for balancing are located on the front of the control unit (see Figure 8).

6. Control unit (see Figure 8) — provides a zero on/off key, two zero-adjustment toggle switches marked "- zero +" and a power switch. The zero-adjustment toggle switches, which are only activated when the control key is "on", each control the position of a zero-balance weight of maximum effect 0,4% of the capacity of a single basework.

Each basework-lever system (see Figure 9) consists of two main levers and a transfer lever. Each main lever is constructed from a steel tube to which one long and two short arms are welded. The longest transfer lever, which is constructed from two steel tubes which are welded together to prevent twisting, has three short arms welded to it and one long arm bolted to a fixing plate. The short transfer lever is similar, except constructed from one steel tube. Counter-balance weights are suspended from the end of each transfer lever to prevent the knife-edges lifting from the fulcrums.

Additional transfer levers are fitted to provide the correct force reduction to the headwork.

The instrument is clearly marked adjacent to the weight reading face:

(III)

Platform		Left	Both	Right
Max	=	40 t	50 t	40 t
Min	=	1 t	1 t	1 t
d = e	=	0,02 t	0,02 t	0,02 t

The approval includes the baseworks of other Commission-approved patterns replacing the three-lever baseworks described in the patterns,

provided tnat:

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

2. tne capacity of tne instrument is not more tnan tne capacity approved for tne basework;

3. tne instrument is installed in a fixed position;

4. tne instrument is marked:

"Approval Numbers

Headwork NSC No 6/10B/20
Basework No 1 NSC No .....
Basework No 2 NSC No ....."

Special Tests:

1. Motion Detector

Place a load equal to 1½ graduations on tne load receptor, disturb tne weigning mecnanism and press tne print button to record tne load. Cneck tnat a second operation of tne print button does not cause tne printer to operate. Witnout disturbing tne weigning mecnanism, remove tne 1½-graduation load and press tne print button; a new load value snould be printed after a delay of not less tnan 1½ seconds.

Tnis sequence snould be repeated at several loads up to tne instrument's capacity.

2. Test Loads

Tne application of tne test loads specified in Table 1 and tne display of tnese loads witnin tne applicable tolerance will cneck tnat tne instrument operates in accordance witn tne approved design.

* Tne basework design may be varied by reducing tne lever ratio of tne transfer lever, or by including an additional force breakdown or transfer lever to matcn tne pullrod force to tne load cell.

TABLE 1

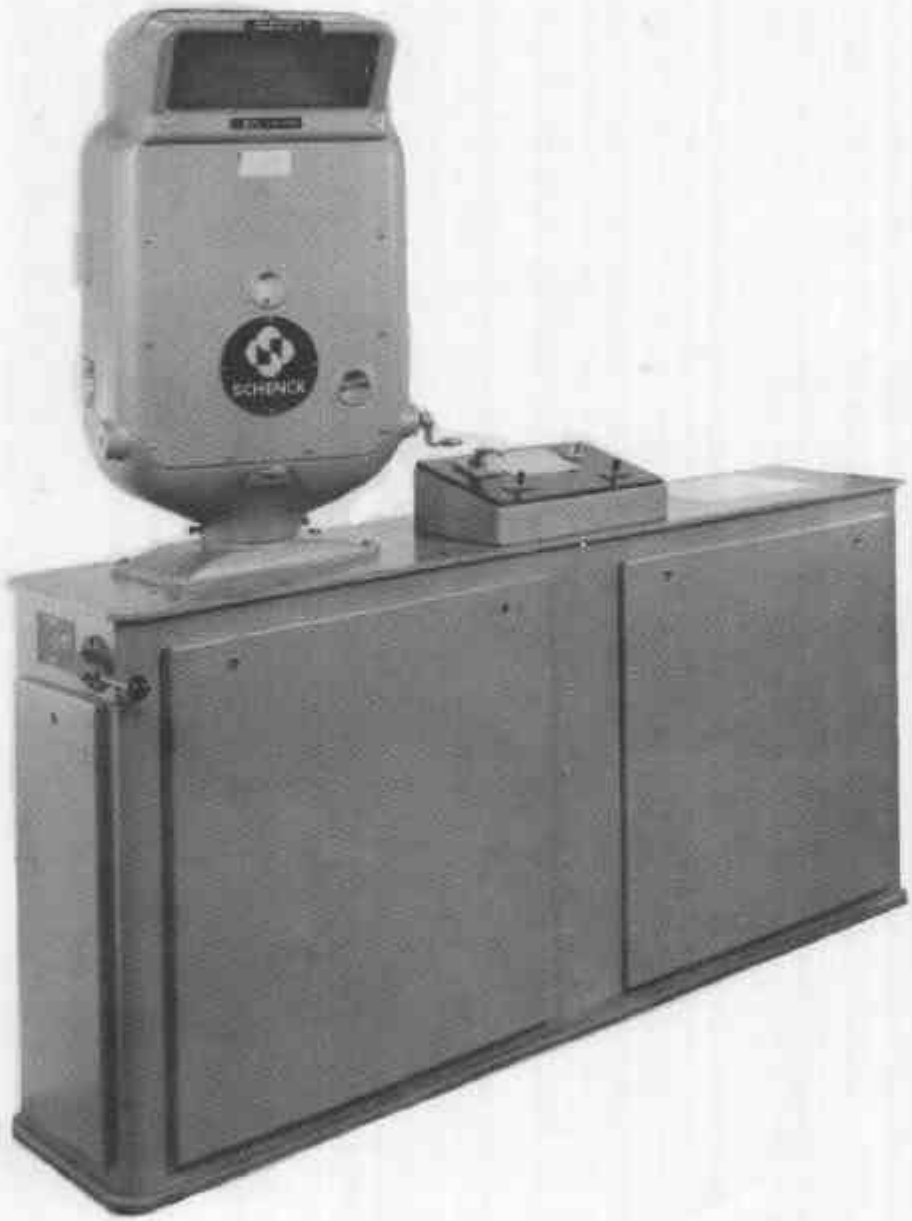
Test load in scale intervals*

0	10	25	60	120	250	698,5
1	12	30	70	140	300	798,5
2	14	35	80	160	350	898,5
3	16	40	90	180	400	998,5
4	18	45	100	200	450	1198,5
5	20	50			500	1398,5
6						1598,5
7						1798,5
8						1998,5
9						2498
						2997

* Test load = Number of scale intervals X scale interval

Note: The test load snould include a test at maximum capacity, less tne tolerance and less 0,5 scale interval.

FIGURE 6/10B/20 - 1



Schenck Model NS Combination Headwork

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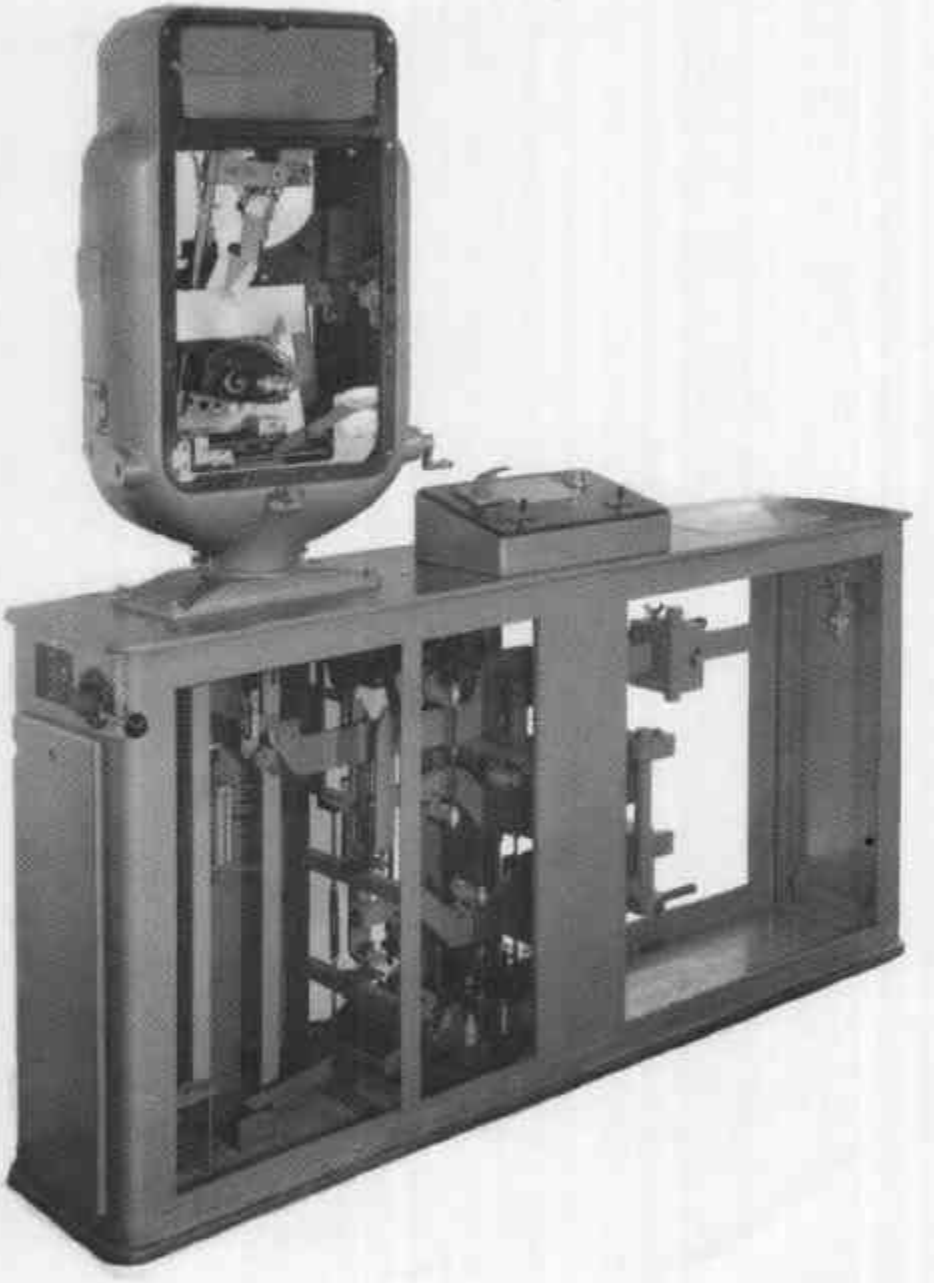
FIGURE 6/10B/20 - 2



Scnenck Model NS Combination Headwork

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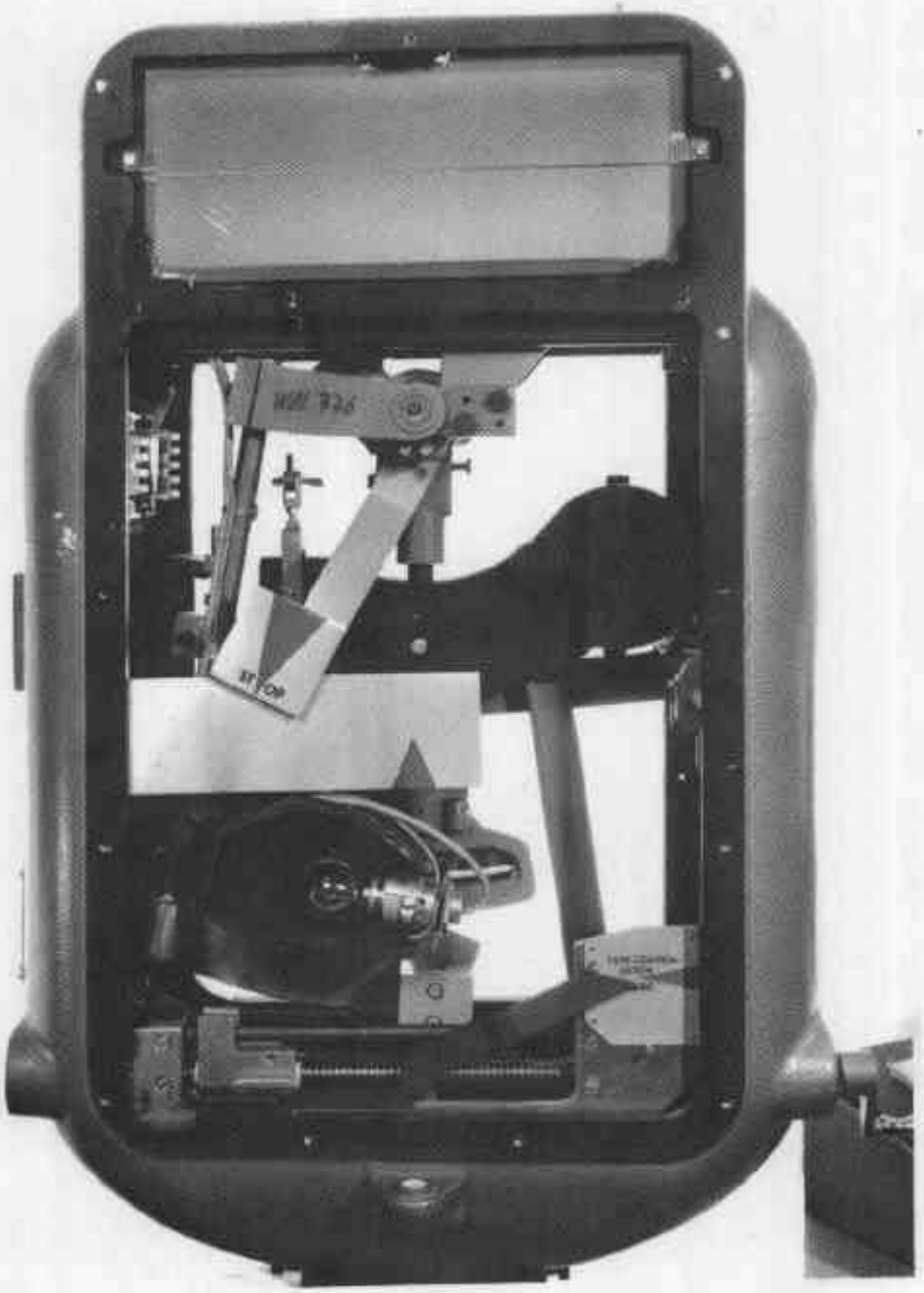
FIGURE 6/10B/20 - 3



Scnenck Model NS Resistant and Tare Mecnanism

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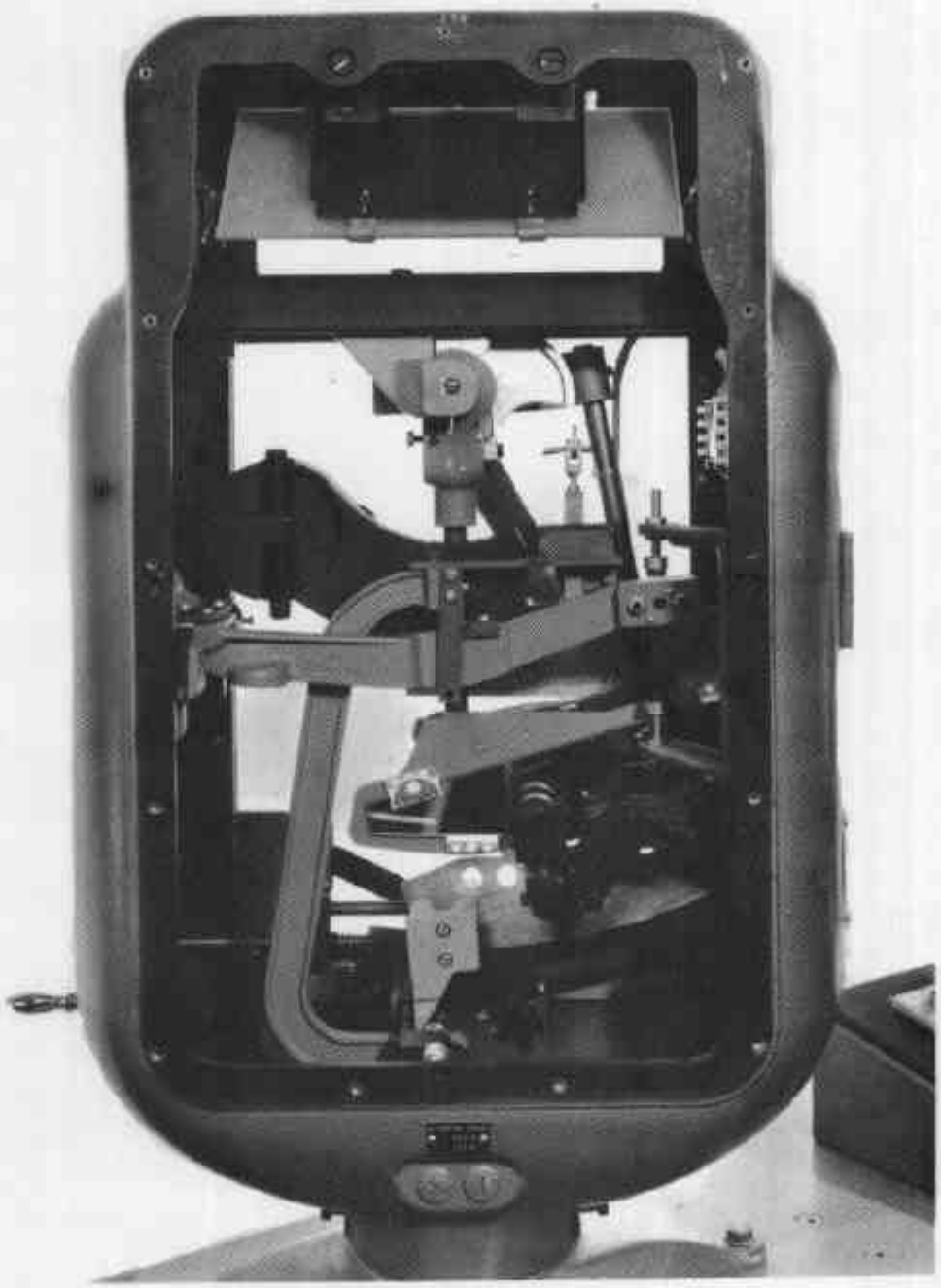
FIGURE 6/10B/20 - 4



Schenck Model NS Resistant Mechanism

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FIGURE 6/10B/20 - 5

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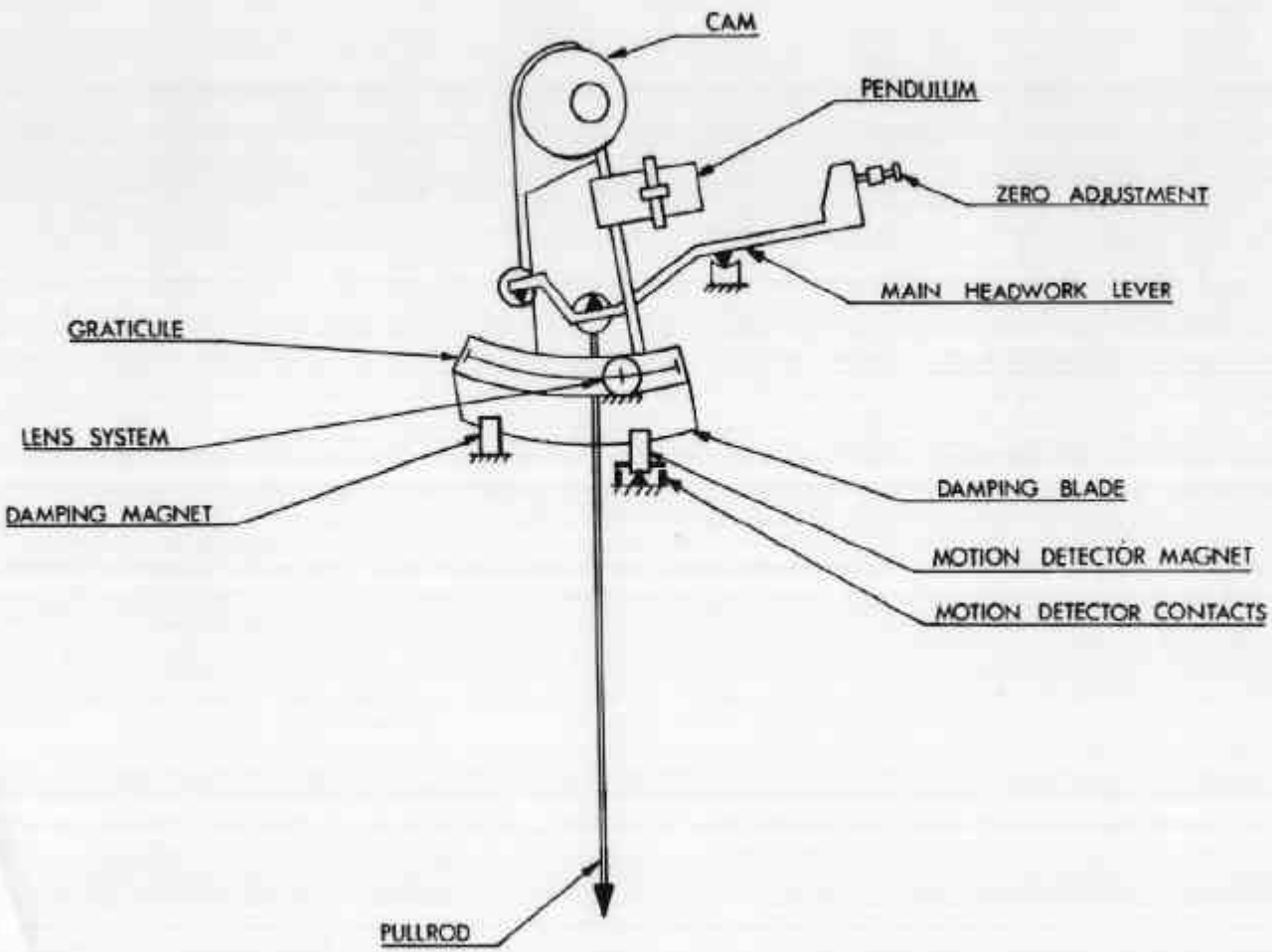

Schenck Model NS Resistant Mechanism — Schematic Diagram

FIGURE 6/10B/20 - 6

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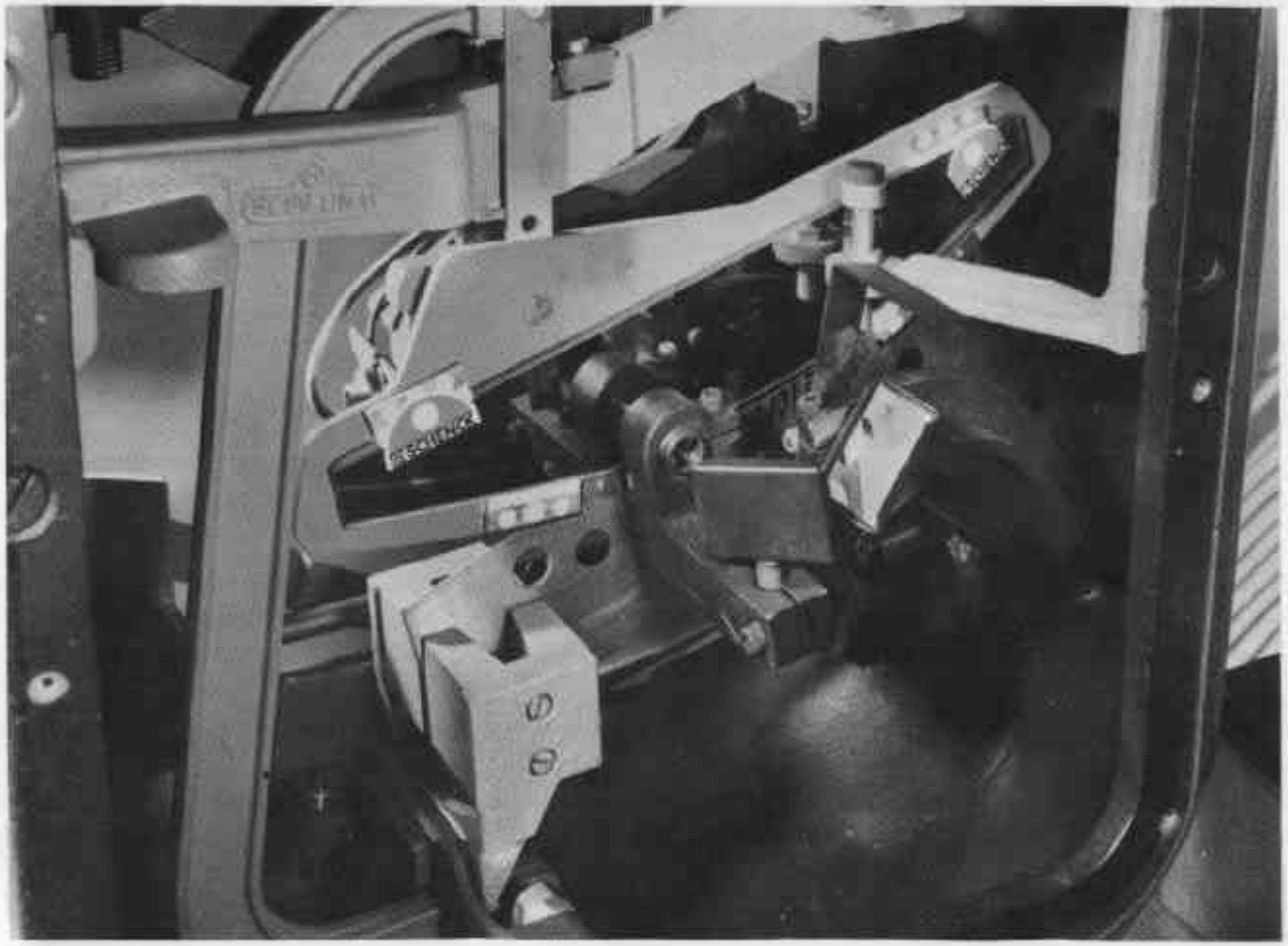
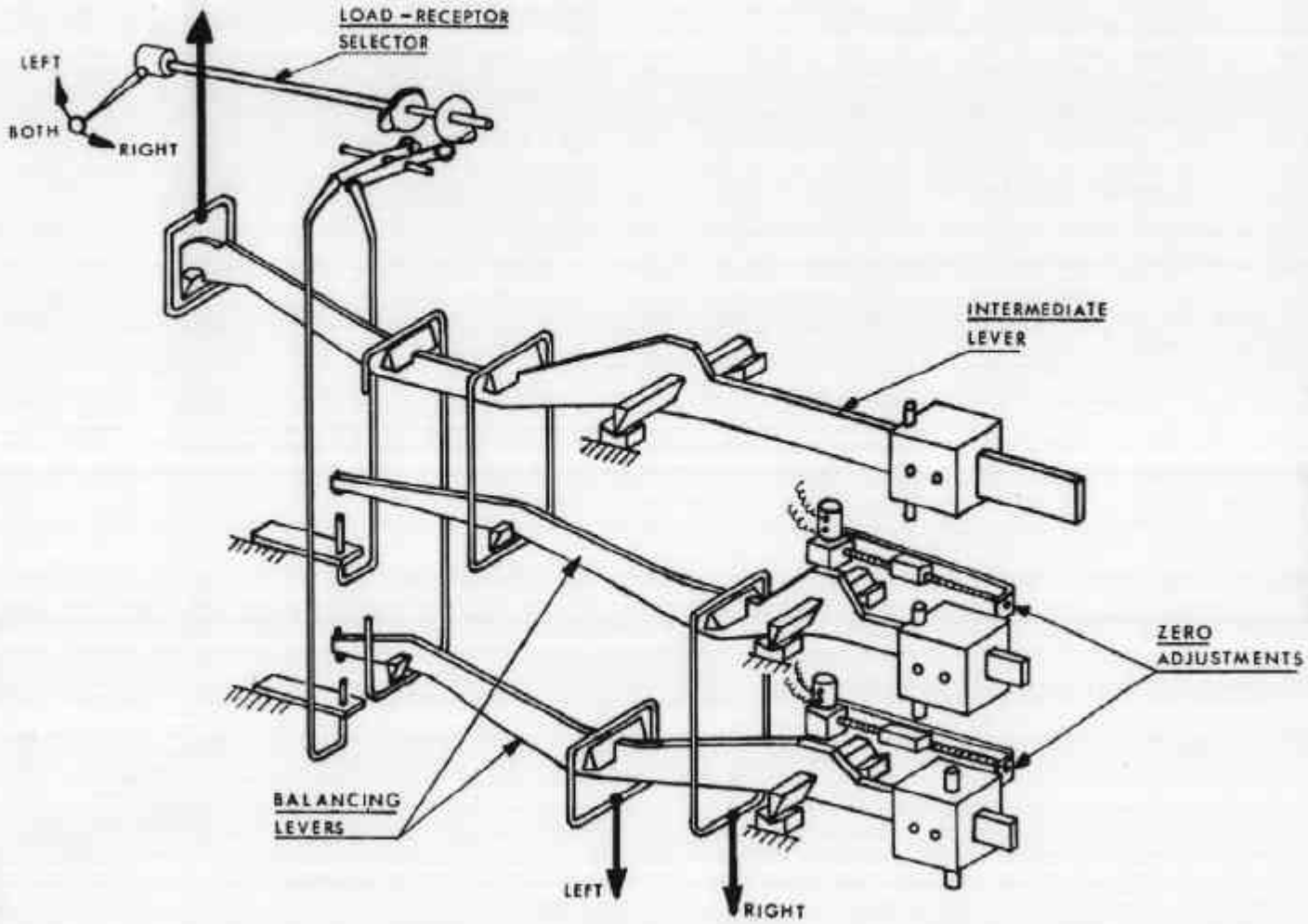


Schenck Model NS — Graticule and Damping Mechanism

FIGURE 6/10B/20 - 7



Scnenck NS Combination Unit — Schematic Diagram

FIGURE 6/10B/20 - 8

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ZEROING INSTRUCTIONS FOR
DUAL PLATFORM WEIGHBRIDGE

IF PLATFORM DIRTY FIRST CLEAN IT

WITH PLATFORM SELECTOR
LEVER IN POSITION -

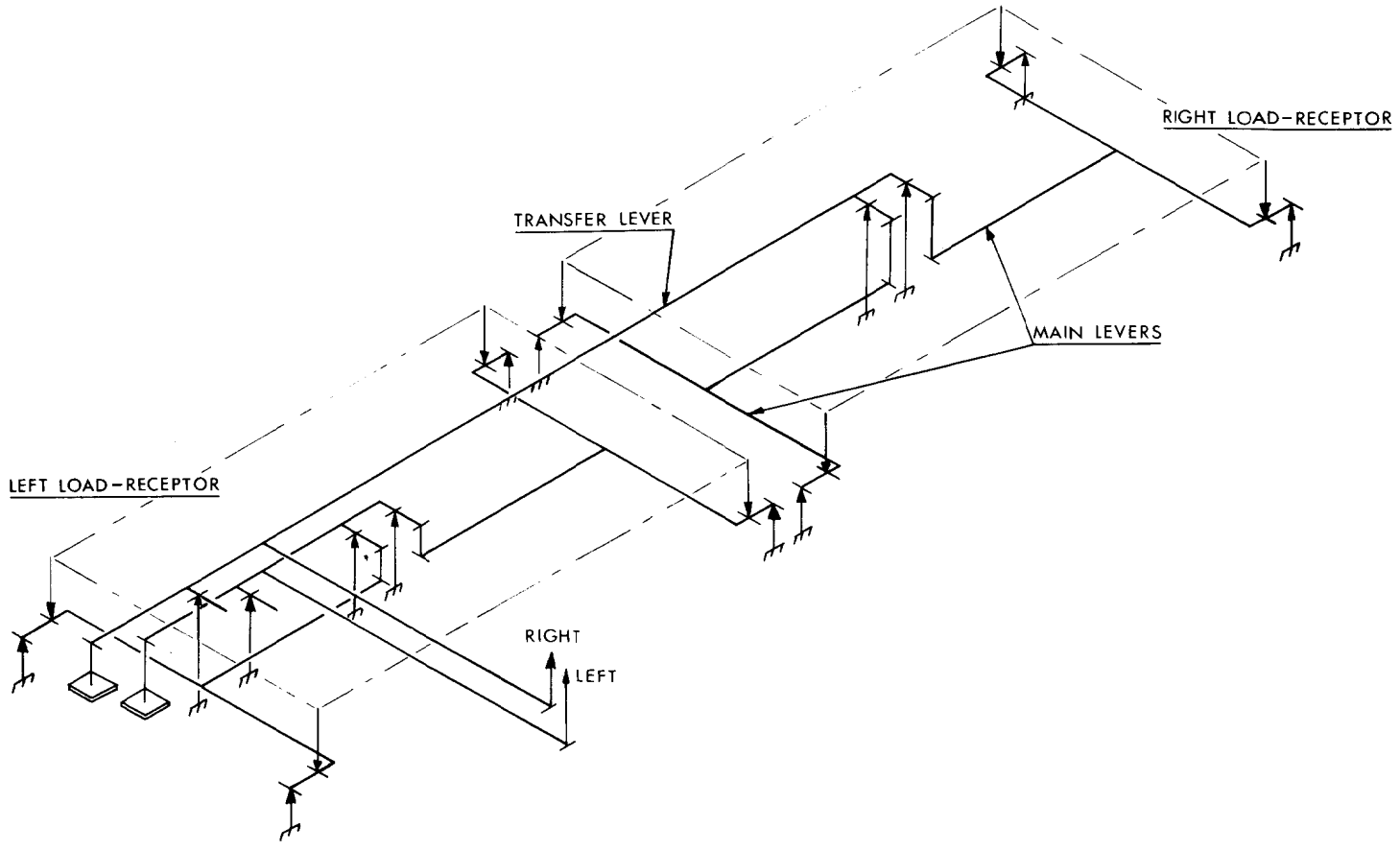
L - ADJUST SCALE TO ZERO WITH SWITCH 'L'

R - ADJUST SCALE TO ZERO WITH SWITCH 'R'

R + L - CHECK THAT SCALE READS ZERO IF NOT
SEE ENGINEER

Control Unit

FIGURE 6/10B/20 - 9



Basework Lever System — Schematic Diagram