CERTIFICATE OF APPROVAL No 6/10A/7

This is to certify that the pattern and variants of the

Hawke (Fairbanks Morse) Weighing Instrument

submitted by Hawke & Co. Pty Ltd,
South Terrace,
Kapunda, South Australia, 5373,

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

Date of Approval: 9 August 1974.

The pattern and variants are described in Technical Schedule No 6/10A/7, and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 1 July 1979.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/10A/7".

Signed

Executive Officer

9/8/74

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/10A/7

Pattern: Hawke (Fairbanks Morse) Weighing Instrument

Submittor: Hawke & Co. Pty Ltd,
South Terrace,
Kapunda, South Australia, 5373.

Date of Approval: 9 August 1974

All instruments conforming to this approval shall be marked "NSC No 6/10A/7".

Description:

The pattern is of a self-indicating weighbridge with Fairbanks Morse headwork and tubular lever basework.

The headwork (see Figures 1 and 2) comprises:

1. Headwork cabinet.

2. Double-pendulum resistant mechanism (see Figure 3). The pendulums are supported by tapes attached to a cam on each pendulum, and raised by other tapes attached to a second cam on each pendulum and to a yoke fitted to the headwork pullrod. The vertical movement of the pendulums rotates the dial indicator through a rack and pinion. The mechanism is suitable for dials with up to 1,75 graduations per degree (600 graduations).

3. Flash dial (see Figures 1 and 2) — operated through a lever system connected to the unit-weight mechanism in the headwork cabinet.

4. A lever intermediate (see Figure 2) between the main headwork lever and the resistant mechanism.

5. Main headwork lever (see Figures 2 and 4) — a zero-adjustment weight and dashpot are on one end and a balance weight is suspended from the other end.

6. Tare bar(s) (see Figures 1 and 2) — attached to the main headwork lever. The poises are fitted with clamping screws. The tare bars may be graduated or ungraduated.

7. Unit weights (see Figures 2 and 4) suspended from the main headwork lever by a manually operated mechanism.

8. Locking handle (see Figures 1 and 2) which raises the main lever against a stop.

9. Ticket printer (see Figure 5) — operated by stepped discs attached to the indicator shaft and the unit-weight mechanism, and a series of fingers. A keyboard which allows non-weight information to be printed on the ticket may be fitted. A sample ticket is illustrated in Figure 6.

10. Motion detector (see Figure 7) — A mechanical motion detector is attached to the end of the main lever which, in conjunction with a time delay, prevents the printer from operating until the weight indication is steady. The detector comprises a lever arm, centred by self-opposing springs which are attached to an adjustable dashpot at one end and moves between adjustable spaced contacts at the other. The printer is inactivated until the lever is free of either contact, and through the time delay for a further period of time.

    The motion detector may be adjusted so that it is sensitive enough to detect a small disturbance of the weighing mechanism, in which case only a short time delay is needed; however, if only large disturbances are detected, the time delay must be lengthened to allow the instrument time to return to the balance position before printing (refer Special Tests — Motion Detector). A light illuminates when a disturbance of the weighing mechanism is sufficiently large to be detected by the motion detector and thus prevent the printer from printing. The motion-detector light may be switched off when not in use for testing purposes.

    The motion-detector sensitivity adjustments, that is, the contact spacing and the dashpot adjustment and the time-delay adjustment, are sealed (see Figures 8 and 9).

The basework is a tubular lever basework of capacity up to 200 tonnes as described in Certificate No 6/10A/4.

The approval includes the following:

1. Capacities up to 200 tonnes.

2. The headwork without unit weights and without a flash dial (see Figure 10). In this case the balance weight is attached to the main lever and the dashpot is connected near the middle of the lever.

3. The headwork with automatically operated unit weights (see Figure 11).

4. The headwork without a ticket printer.

5. The headwork without tare bar(s).

6. The other baseworks described in Certificate No 6/10A/4 replacing the tubular lever basework.

Special Tests — Motion Detector:

1. Determine the smallest load which when removed from the platform causes the motion-detector light to come on; that is, determine the threshold sensitivity of the motion detector. If this is one graduation or less only carry out test 4; if greater than one graduation do tests 2 and 3.

2. Remove the load determined in 1 and at the same time press the print button; the motion-detector light will come on and the printer should print the value of the load remaining on the platform.

3. Decrease the value of the load removed by the equivalent of one graduation. Repeat test 2. The motion-detector light should not come on and the printer should print the value of the load remaining on the platform. If the light does come on, recheck the threshold sensitivity of the motion detector.

   The time delay is correctly adjusted in relation to the motion-detector threshold sensitivity if the correct weights are printed and the light operates as specified.

4. When the threshold sensitivity determined in 1 is one graduation or less, remove a load equal to 1,5 graduations from the platform

and at the same time press the print button. In this case the time delay is correctly adjusted in relation to the motion-detector threshold sensitivity if the light comes on and the printer prints the value of the load remaining on the platform.

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6/10A/7
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NATIONAL STANDARDS COMMISSION

CANCELLATION CERTIFICATE OF APPROVAL No 6/10A/7

This is to certify that Approval No 6/10A/7 for the

Hawke (Fairbanks Morse) Weighing Instrument

submitted by Hawke & Co Pty Ltd
South Terrace
Kapunda SA 5373

and Ultra Scales Pty Ltd
33-35 Judge Street
Sunshine VIC 3020

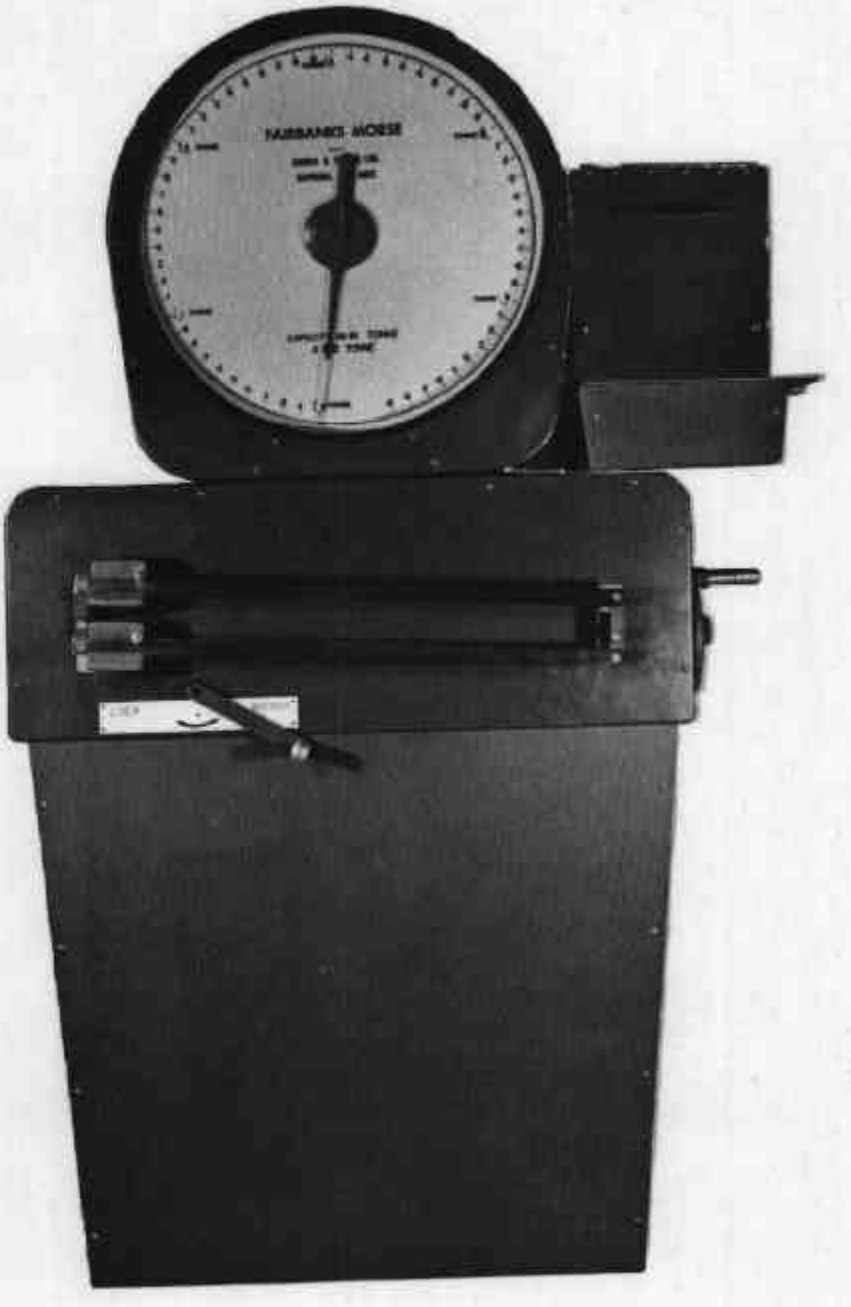
expired in respect of new instruments on 1 May 1985.

Instruments which were verified before that date may, with the concurrence of the State or Territorial verifying authorities, be submitted for reverification.

Signed

Executive Director

FIGURE 6/10A/7 - 1



Hawke (Fairbanks Morse) Headwork

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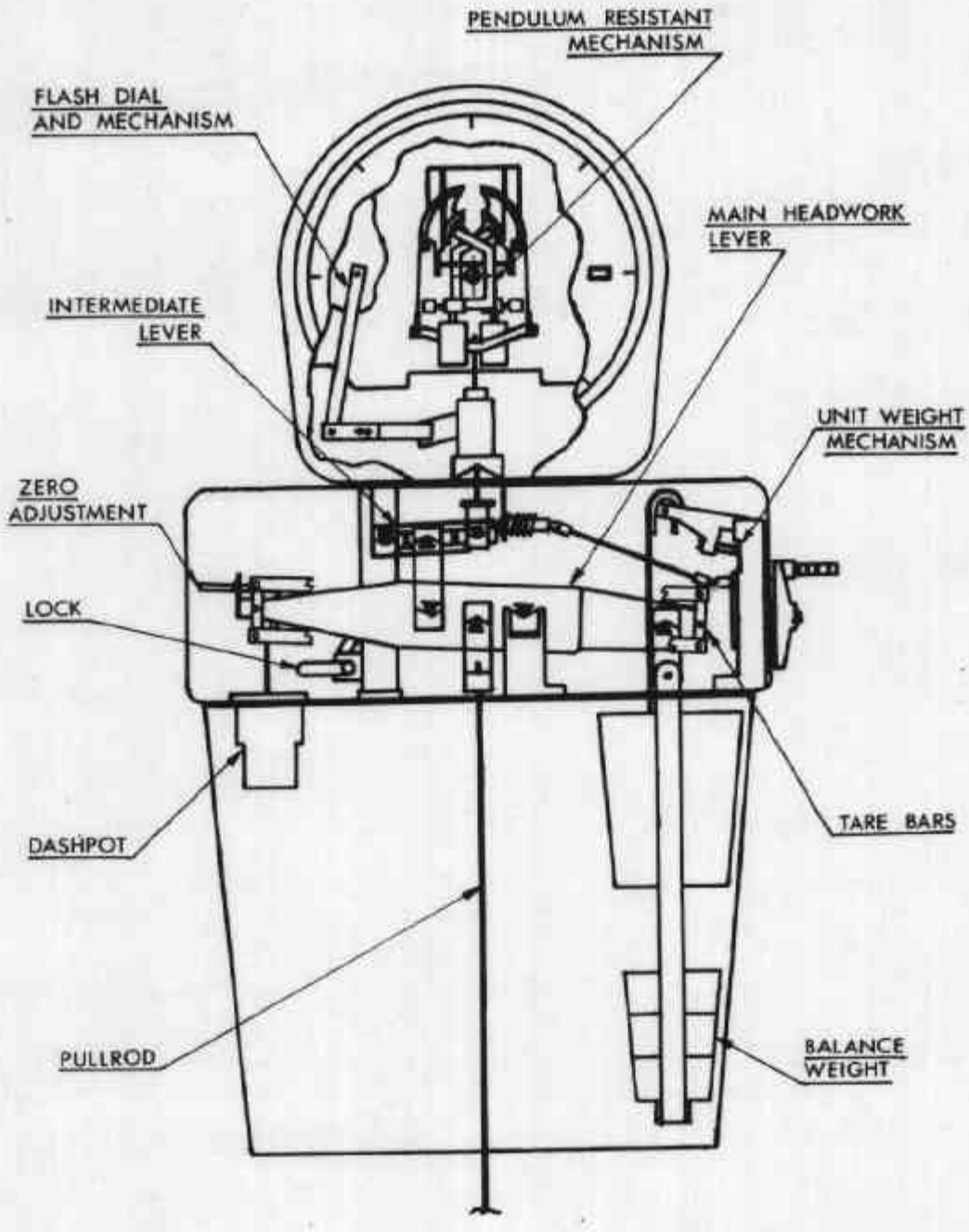
FIGURE 6/10A/7 - 2



Hawke (Fairbanks Morse) Headwork — Schematic Diagram

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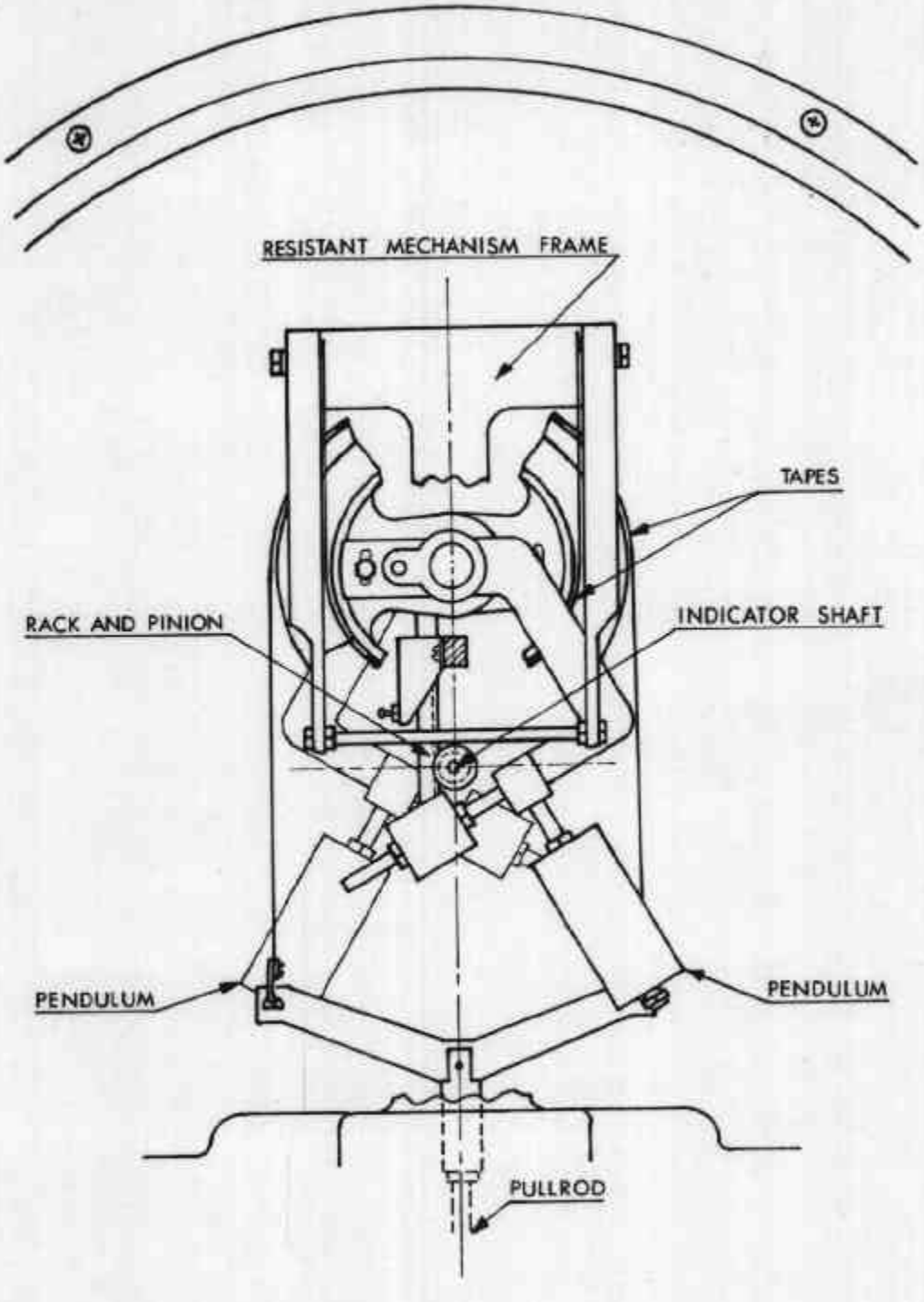
FIGURE 6/10A/7 - 3



Resistant Mechanism

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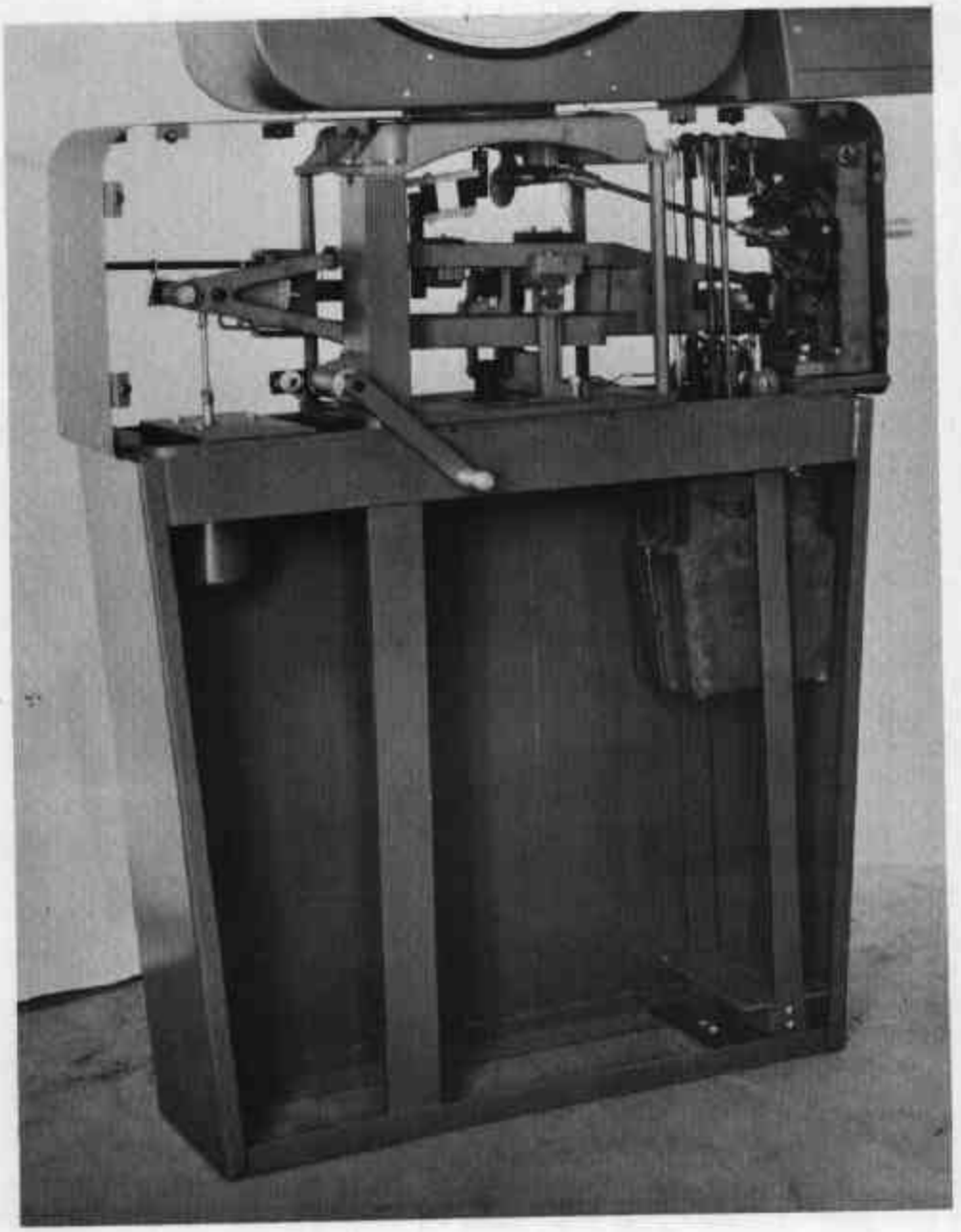
FIGURE 6/10A/7 - 4



Lower Headwork with Manual Unit-weight Mechanism
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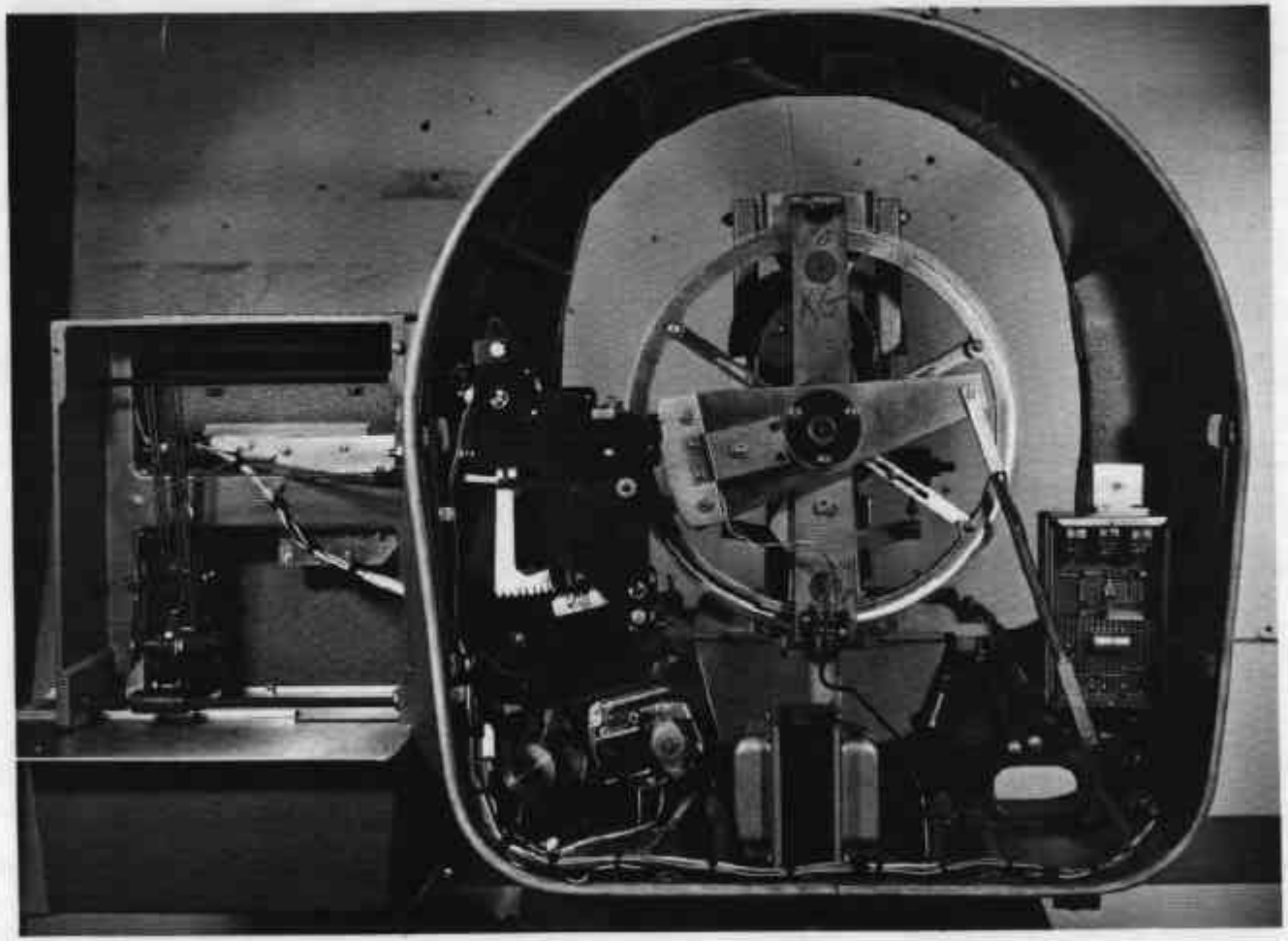
FIGURE 6/10A/7 - 5



Ticket-printer Mechanism

FIGURE 6/10A/7 - 6

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WEIGHED BY FAIRBANKS MORSE

DATE _____

CUSTOMERS NAME _____

ADDRESS _____

COMMODITY _____

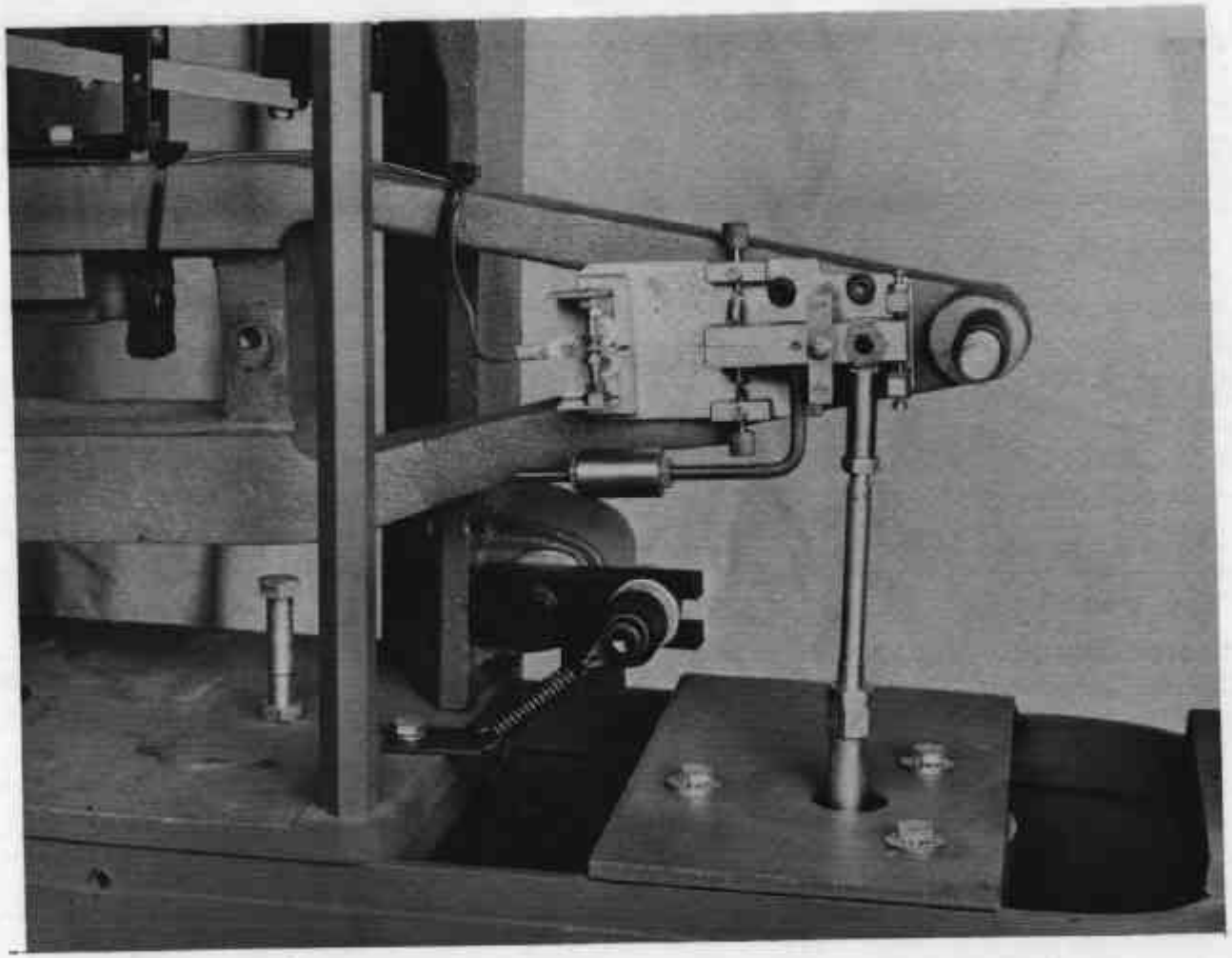
CARRIER _____

423361	148	1974 DEC 22 PM 8:42	30·87	TONNES GROSS
423232	148	1974 DEC 22 PM 7:42	7·05	TONNES TARE
				TONNES NETT

FAIRBANKS MORSE CAT. 083905

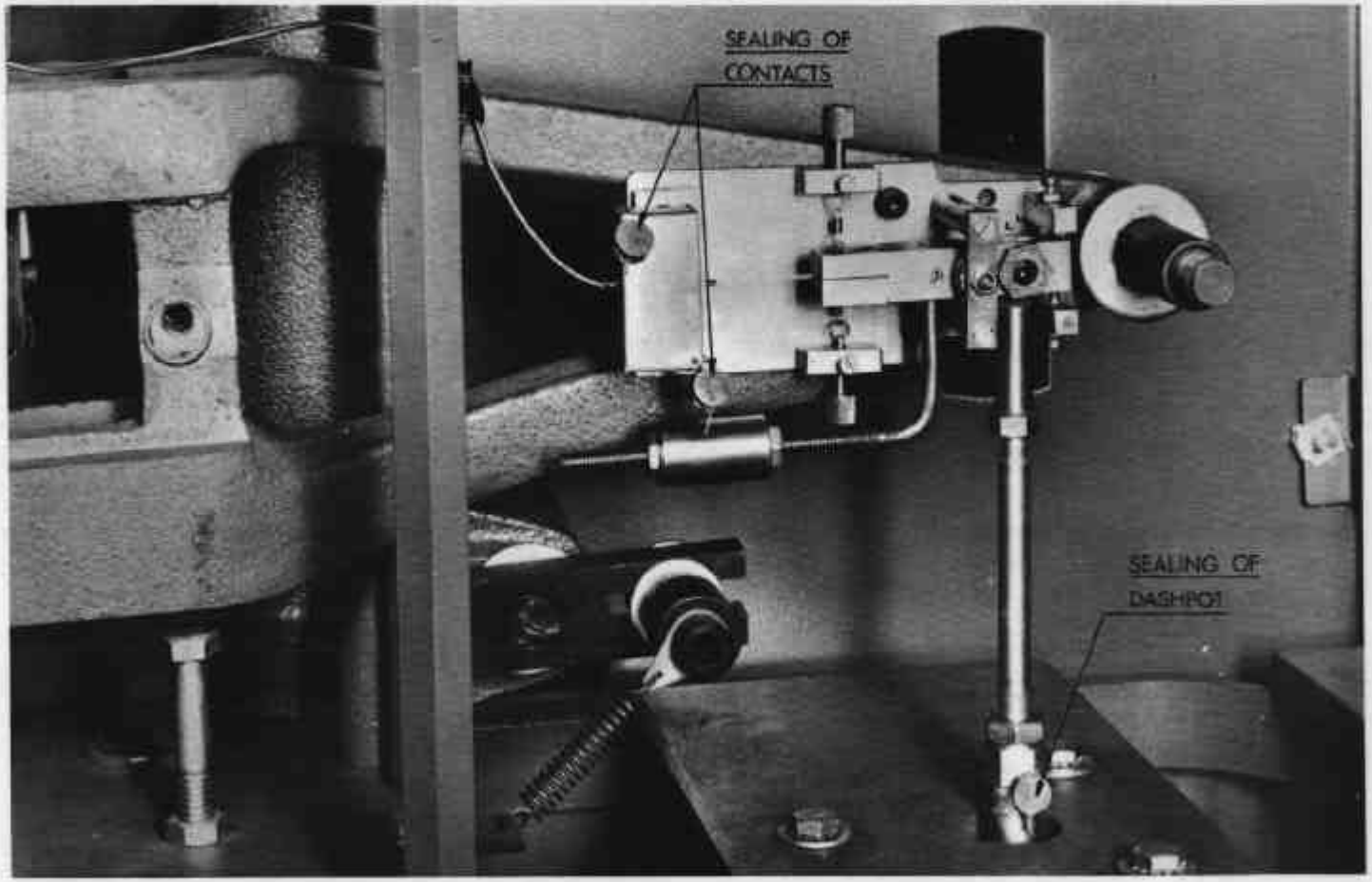
Sample Ticket

FIGURE 6/10A/7 - 7



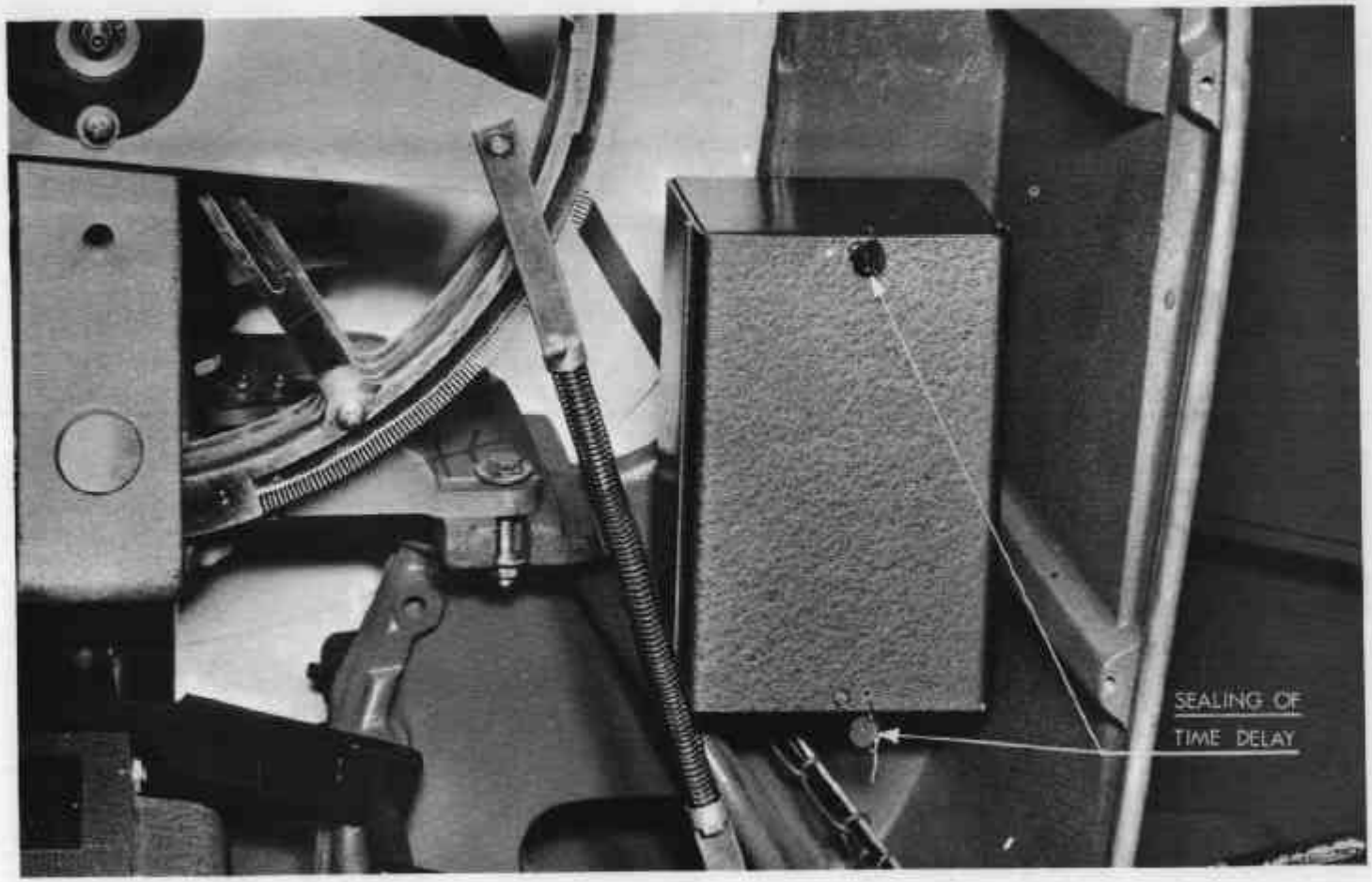
Motion Detector

FIGURE 6/10A/7 - 8



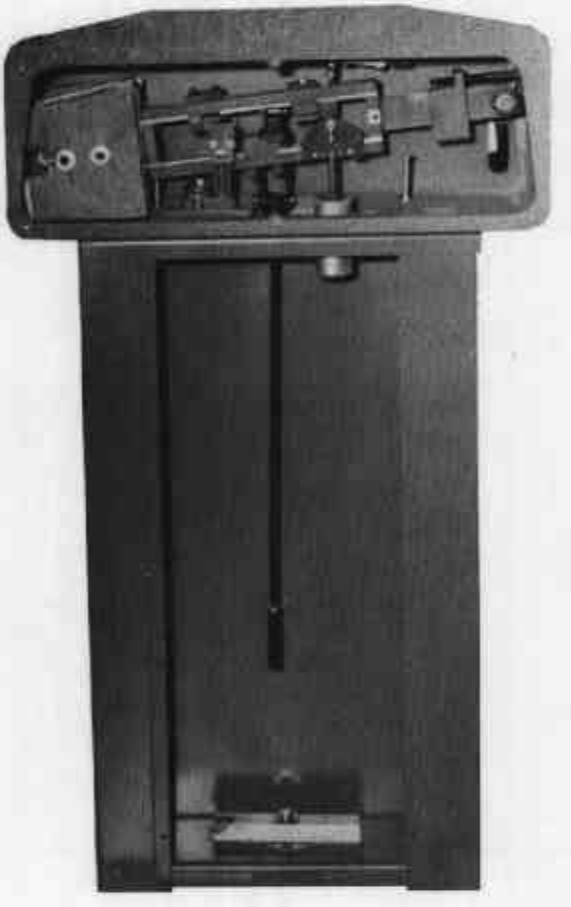
Sealing of Motion-detector Contacts and Dashpot Adjustment

FIGURE 6/10A/7 - 9



Sealing of Time-delay Adjustments

FIGURE 6/10A/7 - 10



Lower Headwork without Unit Weights

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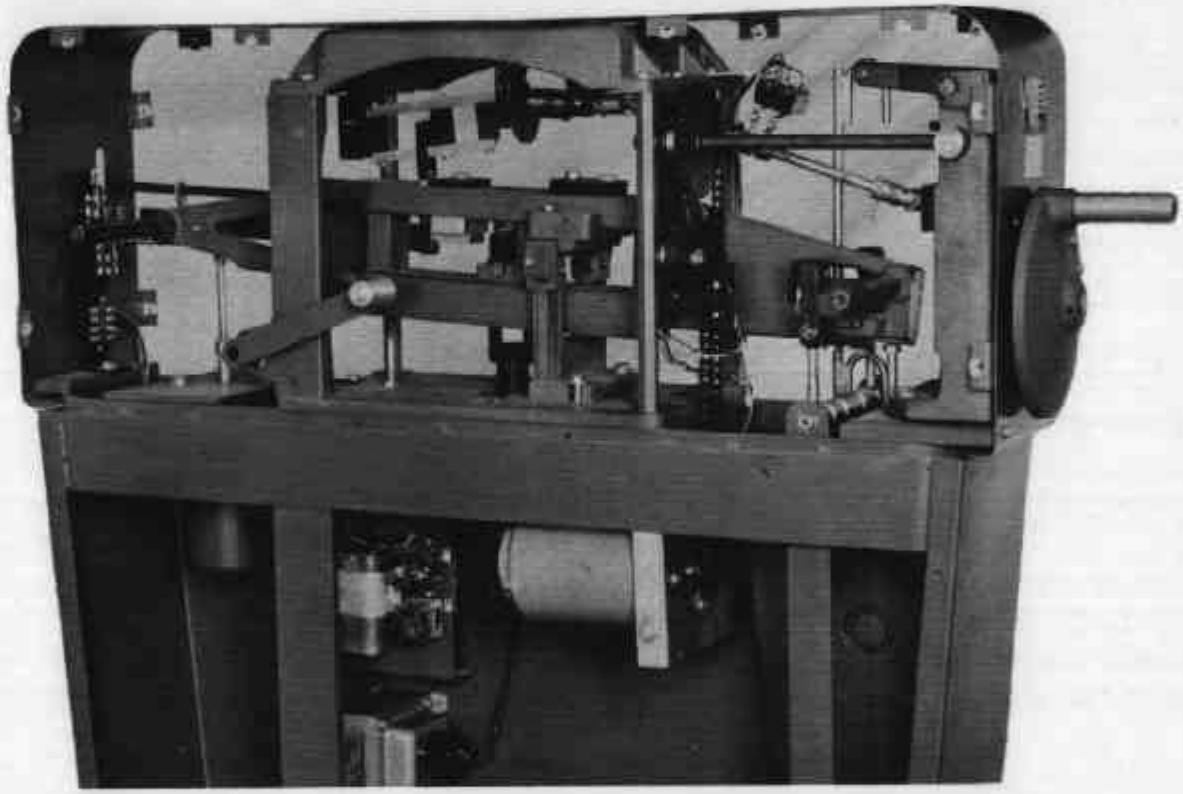
FIGURE 6/10A/7 - 11



Lower Headwork with Automatic Unit-weight Mechanism

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