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Our ref:

CERTIFICATE OF APPROVAL No 6/4D/56 CANCELLED

This is to certify that the pattern of the

Delford WL1-3M1 Weighing Instrument

submitted by Baker Perkins Pty Ltd,
4 Atchison Street,
Crow's Nest, New South Wales, 2065,

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

Date of Approval: 15 August 1975

The pattern is described in Technical Schedule No 6/4D/56, and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 1 September 1980.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/4D/56".

Signed

Executive Officer

Bill 8

2/9/75

CANCELLED

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/56

Pattern: Delford WL1-3M1 Weighing Instrument

Submittor: Baker Perkins Pty Ltd,
4 Atchison Street,
Crow's Nest, New South Wales, 2065.

Date of Approval: 15 August 1975

Condition of Approval:

All instruments conforming to this approval shall be marked "NSC No 6/4D/56".

Description:

The pattern is an automatic weighing and price-computing instrument which digitally indicates and prints weight to 998 g by 2-g increments, unit price to $39,99 by 1-c increments, and total price to $39,91 (see Figures 1 to 3).

It comprises a conveyor (see Figure 4) which carries packages to the load receptor (see Figure 5), where they are momentarily lowered on to a load-cell resistant mechanism (see Figure 6), then lifted and carried away.

An automatic compensating mechanism memorises the weight of the load receptor immediately before each package is weighed. This weight is then subtracted from the total weight when the package is on the load receptor, to give a true package weight. The weight signal is then converted to binary form and multiplied by the unit price entered by four rotary switches (see Figure 3) to provide a total pack price. This information is digitally indicated and transferred to the two print heads of the ticket printer.

The first print head marks the selected unit price on the ticket and the second print head (12 labels later) marks the weight and total price on the ticket. The ticket is then heat-sealed on to the package. A sample

ticket is illustrated in Figure 7.

After a change in unit price an interlock mechanism ensures that the next 12 tickets, which have already been marked with the previous unit price and which are between the first and second print heads, are not attached to a packet. Packets should not be passed through the instrument during this period as they will not be labelled and will be passed to the reject chute (see Figure 8).

Zero is indicated within ± $\frac{1}{4}$ graduation by three coloured lights marked +, 0, and -, which are activated when the test button is pressed; the green light marked "0" indicates zero and the two red lights indicate + 0,25 graduation and - 0,25 graduation (see Figure 3).

An additive ungraduated tare of up to 25 g may be selected by a tare control on the weight-indicating unit. To set the tare, the conveyor is stopped by switching the "test weigh" switch on the auxiliary unit to on (see Figure 9). The container to be tared is then placed on the load receptor and with the "test button" held pressed the tare control is adjusted until the weight indicator is zero and the green light on the zero indicator is illuminated.

The correct setting of the tare is checked with the instrument in its operating condition. With the test button held pressed the instrument should indicate zero and the green light should illuminate when the tared container is automatically weighed by placing it on the conveyor.

Voltage to the drive motor and the instrument's power supplies is provided from a constant-voltage transformer which maintains the voltage supplied to the instrument at 240 V ± 5 V.

The instrument may operate at a nominated fixed speed in the range 40 to 100 packages per minute. The number of packages per minute for which the instrument is verified is marked on a plate attached to the instrument by a lead-and-wire seal.

A "programme-reject unit" which controls a sorting mechanism may be fitted (see Figure 3); this unit does not affect the accuracy of the instrument.

The instrument is marked adjacent to the weight indicator:

(III)

Max = 998 g
Min = 48 g
d_d = 2 g
T = + 25 g

The instrument is not approved for use in the presence of the purchaser.

Special Test Equipment:

The following special equipment is needed for testing this instrument:

1. Nine test packages of the weight specified in Table 1, Column 1, ± 0,1 g.

2. An unevenly loaded package of 996 g ± 0,1 g with its base approximately 150 x 150 mm; the package to have 2/3 of its weight over one-half of the base area and 1/3 of its weight over the other half of the base area, for example, a wedge-shaped package.

3. A tray which spans the load receptor and which is, say, 24 g.

Special Tests:

1. Zero-indication Lights — The illumination of the two red zero-indication lights when the load at zero is varied by ± 0,25 graduation will indicate that the zero-indication circuits are functioning correctly.

   A method of checking their correct operation is to stop the conveyor by switching to the "test weigh" function, placing the test tray and a small weight, say, 1 g, on the load receptor and taring it off so that the green light illuminates when the test button is pressed. The + red light should illuminate when 0,5 g is added to the test tray and the - red light should illuminate when 0,5 g is removed from the test tray.

   With the instrument in its normal operating condition (conveyor

moving), check that the green zero-indication light illuminates when the tray and the small weight is weighed and that the red lights operate when the tray weight is increased and then decreased by 0,5 g.

2. Tare — The weighing of the 996-g test package, together with the tared-off 24-g tray and the display of the load within the applicable tolerance (± 0,5 graduation) in accordance with the Commission's digital testing procedures, checks that the tare function operates in accordance with the approved design.

   The tray is tared-off as specified above and the tray and 996-g package weighed as a single item.

   This test may be done in conjunction with the zero-indication lights test.

3. Load Test — The weighing of the nine test packages specified in Table 1, and the display and printing of these loads within the applicable tolerance (± 0,5 graduation) in accordance with the Commission's digital testing procedures, checks that the weigh functions operate in accordance with the approved design.

4. Price-computing and Weight Circuits — The indication and printing of weight, unit price and total price as listed in Table 1 will indicate that the price-computing, weight circuits, and ticket printer are functioning correctly. The exact figures should be indicated as rounding is effected within the computer. This test may be done in conjunction with the load test.

5. Off-centre Load Test — The weighing of the 996-g unevenly loaded package, base down and orientated so that the heavy end is located twice in succession on each of the four sides of the load receptor, and the display of this load within the applicable tolerance (± 0,5 graduation) in accordance with the Commission's digital testing procedures, checks that the weighing mechanism when unevenly loaded operates in accordance with the approved design.

TABLE 1

Indicated and Printed Weight g	Price/kg $	Total Price $
110	0,10	0,01
110	0,21	0,02
222	0,32	0,07
222	1,43	0,32
330	2,54	0,84
330	3,66	1,21
444	4,75	2,11
444	5,87	2,61
550	6,96	3,83
550	7,98	4,39
666	8,03	5,35
666	19,09	12,71
770	22,70	17,48
770	33,77	26,00
888	35,99	31,96
888	37,80	33,57
996	38,90	38,74
996	39,99	39,83

Test Specification — 998 g by 2-g Instrument

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/4D/56

CHANGE No 1

The approval of the

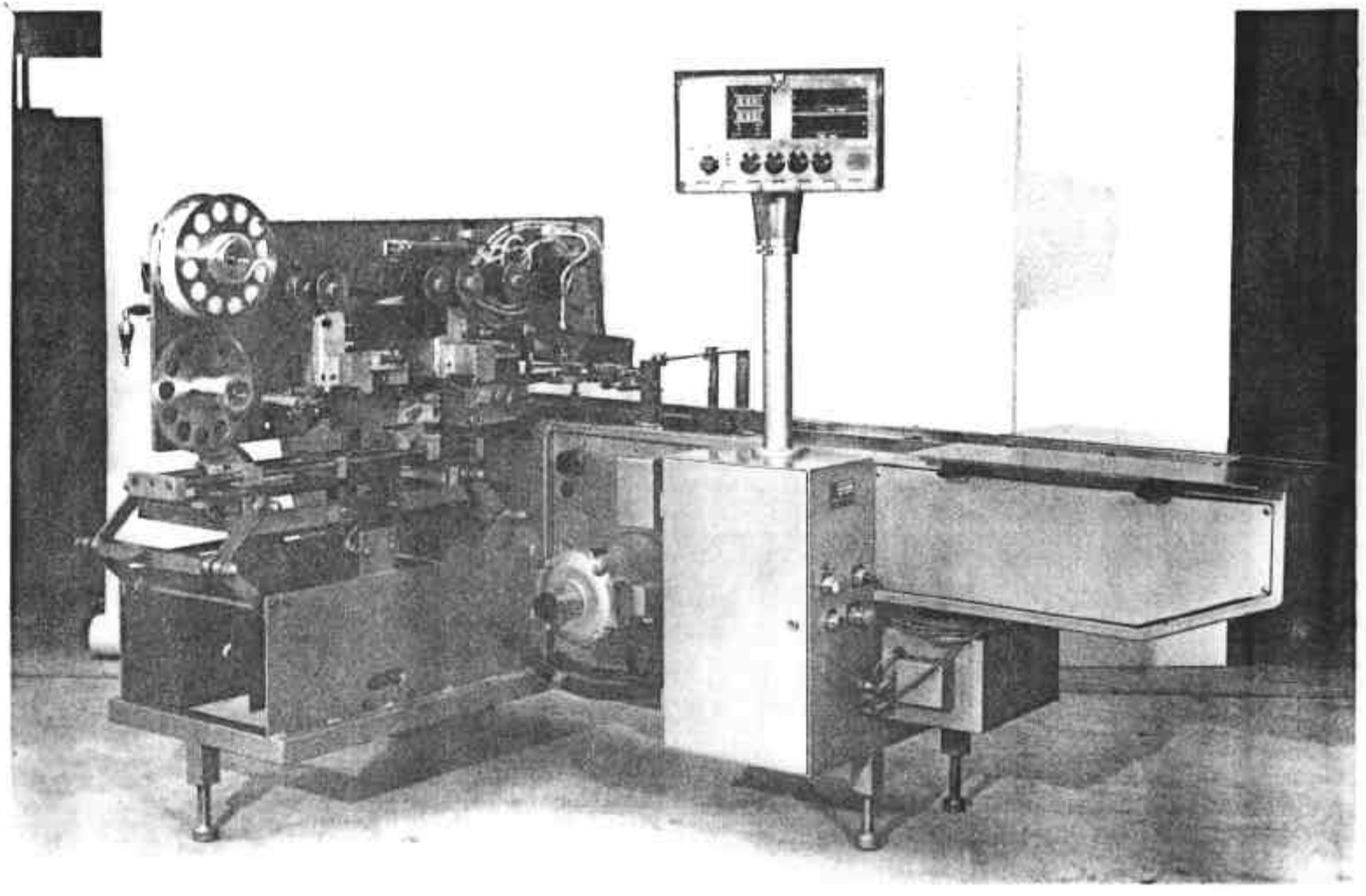
Delford Weighing Instrument Model WL1-3M1

given in Certificate No 6/4D/56 dated 2 September 1975 and described in Technical Schedule No 6/4D/56 dated 2 September 1975 is amended by changing the name of the submittor to -

Portals Engineering of Australia Pty Ltd,
Wattle Road and Short Street,
Brookvale, New South Wales, 2100.

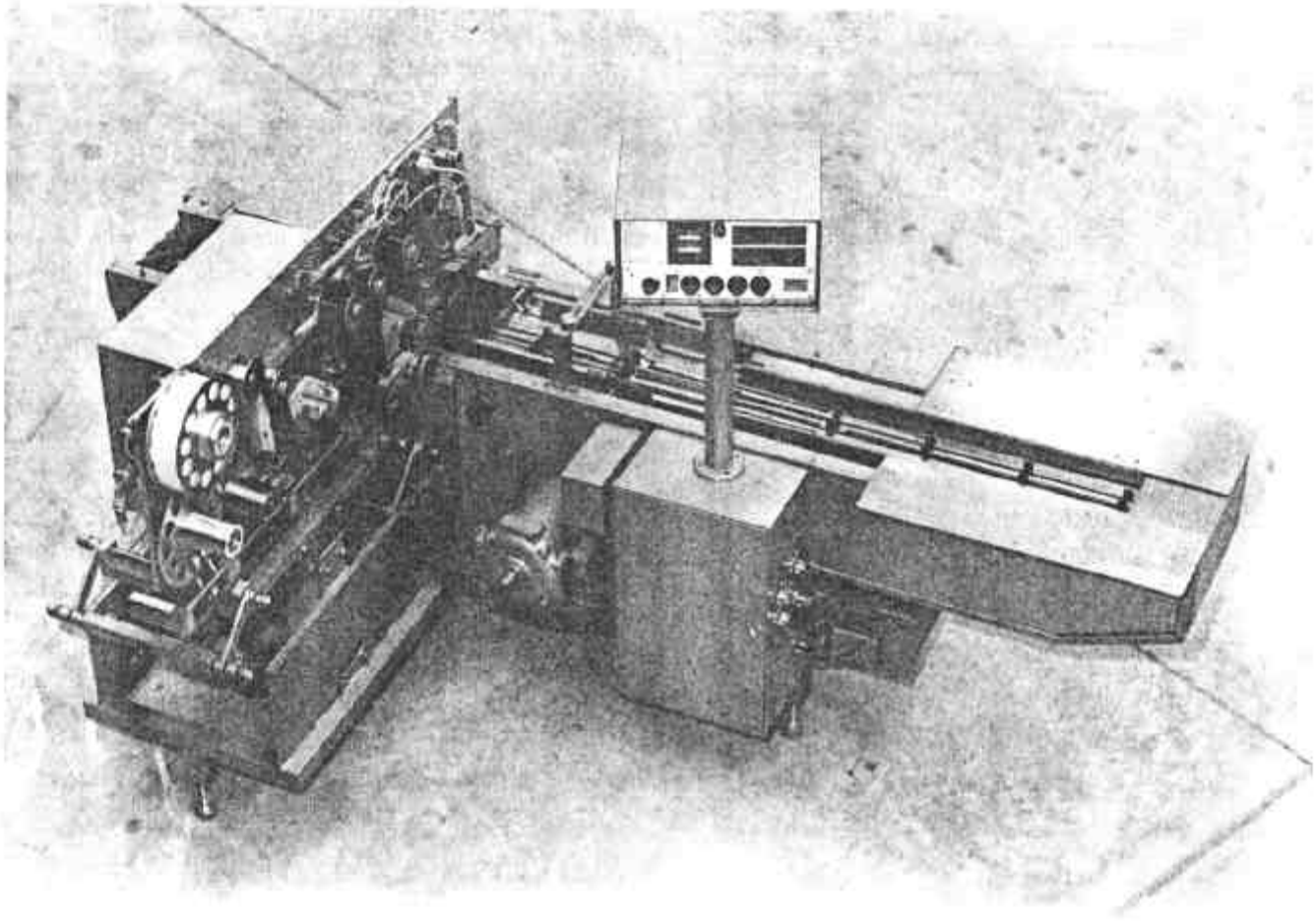
10/3/78

FIGURE 6/4D/56 - 1



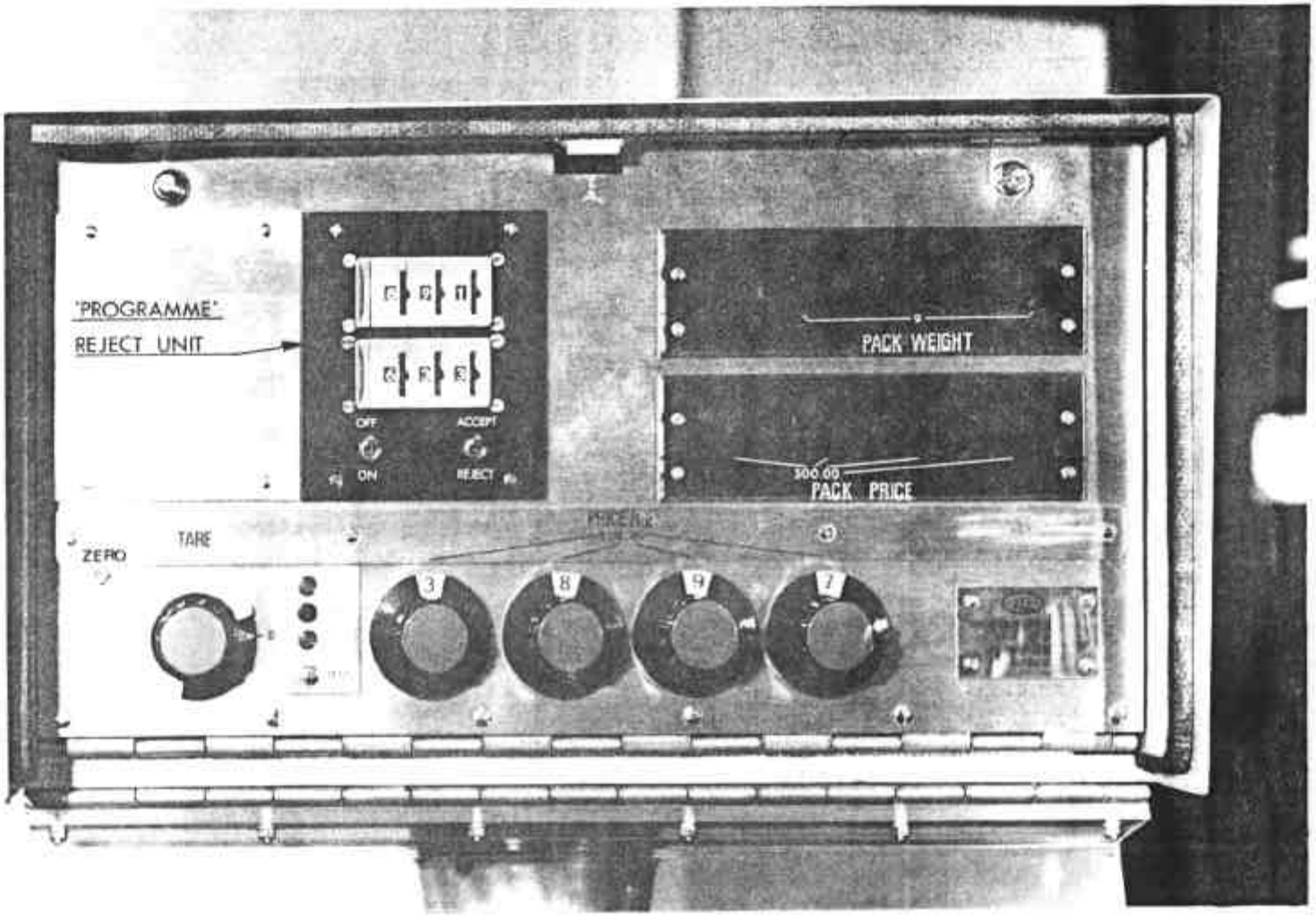
Delford WL1-3M1 Weighing Instrument

FIGURE 6/4D/56 - 2



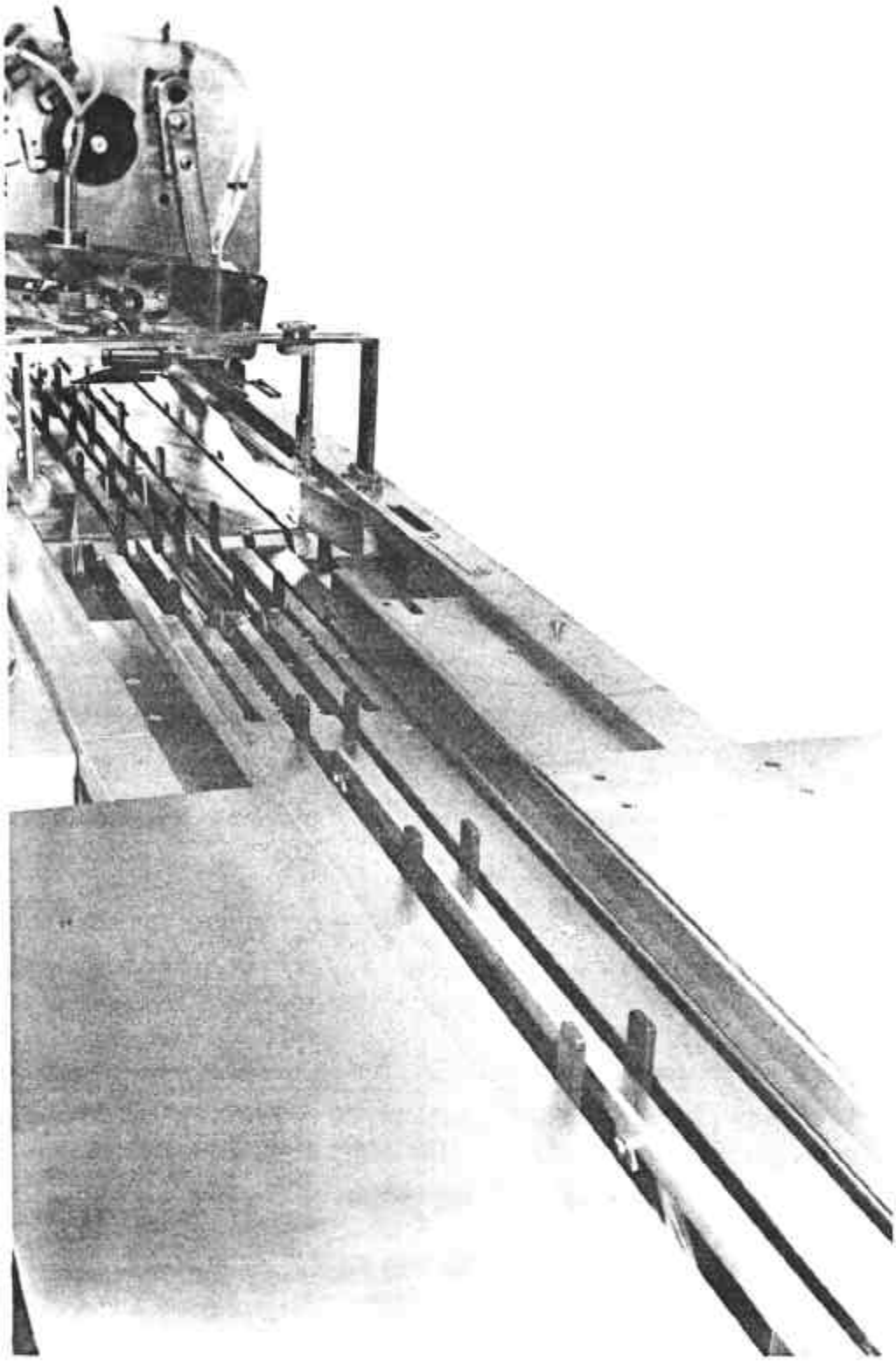
Delford WL1-3M1 Weighing Instrument

FIGURE 6/4D/56 - 3



Weight and Price Indicator

FIGURE 6/4D/56 - 4



Conveyor Mechanism

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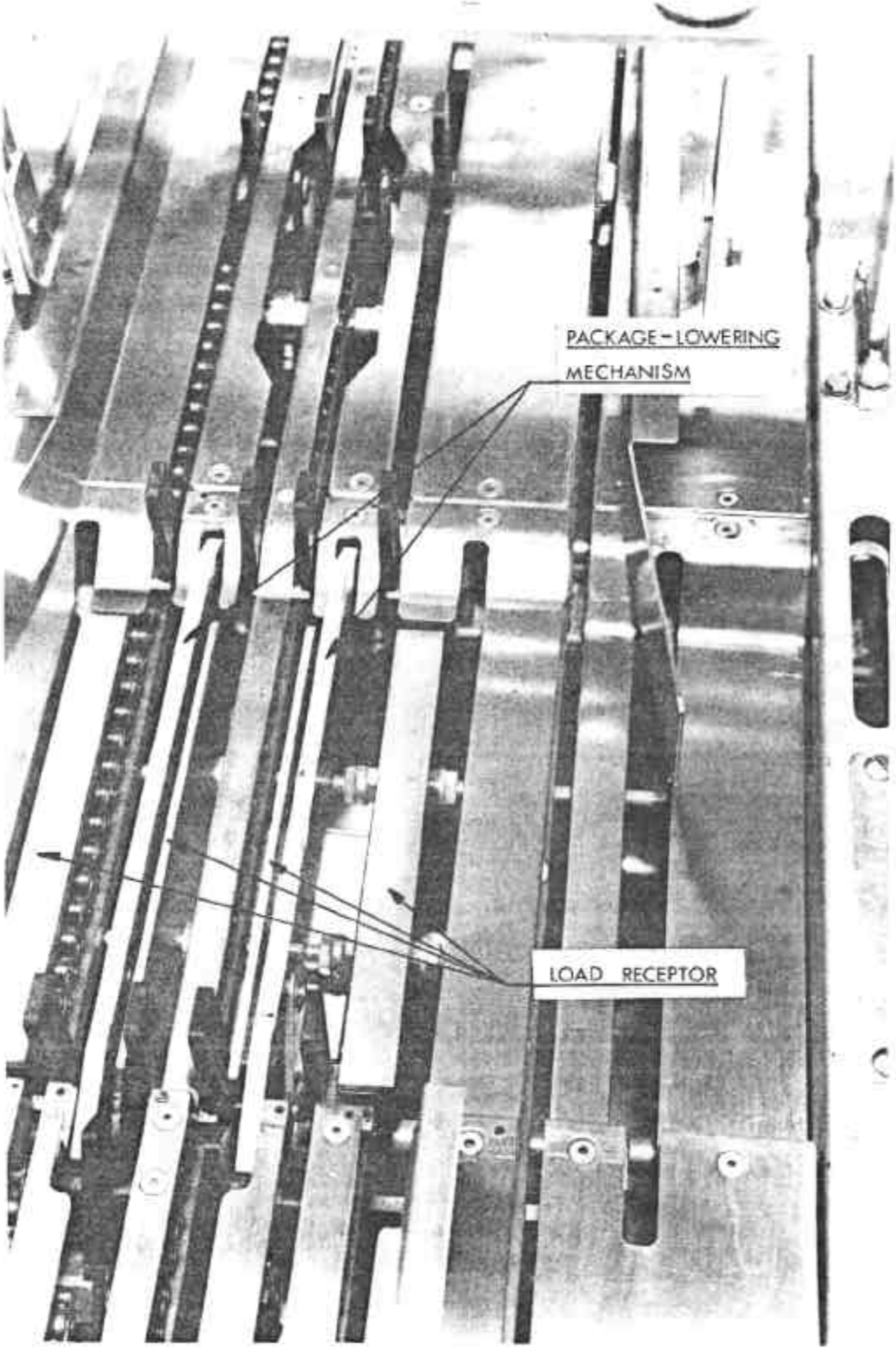
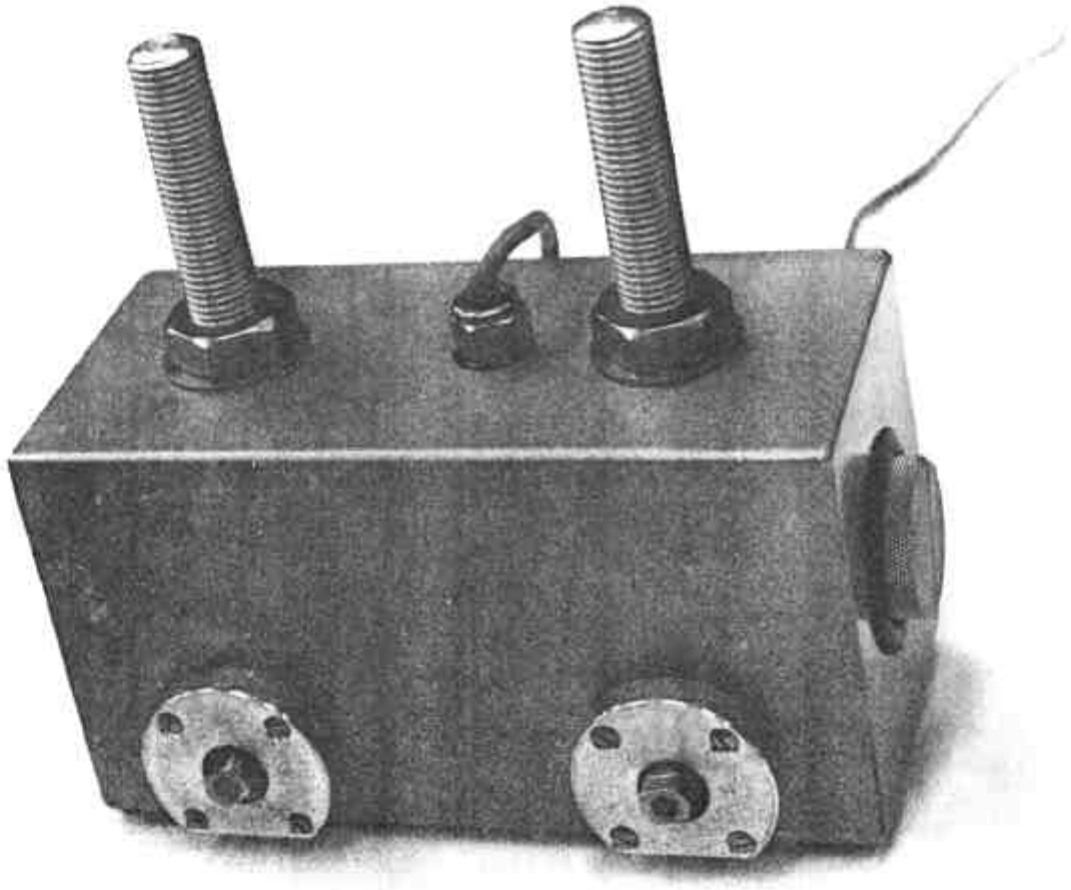
FIGURE 6/4D/56 - 5

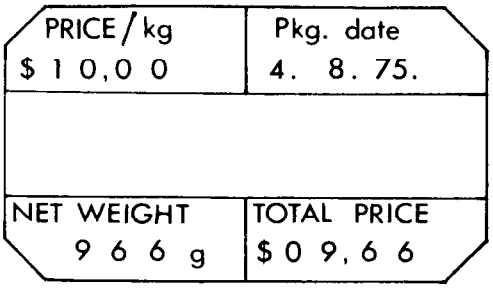


Load Receptor

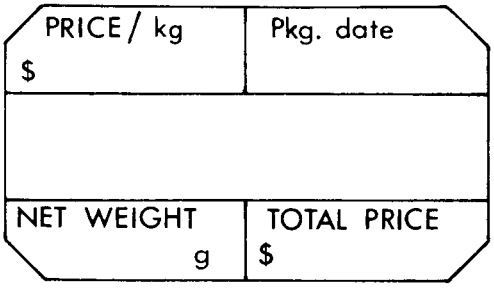
FIGURE 6/4D/56 - 6



Load Cell

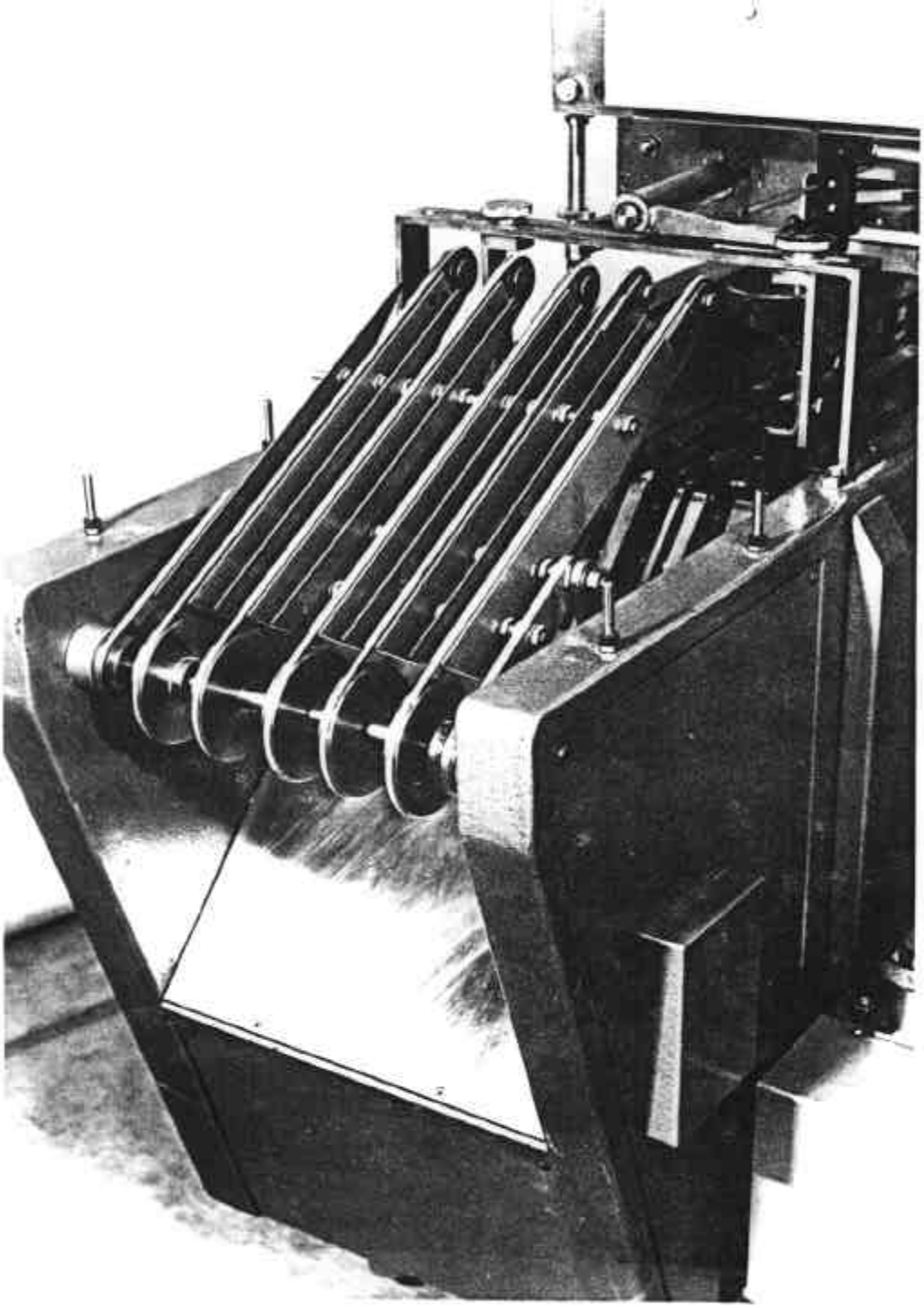


(a) After printing



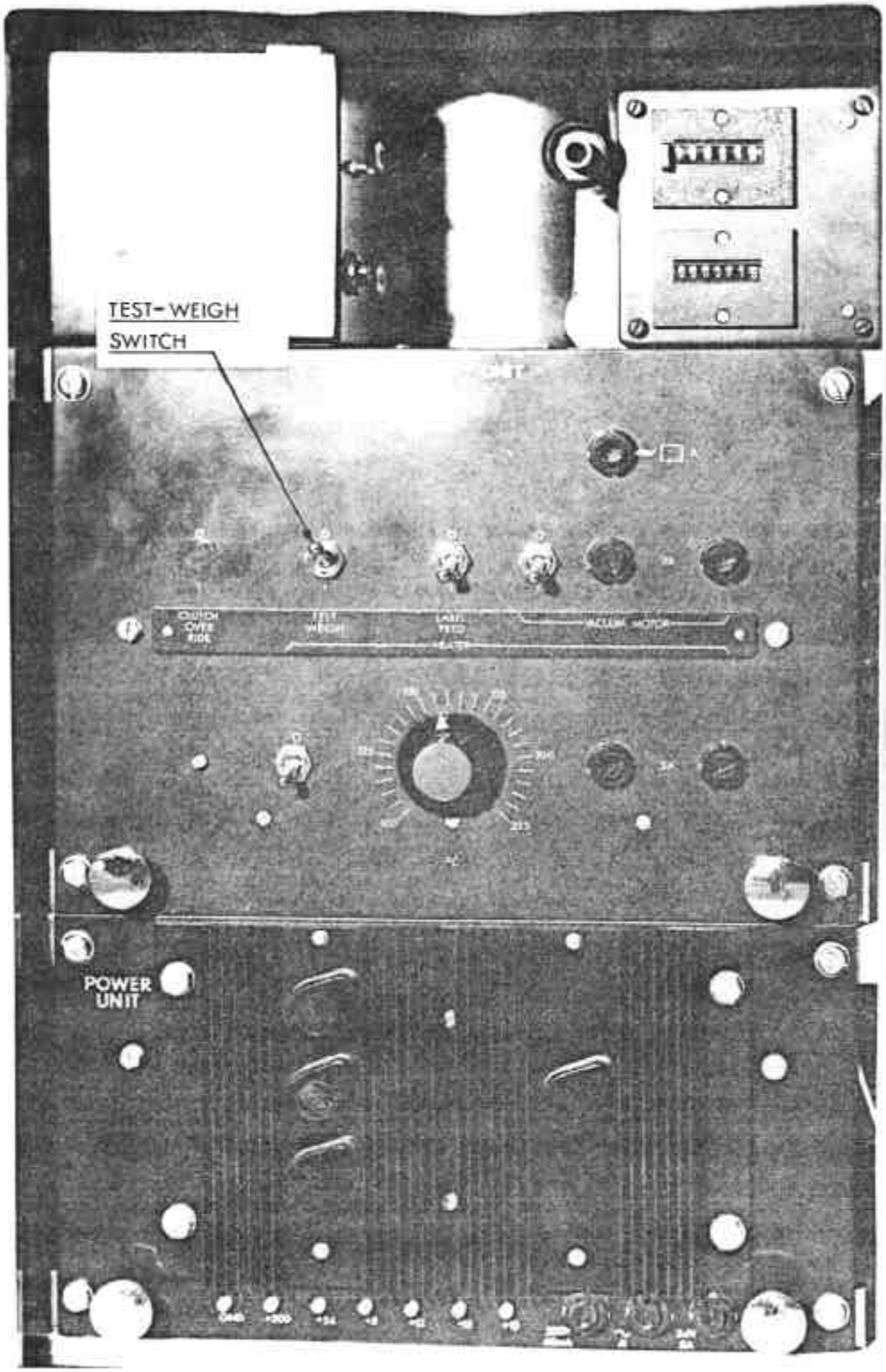
(b) Before printing

Sample Ticket (actual size)



Reject Chute

FIGURE 6/4D/56 - 9



Auxiliary Unit