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CANCELLED

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/44

Pattern: Teraoka Weigning Instrument Models Digi DS-9075 and Otners

Submittor: J. W. Wedderburn & Sons Pty Ltd,
90 Parramatta Road,
Summer Hill, New Soutn Wales, 2130.

Tnis Tecnnical Scnedule* replaces Tecnnical Scnedule No 6/4D/44 dated 27 Marcn 1975, and Tecnnical Scnedule 6/4D/44 - Variation Nos 1, 2, 3 and 4 dated 9 July 1976, 8 April 1977, 16 March 1978 and 17 Marcn 1978 wnicn are nereby cancelled.

Date of Approval: 29 June 1978

All instruments conforming to tnis approval snall be marked "NSC No 6/4D/44".

Description:

The pattern Digi Model DS-9075 (see Figures 6 and 7) is a self-indicating price-computing weigning instrument of capacity 7,5 kg by 0,005-kg scale intervals witn price computing in 1-c increments to $99,99/kg and total price to $749,93. Weignt, unit price and total price are digitally indicated on botn tne vendor's and purcnaser's sides. Tne unit price is entered sequentially by ten pusn-buttons and cancelled automatically wnen a load of more tnan 0,1 kg is removed from tne load receptor or wnen tne "C" (cancel) button is pressed.

Wnen a load of more than 20e is removed from tne load receptor all weignt, unit-price and total-price indicators will snow all 8's, blank, tnen zero before returning to normal operation.

Tne weigning mecnanism comprises a Roberval lever system (see Figures 3 and 5) and a spring-resistant mecnanism (see Figure 4).

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* Figures 6/4D/44 - 1 to 5 and 9 to 13 and Tables 2 and 3 of tne cancelled Tecnnical Scnedule form a part of tnis Scnedule and snould be retained.

A slotted mask (graticule) on the end of the main lever passes through a photo-electric pulse generator which provides a number of pulses proportional to the deflection of the lever. These pulses are counted and converted to a weight indication and in the computer multiplied by the unit price to allow the total price to be indicated. A circuit suppresses the weight, unit-price and total-price indicators if the instrument is turned on with a load on the load receptor. A light marked "R" will be illuminated to indicate this condition.

Zero is set by screwdriver adjustment which alters the tension on a small spring resistant attached to the main lever. A zero light adjacent to each weight indicator will illuminate when zero is set within 0,25e.

The instrument is fitted with a level indicator and three adjustable feet. Adjacent to the level indicator is a notice advising that the instrument must be level when in use.

The instrument is marked adjacent to each weight indicator:

(III)

Max	=	7,5 kg
Min	=	0,1 kg
d_d = e	=	0,005 kg

An output socket may provide data to peripheral devices which are not a part of the measuring instrument.* These devices, which may only be provided with the authorisation of the Weights and Measures Authority of the State, may, for example store and process the data or print weight, etc. A button marked "*" is provided to initiate the transfer of data to the peripheral devices.

Provision is made to seal the output socket to prevent the use of peripheral devices or to seal the plug from the peripheral device to the output socket by means of a bracket retained by the stamping

* The measuring instrument examined and approved by the Commission is limited to the devices which determine and indicate the value of a physical quantity, the devices which calculate price and in the presence of the purchaser of the vendor indicate price, the devices which print the value of the physical quantity together with the price, and the devices which control the measurement or price calculation. A device which receives weight data from the output socket and calculates price, and in the presence of the purchaser or vendor indicates or prints price, is a part of the measuring instrument which requires approval by the Commission.

plug. The bracket retains the plug in its socket or prevents it being put into the socket (see Figure 15).

The approval includes:

1. A Digi Model DS-9100 weigning instrument of capacity 10 kg by 0,01-kg scale intervals with price computing in 1-c increments to $99,99/kg and total price to $999,90. The instrument is marked adjacent to eacn weignt indicator:

(III)

Max	=	10 kg
Min	=	0,2 kg
$d_d = e$	=	0,01 kg

2. A Digi Model DS-9120 weigning instrument of capacity 12 kg by 0,005-kg scale intervals with price computing in 1-c increments to $99,99/kg and total price to $999,99. The instrument is similar to the DS-9075 with a modified lever mechanism and basework (see Figure 8). The instrument is marked adjacent to eacn weignt indicator:

(III)

Max	=	12 kg
Min	=	0,1 kg
$d_d = e$	=	0,005 kg

3. The Digi DS-9075, DS-9100 or DS-9120 with a semi-automatic tare of capacity less than 1000 g.

   A container placed on the load receptor is automatically tared to within 0,25e when the tare button (T) is pressed. The value of the tare is indicated to the nearest whole graduation on tare-weignt indicators on the purchaser's and vendor's sides of the instrument and zero within 0,25e is indicated on the main weignt indicators (see Figures 9, 10 and 11). When the container is removed the weignt indicator goes blank; the tare-weignt indicator continues to display the tare value.

   When the filled container is placed on the load receptor, net weignt is indicated by the main weignt indicator and lights on the purchaser's and vendor's sides of the instrument marked "net" illuminate. The tare value remains displayed throughout the weigning. The tare is cancelled by pressing the tare button a second time.

The instruments are approved for retail counter use, and are marked adjacent to the weight indicators on the purchaser's and vendor's sides of the instrument, as appropriate:

DS-9075	DS-9100	DS-9120
(III)	(III)	(III)
Max = 7,5 kg	Max = 10 kg	Max = 12 kg
Min = 0,1 kg	Min = 0,2 kg	Min = 0,1 kg
d_d = e = 0,005 kg	d_d = e = 0,01 kg	d_d = e = 0,005 kg
T = -995 g	T = -990 g	T = -995 g

The cover over the weight indicator and the cover over the resistant mechanism are secured by a lead-stamping plug and wire seal (see Figure 16).

4. The instrument with an internal or an external selector switch which allows:

   (a) the unit price to automatically cancel when the load is removed,

   (b) the unit price to require manual cancelling when the load is removed, or

   (c) the unit price to require manual cancelling when the load is removed and an automatic print instruction when the instrument is steady. If the instrument has the semi-automatic tare mechanism fitted, the maximum effect of the tare will be limited to 20e.

5. A prepack weighing instrument comprising a Digi Model DS-9075, DS-9100 or DS-9120 weighing unit with a DP-6000, DP-7000, DP-7000S or DP-9100 label printer, or any two of the weighing units with a DP-9100 label printer (see Figures 12, 13 and 14). In each case the weighing-unit output is inhibited to prevent a second label being printed until the load has been removed and to prevent printing when the load is less than 20e. Sample labels are illustrated in Figures 17, 18 and 19.

   A subtractive semi-automatic tare mechanism with a maximum effect up to the capacity of the instrument is provided. A container placed on the load receptor is automatically tared to within 0,25e when the tare button (T) is pressed. A tare light adjacent to each weight indicator illuminates when any tare greater than 0,25e is selected. The tare is cancelled by

pressing the tare button with no container on the load receptor.

If automatic print is selected on the internal or external selector switch (refer para 4) the semi-automatic tare will be limited to 20e.

The instrument is marked adjacent to each weight indicator, for example:

DS-9075	DS-9100	DS-9120
(III)	(III)	(III)
Max = 7,5 kg	Max = 10 kg	Max = 12 kg
Min = 0,1 kg	Min = 0,2 kg	Min = 0,1 kg
d_d = e = 0,005 kg	d_d = e = 0,01 kg	d_d = e = 0,005 kg
T = -7,5 kg	T = -10 kg	T = -12 kg

and "not for retail counter use".

In each case the label printer is sealed to prevent access to components, the removal or replacement of which may affect the performance of the instrument (see Figures 14 and 20).

The cable providing the weight, unit-price and total-price information to the DP-7000, DP-7000S and DP-9100 label printers is internally connected within the label printers. The other end of the data cable is sealed to the weighing unit as illustrated in Figure 15, or alternatively the serial number of the label printer is sealed to the weighing unit (see Figure 21). A Weights and Measures Authority may authorise either method of sealing.

6. A Digi Model DS-4205 weighing instrument (see Figures 1 and 2) of capacity 7,5 kg by 0,005-kg scale intervals with price computing in 1-c increments to $99,99/kg and total price to $749,93. The instrument is marked adjacent to each weight indicator:

(III)

Max	=	7,5 kg
Min	=	0,1 kg
d	=	0,005 kg

A zero indicator is not provided and the circuit which suppresses the weight, unit-price and total-price indicators when power is turned on is not fitted; the power on-switch will act as a taring

device.

Special Tests:

1. Level Sensitivity - when the instrument is tilted so that the bubble in the level indicator moves 2 mm, the zero should not change by more than two graduations, and when zero is reset in the tilted position the instrument should satisfy the weighing-accuracy specification, that is, ± ½ graduation for the first 500 graduations, ± 1 graduation for graduations over 500 and up to 2000, and ± 1½ graduations over 2000 graduations.

2. Price-computing Accuracy - the indications and printing of weight, unit price and total price, as listed in Tables 1, 2 or 3, will indicate that the price-computing and weight circuit are functioning correctly. The exact figures should be indicated as rounding is effected within the computer.

   Note: This test only establisnes correct weight indications if the indicated weight is the same as the test weights. If this does not occur, a separate test, which may be carried out in conjunction with this test, in accordance with the Commission's recommended testing procedure for the elimination of rounding errors - Document 104 - is necessary.

3. Zero Balance - the zero light should only illuminate when the instrument is within 0,25e of zero. This may be checked by the method described in the Commission's recommended testing procedure for the elimination of rounding errors - Document 104.

4. Taring - at any load within the capacity of the tare mechanism, the semi-automatic tare mechanism should reset the weight indicator to zero, within 0,25e, when the tare button "T" is pressed. This may be checked as described for Zero Balance.

5. Range of Indication -

   (a) The maximum weight indicated should not exceed the maximum capacity (Max); above this weight the indicator should be blank.

   (b) The minimum weight indicated should be zero; the weight indicator must not indicate a negative weight.

TABLE 1

Indicated or printed weight	Price per kilogram	Total price
kg	$	$
0	0	0
0,100	98,11	009,81
0,105	90,67	009,52
0,110	99,98	011,00
0,120	09,97	001,20
0,130	99,77	012,97
0,140	99,60	013,94
0,150	99,55	014,93
0,160	99,46	015,91
0,170	99,34	016,89
0,180	99,23	017,86
0,190	99,12	018,83
0,200	18,90	003,78
0,300	27,80	008,34
0,400	36,50	014,60
0,500	45,92	022,96
0,600	54,99	032,99
0,700	63,99	044,79
0,800	72,50	058,00
0,900	81,00	072,90
1,000	90,13	090,13
2,000	95,10	190.20
3,000	96,20	288,60
4,000	90,10	360,40
5,000	98,50	492,50
6,000	99,55	597,30
7,000	99,60	697,20
7,500	99,98	749,85

Test Procedure — 7,500 kg by 0,005-kg
Weighing Instrument

TABLE 2

Indicated weight kg	Unit price $	Total price $
0	0	0
0,200	99,99	20,00
0,210	98,99	20,79
0,220	97,99	21,56
0,230	96,99	22,31
0,240	95,99	23,04
0,250	94,99	23,75
0,260	93,99	24,44
0,270	92,99	25,11
0,280	91,99	25,76
0,290	90,99	26,39
0,300	89,88	26,96
0,400	79,77	31,91
0,500	69,66	34,83
0,600	59,55	35,73
0,700	49,44	34,61
0,800	39,33	31,46
0,900	29,22	26,30
1,000	47,17	47,17
2,000	98,11	196,22
3,000	97,00	291,00
4,000	96,22	384,88
5,000	95,00	475,00
6,000	94,00	564,00
7,000	93,00	651,00
8,000	92,00	736,00
9,000	91,00	819,00
9,990	99,90	998,00
10,000	99,99	999,90

Test Procedure — 10,000-kg by 0,010-kg Instrument

TABLE 3

Indicated weight	Price per kg	Total price
kg	$	$
0	0	0
0,100	99,99	10,00
0,105	98,99	10,39
0,110	97,99	10,78
0,120	96,99	11,64
0,130	95,99	12,48
0,140	94,99	13,30
0,150	93,99	14,10
0,160	92,99	14,88
0,170	91,99	15,64
0,180	90,96	16,37
0,190	89,88	17,08
0,200	79,77	15,95
0,300	69,66	20,90
0,400	59,55	23,82
0,500	49,44	24,72
0,600	39,33	23,60
0,700	29,22	20,45
0,800	19,11	15,29
0,900	9,14	8,23
1,000	30,57	30,57
2,000	70,03	140,06
3,000	84,67	254,01
4,000	92,00	368,00
5,000	95,00	475,00
6,000	97,00	582,00
7,000	99,00	693,00
8,000	99,50	796,00
9,000	99,99	899,91
10,000	99,99	999,90
11,000	90,90	999,90
12,000	83,33	999,96

Test Procedure — 12 kg by 0,005-kg Instrument

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/44

VARIATION No 1

Pattern: Teraoka Weighing Instrument Models Digi DS-9075 and Others

Submittor: J. W. Wedderburn & Sons Pty Ltd,
90 Parramatta Road,
Summer Hill, New South Wales, 2130.

Date of Approval of Variation: 19 December 1978

The modifications described in this Schedule apply to the patterns described in Technical Schedule No 6/4D/44 dated 31 August 1978.

All instruments conforming to this approval shall be marked "NSC No 6/4D/44".

Description:

The approved modifications provide for:

1. A Digi DS-9075, DS-9100 or DS-9120 retail counter weighing instrument with a DP-9100 ticket printer (see Figures 6 and 14). The tickets may be hand-held or adhesive and are intended for printing in the presence of the purchaser. The ticket is similar to the sample label illustrated in Figure 19.

   The instrument is approved for retail counter use. Mass, unit price and price are digitally indicated on both the reader's and purchaser's sides of the instrument (see Figures 6 and 7).

   The ticket printer is sealed to prevent access to components the removal or replacement of which may affect the performance of the instrument (see Figure 14).

   The cable providing the mass, unit-price and total-price information to the DP-9100 ticket printer is internally connected within the ticket printer. The other end of the data cable is sealed to the weighing unit as illustrated in Figure 22, or alternatively the serial number of the ticket printer is sealed to the weighing unit (see Figure 23). A State or Territorial

Weights and Measures Authority may authorise either method of sealing.

The approval includes the instrument with a semi-automatic tare device of capacity less than 1000 g with the tare value displayed on tare indicators on the purchaser's and vendor's sides of the instrument (see Figures 10 and 11).

2. The above sealing method replacing the methods illustrated in Figures 15 and 21.

Special Tests:

The special tests described in Technical Schedule No 6/4D/44 dated 31 August 1978 apply to these variations.

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

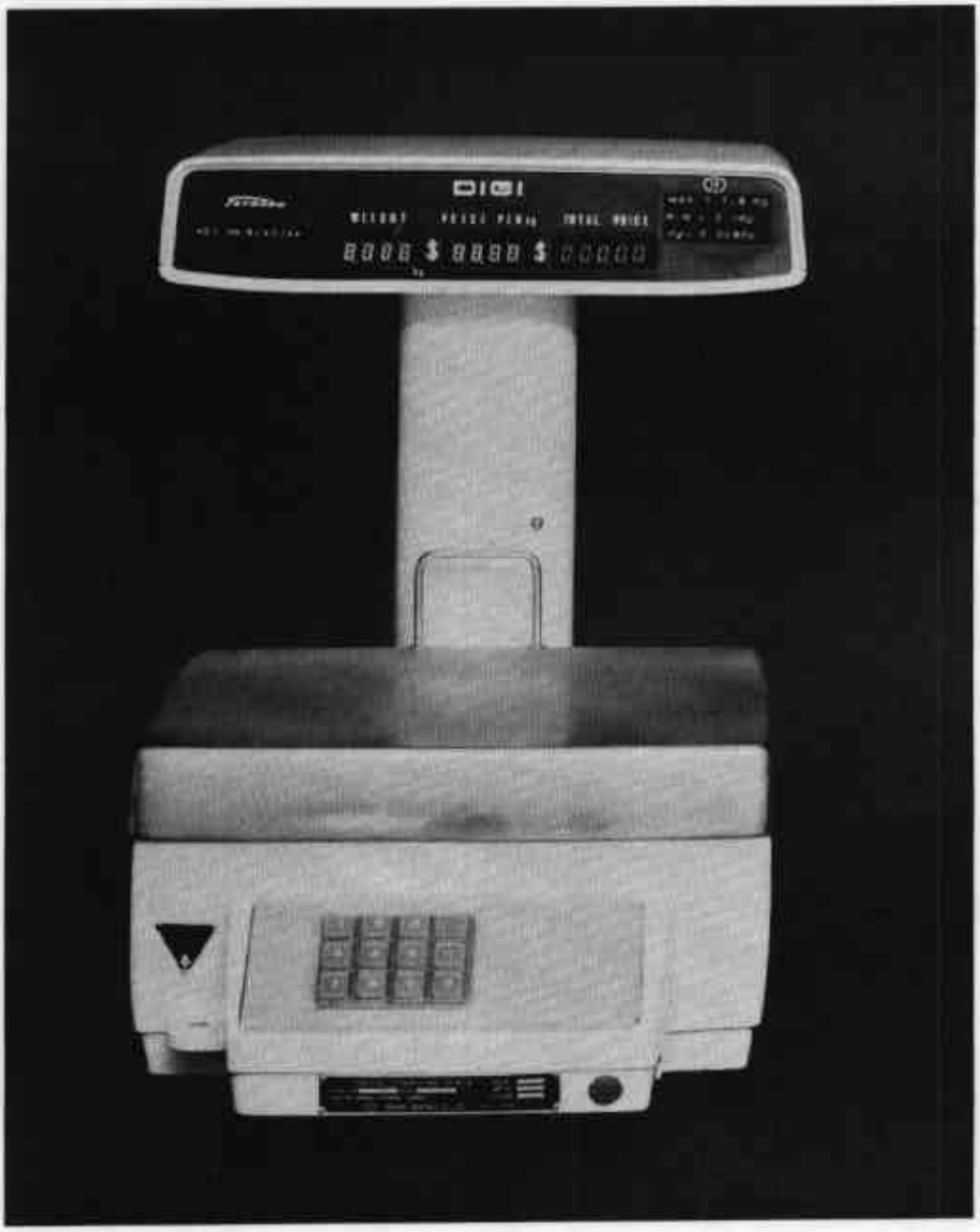
CERTIFICATE OF APPROVAL No 6/4D/44

CHANGE No 1

On page 1 of Technical Schedule No 6/4D/44 dated 31 August 1978, delete "Teraoko" and substitute "Teraoka".

26/2/79

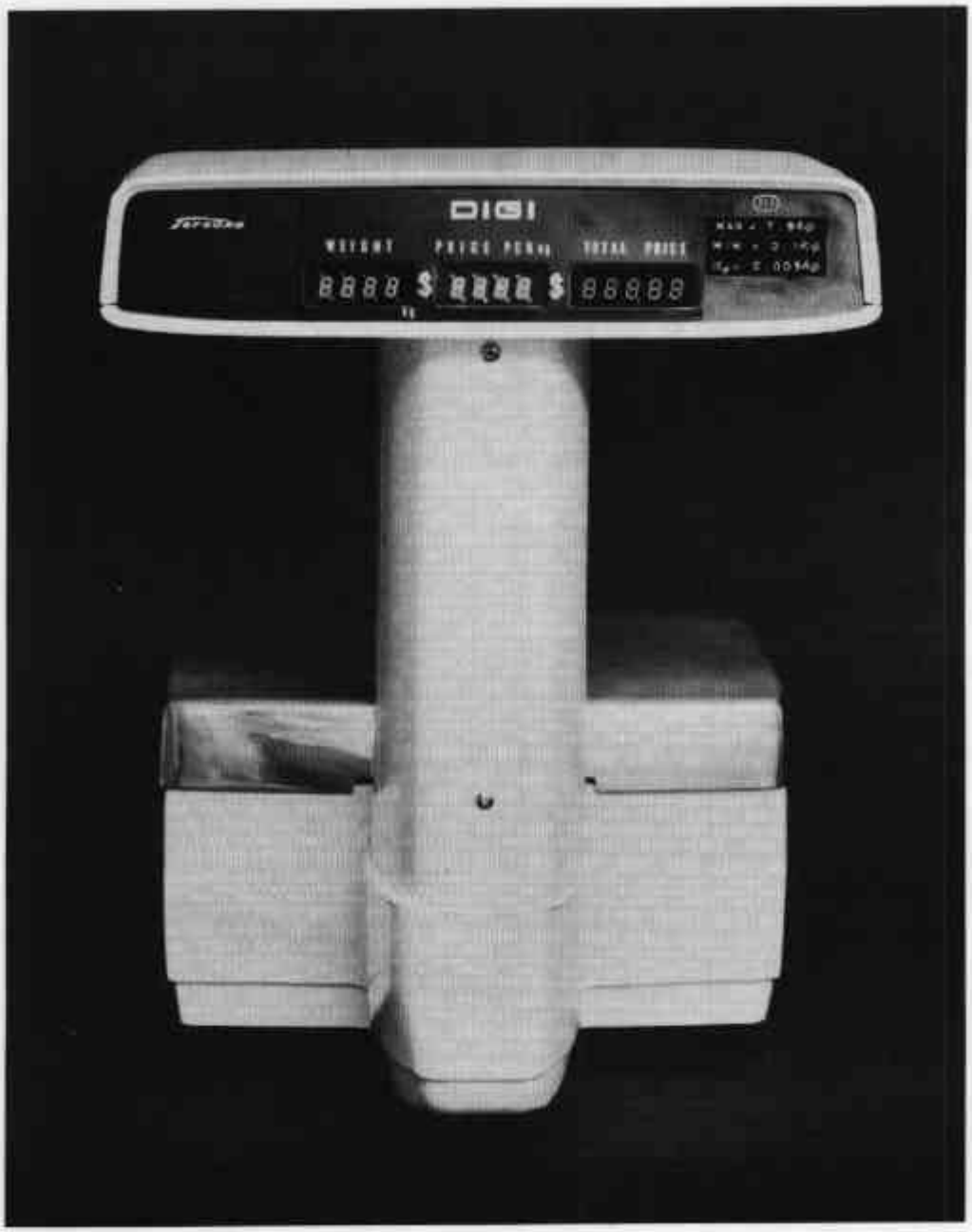
FIGURE 6/4D/44 - 1



Teraoka DS-4205

27/3/75

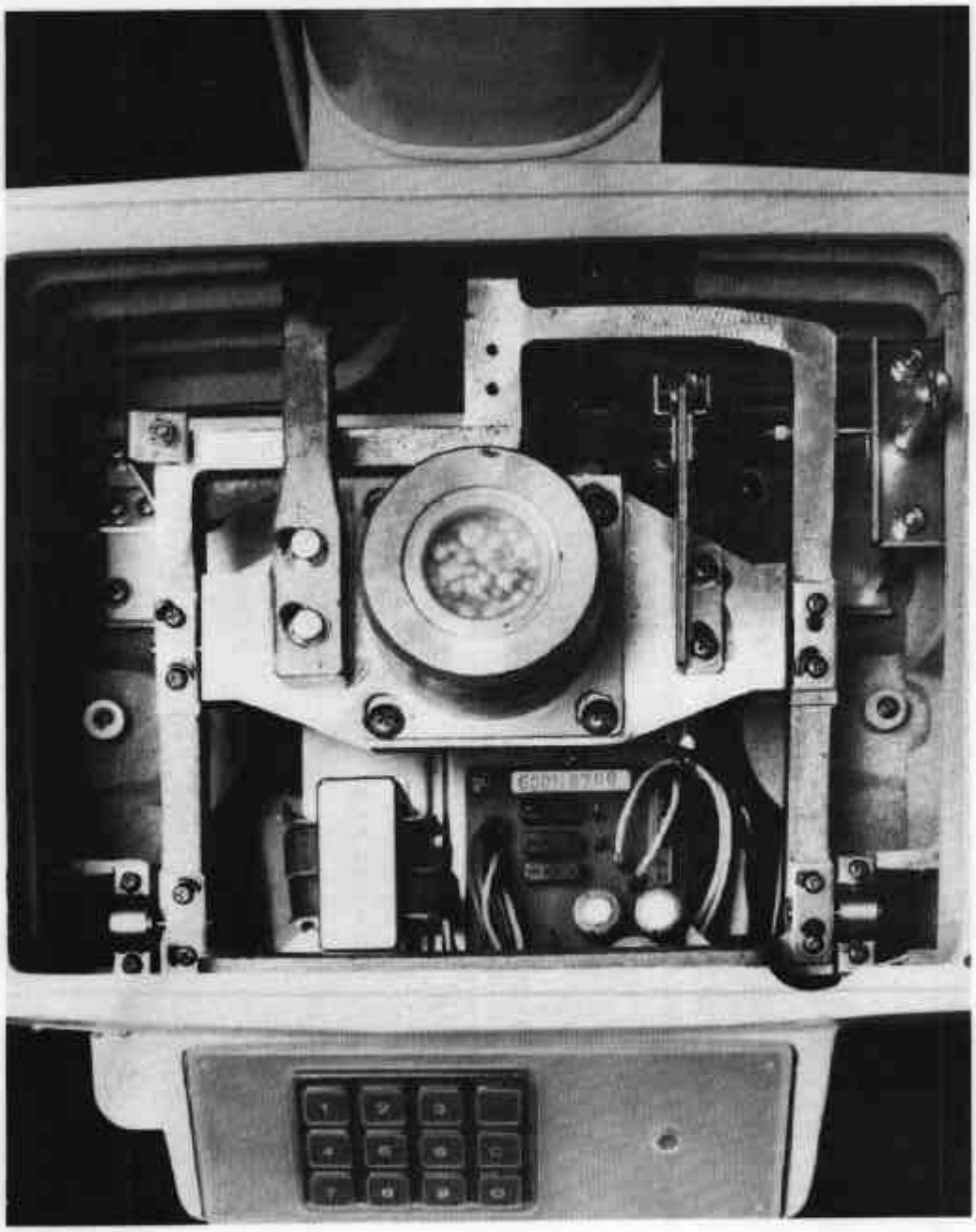
FIGURE 6/4D/44 - 2



Teraoka DS-4205

27/3/75

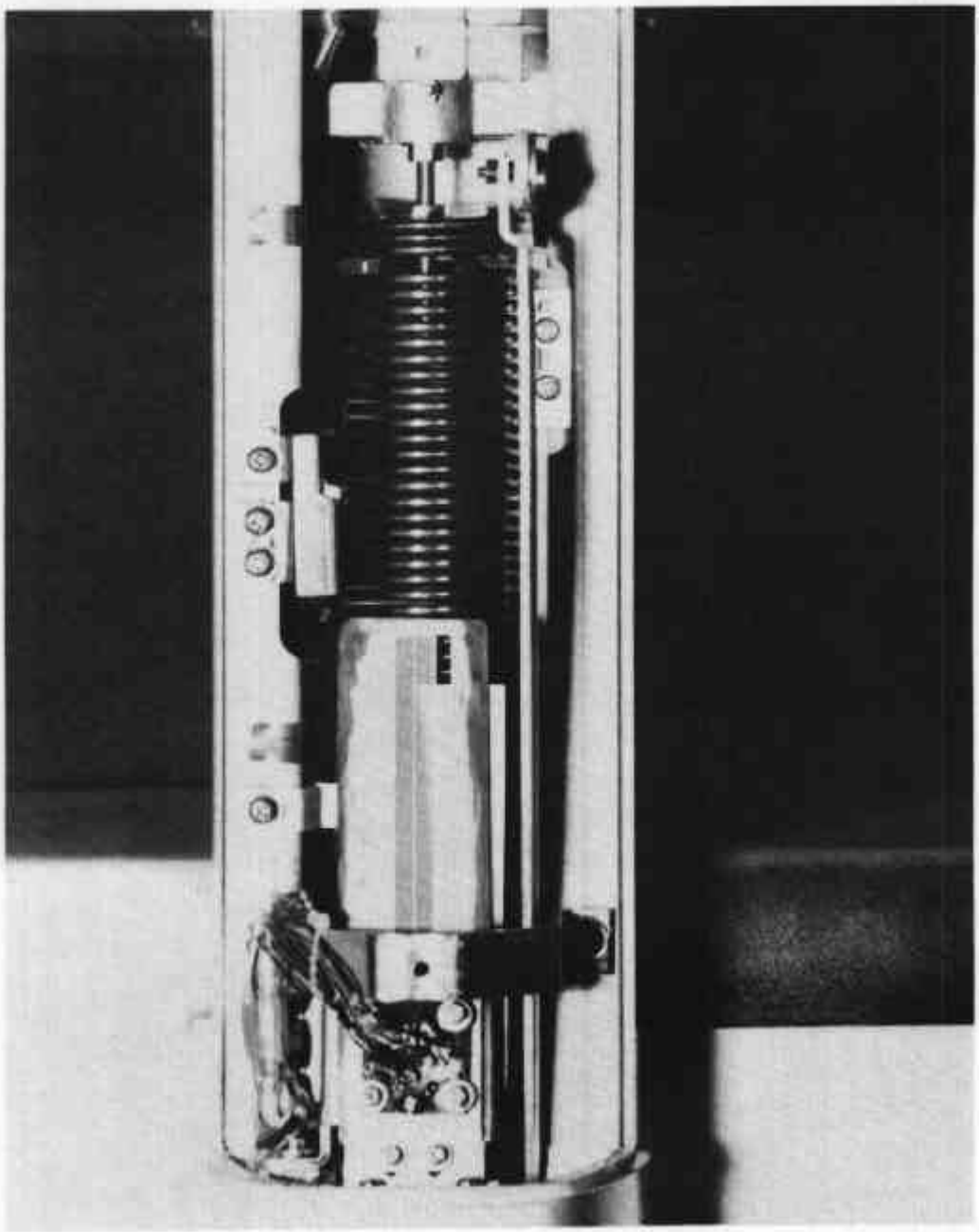
FIGURE 6/4D/44 - 3



Lever System

27/3/75

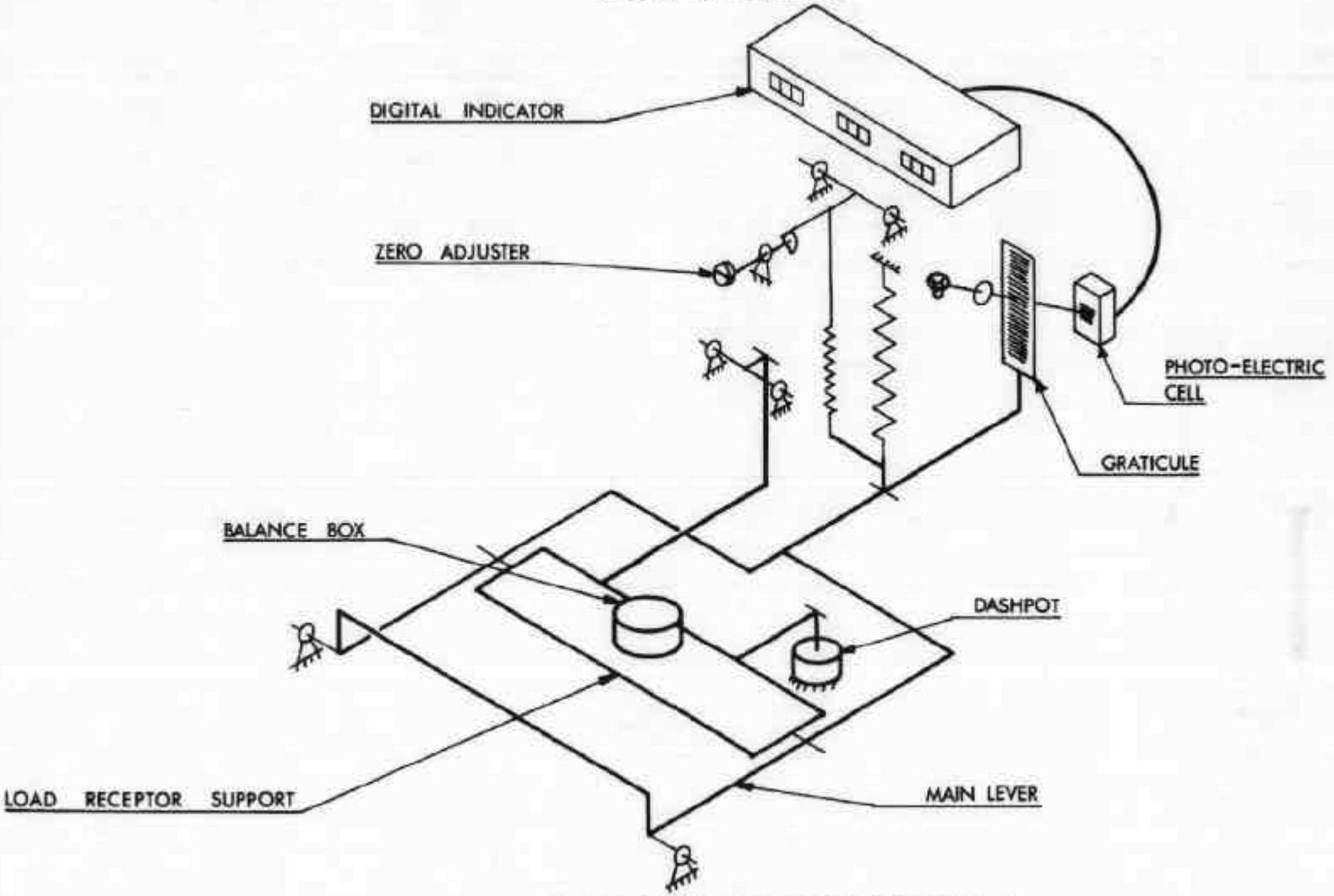
FIGURE 6/4D/44 - 4



Spring-resistant Mechanism

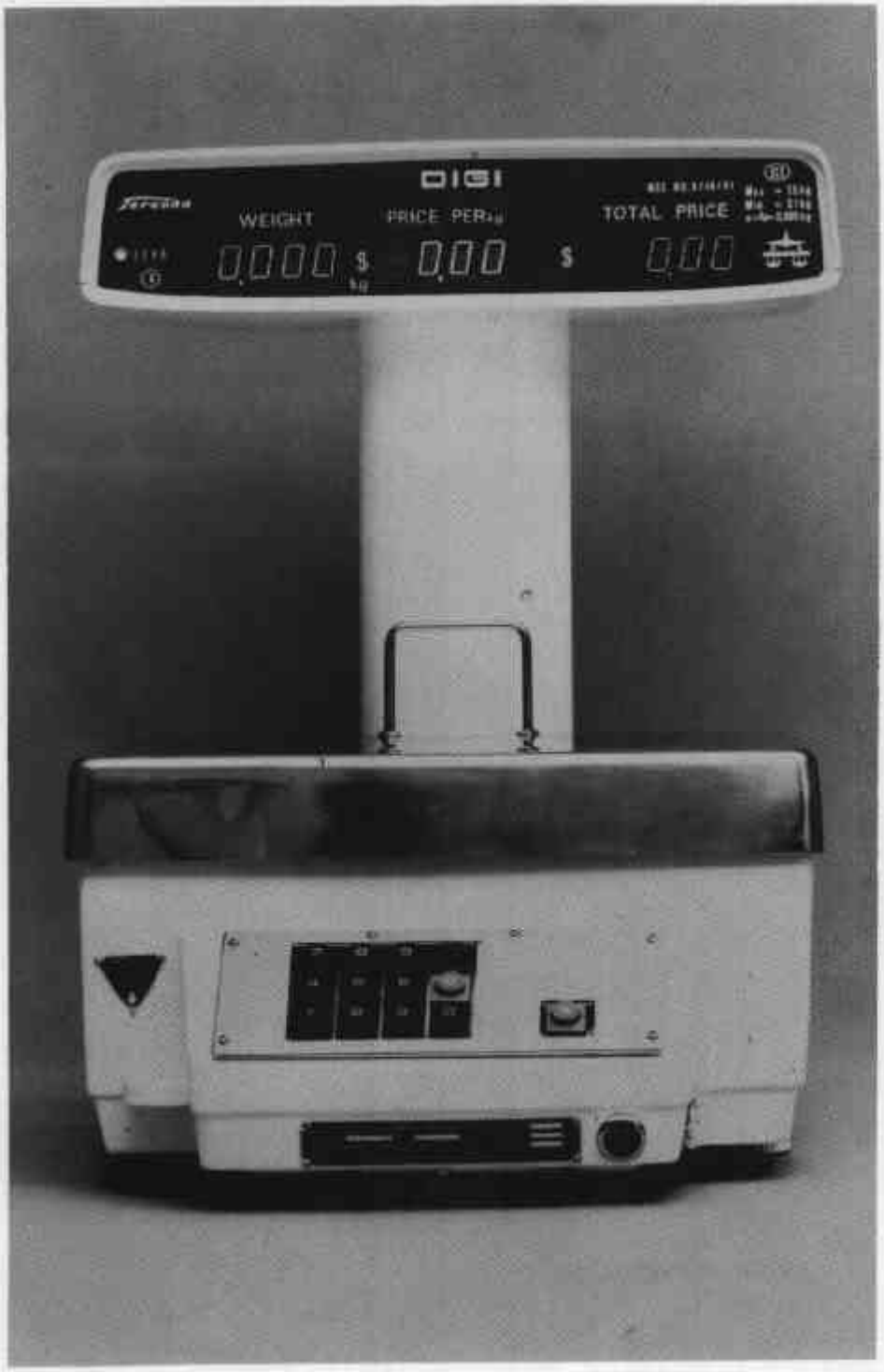
27/3/75

FIGURE 6/4D/44 - 5



Teraoka DS-4205 — Schematic Diagram

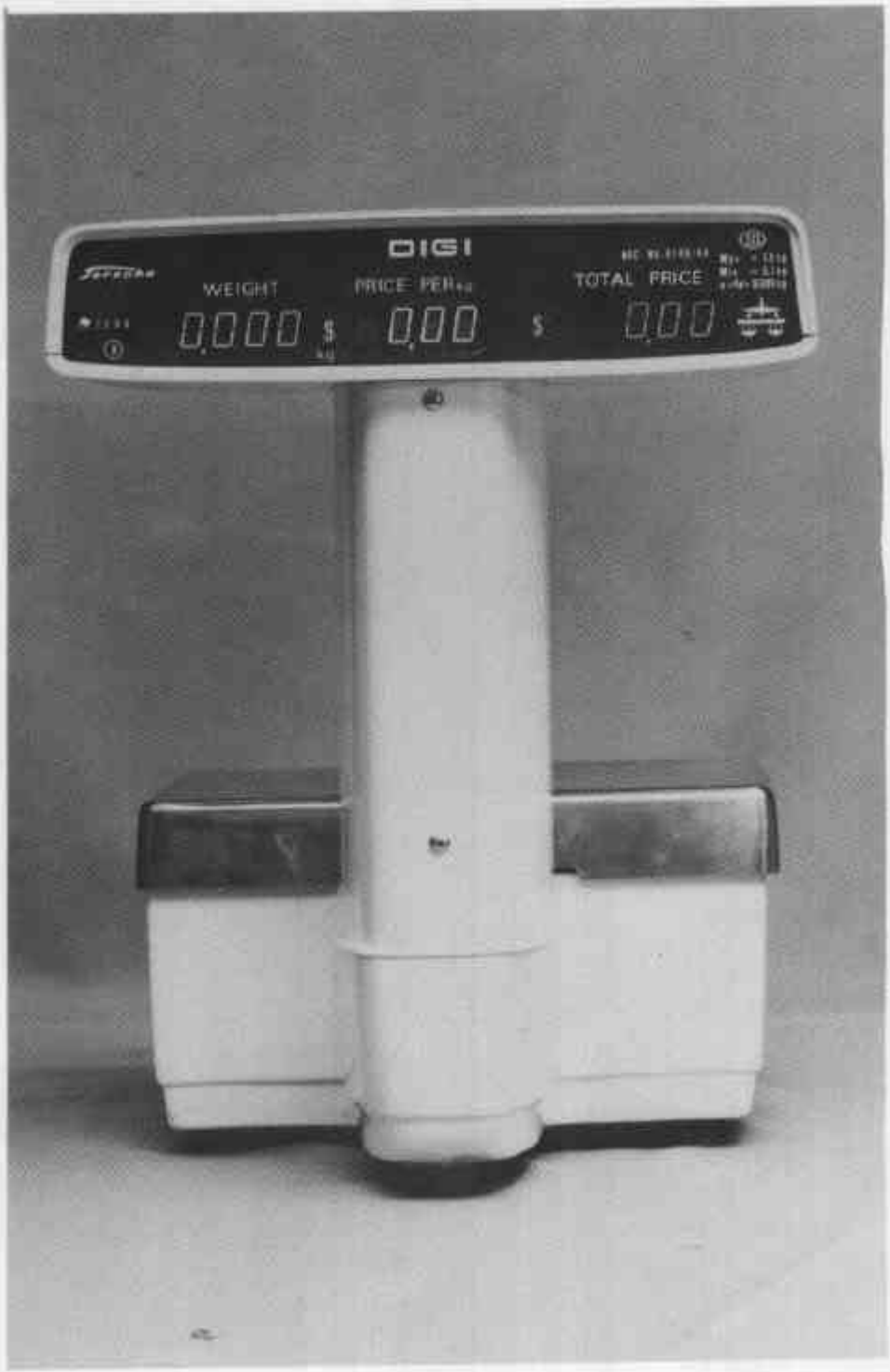
FIGURE 6/4D/44 - 6



Digi Model DS-9075

31/8/78

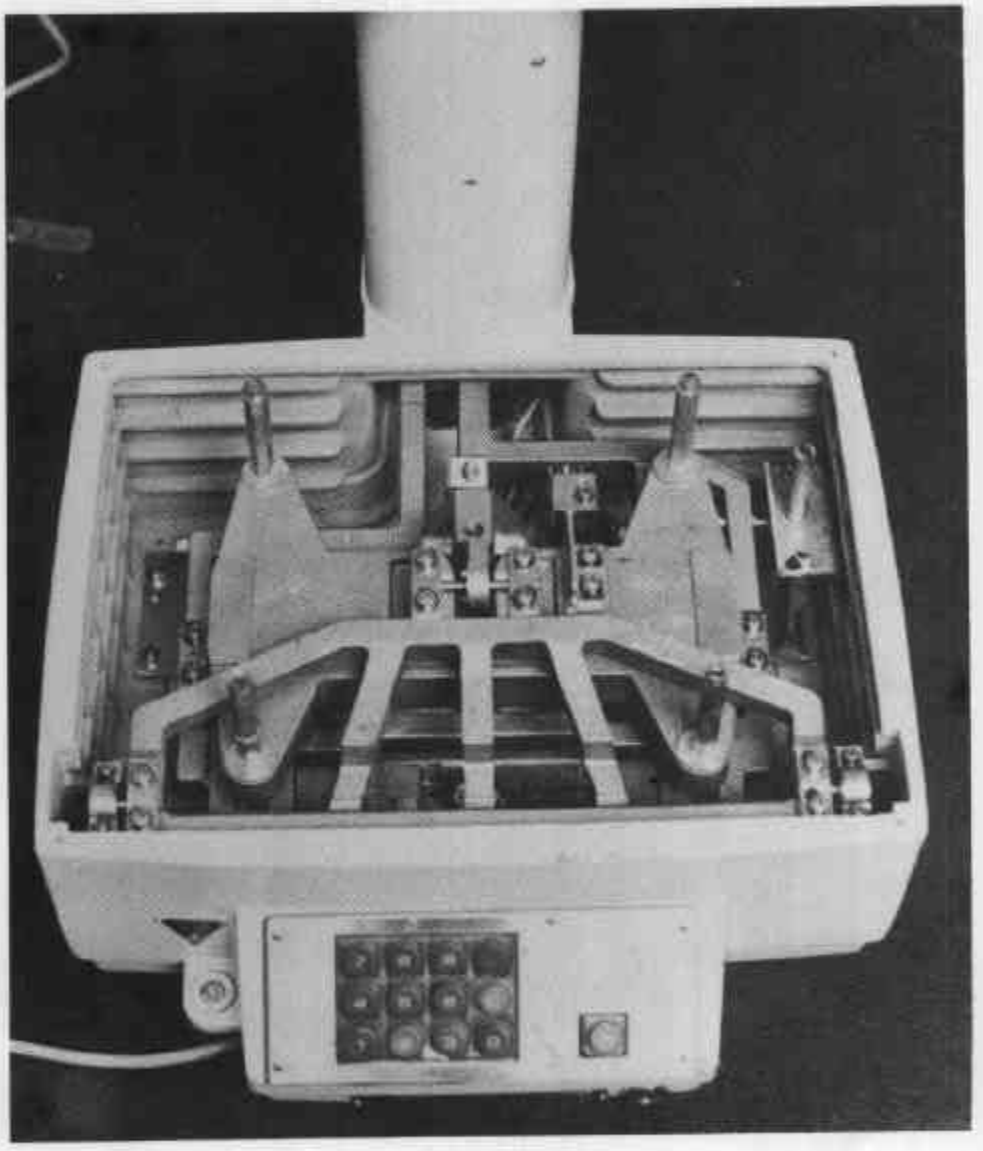
FIGURE 6/4D/44 - 7



Digi Model DS-9075

31/8/78

FIGURE 6/4D/44 - 8



Digi Model DS-9120 — 12-kg Basework

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FIGURE 6/4D/44 - 9

Digi DS-9075 with Semi-automatic Tare

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FIGURE 6/4D/44 - 10

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Digi DS-9075 Weight Reading Face — Vendor's Side

Digi DS-9075 Weight Reading Face — Purchaser's Side

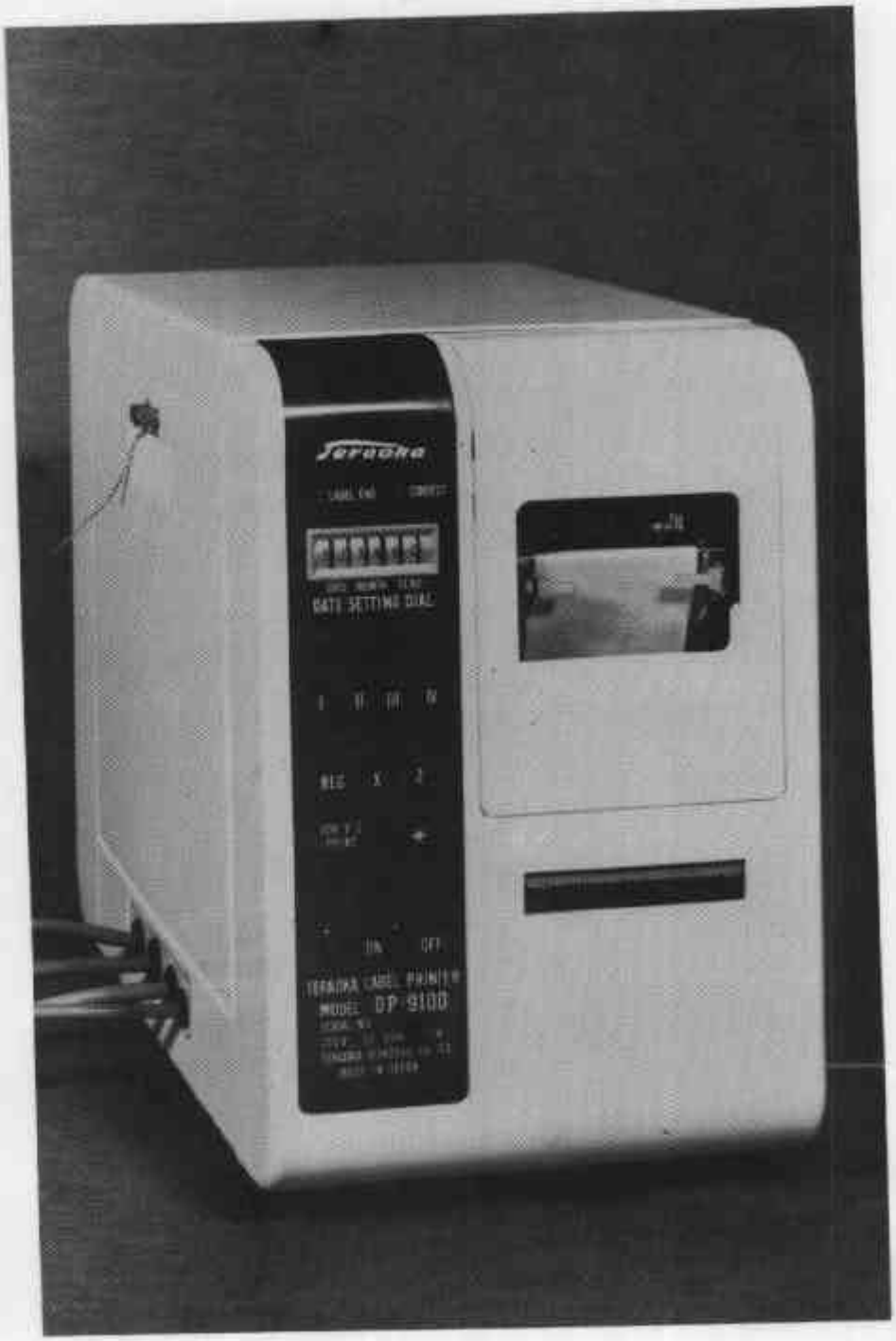
FIGURE 6/4D/44 - 12

Digi DS-9120 with DP-6000 Label Printer

17/3/78

Digi DS-9120 with DP-7100S Label Printer
(A DP-7100S is a DP-7100 with a memory)

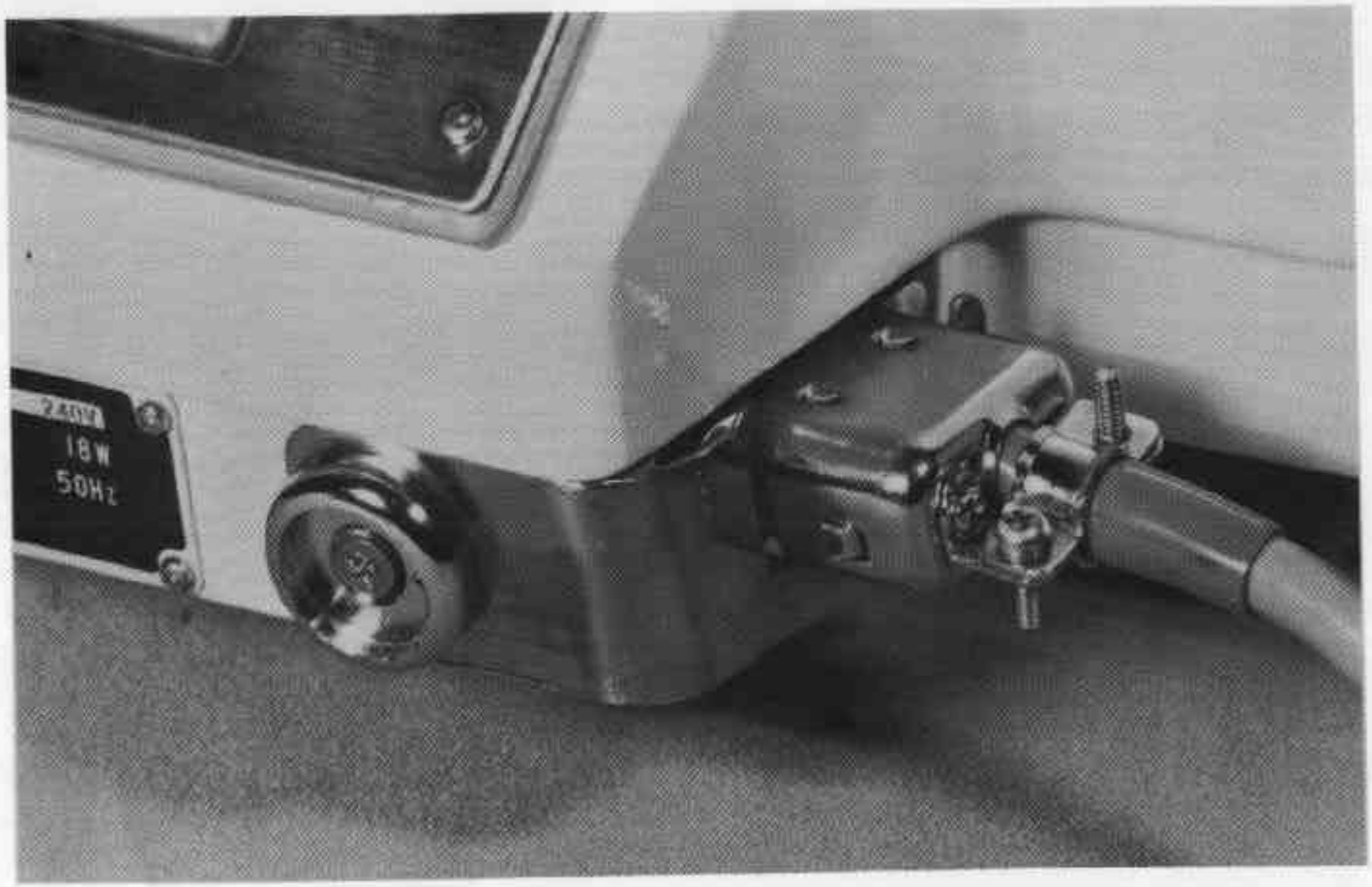
FIGURE 6/4D/44 - 14



DP-9100 Label Printer

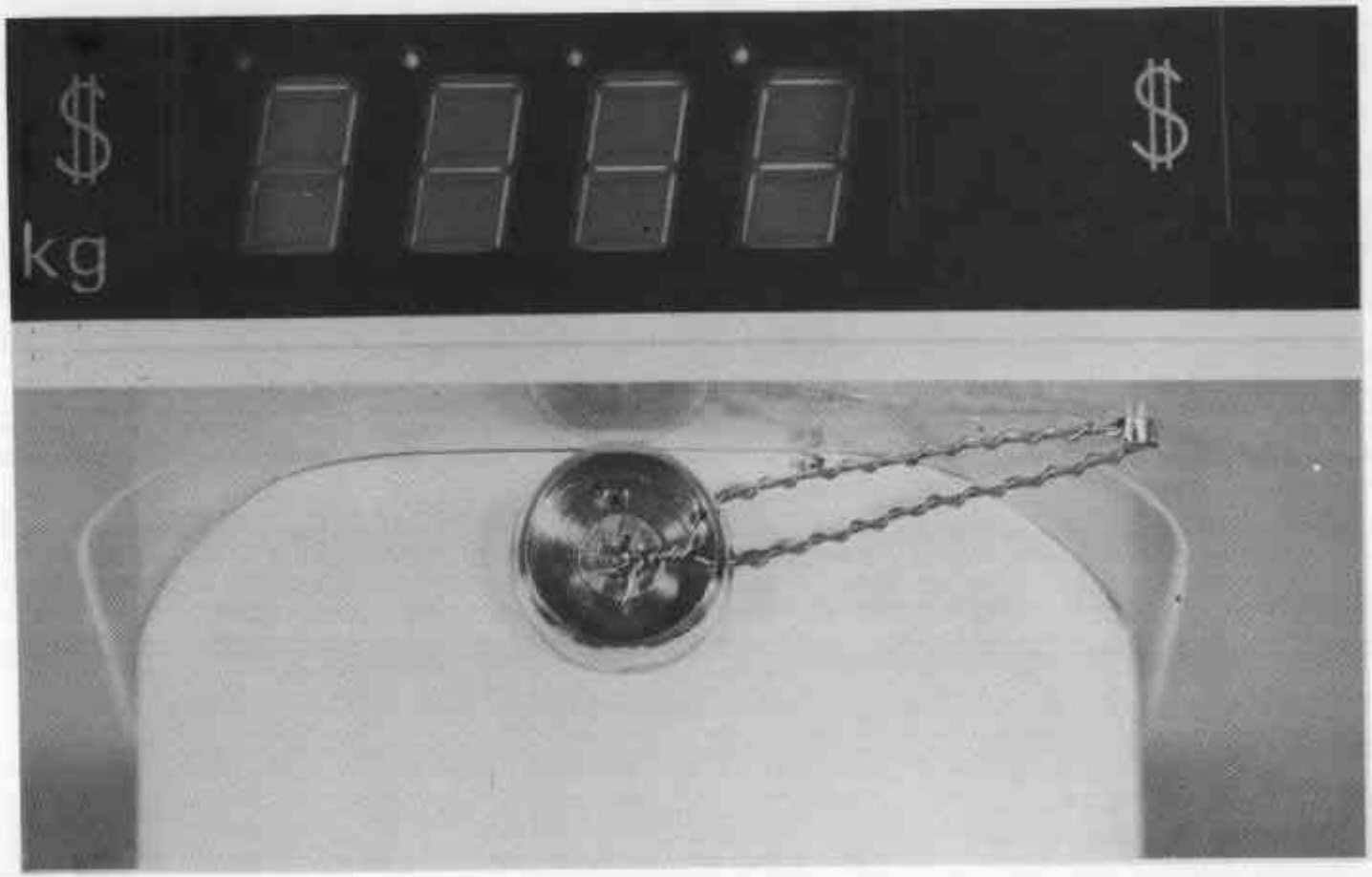
31/8/78

FIGURE 6/4D/44 - 15

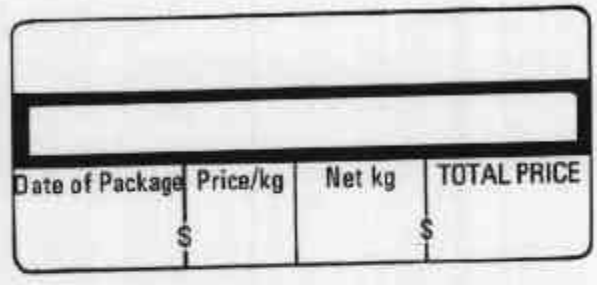


Sealing of Output Socket

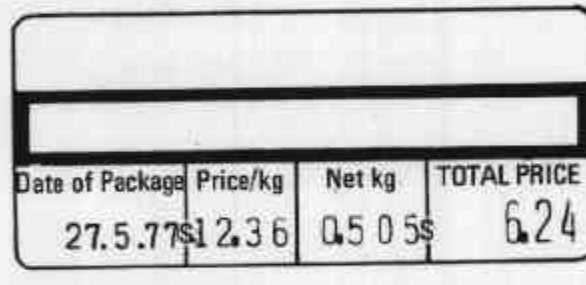
FIGURE 6/4D/44 - 16



Sealing of Weight Indicator and Resistant Mechanism

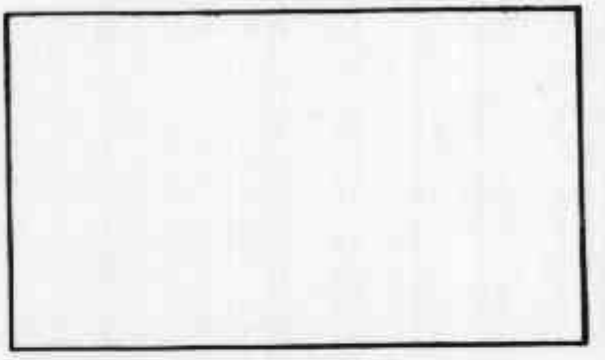


(a) Before printing

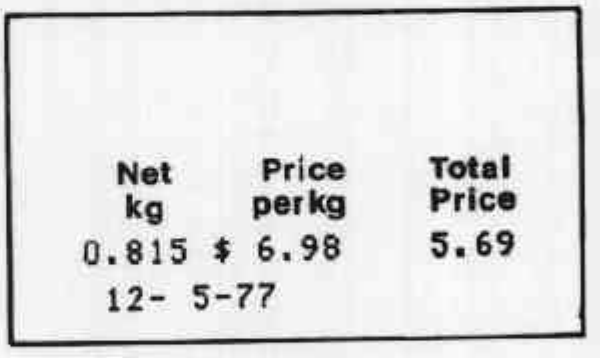


(b) After printing

Sample Label — DP-6000 Label Printer



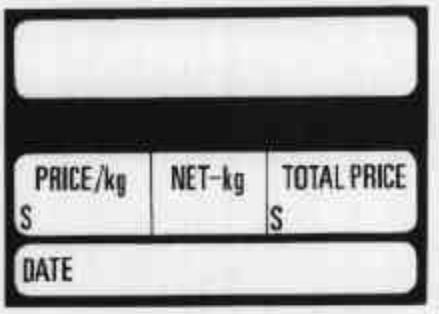
(a) Before printing



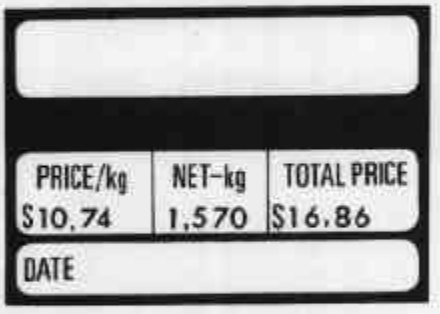
(b) After printing

Sample Label — DP-7100S Label Printer

FIGURE 6/4D/44 - 19



(a) Before printing



(b) After printing

Sample Label — DP-9100 Label Printer

31/8/78

FIGURE 6/4D/44 - 20

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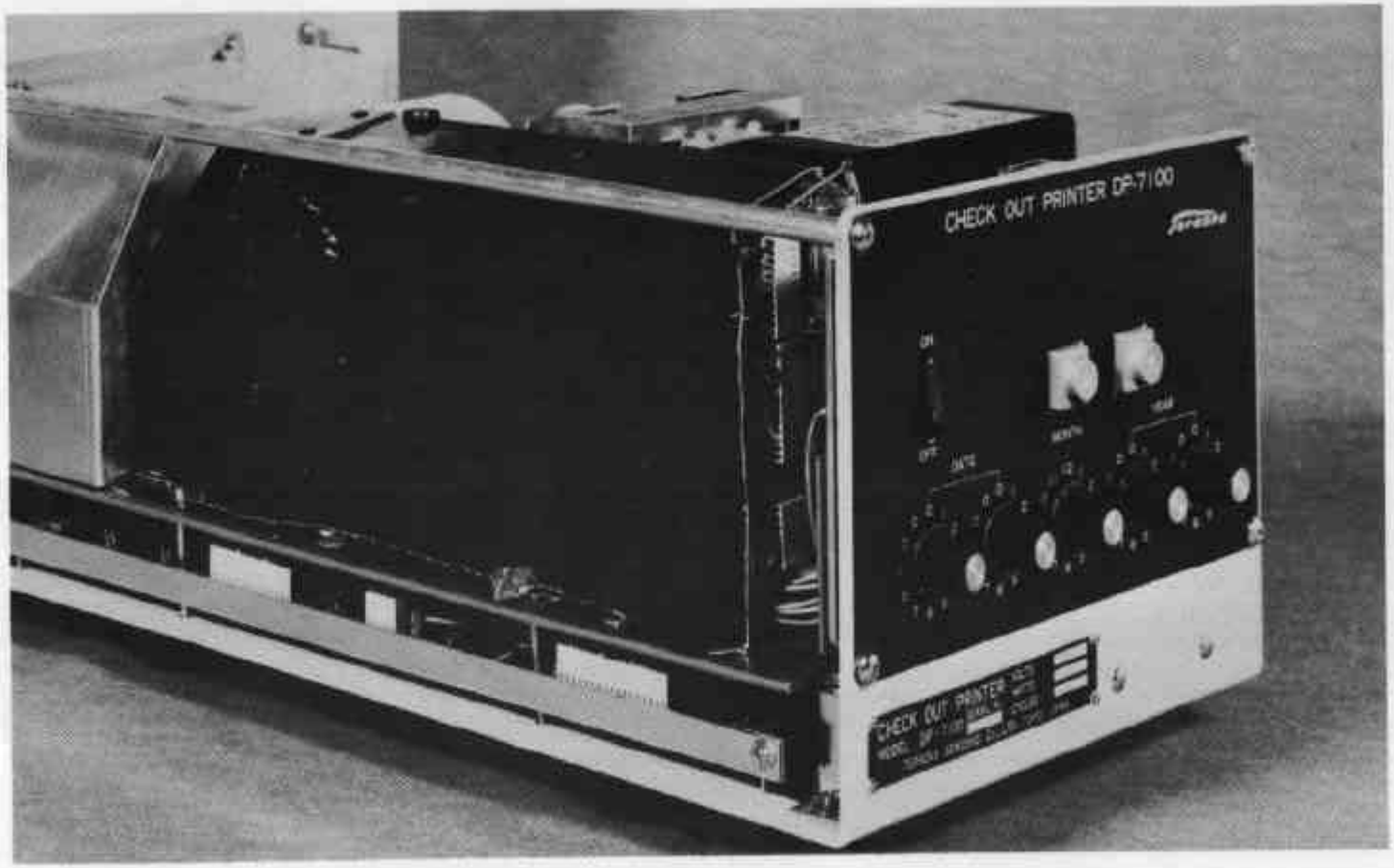
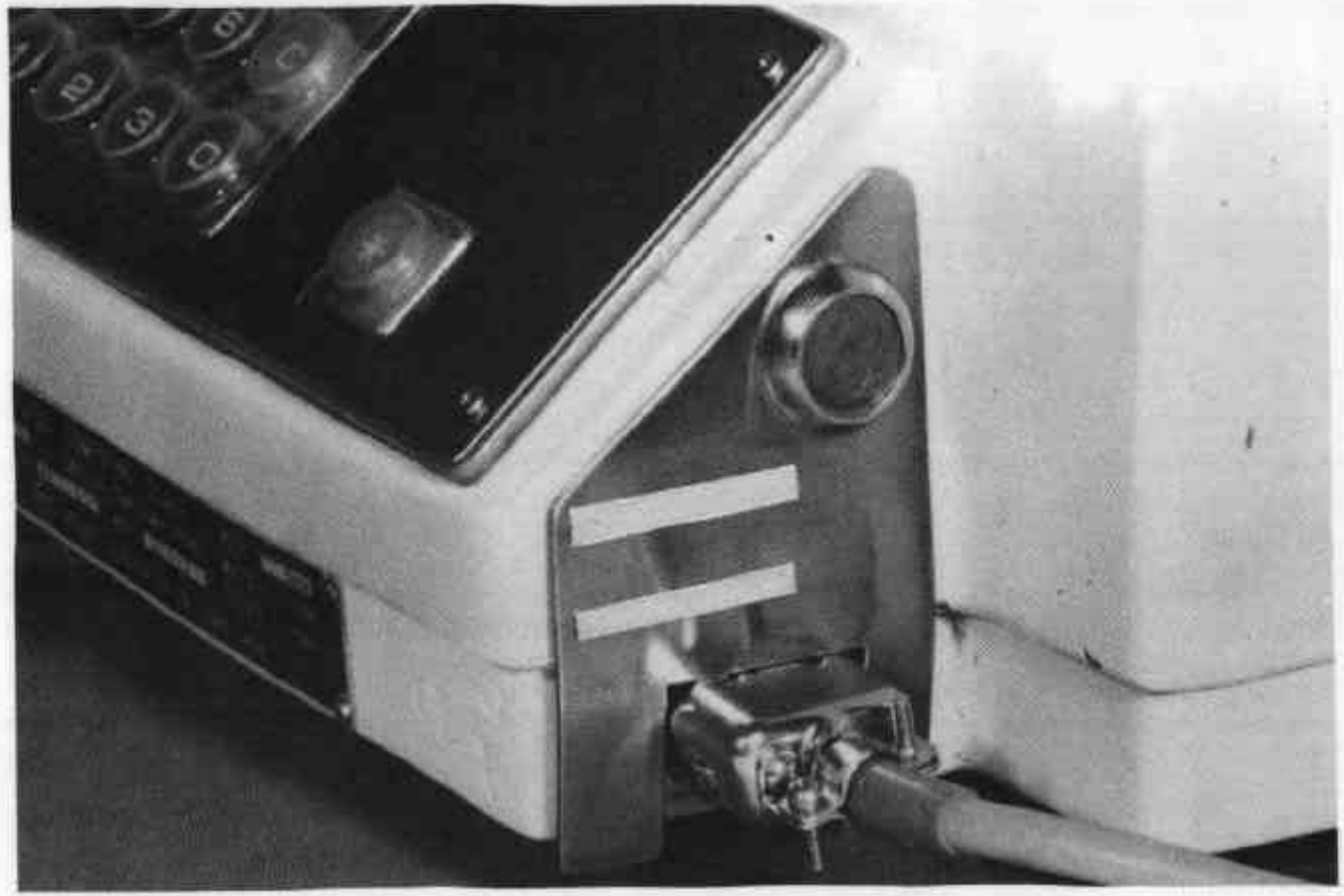


Sealing of DP-7100 Label Printer

Sealing of Label Printer Serial Number to
Weighing Unit



Sealing of Output Socket

FIGURE 6/4D/44 - 23

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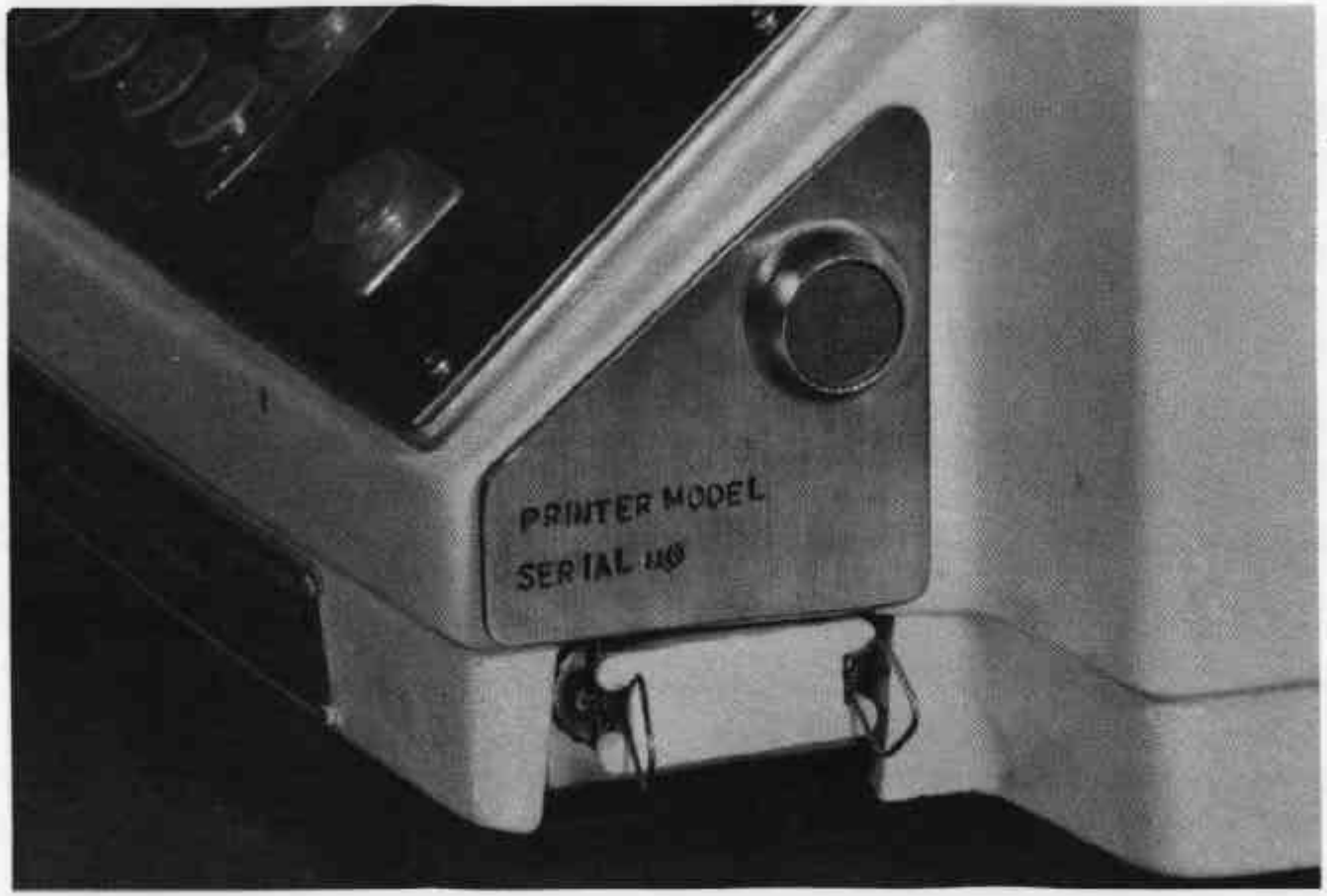

Sealing of Ticket-printer Serial Number to Weighing Unit