



Weights and Measures
(National Standards)
Act 1960-1966

Weights and Measures
(Patterns of Instruments)
Regulations

CANCELLED

COMMONWEALTH OF AUSTRALIA

NATIONAL STANDARDS COMMISSION

Certificate of Approval

CERTIFICATE NUMBER 6/4D/17

In respect of the pattern of

Anker-Bizerba Self-indicating Price-computing Ticket-printing
Counter Machine and Variants.

Submitted by: Ads-Anker Data Systems Pty. Ltd. ,
 212 Elizabeth Street,
 Sydney,
 New South Wales. 2000.

Manufactured by: Bizerba-Werke,
 Wilhelm Kraut KG,
 7460 Balingen/Württ. ,
 Wilhelm Kraut - Str. 41,
 West Germany.

This is to certify that the pattern and variants of the instrument
illustrated and described in this Certificate have been examined
by the National Standards Commission under the provisions of
the abovementioned Regulations and have been approved as
being suitable for use for trade.

The pattern and variants were approved on 12th December,
1967.

The approval of variants 2 and 3 was withdrawn on 15th July,
1971.

Approval was granted on condition that all instruments made in

30/7/71

Cont'd over

conformity with this Certificate:

1. are appropriately marked NSC No 6/4D/17;
2. comply with the General Specifications for Weighing and Measuring Instruments to be Used for Trade; and
3. are tested in accordance with the test procedure described in the General Notes to this Certificate.

This Certificate comprises:

Pages 1 to 9 dated 30th July, 1971.

Figures 6/4D/17 - 1 to 9 dated 30th July, 1971.

Date of issue 30th July, 1971.

Signed



A person authorised by the Commission
to sign Certificates under the
abovementioned Regulations.

DESCRIPTION OF PATTERN

The pattern (see Figure 1) is of a self-indicating price-computing ticket-printing counter machine of 9 lb 15 $\frac{3}{4}$ oz capacity, known as the Anker-Bizerba Model EWP.

The pattern comprises:

1. scale unit;
2. computer; and
3. ticket printer,

which together weigh, compute the price for the selected unit price, and print the weight, unit price and package price on a heat-seal ticket. The unit-price range is from 0 to \$2.99 per pound in 1 cent-per-pound increments.

Other information, such as date, code number and commodity name, may be printed on the ticket. Figure 2 is a block schematic diagram of the major sections of the pattern; the function of each section is described below:

1. Scale Unit (see Figures 2, 3 and 4)

Three parallel links, two of which are in compression and one of which is in tension, connect the load-receptor bracket to the frame, through knife-edges and bearings. The parallel linkage maintains the load receptor in a horizontal position. An oil-filled dashpot is connected to the load-receptor bracket. A circular spirit level is attached to a bracket fixed to the base of the scale unit.

A coupling from the load-receptor bracket applies the load to a second-order main lever, which is supported on a fulcrum knife-edge and bearing from a spring-resistant taring device. The nose-end of the main lever is connected to a pullrod and double-pendulum-resistant mechanism through a knife-edge and bearing. The tare is adjusted by a knob on the operator's side of the pattern. A balance box is located beneath the load receptor. Mounted on one of the pendulum resistants is a transparent graticule (see Figure 5) with a weight scale and a digital code. The graticule is marked with 652 weight graduations over an angle of 33 degrees 57.5 minutes (19.2 graduations per degree). The weight scale is graduated from minus 3 oz to 10 lb by $\frac{1}{4}$ oz

graduations. The digital code (see Figure 6) represents weight values between $\frac{1}{4}$ oz and 9 lb $15\frac{3}{4}$ oz in $\frac{1}{4}$ oz increments.

An optical-projection system (see Figure 3) transmits the weight scale to a translucent screen, where it is viewed by the operator. A second optical-projection system (see Figure 3) transmits the digital code on to photo-electric cells which convert the light pattern into electric signals which are applied to the computer. The digital code on the graticule is blanked off below 2 dr.

2. Electric Computer (see Figures 2 and 7)

which is divided into six main sections, namely:

- (a) Programmer, which provides the switching and operating sequences necessary to direct the processing of the data received from the scale and from the ticket printer;
- (b) Decoder, which receives the weight data in the form of electric signals from the photo-electric cells in the scale unit, and converts the information into pounds, ounces and $\frac{1}{4}$ ounces by energising the appropriate relays, each of which is designated with a particular weight. Three of the total of 30 weight-designated relays will be energised for each series of electric signals, that is, a designated pound relay, a designated ounce relay and a designated $\frac{1}{4}$ ounce relay. Contacts of the energised relays energise the appropriate solenoids in the ticket printer, thus setting the printer to the weight indicated on the scale unit;
- (c) Motion detector, which prevents the printer from operating until $1\frac{1}{2}$ seconds after the weight indication on the scale unit has come to rest, that is, when the load receptor comes to rest. It is operated by contacts on each of the 30 weight-designated relays. The contacts of all 30 relays are connected in series such that each contact may break the chain, but in doing so will change the voltage on the motion-detector end of the chain. As the digital code on the graticule has one change midway between each $\frac{1}{4}$ ounce, any oscillation greater than $\frac{1}{2}$ graduation will alternatively cause a high and low voltage to be applied to the motion detector. The motion detector will only allow printing when the input voltage is stable;
- (d) Weight convertor, which changes the weight, expressed in

pounds, ounces and $\frac{1}{4}$ ounces, stored on energised weight-designated relays, to pounds and decimal fractions of pounds; each weight now being designated by two energised weight-designated relays;

- (e) Multiplier, which multiplies the decimal weight data from the weight convertor by the unit price as set on a unit-price keyboard on the ticket printer; the output being stored in Binary Coded (BCD) form in decade counters; and
- (f) Output amplifier, which converts the BCD data stored in the decade counters to information as energised price-designated relays. Contacts of these relays energise the appropriate solenoids in the printer to set the total price.

3. Ticket Printer (see Figures 2 and 8)

An Anker Model 800 which has a separate unit-price keyboard, a ticket-printing and ejection mechanism and a heated ticket retainer. A switch on the ticket retainer initiates the delivery of the ticket (see Figure 9) for the next package on the scale unit. This ticket will be automatically issued when the scale unit comes to rest. The printer is inhibited for weights less than $\frac{1}{4}$ oz and for weights greater than 9 lb $15\frac{3}{4}$ oz. A zero weight cannot be printed.

The pattern is marked "not for retail counter use" and "instrument incorrect if not truly level".

OPERATING PROCEDURE

The operating sequence is as follows:

- (a) power is switched on;
- (b) commodity name may be set on the printer;
- (c) date and code number may be set on the printer;
- (d) unit price is set by the unit-price keyboard;
- (e) the container is tared off by the tare control on the scale unit;
and
- (f) the ticket-retainer switch is manually pressed.

When the article to be weighed is placed on the load receptor and the

load receptor comes to rest, a ticket is ejected and retained on the heated ticket retainer. Pressing the package on the ticket retainer fixes the ticket to the package and operates the switch to initiate the next weighing sequence. The weighing and printing cycle only proceeds after the motion detector signals the load receptor is stationary.

DESCRIPTION OF VARIANTS

1. The pattern without a taring device.
- *2. In other capacities up to 12 kg or 25 lb and with a maximum unit price of \$9.99.
- *3. With the weight indicated in pounds and decimals of a pound.

GENERAL NOTES

Test Procedure

The following series of 115 weighings will check that the electronic circuiting is functioning correctly:

<u>Weight</u>		<u>Unit Price</u>	<u>Ticket</u>	
lb	oz	\$	lb	oz
0	0	1.00	No ticket printed	
0	$\frac{1}{4}$	"	$0\frac{1}{4}$	0.02
0	$\frac{1}{2}$	"	$0\frac{1}{2}$	0.03
0	$\frac{3}{4}$	"	$0\frac{3}{4}$	0.05
0	1	"	1	0.06
0	$1\frac{1}{4}$	"	$1\frac{1}{4}$	0.08
0	$1\frac{1}{2}$	"	$1\frac{1}{2}$	0.09
0	$1\frac{3}{4}$	"	$1\frac{3}{4}$	0.11
0	2	"	2	0.13 or 0.12
0	$2\frac{1}{4}$	"	$2\frac{1}{4}$	0.14
0	$2\frac{1}{2}$	"	$2\frac{1}{2}$	0.16
0	$2\frac{3}{4}$	"	$2\frac{3}{4}$	0.17
0	3	"	3	0.19
0	$3\frac{1}{4}$	"	$3\frac{1}{4}$	0.20
0	$3\frac{1}{2}$	"	$3\frac{1}{2}$	0.22
0	$3\frac{3}{4}$	"	$3\frac{3}{4}$	0.23

* Approval withdrawn on 15th July, 1971

30/7/71

<u>Weight</u>		<u>Unit Price</u>	<u>Ticket</u>		
lb	oz	\$	lb	oz	\$
0	4	1.00		4	0.25
0	4 $\frac{1}{4}$	"		4 $\frac{1}{4}$	0.27
0	4 $\frac{1}{2}$	"		4 $\frac{1}{2}$	0.28
0	4 $\frac{3}{4}$	"		4 $\frac{3}{4}$	0.30
0	5	"		5	0.31
0	5 $\frac{1}{4}$	"		5 $\frac{1}{4}$	0.33
0	5 $\frac{1}{2}$	"		5 $\frac{1}{2}$	0.34
0	5 $\frac{3}{4}$	"		5 $\frac{3}{4}$	0.36
0	6	"		6	0.38 or 0.37
0	6 $\frac{1}{4}$	"		6 $\frac{1}{4}$	0.39
0	6 $\frac{1}{2}$	"		6 $\frac{1}{2}$	0.40
0	6 $\frac{3}{4}$	"		6 $\frac{3}{4}$	0.42
0	7	"		7	0.44
0	7 $\frac{1}{4}$	"		7 $\frac{1}{4}$	0.45
0	7 $\frac{1}{2}$	"		7 $\frac{1}{2}$	0.47
0	7 $\frac{3}{4}$	"		7 $\frac{3}{4}$	0.48
0	8	"		8	0.50
0	8 $\frac{1}{4}$	"		8 $\frac{1}{4}$	0.52 or 0.51
0	8 $\frac{1}{2}$	"		8 $\frac{1}{2}$	0.53
0	8 $\frac{3}{4}$	"		8 $\frac{3}{4}$	0.55
0	9	"		9	0.56
0	9 $\frac{1}{4}$	"		9 $\frac{1}{4}$	0.58
0	9 $\frac{1}{2}$	"		9 $\frac{1}{2}$	0.59
0	9 $\frac{3}{4}$	"		9 $\frac{3}{4}$	0.61
0	10	"		10	0.63 or 0.62
0	10 $\frac{1}{4}$	"		10 $\frac{1}{4}$	0.64
0	10 $\frac{1}{2}$	"		10 $\frac{1}{2}$	0.66
0	10 $\frac{3}{4}$	"		10 $\frac{3}{4}$	0.67
0	11	"		11	0.69
0	11 $\frac{1}{4}$	"		11 $\frac{1}{4}$	0.70
0	11 $\frac{1}{2}$	"		11 $\frac{1}{2}$	0.72
0	11 $\frac{3}{4}$	"		11 $\frac{3}{4}$	0.73
0	12	"		12	0.75
0	12 $\frac{1}{4}$	"		12 $\frac{1}{4}$	0.77 or 0.76
0	12 $\frac{1}{2}$	"		12 $\frac{1}{2}$	0.78
0	12 $\frac{3}{4}$	"		12 $\frac{3}{4}$	0.80
0	13	"		13	0.81
0	13 $\frac{1}{4}$	"		13 $\frac{1}{4}$	0.83
0	13 $\frac{1}{2}$	"		13 $\frac{1}{2}$	0.84
0	13 $\frac{3}{4}$	"		13 $\frac{3}{4}$	0.86

<u>Weight</u>		<u>Unit Price</u>	<u>Ticket</u>		
lb	oz	\$	lb	oz	\$
0	14	1.00		14	0.88 or 0.87
0	14 $\frac{1}{4}$	"		14 $\frac{1}{4}$	0.89
0	14 $\frac{1}{2}$	"		14 $\frac{1}{2}$	0.91
0	14 $\frac{3}{4}$	"		14 $\frac{3}{4}$	0.92
0	15	"		15	0.94
0	15 $\frac{1}{4}$	"		15 $\frac{1}{4}$	0.95
0	15 $\frac{1}{2}$	"		15 $\frac{1}{2}$	0.97
0	15 $\frac{3}{4}$	"		15 $\frac{3}{4}$	0.98
1	0	"	1	0	1.00
2	0	"	2	0	2.00
3	0	"	3	0	3.00
4	0	"	4	0	4.00
5	0	"	5	0	5.00
6	0	"	6	0	6.00
7	0	"	7	0	7.00
8	0	"	8	0	8.00
9	0	"	9	0	9.00
9	15 $\frac{3}{4}$	"	9	15 $\frac{3}{4}$	9.98
9	15 $\frac{3}{4}$	1.99	9	15 $\frac{3}{4}$	19.87
9	15 $\frac{3}{4}$	2.99	9	15 $\frac{3}{4}$	29.85
10	0	2.99	No ticket printed		
1	0	0.01	1	0	0.01
1	0	0.11	1	0	0.11
1	0	0.22	1	0	0.22
1	0	0.33	1	0	0.33
1	0	0.44	1	0	0.44
1	0	0.55	1	0	0.55
1	0	0.66	1	0	0.66
1	0	0.77	1	0	0.77
1	0	0.88	1	0	0.88
1	0	0.99	1	0	0.99
1	0	1.11	1	0	1.11
1	0	1.22	1	0	1.22
1	0	1.33	1	0	1.33
1	0	1.44	1	0	1.44
1	0	1.55	1	0	1.55
1	0	1.66	1	0	1.66
1	0	1.77	1	0	1.77
1	0	1.88	1	0	1.88
1	0	1.99	1	0	1.99

<u>Weight</u>		<u>Unit Price</u>	<u>Ticket</u>		
lb	oz	\$	lb	oz	\$
1	0	2.11	1	0	2.11
1	0	2.22	1	0	2.22
1	0	2.33	1	0	2.33
1	0	2.44	1	0	2.44
1	0	2.55	1	0	2.55
1	0	2.66	1	0	2.66
1	0	2.77	1	0	2.77
1	0	2.88	1	0	2.88
1	0	2.99	1	0	2.99

<u>Weight</u>		<u>Unit Price</u>	<u>Ticket</u>
lb	oz	\$	
minus	0 $\frac{1}{4}$		No ticket printed
"	0 $\frac{1}{2}$		"
"	0 $\frac{3}{4}$		"
"	1		"
"	1 $\frac{1}{4}$		"
"	1 $\frac{1}{2}$		"
"	1 $\frac{3}{4}$	Set by tare knob	"
"	2		"
"	2 $\frac{1}{4}$		"
"	2 $\frac{1}{2}$		"
"	2 $\frac{3}{4}$		"
"	3		"

GENERAL

Notice of approval of the pattern and variants described in this Certificate was given in Memorandum of Approval No 94 dated 15th December, 1967.

FIGURE 6/4D/17 - 1



Anker-Bizerba Model EWP

30/7/71

FIGURE 6/4D/17 - 2

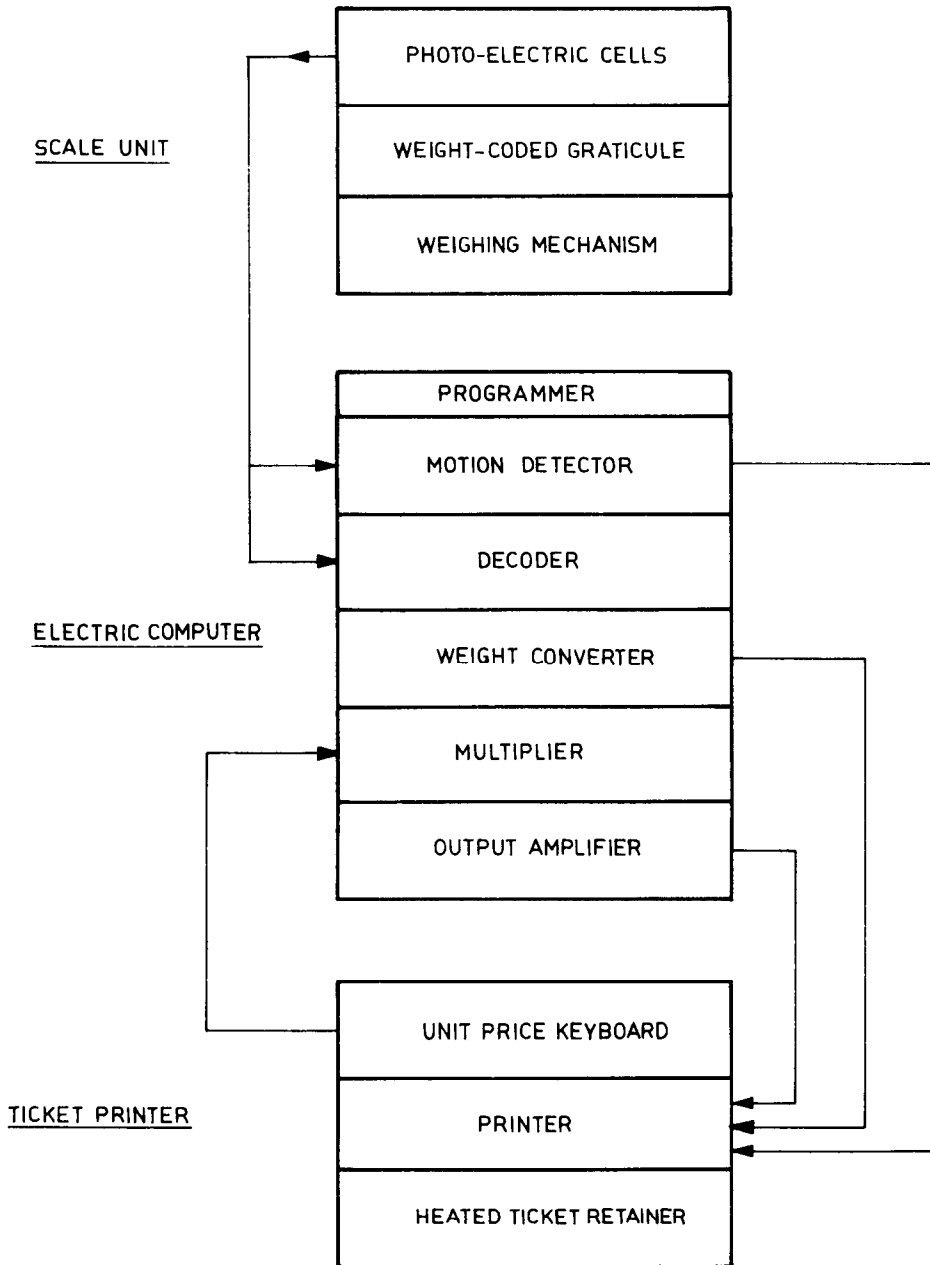
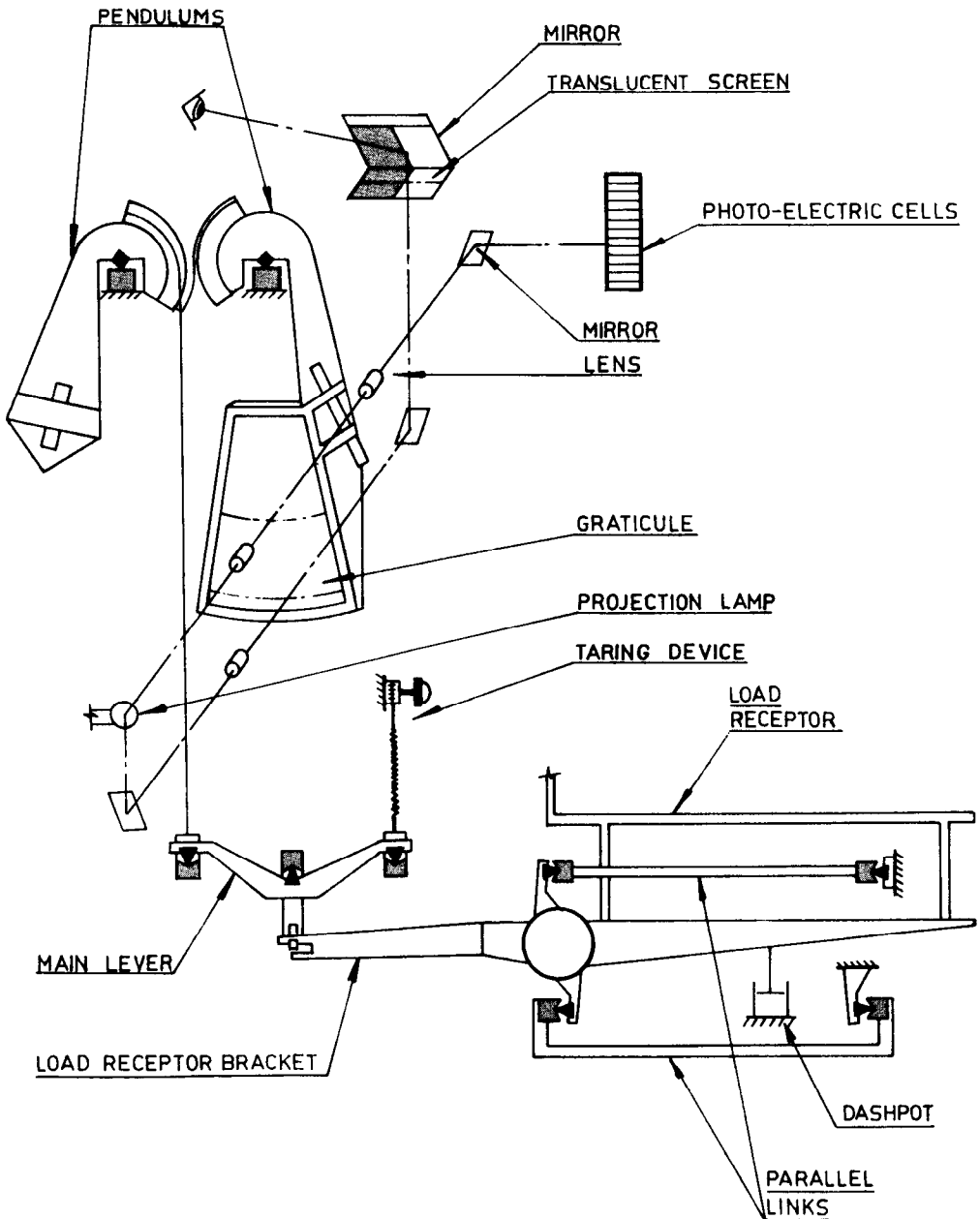


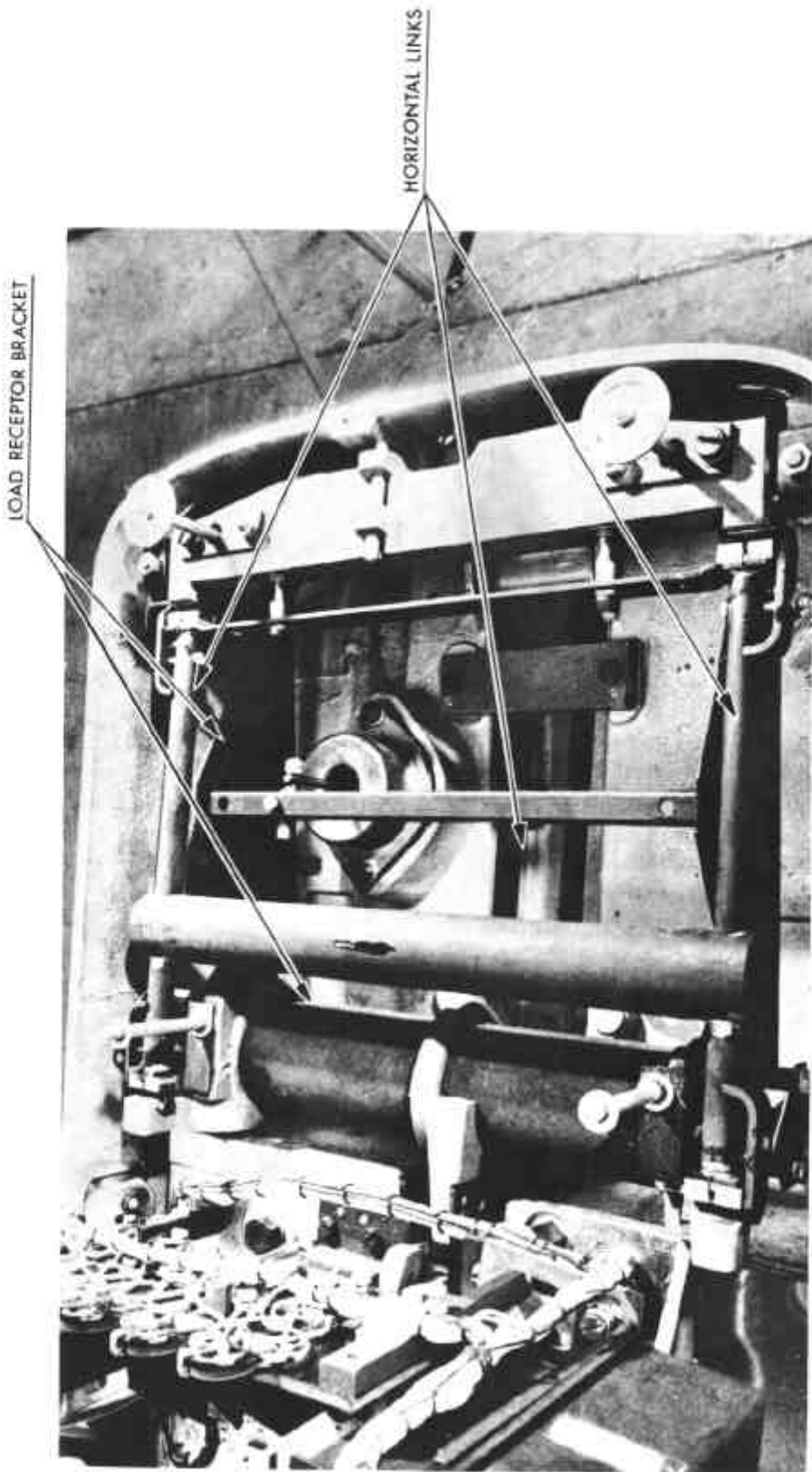
FIGURE 6/4D/17 - 3



Anker-Bizerba Model EWP — Lever Mechanism,
Optical-projection System and Resistant Mechanism

30/7/71

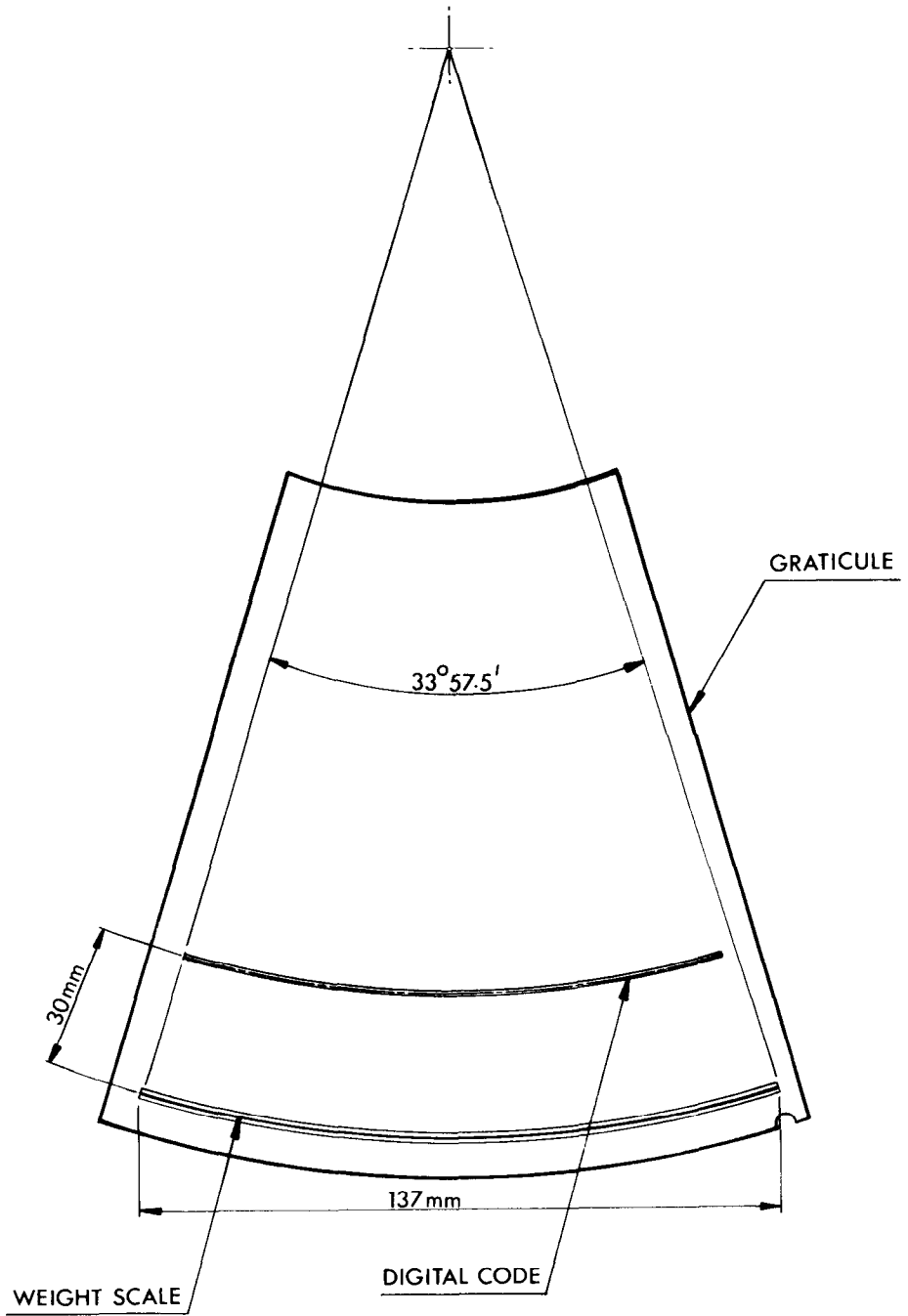
FIGURE 6/4D/17 - 4



Basework

30/7/71

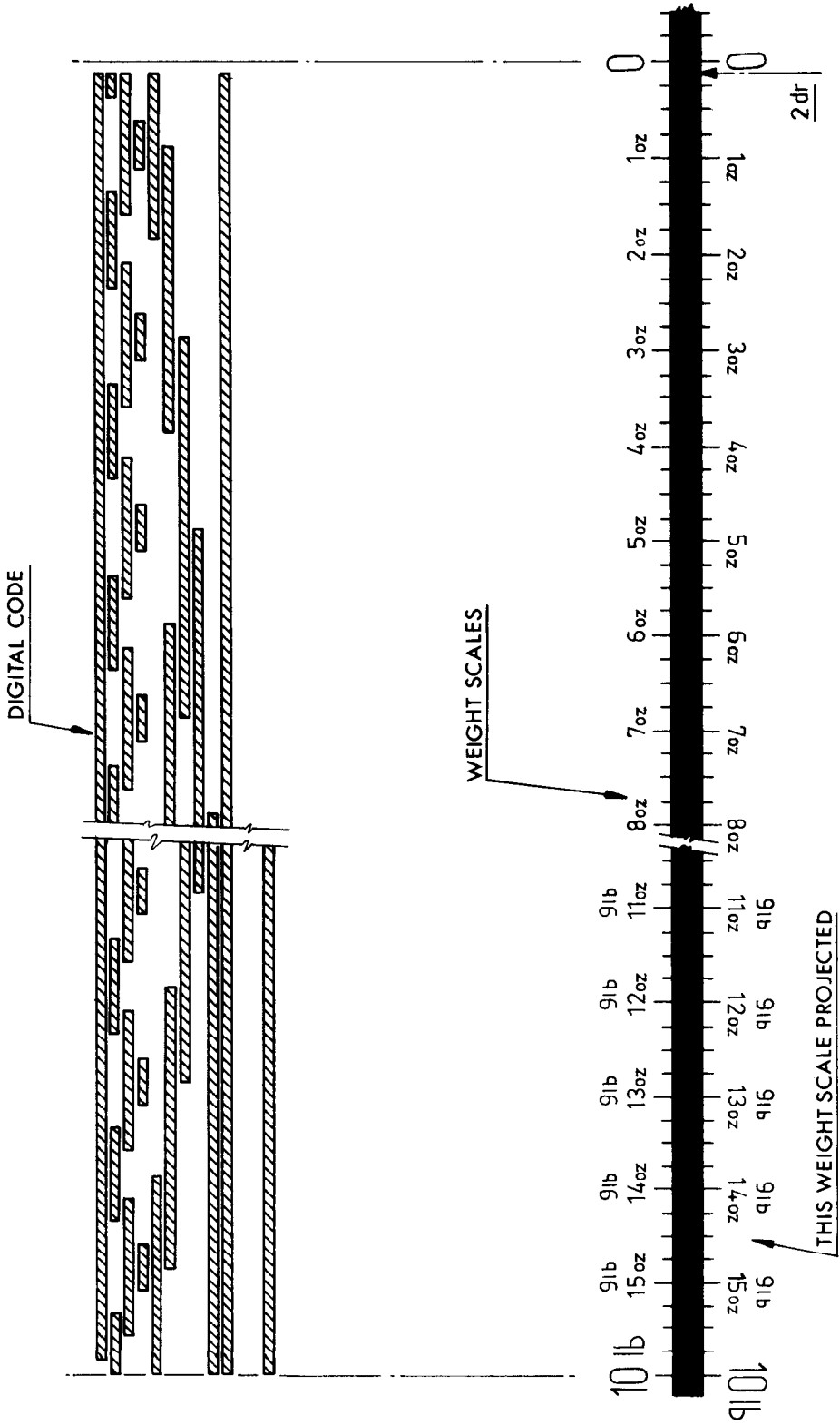
FIGURE 6/4D/17 - 5



Graticule

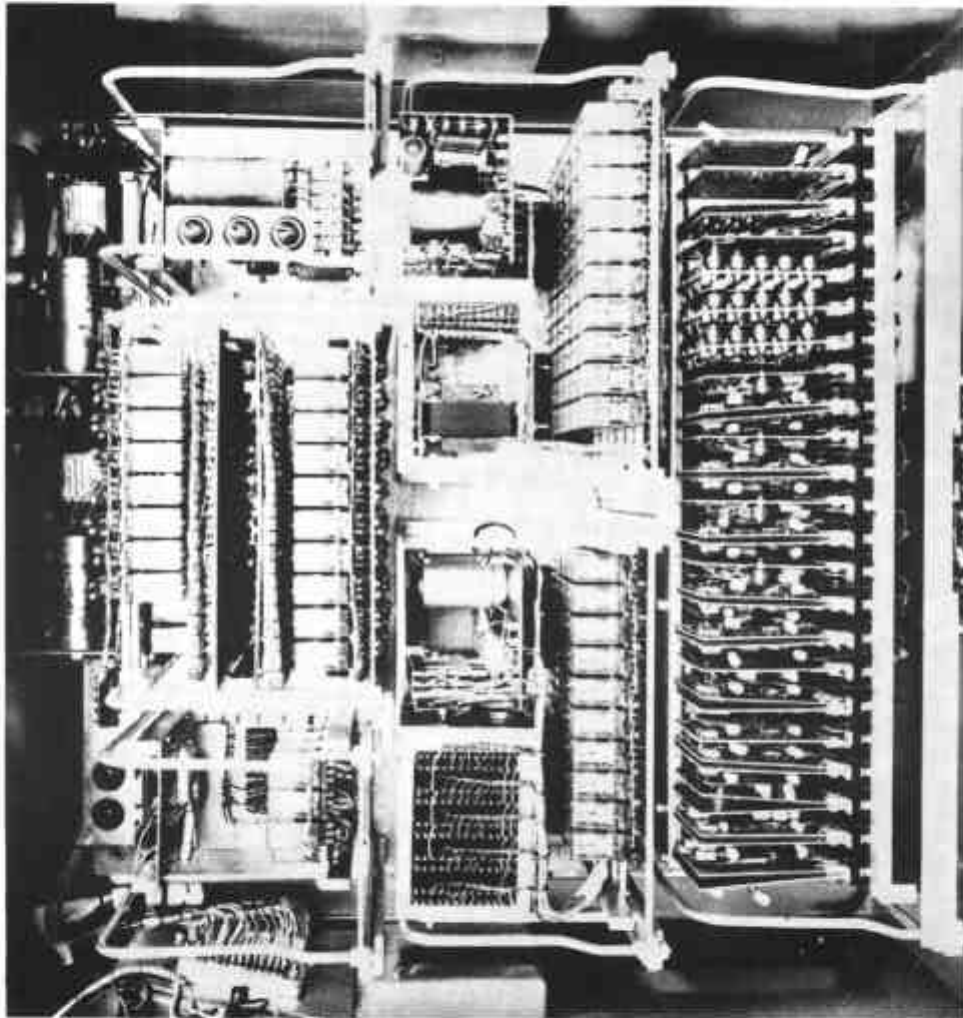
30/7/71

FIGURE 6/4D/17 - 6

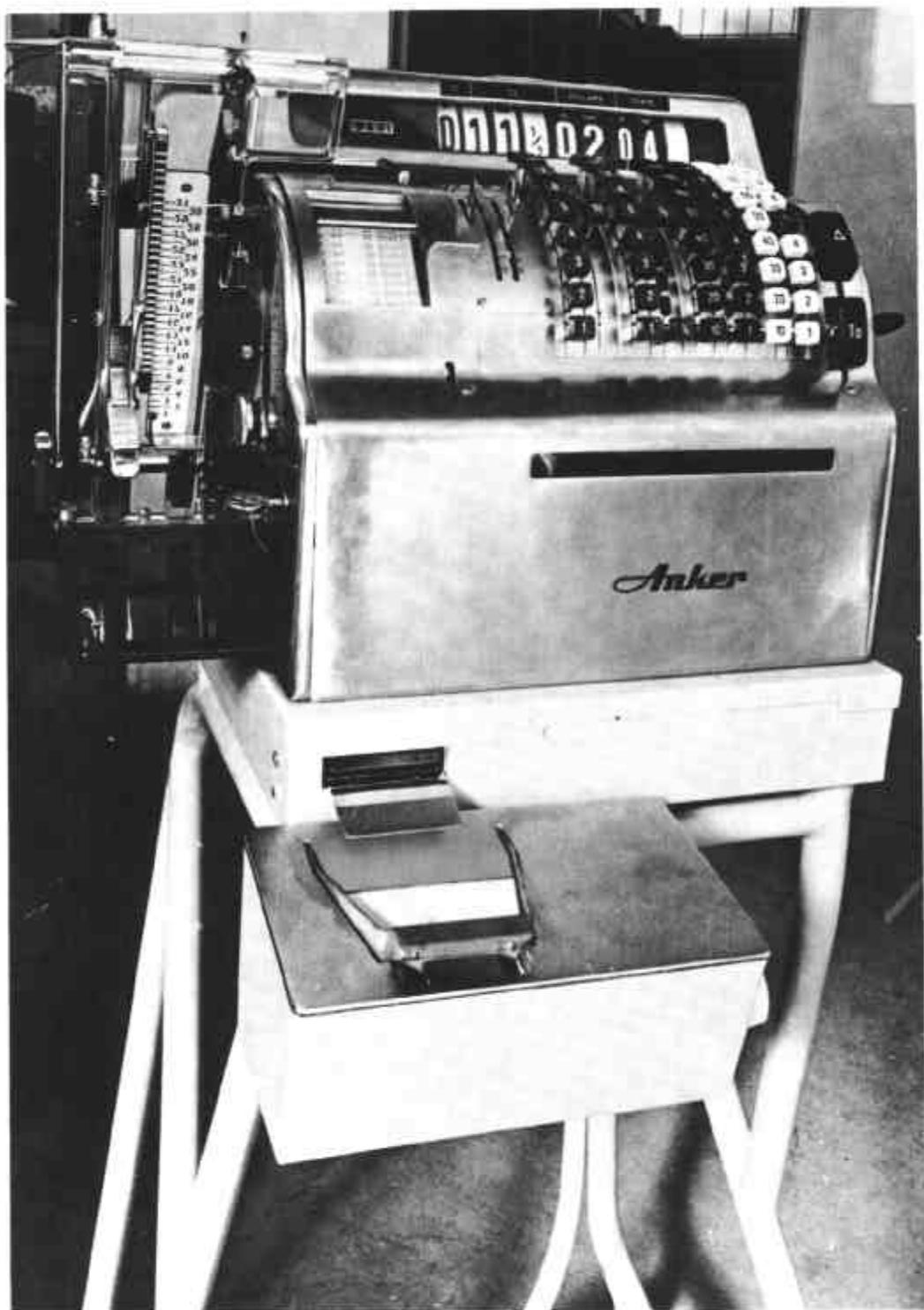


Weight Scale and Digital Code

FIGURE 6/4D/17 - 7



Electric Computer with Cover Removed



Ticket Printer

30/7/71

FIGURE 6/4D/17 - 9

PRODUCT INFORMATION

PRICE/LB	NET WT	TOTAL PRICE
DOLLARS	LB OZ	DOLLARS

(a) BEFORE PRINTING

PRODUCT INFORMATION

PRICE/LB	NET WT	TOTAL PRICE
0.96	2 ³ / ₄	2.20
DOLLARS	LB OZ	DOLLARS

(b) AFTER PRINTING