CAPECRAFT LIMITED
WARWICK - ENGLAND
CATALOGUE

TELEPHONES
WARWICK 774-5

TELEGRAMS
"CAPABILITY" WARWICK
THE 'JUNIOR' CABINET RESPIRATOR
(Alligator Model)

THE 'SENIOR' CABINET RESPIRATOR
(Alligator Model)

Designed to meet modern medical, nursing and patient requirements from research and development carried out by Capt. G. T. Smith-Clarke, M.I.Mech.E., F.R.Ae.S., this equipment has been clinically tested and is in current production for early delivery.
THE "SENIOR"
SMITH-CLARKE CABINET RESPIRATOR
PATENT No. 739,850. DESIGN REG. No. 873,172.
(Alligator Model)

Manufactured and Marketed by
THE CAPE ENGINEERING COMPANY LIMITED
WARWICK ENGLAND

Telephones
WARWICK 774-775

Telegrams
"CAPABILITY" WARWICK
THE "SENIOR"
SMITH-CLARKE CABINET RESPIRATOR
AND PUMP UNIT
(Alligator Model)

Fig. 1

General view of Respirator and Pump Unit complete with the following fittings:

Positive Pressure Breathing Attachment to Main Pump with Valve Control Box, Diaphragm Valve and Face Mask.
Cabinet for Spare Collars, Etc.
Reading Tray,
Adjustable Mirror,
Latex Mattress and Head Pillow.
GENERAL DESCRIPTION AND SPECIFICATION

CABINET CONSTRUCTION

The stand is of heavy gauge aluminium tubing mounted on four rubber tyred castors, each fitted with locking mechanism. The fixed portion of the cabinet carrying the bed frame is of heavy gauge aluminium sheet and the "Alligator" top is a one-piece shell. The cabinet is light in weight, yet extremely sturdy and free from deflection under maximum negative pressure. The whole assembly is finished in off-white and all bright parts are either chromium plated or of stainless steel.

PRESSURE CONTROLS

A negative pressure control is fitted at the foot-end of the cabinet near the connection of the pump hose. A positive pressure control is fitted to the top plate of the pump unit.

RESPIRATOR FRONT

The respirator front is "split," and the top and bottom halves form an obtuse angle at the neck line allowing the patient to lie either supine or prone.

The slope of the bottom tray (carrying lower half collar) has been made vertical. The slope of the Alligator top (carrying top half collar) is 30 degrees, thus providing considerable freedom for the patient's chin and improved vision for the patient.

A special feature of the Alligator top, which is constructed in aluminium, is that special orders can be accepted for variation of 30 degrees slope to suit individual preference of particular Polio Centres.

DEPRESSION PLATE

A Depression Plate is provided to give increased clearance in cases of tracheotomy. See Fig. II.

HEAD REST

The pillow rest is adjustable, with a vertical range of 6ins. and a horizontal range (parallel to the cabinet) of 7ins. The pillow rest is hinged and can be lowered away completely from the patient's head should this be necessary (for Bronchoscopy or similar procedures).
NECK SEAL COLLARS

Three alternative collar arrangements are available:

Split Half Collars (similar to modified "Both" Type). Fig. IV.

One Piece Collars with zip fasteners (similar to unmodified "Both" Type).

One Piece Collars with Cape "wrap-over" joint. Fig. III.

The overall size of the collars is such as to allow ample flexibility and to enable a "Depression Plate" to be fitted for use in cases of tracheotomy.

The collars are attached to the respirator by four quick action clamps. The lower section with a half collar plate and the top half by special quarter yoke "Gates" which Fig. III readily clamp either type of collar in any desired position.

The collar attachment is such that collar thicknesses of \( \frac{1}{4} \) in. up to 1 \( \frac{1}{2} \) in. can be accommodated and this overcomes the difficulties experienced in the past on some types of respirators when replacement supplies of collars vary in thickness.

SHOULDER RAISING GEAR

The shoulder-end of the mattress platform is adjustable by two hand wheels (outside the cabinet) providing an adjustment range of 4 ins.

POSITIVE PRESSURE BREATHING ATTACHMENT

An auxiliary bellows is fitted to the pump top plate for occasional or continual use. These bellows are connected to a valve control box with an adjustable valve and a "dead weight" safety valve by anti-static flexible tubing: the outlet from the valve control box providing a supply of air to a face mask via an improved type of diaphragm valve. The positive pressure is supplied in "phase" with the main pump. This makes it possible to apply the face mask before opening the respirator for nursing purposes.
MATTRESS

Alternative mattresses are now available as follows:

A 4in. Medium and Hard Density sandwich mattress (Providing a 2in. firm base with a 2in. softer top).

B 4in. Medium density Dunlopillo (as fitted to most existing respirators).

C 3in. Hard density mattress (recommended by the Mattress Manufacturers for heavy patients who have to lie in respirators for prolonged periods).

Type "B" is supplied unless type "A" or "C" are specially requested.

FOOTREST

A footrest is provided over the full mattress width, giving adjustment longitudinally over a range from 3ft. 6in. to 6ft. 6in. from the head end of the bed. The footrest is adjustable for rake and height and adjustable wings are fitted to provide side support for the feet. (Fig. V).

PRESSURE GAUGE

A dial pressure gauge is fitted with a scale calibrated from minus 35 c.m. to plus 20 c.m. water gauge.

CLAMPS

The "Alligator" cabinet top sits snugly in a rubber seal when in the closed position and is secured by two quick action clamps which provides a perfect seal under negative and positive conditions—a special feature being that the seal is in one plane only, thus ensuring equal sealing pressure under all conditions.

ARMPORTS

Four port holes with air tight lids, hinged at the bottom and fastened at the top by a quick release catch providing a positive lock to hand hole covers, are fitted to each side of the respirator.

Fig. V

Fig. VI
TILTING MECHANISM

Tilting Mechanism allows a cabinet adjustment from 10 degrees head up to 25 degrees head down. (The point of pivot is brought nearer to the head end of the cabinet, so that when in the "head down" position the patient's head is only a few inches below normal level). (Fig. VII).

ALARM

An alarm is fitted with a dry battery which operates an alarm bell and red light signal if "breathing" ceases or negative pressure is reduced, either on account of electricity breakdown, pump failure, armports left open, etc.

LIGHTING AND HEATING

Two internal tungsten strip lights are fitted with individual switches: these also provide the necessary heating.

PUMP UNIT

A separate pump unit is supplied which completely eliminates vibration from the respirator cabinet. Speed variations are provided by fixed five-speed pulleys giving breathing rates of 13, 16, 19, 22 and 25 per minute. The pump is of the bellows type closely following the design already in use on the "Both" respirators, but is fitted with a cross head lever slide drive in place of the usual connecting rod. This not only reduces the "thump" noticeable at the top and bottom of pump stroke, but gives a smoother breathing pattern which very closely approximates normal breathing. Manual operation in case of power failure is simple and instantaneous. The only operation necessary is a pull and turn of a plunger (which is not a loose part and therefore cannot be lost) connecting T handle when hand pumping can be commenced immediately. When power is resumed and the motor restarts, the plunger can be released by a half turn and mechanical pumping is engaged without any pause in the "breathing" action.

Motors to operate from a 230 volt A.C. 50 cycle supply are normally supplied.

THIS PUMP UNIT PROVIDES AN INTERCHANGEABLE REPLACEMENT UNIT FOR "BOTH" TYPE RESPIRATORS BUT A "BOTH" PUMP HAS INSUFFICIENT CAPACITY TO OPERATE A SMITH-CLARKE RESPIRATOR.
ACCESSORIES (Included in Standard Specification)

A Cabinet is provided for storing spare collars etc.
A polished perspex Reading Tray which can be quickly removed when not required.
An Adjustable Mirror.
A 4in. Mattress—medium density.
A Latex Pillow.
A Plastic Case for Mattress.
A Plastic Case for Pillow.
A Depression Plate.
Four Rubber Bungs for drip therapy apertures.
Two Rubber Bungs with drip tube inserted.
One set of Split Half Collars.
One set of One Piece Collars with zip fasteners.
One set of "Cape" One Piece Collars with "Wrap over" joint.

SPECIFICATION

RESPIRATOR—Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum length (over hinges and pillow rest)</td>
<td>8ft. 7ins.</td>
</tr>
<tr>
<td>Maximum width (valve control box removed)</td>
<td>3ft. 1in.</td>
</tr>
<tr>
<td>Height (top closed)</td>
<td>4ft. 4ins.</td>
</tr>
<tr>
<td>Height (top fully open)</td>
<td>9ft. 0ins.</td>
</tr>
<tr>
<td>Mattress width—head end</td>
<td>27ins.</td>
</tr>
<tr>
<td>Mattress width—foot end</td>
<td>18ins.</td>
</tr>
<tr>
<td>Mattress length</td>
<td>70ins.</td>
</tr>
<tr>
<td>Mattress height from ground (Normal position)</td>
<td>34ins.</td>
</tr>
<tr>
<td>Weight complete (Nett)</td>
<td>4 cwts. 1 qtr.</td>
</tr>
</tbody>
</table>

PUMP UNIT—Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>39ins.</td>
</tr>
<tr>
<td>Diameter</td>
<td>29ins.</td>
</tr>
<tr>
<td>Weight complete (Nett)</td>
<td>2 cwts. 15 lbs.</td>
</tr>
</tbody>
</table>

SHIPPING SPECIFICATION

PACKED

For export shipment and delivery outside 100 miles radius the equipment can be packed in strongly constructed wooden cases as follows:

<table>
<thead>
<tr>
<th>RESPIRATOR</th>
<th>PUMP UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>8ft. 0ins.</td>
</tr>
<tr>
<td>Width</td>
<td>3ft. 8ins.</td>
</tr>
<tr>
<td>Height</td>
<td>5ft. 0ins.</td>
</tr>
<tr>
<td>Gross weight</td>
<td>11 cwts.</td>
</tr>
<tr>
<td></td>
<td>2ft. 9ins.</td>
</tr>
<tr>
<td></td>
<td>2ft. 8ins.</td>
</tr>
<tr>
<td></td>
<td>3ft. 9ins.</td>
</tr>
<tr>
<td></td>
<td>4 cwts. 1 qtr.</td>
</tr>
</tbody>
</table>

Note.—The specification detailed in this Brochure is in general terms only and equipment actually supplied may vary in detail from the illustration. Prices should be confirmed at time of ordering.
IN ADDITION TO THE EQUIPMENT DESCRIBED IN THIS BROCHURE THE COMPLETE RANGE OF BREATHING EQUIPMENT DESIGNED TO MEET MODERN MEDICAL, NURSING AND PATIENT REQUIREMENTS FROM RESEARCH AND DEVELOPMENT CARRIED OUT BY CAPTAIN SMITH-CLARKE, M.I.MECH.E., F.R.AE.S. NOW COMPRISSES THE FOLLOWING:

“JUNIOR” CABINET RESPIRATOR (ALLIGATOR MODEL).

“BABY” CABINET RESPIRATOR (ALLIGATOR MODEL).

MECHANICAL RESPIRATOR for Intermittent Positive or Positive/Negative Pressure Ventilation.

ROCKING BED with or without Positive Pressure Breathing Attachment.

“SENIOR” PUMP as an interchangeable replacement Unit for “Both” Type Respirators.

POSITIVE PRESSURE BREATHING ATTACHMENT for Cabinet Respirators.

HUMIDIFIER for use with Positive Pressure Breathing Machines and Equipment.

DIAPHRAGM VALVE for use with Positive Pressure Respiration.

CUIRASS PUMP UNIT.

CUIRASS ADAPTOR for fitting to “Both” type Pumps.

SUCTION PUMP (foot operated).
THE "JUNIOR"
SMITH-CLARKE CABINET RESPIRATOR
PATENT No. 739850.
(Alligator Model)

Manufactured and Marketed by
THE CAPE ENGINEERING COMPANY LIMITED
WARWICK
ENGLAND

Telephones
WARWICK 774-775

Telegrams
"CAPABILITY" WARWICK
SMITH-CLARKE "JUNIOR" CABINET RESPIRATOR
(ALLIGATOR MODEL)

GENERAL VIEW OF RESPIRATOR

"ALLIGATOR" TOP OPEN, SHOWING WRAP OVER COLLAR RELIEVED FROM PATIENT'S NECK

VIEW SHOWING "HEAD DOWN" TILT
GENERAL DESCRIPTION AND SPECIFICATION

GENERAL CONSTRUCTION

This respirator has been introduced to meet the demand for a respirator to take children up to 6 or 7 years of age.

The Cabinet carrying the mattress is a scaled down version of the Smith-Clarke "Senior" Cabinet Respirator (Alligator Model) and such parts as Armports, Toggle Fasteners, Collar Clamps, Pressure Control Valves, etc. are common parts, therefore facilitating the supply of spares when required.

The Alligator top is counterbalanced and therefore cannot be accidentally dropped when opened for nursing. The cabinet is attached by hinges and tilting mechanism to a strongly constructed angle iron framework which is mounted on four rubber tyred castors and totally enclosed with panelling. The whole assembly is finished in off-white and all bright parts are either chromium plated or of stainless steel.

PRESSURE CONTROLS

A negative pressure control with ratchet adjustment is fitted at the foot end of the cabinet. A positive pressure control with screw adjustment is fitted to the top plate of the pump unit with access through the side panelling.

RESPIRATOR FRONT

The respirator front is "split" and the top and bottom halves form an obtuse angle at the neck line allowing the patient to lie either supine or prone.

The slope of the Alligator top is 30 degrees, thus providing considerable freedom of the patient's chin and improved vision for the patient.

DEPRESSION PLATE

A Depression Plate is provided to give increased clearance in cases of tracheotomy.

HEAD REST

A canvas sling type of head rest is provided with a loose latex pillow.

NECK SEAL COLLARS

The "Cape Wrap over" type of collar as used on the "Senior" Respirator is provided in five sizes. The neck aperture sizes being of 2in., 2\(\frac{1}{4}\)in., 3in., 3\(\frac{1}{4}\)in. and 4in. diameter.

FOOTREST

A footrest is provided over the full mattress width, giving adjustment longitudinally over a range from 28ins. to 33ins. from the head end of the bed. Alternatively the footrest can be removed to use the maximum mattress length of 40in.
PRESSURE GAUGE

A dial pressure gauge is fitted with a scale calibrated from minus 35 cms. to plus 20 cms.

CLAMPS

The "Alligator" cabinet top sits snugly in a rubber seal when in the closed position and is secured by two quick action clamps which provides a perfect seal under negative and positive conditions—a special feature being that the seal is in one plane only, thus ensuring equal sealing pressure under all conditions.

ARMPORTS

Two port holes with airtight lids, hinged at the bottom and fastened at the top by a quick release catch providing a positive lock to hand hole covers are fitted to each side of the respirator.

TILTING MECHANISM

The respirator can be tilted to an angle of 20 degrees head down for postural drainage.

PUMP UNIT

A bellows type of pump unit is mounted under the cabinet and concealed behind the paneling.

Speed variations are provided by fixed 5-speed pulleys giving breathing rates of 16, 20, 24, 28 and 32 per minute. Manual operation for emergency use is simple and instantaneous.

Motors to operate from a 230 volt A.C. 50 cycle supply are normally supplied.

ACCESSORIES (Included in Standard Specification)

An adjustable Mirror.
A 2in. Mattress—medium density.
A Latex Pillow.
A Plastic Case for Pillow.
A Plastic Case for Mattress.
A Depression Plate.
One set of five sizes of "Cape Wrap over" one piece Collars.

SPECIFICATION—Dimensions

<table>
<thead>
<tr>
<th>Dimension Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum length (over balance weights and pillow rest)</td>
<td>72½ ins.</td>
</tr>
<tr>
<td>Maximum width (hand pumping and tilting handles removed)</td>
<td>23½ ins.</td>
</tr>
<tr>
<td>Height (top closed)</td>
<td>56½ ins.</td>
</tr>
<tr>
<td>Height (top fully open)</td>
<td>82 ins.</td>
</tr>
<tr>
<td>Mattress length</td>
<td>40 ins.</td>
</tr>
<tr>
<td>Mattress width</td>
<td>16½ ins.</td>
</tr>
<tr>
<td>Mattress height from ground</td>
<td>37½ ins.</td>
</tr>
<tr>
<td>Weight complete nett</td>
<td>4 cwt. 2 qtrs.</td>
</tr>
</tbody>
</table>

Note.—The specification detailed in this Brochure is in general terms only and equipment actually supplied may vary in detail from the illustration. Prices should be confirmed at time of ordering.

THE
"SMITH-CLARKE"
MECHANICAL RESPIRATOR
FOR
INTERMITTENT POSITIVE PRESSURE OR
POSITIVE/NEGATIVE PRESSURE VENTILATION

Manufactured and Marketed by
THE CAPE ENGINEERING COMPANY LIMITED
WARWICK ENGLAND

Telephones
WARWICK 774-775

Telegrams
"CAPABILITY" WARWICK
THE

"SMITH-CLARKE" MECHANICAL RESPIRATOR

The apparatus is supplied complete as illustrated
GENERAL DESCRIPTION AND SPECIFICATION

GENERAL CONSTRUCTION

This apparatus has been developed to provide Positive/Negative, or Intermittent Positive Pressure Ventilation and to be reliable and efficient on either system. It is constructed to the designs of Captain G. T. Smith-Clarke, M.I.Mech.E., F.R.Ae.S. and was fully described in the Lancet—G. T. Smith-Clarke—J. F. Galpine, 25th June, 1955.

The apparatus is built in two tiers and is mounted on anti-static castors. The upper tier comprises the pumps, control gear, the driving motor and gear boxes and the completely mechanical inspiratory and expiratory valves, with the mechanism for easy and efficient manual operation in the event of power failure. The lower tier carries the humidifier, the negative pressure vessel and the dry spirometer; a parking place for the handle used for manual operation is provided.

Motors to operate from a 230 volt A.C. 50 cycle supply are normally supplied.

CONTROLS

Positive Pressure Control. The transverse lever controls the volume of air (or air/oxygen mixture) pumped to the valve box at each stroke of the pump. This control is obtained by varying the stroke of the positive pressure pump, and is calibrated in stages from 200 c/cms to 1,500 c/cms. The calibration represents air at atmospheric pressure delivered through the inspiratory valve to the valve box.

Motor Drive and Hand Operation Control. The rear position of the lever is the normal one for motor drive and the forward position is for manual operation in the event of power supply, motor or other failure.

Breathing Rate Speed Control. This wheel controls the stepless speed variations and provides for breathing rates of from 10 to 40 per minute. A calibrated scale is provided and the control wheel can be locked in any intermediate position. For following the breathing efforts of a recovering patient the control can be placed in any position desired.

Negative Pressure Control. When the control is set to MINIMUM, negative pressure is zero, and in this position resistance to expiration (when using I.P.P.) is also practically zero. Negative pressure is provided by a separate pump. Pressure is built up by turning the control towards maximum, the value being read on the compound pressure gauge which records pressure in the valve box.

Mains "On" Indicator. An indicator is fitted which glows with a red light when the mains are "on."
VALVE MECHANISM

Mechanically Operated Inspiratory/Expiratory Valve. The valve mechanism comprises two stainless steel poppet valves (inspiratory and expiratory) working in a housing of hard bronze. They are closed by springs and operated by cams, and timed so as not to be open together however fractionally. The valve box is built into the side of the cabinet so that the minimum possible length of tube is necessary to join it to the trachea tube connection; this with the very small volume of the valve box reduces the "dead air" between valve and patient to the least possible. The valve cams are designed to give a breathing pattern of Inspiration 1, Expiration 2. The inspiration period is 120° and the pressure stroke of the pump is 180°, thereby building up pressure before the inspiratory valve opens. This helps to overcome the inertia of the air in the humidifier and tubing and makes possible a "zero" period at the end of the expiration when I.P.P. alone is in use.

An alternative valve cover is supplied with "Y" piece to enable separate Inspiratory and Expiratory pipes to be used where this is preferred.

SHIPPING SPECIFICATION

UNPACKED:

Dimensions:

- Maximum length: 3' 0"
- Maximum width: 1' 8"
- Height overall: 3' 4"
- Weight complete (net): 175 lbs.

PACKED:

For export shipment and delivery outside 100 miles radius the equipment can be packed in a strongly constructed wooden packing case as follows.

- Length: 3' 9"
- Width: 2' 3"
- Height: 3' 9"
- Gross Weight: 280 lbs.

Note.—The specification detailed in this Brochure is in general terms only and equipment actually supplied may vary in detail from the illustration. Prices should be confirmed at time of ordering.

Leaflet C.6

Printed in England by A. Tomes Ltd., Leamington Spa.
This foot-operated Suction Pump has been introduced to provide an inexpensive strongly constructed pump entirely independent of power (Electrical, Compressed Gas or Water Pressure). It is therefore ideally suited for occasional or intermediate Ward use, for use in a house, an ambulance or in any emergency.

It consists of a spring return foot pump, suction being created in a metal cylinder of 750 c.c.m. capacity. The power of this pump is due to the large bore of the cylinder. A unidirectional non-corrodible ball valve and a rubber diaphragm suction release valve are housed in a casting forming a lid and pressure seal for the suction bottle. The bottle can be removed easily for emptying and the lid casting and valve assemblies can be sterilized. The complete assembly is finished in Hospital Cream paint and metal parts are plated against corrosion where necessary.

Size: Length 14½in.; Width 10in.; Height 17½in.; Weight Net 23½ lbs.

Manufactured and Marketed by
THE CAPE ENGINEERING COMPANY LIMITED
WARWICK ENGLAND

Telephones: Warwick 774-775.
IN ADDITION TO THE EQUIPMENT DESCRIBED IN THIS BROCHURE THE COMPLETE RANGE OF BREATHING EQUIPMENT DESIGNED TO MEET MODERN MEDICAL, NURSING AND PATIENT REQUIREMENTS FROM RESEARCH AND DEVELOPMENT CARRIED OUT BY CAPTAIN G. T. SMITH-CLARKE, M.I.MECH.E., F.R.Ae.S., NOW COMPRIZES THE FOLLOWING:

"SENIOR" CABINET RESPIRATOR (Alligator Model).

"JUNIOR" CABINET RESPIRATOR (Alligator Model).

"BABY" CABINET RESPIRATOR (Alligator Model).

MECHANICAL RESPIRATOR for Intermittent Positive Pressure or Positive Negative Pressure Ventilation.

ROCKING BED with or without Positive Pressure Breathing Attachment.

"SENIOR" PUMP as an interchangeable replacement Unit for "Both" Type Respirators.

POSITIVE PRESSURE BREATHING ATTACHMENT for cabinet Respirators.

HUMIDIFIER for use with Positive Pressure Breathing Machines and Equipment.

DIAPHRAGM VALVE for use with Positive Pressure Respiration.

CUIRASS PUMP UNIT.

CUIRASS ADAPTOR for fitting to "Both" Type Pumps.

Details of this equipment will gladly be forwarded upon request.

Note.—The specification detailed in this Brochure is in general terms only and equipment actually supplied may vary in detail from the illustration. Prices should be confirmed at time of ordering.

Leaflet C.8.
THE SMITH-CLARKE ROCKING BED

Manufactured and Marketed by
THE CAPE ENGINEERING COMPANY LIMITED
WARWICK ENGLAND

Telephones
WARWICK 774-775

Telegrams
"CAPABILITY" WARWICK
# THE SMITH-CLARKE ROCKING BED

![Image of the Smith-Clarke rocking bed](image)

## SPECIFICATION

<table>
<thead>
<tr>
<th>Specification</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum length</td>
<td>7ft. 3ins.</td>
</tr>
<tr>
<td>Maximum width (without positive pressure breathing attachment)</td>
<td>3ft. 6ins.</td>
</tr>
<tr>
<td>Height (Bed level)</td>
<td>3ft. 0ins.</td>
</tr>
<tr>
<td>Weight (Nett)</td>
<td>6cwt. 1qtr.</td>
</tr>
<tr>
<td>Mattress length</td>
<td>6ft. 10ins.</td>
</tr>
<tr>
<td>Mattress width</td>
<td>2ft. 4ins.</td>
</tr>
<tr>
<td>Mattress height from ground at centre (Bed level)</td>
<td>2ft. 2ins.</td>
</tr>
<tr>
<td>Rocking movement</td>
<td>0° to 20° head down 0° to 20° head up</td>
</tr>
<tr>
<td>Electric motor</td>
<td>1/2 h.p. 230 volts A.C. supply</td>
</tr>
</tbody>
</table>
GENERAL DESCRIPTION

INTRODUCTION

This apparatus has been developed as an aid to patients with impaired breathing capacity and meets the problem, in more severe cases, of transition from cabinet respirators or positive pressure machines. The apparatus is also useful in preventing kidney stone formation and bed sores in patients who have been confined to respirator or bed for long periods. Circulation is actively assisted and the freedom from restriction makes the patient more accessible for physiotherapy and exercise and also gives the muscles the best possible conditions for recovery.

GENERAL CONSTRUCTION

The main chassis is strongly constructed from welded steel angle with sufficient cross bracing to ensure freedom from distortion when the bed is operating on maximum "Rock." The chassis is mounted on four heavy duty rubber tyred castors each fitted with a simple foot operated locking device.

The bed frame is constructed from light alloy square tubing and supports the adjustable mattress frame which pivots to provide 90 degrees adjustment between knees and thighs and between thighs and trunk.

All working and moving parts are fully enclosed to provide a clean appearance and safety in operation. External parts are finished in off white high gloss paint or plated as appropriate.

ROCKING MECHANISM

The "Rock" is induced by a pivotal bearing block coupled by a connecting rod to a crank disc mounted on a gearbox. The gearbox is driven by an electric motor and belt drive via five speed stepped pulleys. The gearbox, motor and pulleys are common to those used on the Smith-Clarke Cabinet Respirator Pump Unit and provide "Breathing Rates" of 13, 16, 19, 22 or 25 per minute. The "Rock" is variable from zero to 40 degrees between head up and head down positions. A special feature of the bed is that the degree of rock can be adjusted throughout its range by a simple hand operation while the bed is operating, thus providing a smooth and gradual increase in the rocking action.
FOOTREST, BACKREST AND LEG SUPPORT

An adjustable footrest is fitted over the full width of the mattress and is easily adjustable for length. The angulation of the mattress at the head end is adjusted by a rack and stay and at the foot end by a quick acting hand wheel operated screw jack.

POSITIVE PRESSURE BREATHING

The Smith-Clarke Positive Pressure Breathing Attachment (Fig. II), providing a ready means of applying positive pressure through a face mask, can be incorporated on the apparatus at the time of ordering.

This assembly comprises rubber bellows connected to a sliding arm, coupled to the Rocking Mechanism. These bellows are connected to a valve control box with an adjustable pressure valve and a "dead weight" safety valve; the outlet from the valve control box providing a supply of air to a face mask via an improved type of diaphragm valve.

The positive pressure is synchronised and supplied "in phase" with the action of the Rocking Bed irrespective of the degree of "Rock."

Note.—The specification detailed in this Brochure is in general terms only and equipment actually supplied may vary in detail from the illustration. Prices should be confirmed at time of ordering.