WARNING / CAUTION

Switch off when not in use.

To prevent the corrosion of the handle, the battery should be removed when not in use. The instruments covered are distributed in non-stereile conditions and are for use only by trained persons fully conversant with their use.

1 General Introduction

Congratulations on buying a Gowlands product, our products comply with all up-to-date standards and are of high quality goods. Devices from Gowlands have been manufactured by skilled British workers for over a hundred years, whose specialty includes instruments used for examining ears, eyes, nose and throat of humans as well as small animals.

2 CONTENTS

The present set intended for examining the eye and ear, comprises the following:

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<th>Description</th>
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<td>Ophthalmoscope Head</td>
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<tr>
<td>V1-V2-V3</td>
<td>(three)</td>
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<td>43</td>
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<td>310</td>
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<tr>
<td>55</td>
<td>Ophthalmoscope Head</td>
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2 INITIAL EXAMINATION

When the set is first received, it should be checked externally for damage; and then the case should be opened and a check should be made that all the components listed above are present.

Then a preliminary check should be carried out on the electrical functioning of the instruments. For this purpose, see Section 3-C describing how the battery handle is used in conjunction with the various instruments; it will then be possible to check that both instruments function correctly.

3-A OPHTHALMOSCOPE CAT NO #55

The Ophthalmoscope is used for examination of the fundus (retina) of the eye.

3-A-1 Operation of Instrument

Insert the pin contact of the ophthalmoscope head into the top of the battery handle and tighten the thumbscrew. Rotating the black rotary control on the top of the battery handle in an anti-clockwise direction gradually increases the intensity of illumination up to maximum (see Section 3-C).

3-A-2 Use of Retinoscopic Disc

This contains a range of lenses whose powers vary from minus 40 dioptres to plus 25 dioptres. These are used to compensate for refractive errors in both doctor and patient. Once the correct dioptic power has been selected, by rotating the wheel until optimum results are obtained, a clear view of the optic disc and the associated blood vessels will be obtained. An indicator showing the dioptic power of the lens in use is visible through the window in the lower part of the ophthalmoscope head; positive powers (concave) are in red, and negative powers (convex) in black.

3-A-3 Changing the Lamp

Should it be necessary to replace the lamp (Cat No #13), unscrew slightly the knurled plastic collar on the lower end of the ophthalmoscope, thereby permitting the removal of the lamp-holder. The old lamp is unscrewed and discarded. Clean lightly the glass portion visible in the new lamp with a clean cloth, in case any dust has settled on it in transit: screw it into the lamp-holder, which is then replaced in the ophthalmoscope head, pushing it gently as far as it will go, thereafter re-tightening the knurled plastic collar. If any adjustment of the pitch is needed, fit the ophthalmoscope into the handle, switch on the handle, slacken off the collar slightly, and rotate it slightly in order to obtain optimum illumination, finally tightening the collar up again.

3-A-4 Use of the Ophthalmoscope

Examination of the eye is best carried out in a dark room. The Retinoscopic Disc should be set to 0 (or the nearest lens possible to the user's refractive error) and, to examine the patient's right eye, the doctor should position himself on the right hand side of the patient with the ophthalmoscope close up to his right eye, held with the right hand. At a distance of about 15cm and at an angle of about 30°, he should direct the beam of light to the patient's eye, instructing the patient to look straight ahead. At this point a red circular colouration should be visible in the patient's fundus, and the doctor should then gradually move closer, up to a distance of about 5cm at which point the retinal details should appear clearly and in focus. If this is not so, rotating the Retinoscopic Disc should bring them into focus, other than where capillaries in the patient's media prevent a clear view being obtained. For examining the left eye, the contrary procedure applies.

the doctor using his left eye. Once a clear magnified image is obtained, the retina may be examined in more detail. Movement of the ophthalmoscope and/or instructing the patient to look in a specific direction will facilitate examination of peripheral areas.

3-B OTOSCOPE CAT NO #53

There are three aural specula supplied, of differing diameters, one of which will be suitable for all examinations, as follows:

<table>
<thead>
<tr>
<th>Cat No</th>
<th>Diameter</th>
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<tbody>
<tr>
<td>V1</td>
<td>61 m/m long x 7 mm dia</td>
</tr>
<tr>
<td>V2</td>
<td>61 m/m long x 5 mm dia</td>
</tr>
<tr>
<td>V3</td>
<td>60 m/m long x 8 mm dia</td>
</tr>
</tbody>
</table>

A magnifying lens of power 10 dioptres (magnification x 3.1/2) is supplied with the otoscope head, in a swinging mount which enables it to be partially or wholly withdrawn for instrumentation. The specula may be sterilized in boiling water, or an autoclave in which case the temperature should not exceed 125° C alternatively, cold disinfectants may be used, in the normal concentration used for sterilization of medical instruments.

To replace the Otoscope lamp (Cat No #310), the old lamp is unscrewed; the new lamp is then screwed into the otoscope head.

3-C BATTERY HANDLE CAT NO #53

The handle comprises a Top, a Tube and a Bottom.

The bottom fits on to the Tube by means of a thread. To remove the bottom, it is turned anti-clockwise. Into the tube are then inserted two battery cells with the positive (small) terminals upwards, size C - R14 (1.5 volts); and these may be either dry cells (non-rechargeable) or rechargeable. The bottom is then replaced on the tube by turning it clockwise and a spring integrally incorporated in the bottom will hold the battery cells in place.

The intensity of the light is controlled with the black circular knurled ring on the Top. Turning gradually anti-clockwise reduces the light and finishes in the "OFF" position; and turning clockwise gradually increases the light to the "ON" position.

The instrument is attached to the handles by being pushed gently downwards into the Top; the thumb-screw is then tightened (by turning it clockwise) and they are held in position. To remove, the thumb-screw is loosened (by turning it anti-clockwise) and they may then be lifted off.

The battery handle is made of chrome-plated brass for maximum durability, but, as with all equipment of this nature, it is extremely important that the battery is not allowed to become exhausted within the handle, for then it emits corrosive acid which will damage the instrument.

3-D SPARE LAMP CAT NO #310

The Spare Lamp provided is Cat No #310 used in the Otoscope. It cannot be used in the Ophthalmoscope for which Cat No #13 is required.

3-E FITTED CASE CAT NO #3124

The case contains all the above instruments in specially shaped recesses for maximum security in transit. It is opened by pressing on the catch; to close, it is necessary only to push the lid downwards, and the catch then fastens itself automatically.

4 Repair and Maintenance

The instruments have no user-serviceable parts incorporated within it design apart from those with lamps. The unit should be sent to the dealer from whom it was purchased in the event of any damage arising to these instruments, or in the unlikely event of a fault developing within the product.

5 Guarantee

The unit is unconditionally guaranteed for two years from the date of purchase. The guarantee protects the user against any defect in design or manufacture of every element comprising the set, apart from lamps. This guarantee, of course, does not apply in the event that damage occurs when the instrument is not being used for its intended use and/or not being used normally and/or when it has been subjected to non-authorised repair. Proof of purchase is mandatory.

After the period of two years, repairs will still be applicable from the manufacturer for a minimum of five years from the date of purchase.