WRITING A TECHNICAL DESCRIPTION

Outline of Technical Description

TECHNICAL DESCRIPTION

(*Title*)

INTRODUCTION

- Definition of the subject (what is the mechanism and purpose of the mechanism)
- Overall description
- List main parts and sub-parts (if any)

DESCRIPTION OF MAIN PARTS AND SUB-PART/S (*if any*)

Main part 1 and/or sub-part/s

- Definition and purpose of part
- Sources of description (size, weight, measurements, shape, design, colour, texture, pattern, odour, time, temperature, age, model numbers and names, orientation of parts, operating cycle, etc.)

Main part 2 and/or sub-part/s

- Definition and purpose of part
- Sources of description (size, weight, measurements, shape, design, colour, texture, pattern, odour, time, temperature, age, model numbers and names, orientation of parts, operating cycle etc.)

Main part 3 and/or sub-part/s

- Definition and purpose of part
- Sources of description (size, weight, measurements, shape, design, colour, texture, pattern, odour, time, temperature, age, model numbers and names, orientation of parts, operating cycle etc.)

CONCLUSION

- Function and use of mechanism OR operation of the mechanism described OR summary of main parts

Source: McMurrey (2002)

Read the following technical description of a Workhorse Flashlight.

TECHNICAL DESCRIPTION

Workhorse Flashlight

INTRODUCTION

The Workhorse is a hand-sized plastic flashlight that fits into most automobile glove compartments. The Workhorse's overall length is 18 cm, with a diameter of 5 cm at the head of the flashlight, tapering to 3 cm in diameter at the battery compartment. The cylindrically-shaped body of the Workhorse is made of matte black, high-impact plastic, ribbed for a secure handgrip. The Workhorse flashlight consists of two major parts: the body, containing the compartment and switch; and the bulb assembly, containing the reflector, the bulb, and the connector. The flashlight is powered by two 1.5-volt, C-size batteries. *(See Figure 1 for an illustration of the fully assembled flashlight.)*

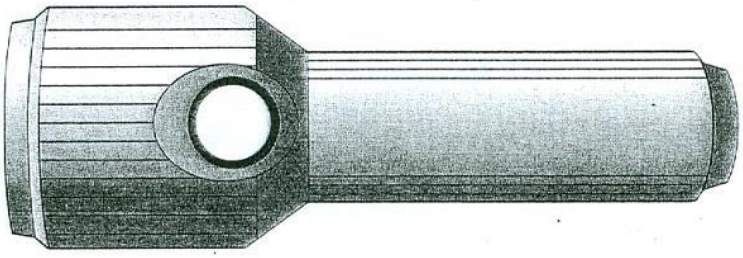

Figure 1. Fully Assembled Flashlight

DESCRIPTION OF MAIN PARTS AND SUB-PARTS

Main Part 1 and Sub-parts

Body

The body of the Workhorse Flashlight is 14 cm, with a diameter of 5 cm at the screw, or head end, tapering to 3 cm at the battery compartment. The interior of the screw end is threaded, allowing for connection with the bulb assembly *(See Figure 2 for an illustration of the complete flashlight assembly).*

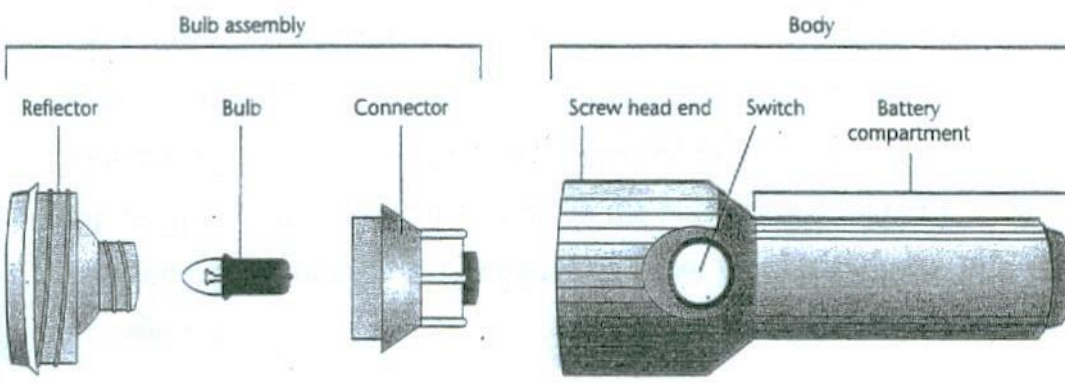

Figure 2. Components of the Workhorse Flashlight

Battery Compartment

The battery compartment holds the batteries, the power source of the flashlight. The compartment is cylindrical, 9 cm long and 3 cm in diameter, with a coiled metal spring on the interior of the closed end, and 0.6 cm wide strip of gold-coloured metal running along one interior side of the compartment. The battery compartment holds two 1.5-volt C batteries, in a stacked position, with the negative end of the lowermost battery in contact with the spring and the positive end of the lowermost battery supporting the negative end of the uppermost battery. The open end of the battery compartment closes with the insertion of the bulb assembly.

Switch

The switch turns the flashlight on and off. It is located on the body of the Workhorse 4 cm from the screw end. The switch is made of white plastic, designed to be activated with the thumb of the hand holding the flashlight. When the switch is pushed forward, toward the larger end of the flashlight, the light turns on. When the switch is returned to its original position, the light turns off.

Main Part 2 and Sub-parts

Bulb Assembly

The bulb assembly of the flashlight consists of the reflector, the bulb, and the connector. When fully assembled, the bulb assembly is 5 cm long, with a diameter of 5 cm at the reflector end reducing to 2 cm at the contact end of the connector. The bulb assembly completes the flashlight by screwing into the end, or head end of the body of the flashlight.

Reflector

The reflector magnifies and projects the light generated by the battery powered bulb. When viewed from the larger end, the reflector consists of a transparent flat plastic cover over a chrome coloured reflective plastic concavity with a central hole. The elements are permanently attached together and housed in matte black plastic. The reflector screws into the connector on one end, and the mid-section of the reflector provides the main screw for attachment to the flashlight body.

Bulb

The light source for the Workhorse is a glass bulb, 1 cm long, permanently fused onto a cylindrical metal base 1 cm long and 0.8 cm in diameter. The bottom of the metal base has a protrusion, providing the electrical connection between the bulb and the connector. The bulb itself contains a metallic filament, one-half the length of the glass portion of the bulb, surrounded, at the point halfway up the length, by a clouded white plastic-like material.

Connector

The connector connects the reflector and the bulb to the battery power source. The connector is made of black plastic, ringed with a metallic collar 0.8 cm wide. The closed end of the connector is mounted with a 2.1 cm square, gold-coloured metal strip. The metal strip facilitates the connection between the bulb and the batteries. The open end of the connector is threaded to allow joining with the bulb and reflector.

CONCLUSION

When fully assembled, the Workhorse Flashlight is a sturdy, easily held tool providing light sufficient for regular outdoor and emergency use. The compact size makes the flashlight easily portable, and batteries and bulb are readily accessible for replacement.

Source: McMurrey (2002)