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DRAFT TANZANIA STANDARD

Scissors for general purposes — Specification

TANZANIA BUREAU OF STANDARDS

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ISBN

Scissors for general purposes — Specification

0 Foreword

Scissors are common products used in office, domestic and textile industry. Currently, these products are available at different levels of quality and performance. Therefore, in order to meet performance and quality that required for ensuring the public safety, health, environmental protection and social-economic welfare in general public this standard has been prepared.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated expressing the result of a measurement or test shall be rounded off in accordance with TZS 4, *Rounding off numerical values*.

During the preparation of this Tanzania Standard, assistance was derived from the following publications:

> IS 989:1982, published by the Bureau of Indian Standards *Scissors for general purposes — Specification*.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below.

ISO 404, Steel and steel products — General technical delivery requirements

ISO 4995, Hot-rolled steel sheet of structural quality

ISO 6316, Hot-rolled steel strip of structural quality

ISO 1190-1, Copper and copper alloys — Code of designation — Part 1: Designation of materials

ISO 4042, Fasteners — Electroplated coating systems

ISO 10683, Fasteners — Non-electrolytically applied zinc flake coating systems

ISO 10684, Fasteners — Hot dip galvanized coatings

ISO/TR 9769, Steel and iron — Review of available methods of analysis

ISO 1811-1, Copper and copper alloys — Selection and preparation of samples for chemical analysis — Part 1: Sampling of cast unwrought products

ISO 1811-2, Copper and copper alloys — Selection and preparation of samples for chemical analysis — Part 2: Sampling of wrought products and castings

ISO 24153, Random sampling and randomization procedures

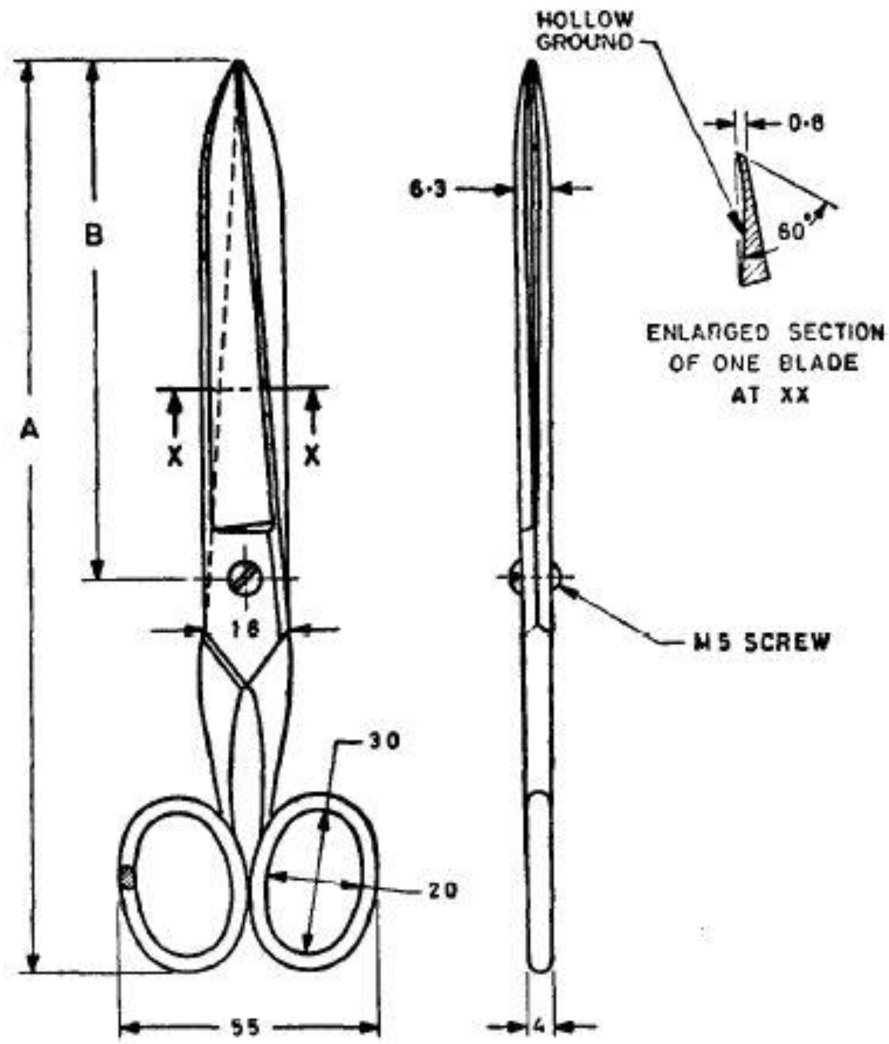
3 Scope

This standard covers the requirements, test methods and sampling for the following 17 classes of scissors:

a) Stationery scissors (Figure 1),
b) Embroidery scissors (Figure 2),
c) Pinking scissors (Figure 3),
d) Tailor’s scissors (Figure 4),
e) Carpet scissors (Figure 5),
f) Household scissors (Figure 6),
g) Barber’s scissors (Figure 7),
h) Leather-cutting scissors (Figure 8),
j) Trimming scissors (Figure 9),
k) Lamp scissors (Figure 10),
l) Buttonhole scissors (Figure 11),
m) Post office scissors (parrot billed) (Figure 12),
n) Canvas scissors (Figure 13),
n) Paper hanger’s scissors (Figure 14),
r) Camel-trimming scissors (Figure 15),
s) Nail-cutting scissors (Figure 16 and 16A), and
t) Grape scissors (Figure 17).

4 Shapes and Dimensions

Scissors shall conform generally to the shapes and dimensions shown in Figure 1 to Figure 17.

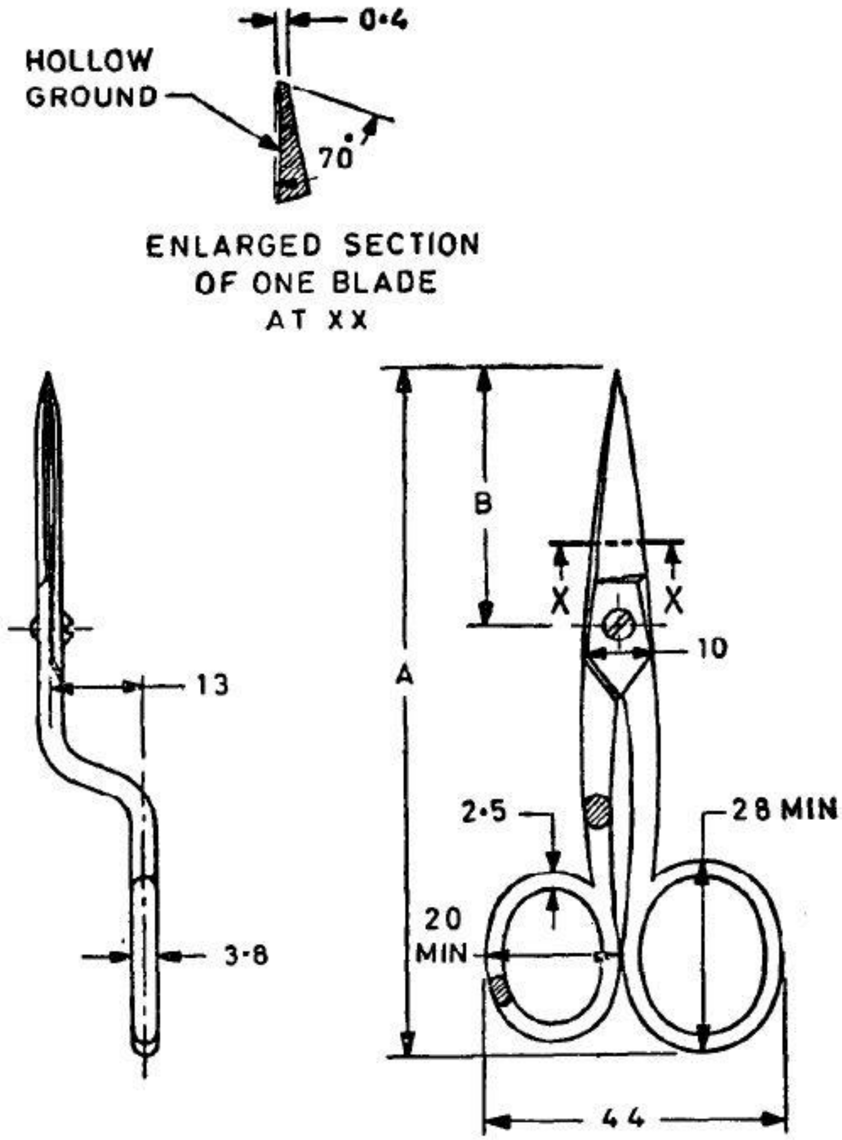


All dimensions in millimetres

Figure 01: Stationery Scissors

Table 01: Sizes for Stationery Scissors

Nominal Size		**Fastening**
A	**B**	
125	50	Screw
165	90	Screw
180	105	Screw
205	115	Screw and Nut
All dimensions in millimetres.		

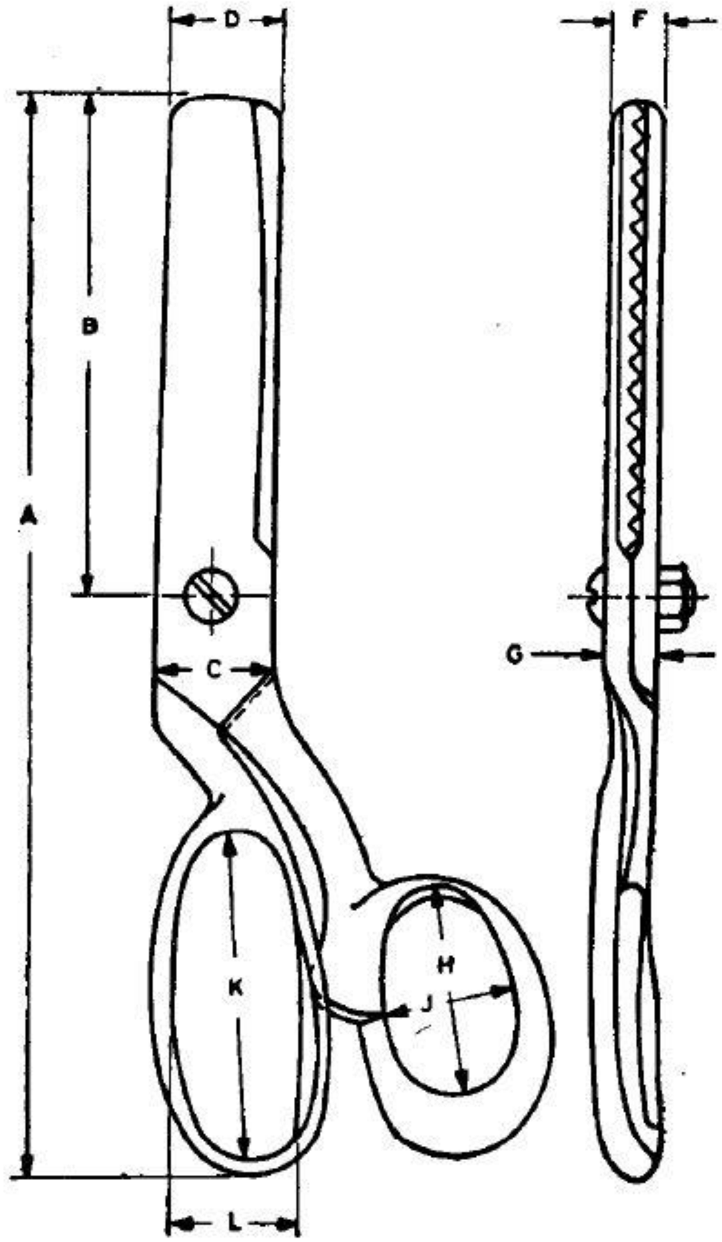


All dimensions in millimetres

Figure 02: Embroidery Scissors

Table 02: Sizes for Embroidery Scissors

Nominal Size		**Fastening Screw**
A	**B**	
75	25	M 1.6
100	35	M 2.5
125	50	M 2.5
All dimensions in millimetres.		

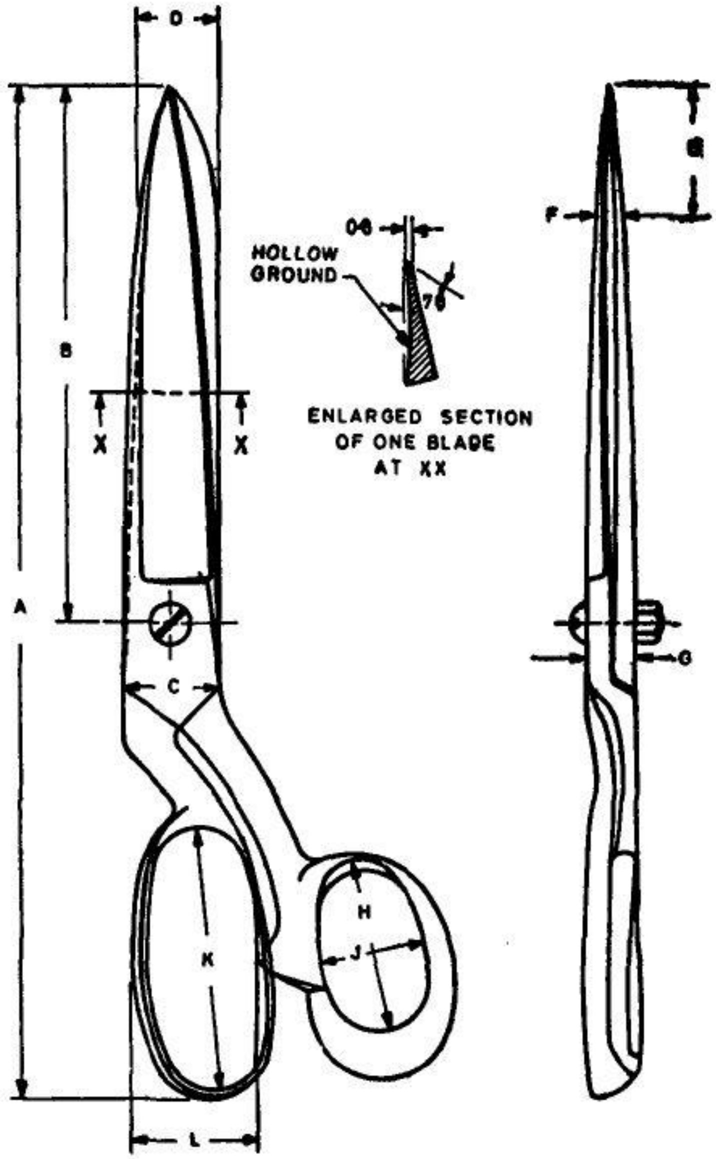


All dimensions in millimetres

Figure 03: Pinking Scissors

Table 03: Sizes for Pinking Scissors

Nominal Size						Loop	Loop	Fastening
A	**B**	**C**	**D**	**F**	**G**	**H X J**	**K x L**	
190	80	15	13	5	10	40 X 27	60 X 27	M 5 Screw & Nut
210	90	16	14	6	10	40 X 27	60 X 27	M 5 Screw & Nut
235	100	17	15	6	10	40 X 27	60 X 27	M 5 Screw & Nut
All dimensions in millimetres.								

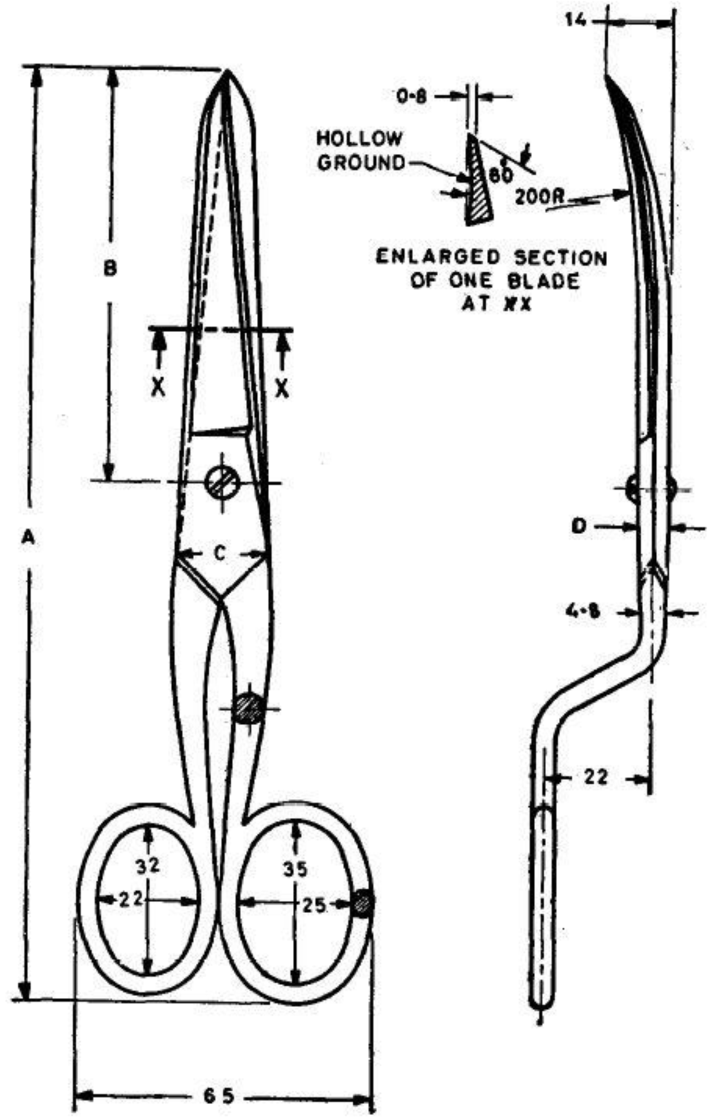


All dimensions in millimetres

Figure 04: Tailor's Scissors

Table 04: Sizes for Tailor's Scissors

Nominal Size							Loop	Loop	Fastening
A	**B**	**C**	**D**	**E**	**F**	**G**	**H x J**	**K x L**	
180	75	19	16	19	4.8	9.5	40 x 27	60 x 27	M 4 Screw
205	100	21	16	25	4.8	9.5	40 x 27	60 x 27	M 5 Screw & Nut
230	120	22	17	29	5.6	11.1	40 x 27	60 x 27	M 5 Screw & Nut
255	135	24	19	32	6.4	12.7	43 x 32	70 x 29	M 6 Screw & Nut
280	150	25	19	35	7.1	14.3	43 x 32	70 x 29	M 6 Screw & Nut
305	170	27	21	38	7.9	15.9	43 x 32	70 x 29	M 6 Screw & Nut
355	200	29	22	44	8.7	17.5	43 x 32	70 x 29	M 6 Screw & Nut
All dimensions in millimetres									

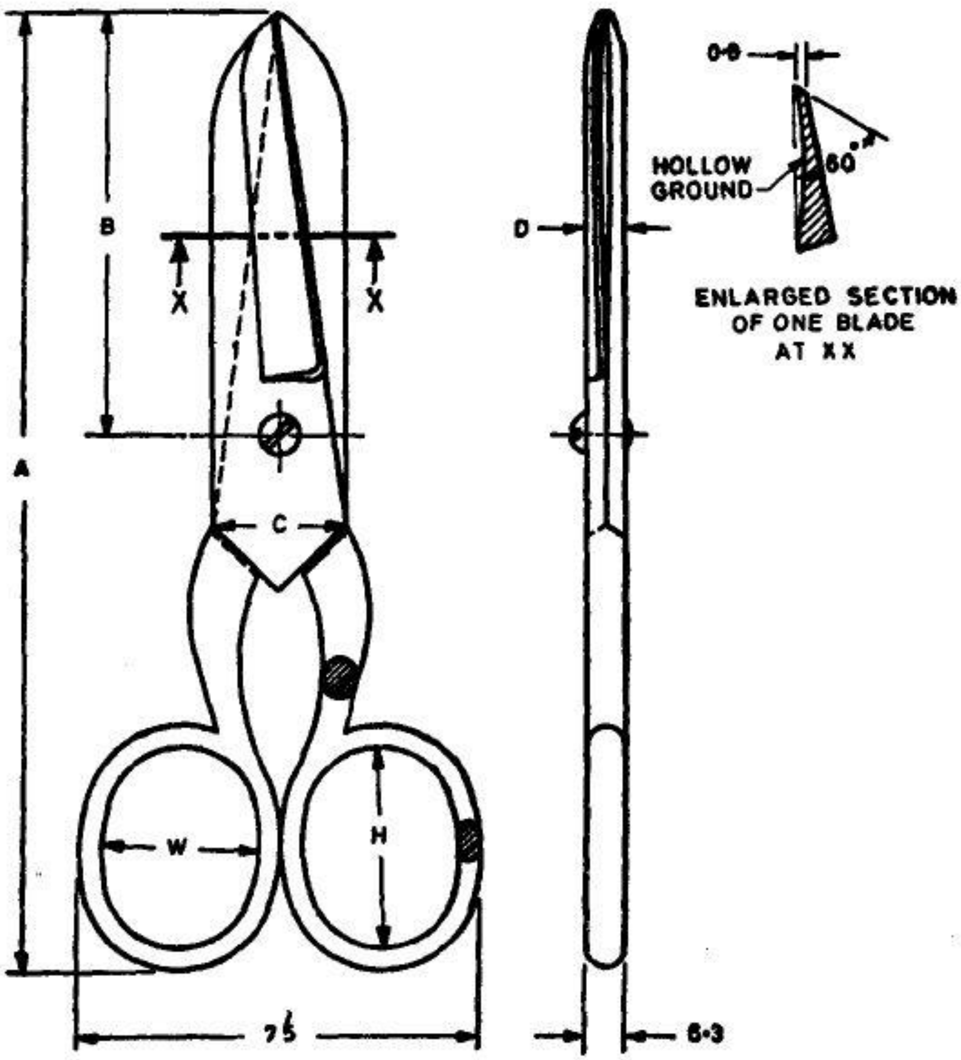


All dimensions in millimetres

Figure 05: Carpet Scissors

Table 05: Sizes for Carpet Scissors

Nominal Size				Fastening
A	B	C	D	
180	75	19	16	M 4 Screw
205	100	21	16	M 5 Screw & Nut
230	120	22	17	M 5 Screw & Nut
255	135	24	19	M 6 Screw & Nut
280	150	25	19	M 6 Screw & Nut
305	170	27	21	M 6 Screw & Nut
355	200	29	22	M 6 Screw & Nut
All dimensions in millimetres				

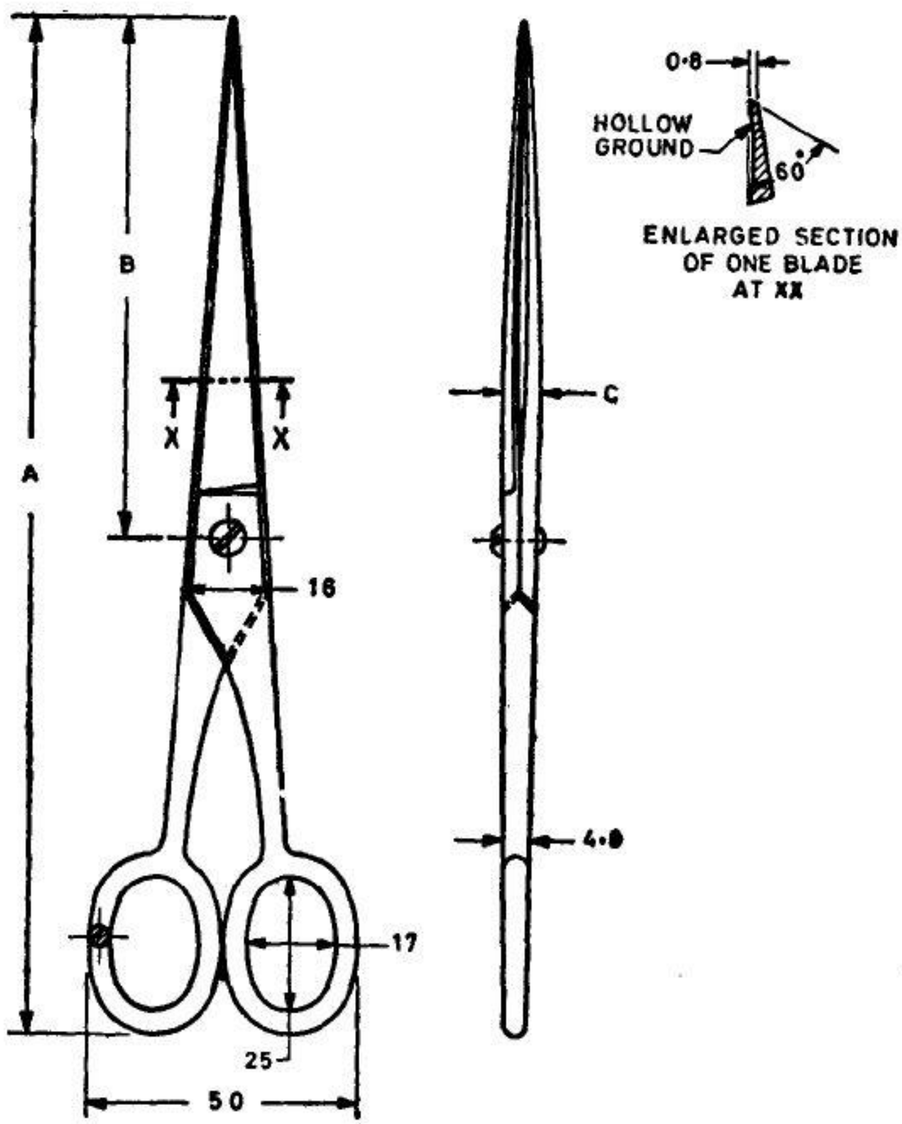


All dimensions in millimetres

Figure 06: Household Scissors

Table 06: Sizes for Household Scissors

Nominal Size				Loop	Fastening
A	***B***	***C***	***D***	***W x H***	
150	70	22	6.4	29 x 38	Rivet
180	80	25	6.4	29 x 38	Rivet
205	95	25	7.9	29 x 41	M 5 Screw & Nut
230	100	25	7.9	29 x 41	M 5 Screw & Nut
All dimensions in millimetres.					

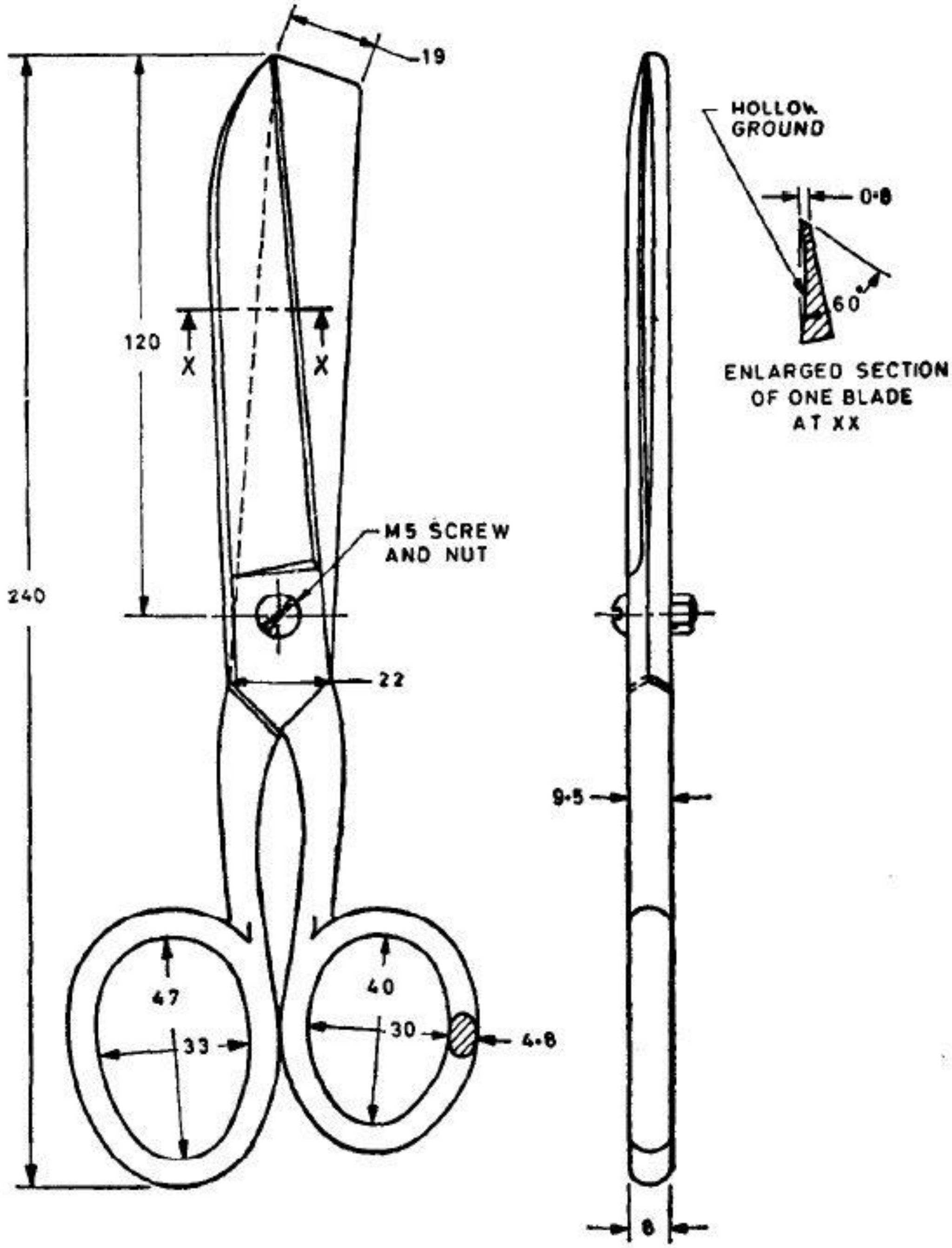


All dimensions in millimetres

Figure 07: Barber's Scissors

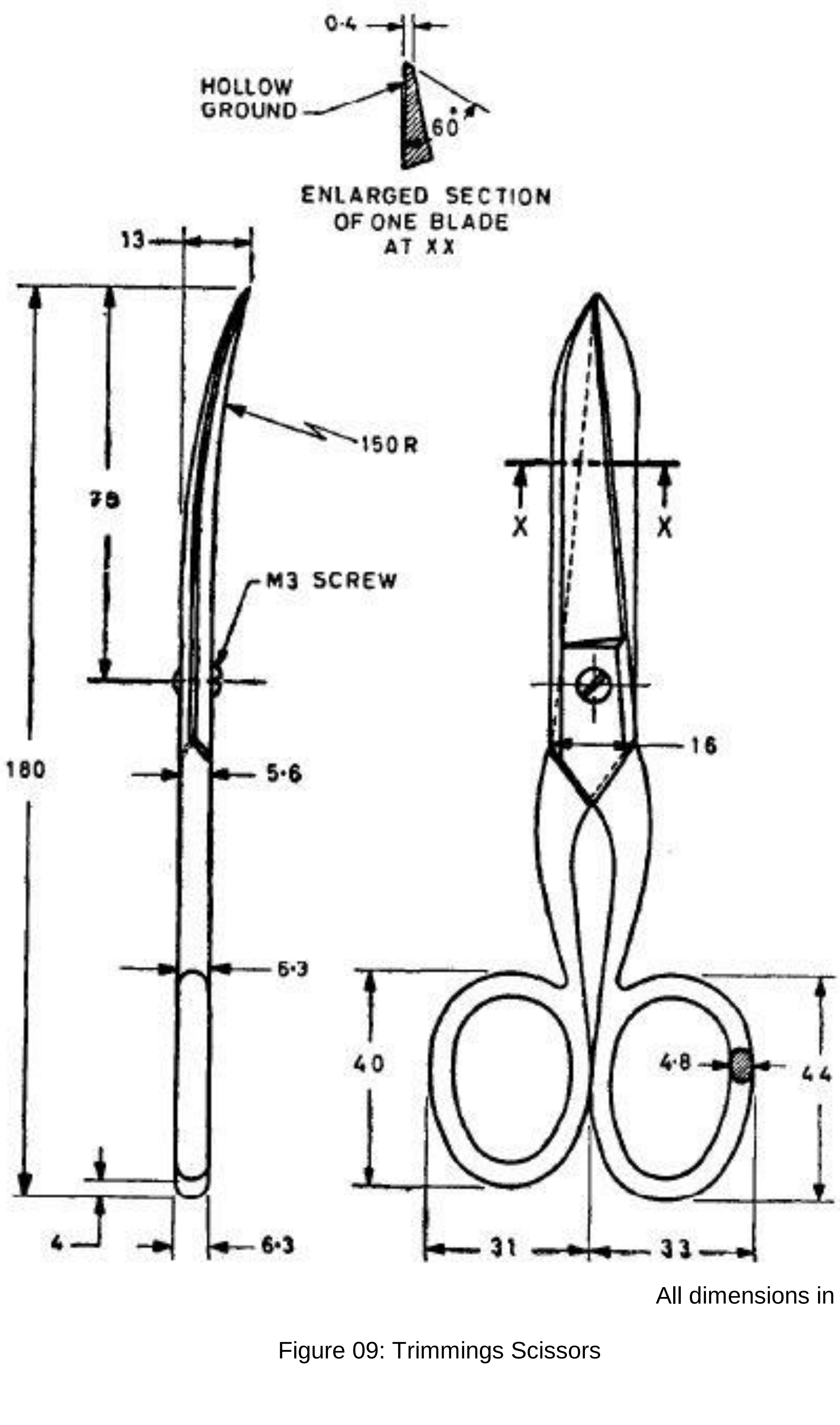
Table 07: Sizes for Barber's Scissors

Nominal Size			**Fastening**
A	**B**	**C**	
150	80	6.3	Rivet
180	90	7.1	M 3 Screw
190	100	7.1	M 3.5 Screw
205	105	7.1	M 3.5 Screw
All dimensions in millimetres			



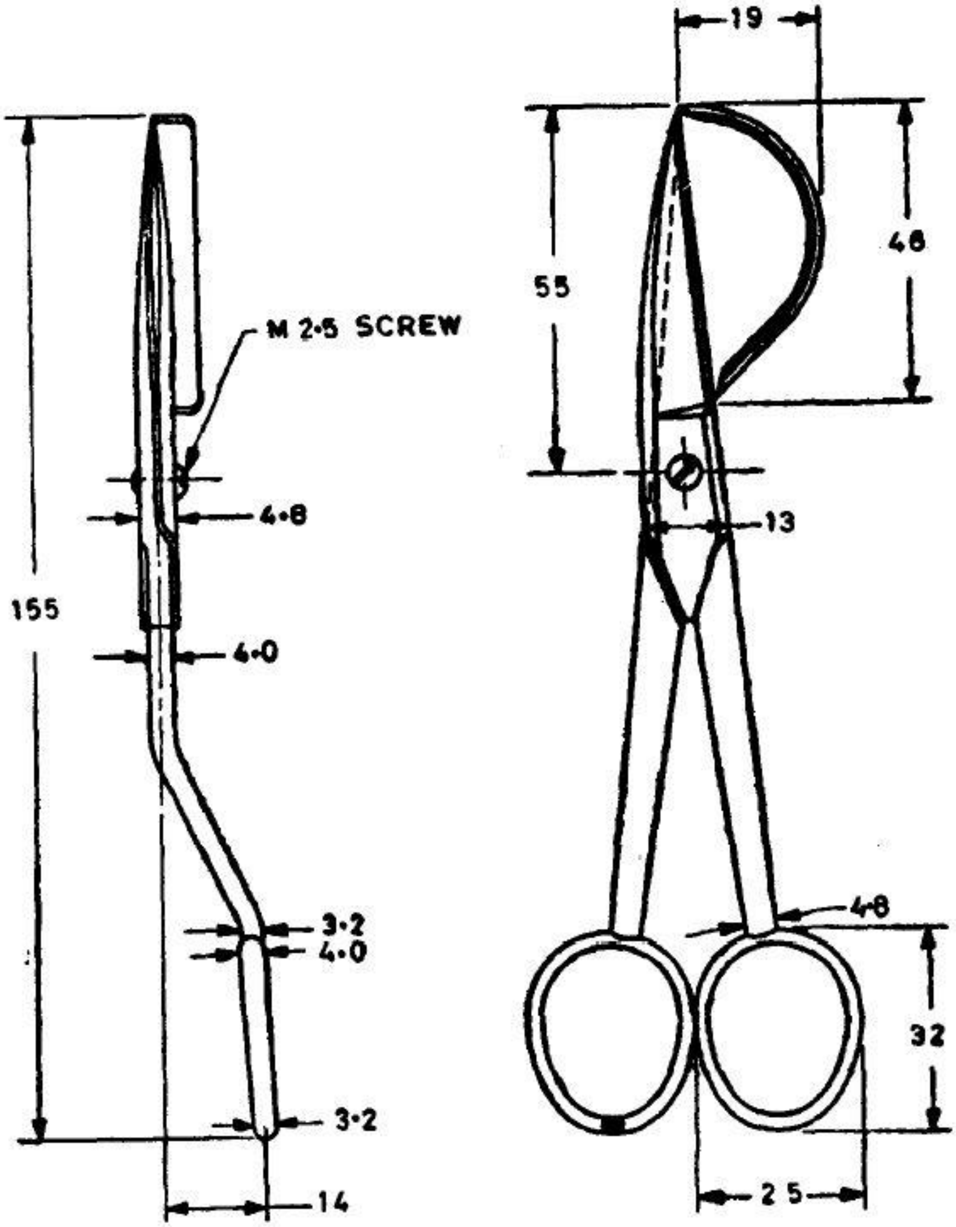
All dimensions in millimetres

Figure 08: Leather Cutting Scissors



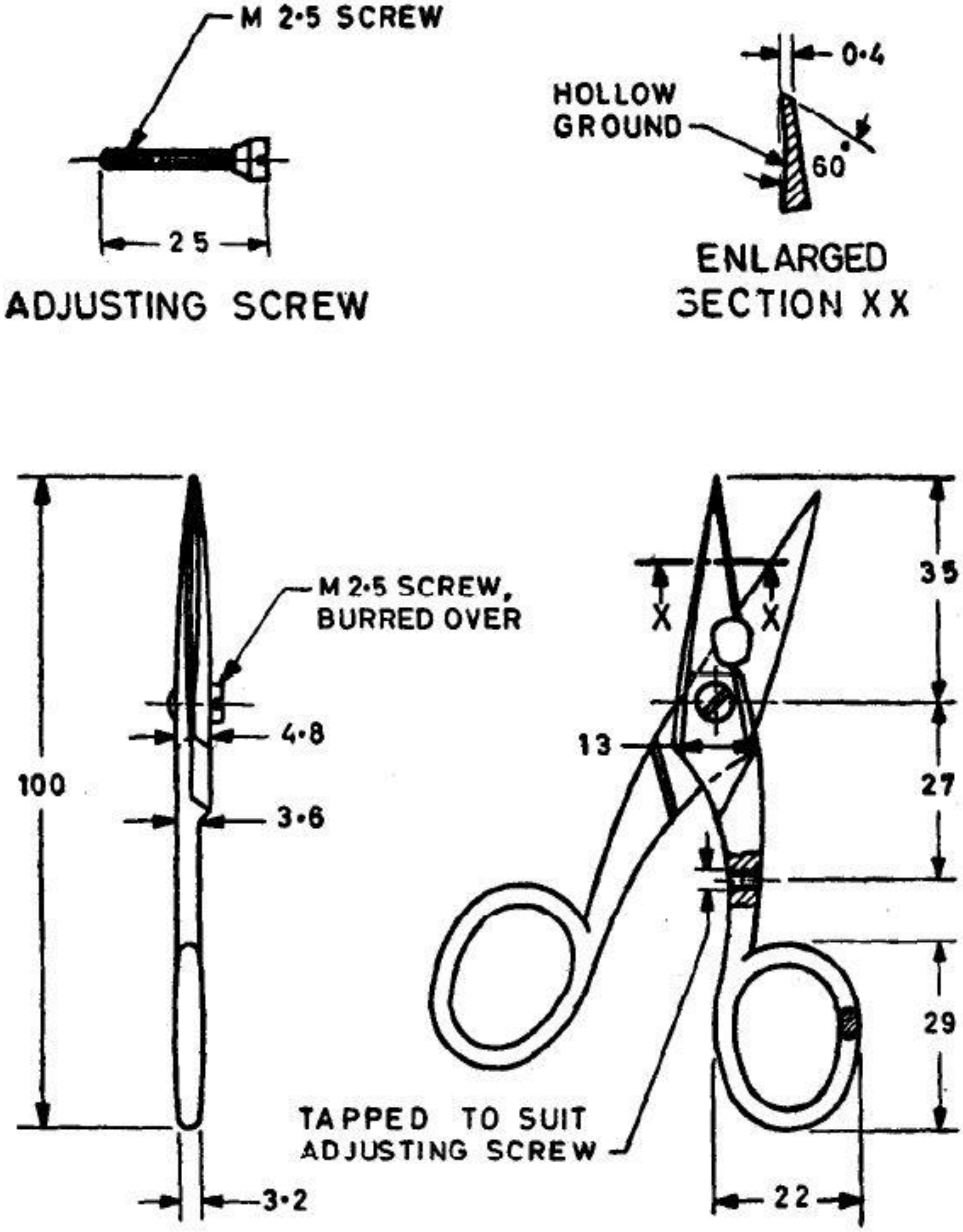
All dimensions in millimetres

Figure 09: Trimmings Scissors



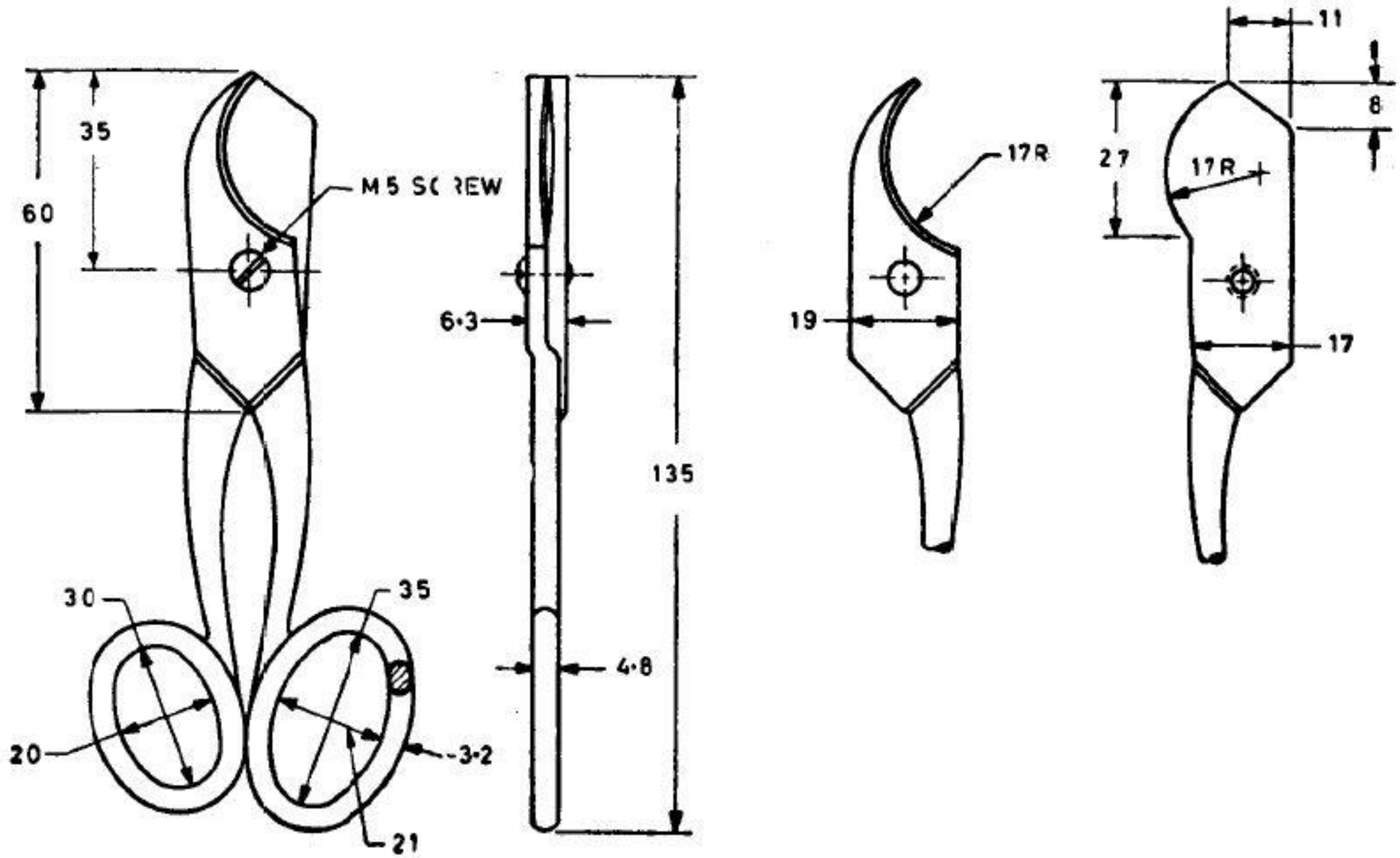
All dimensions in millimetres

Figure 10: Lamp Scissors



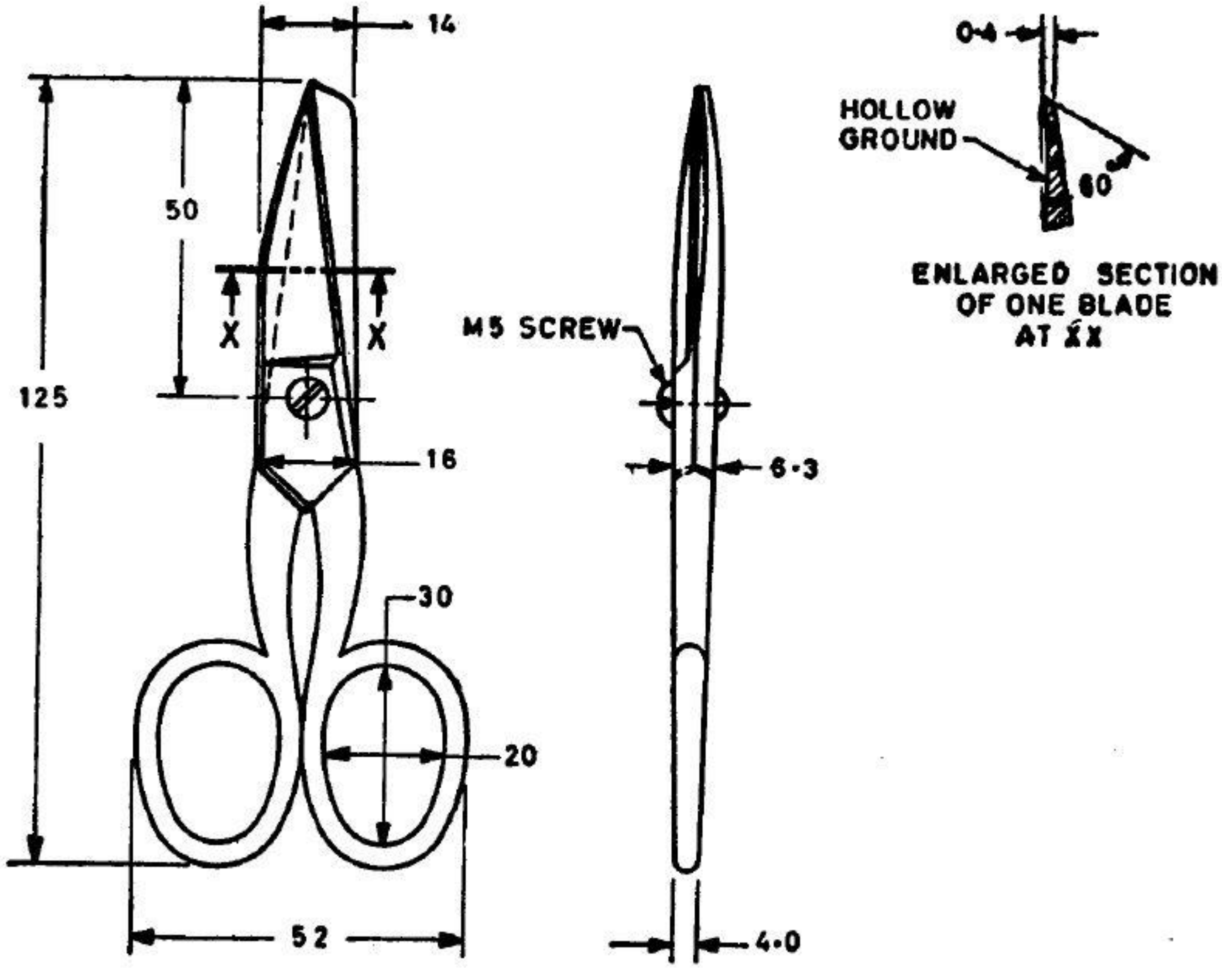
All dimensions in millimetres

Figure 11: Buttonhole Scissors



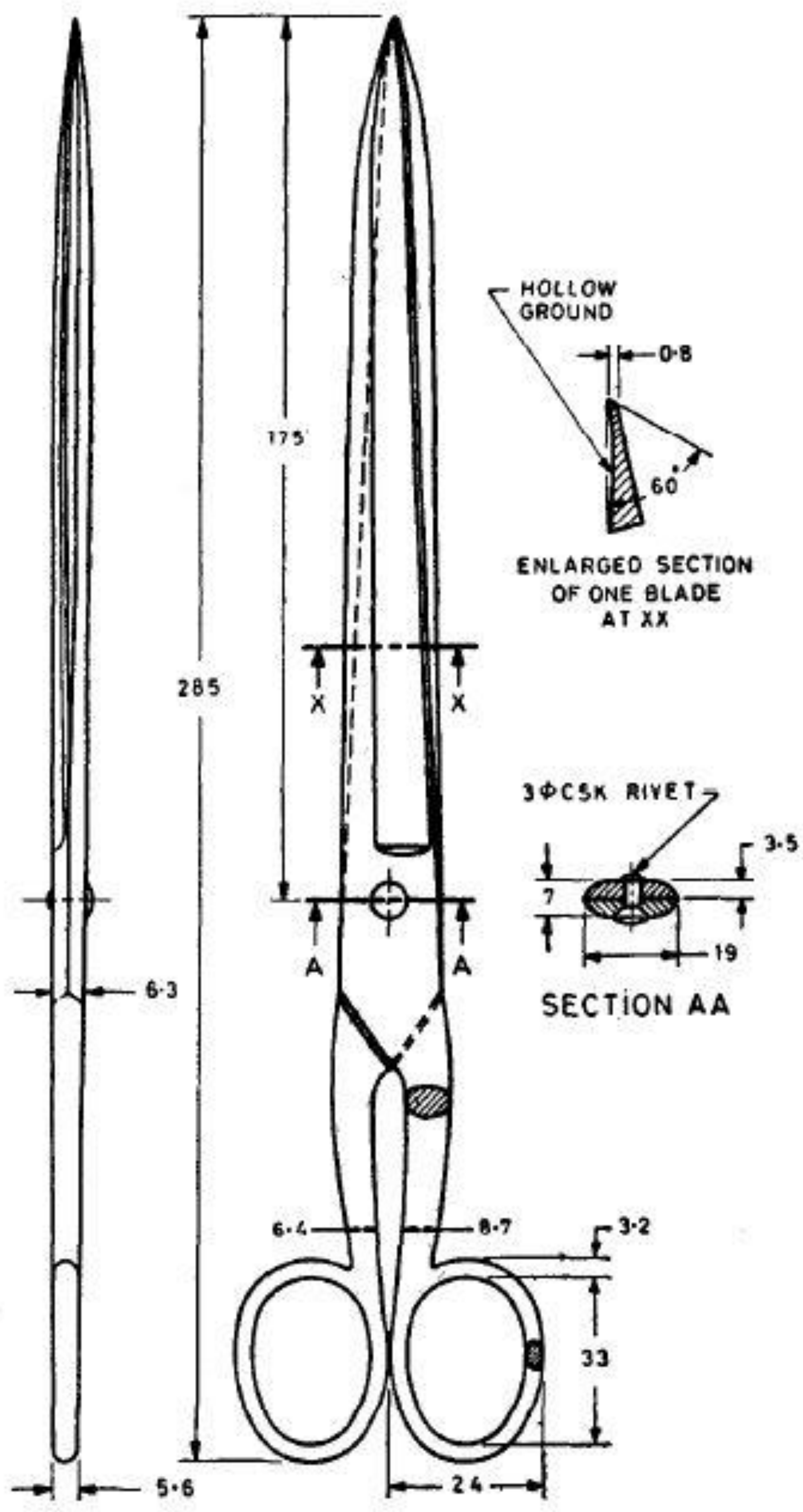
All dimensions in millimetres

Figure 12: Post Office Scissors (Parrot Billed)



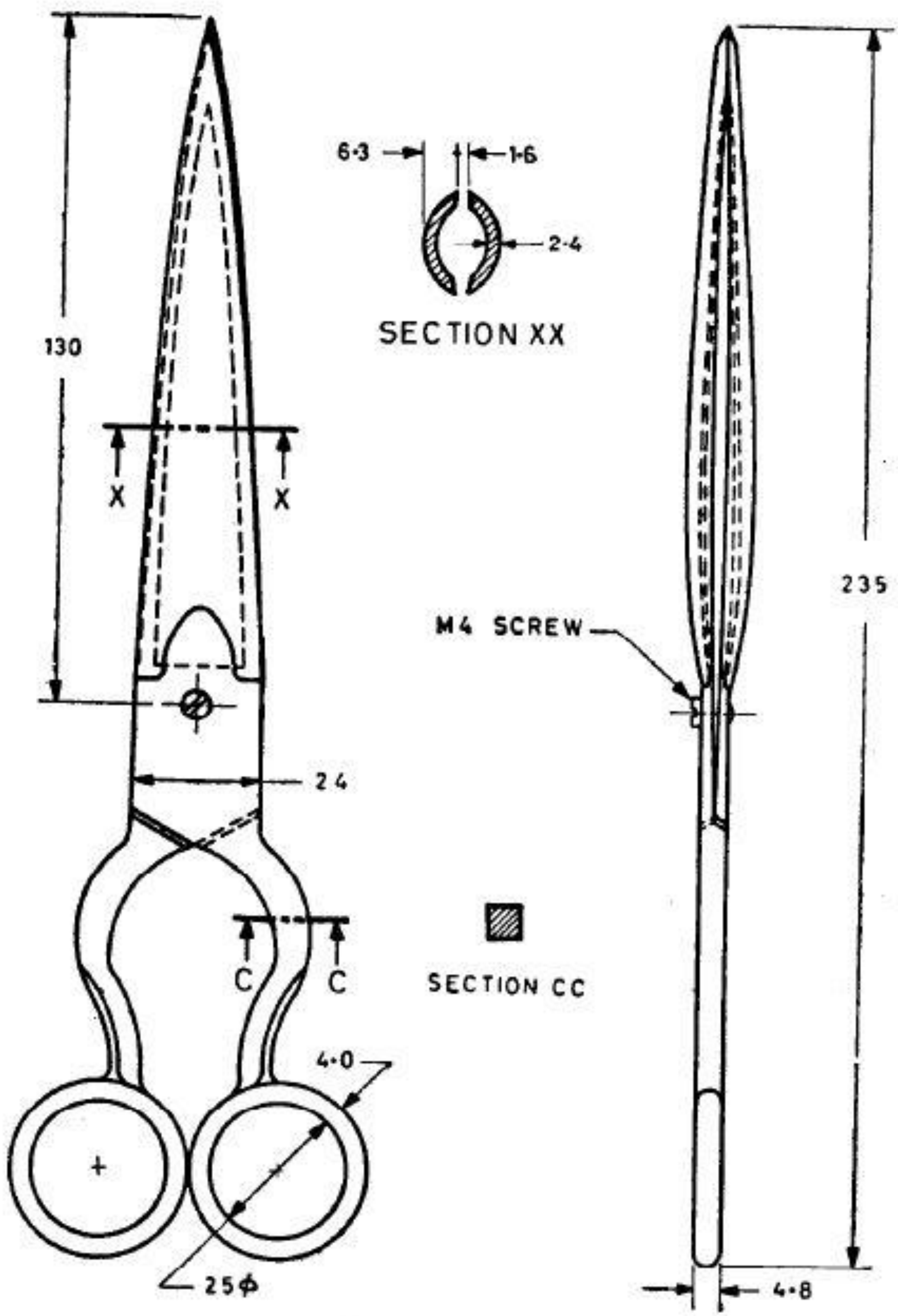
All dimensions in millimetres

Figure 13: Canvas Scissors



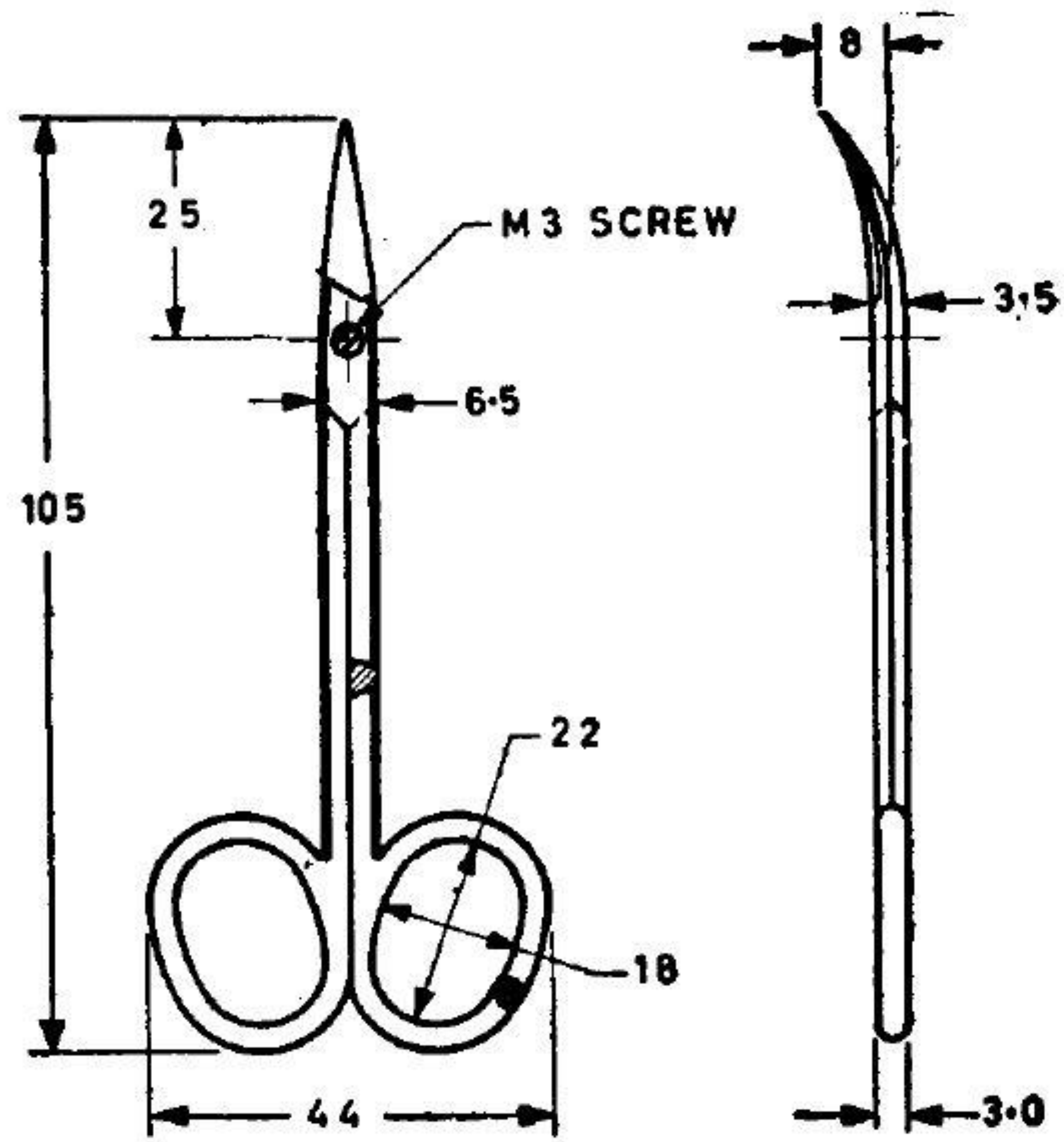
All dimensions in millimetres

Figure 14: Paper Hanger’s Scissors



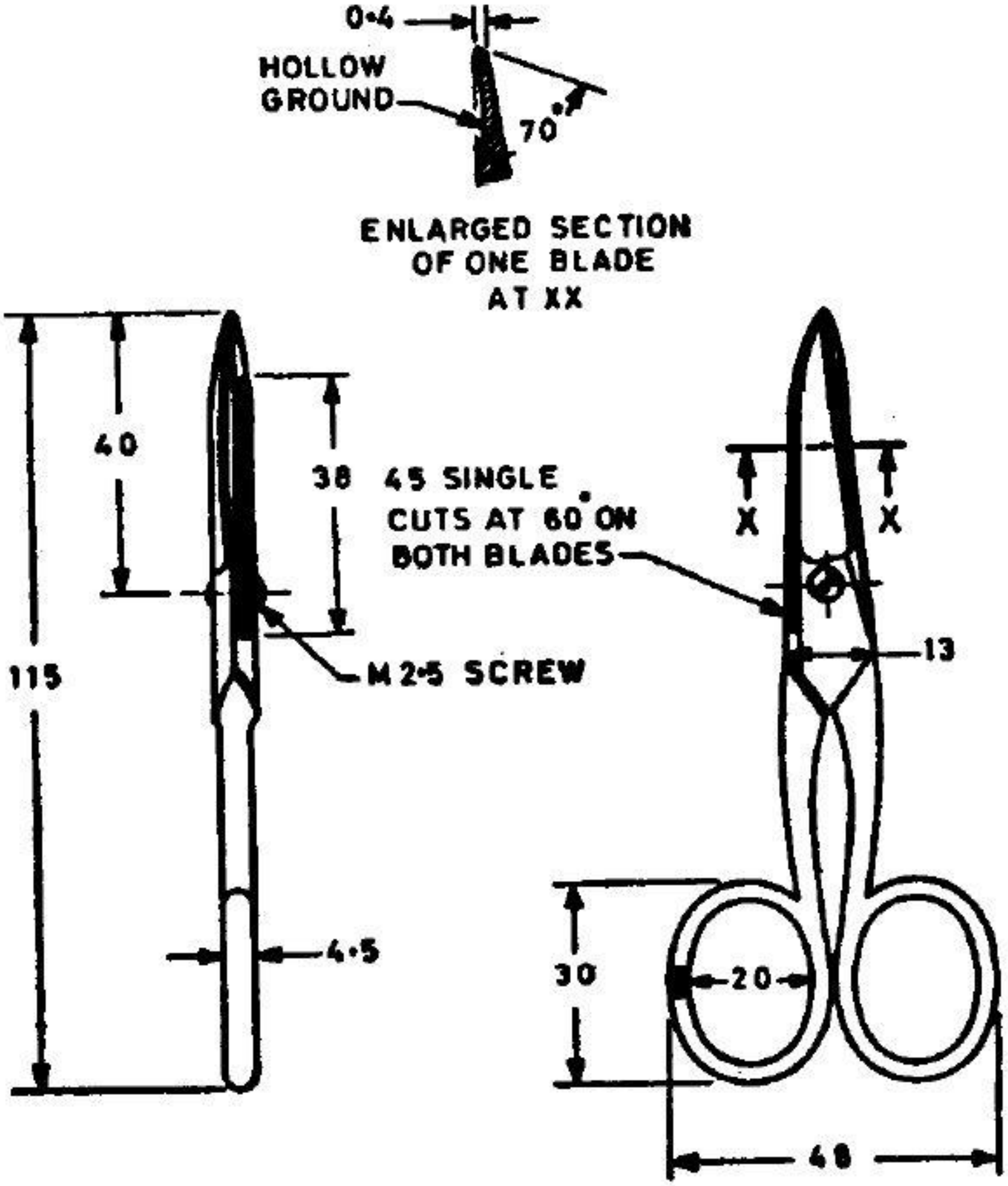
All dimensions in millimetres

Figure 15: Camel-Trimming Scissors



All dimensions in millimetres

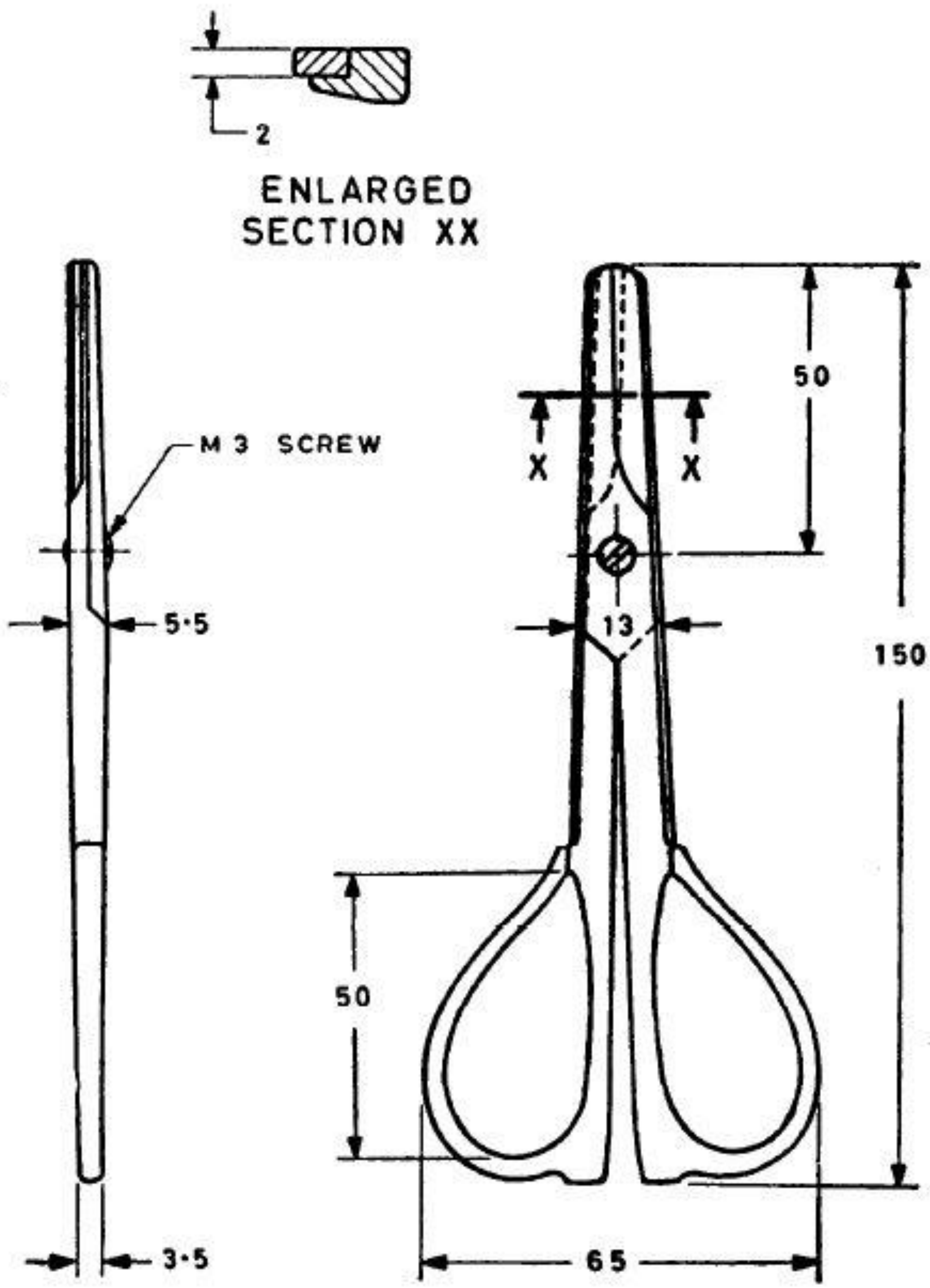
Figure 16A: Nail-Cutting Scissors



All dimensions in millimetres

Figure 16B: Nail-Cutting Scissors Alternative Shape

Figure 16: Nail-Cutting Scissors



All dimensions in millimetres

Figure 17: Grape Scissors

5 Materials

5.1 General requirement relating to supply of blades, handles and fasteners for scissors shall conform to ISO 404.

5.2 The materials for the manufacture of scissors shall be as specified below:
5.2.1 Blades complete with handles or blades only:

a) For all scissors excepting barber's scissors shall be made of carbon and alloy tool steels with the composition specified below:

Designation	Chemical Composition (%)				
	Carbon, C	**Manganese, Mn**	**Silicon, Si**	**Chromium, Cr**	**Vanadium, V**
T80	0.75 – 0.85	0.20 – 0.35	0.10 – 0.30	-	-

b) For barber's scissors shall be made of carbon and alloy tool steels with the composition specified below:

Designation	Chemical Composition (%)				
	Carbon, C	**Manganese, Mn**	**Silicon, Si**	**Chromium, Cr**	**Vanadium, V**
T90	0.85 – 0.95	0.20 – 0.35	0.10 – 0.30	-	-
T103	0.95 – 1.10	0.20 – 0.35	0.10 – 0.30	-	-
T103 V23	0.95 – 1.10	0.20 – 0.35	0.10 – 0.30	-	-
T118	1.10 – 1.25	0.25 – 0.35	0.10 – 0.30	-	-
T118 Cr45	1.10 – 1.25	0.25 – 0.35	0.10 – 0.30	0.30 – 0.60	0.15 – 0.30

5.2.2 Handles when welded or riveted to blades made of high carbon steel shall be made of either of the following;
Steel conforming to ISO 4995/ISO 6316 for steel handles or Cast brass conforming to ISO 1190-1 for brass handles or malleable iron castings conforming to ISO 5922 for iron handles.

The handles can be made from other materials such as plastic.

5.2.3 Fasteners shall be made of any non-corrosive material and shall comply with ISO 4042, ISO 10683 or ISO 10684.

5.3 Hardness
The blades shall be heat treated so as to give their cutting edges hardness within a range of 500 to 700 HV (35 to 60 HRC). The test point shall be as near as possible but not more than 13 mm from the cutting edge. The hardness shall be uniform up to 6 mm from the cutting edge.

6 Types and Classification

6.1 Scissors shall be of the following four types:

Type 1 - Scissors having blades of two-piece construction in which the inside portion is of high carbon steel forged and welded to the mild steel body and the handle.

Type 2 - Scissors forged from high carbon steel.

Type 3 - Scissors baving blades entirely made of high carbon steel welded or riveted to mild steel or malleable iron handles.

Type 4 - Scissors having blades made of high carbon steel, riveted to brass handles.

6.2 The different classes of scissors and their types' shall be as given below:

S/No.	Class	Type
i	Stationery scissors	1, 2, 3
ii	Embroidery scissors	2
iii	Pinking scissors	2
iv	Tailor's scissors	1, 2, 3, 4
v	Carpet scissors	1, 2, 3
vi	Household scissors	1, 2, 3
vii	Barber's scissors	1, 2, 3
viii	Leather-cutting scissors	1, 2, 3
ix	Trimming scissors	1, 2,3
x	Lamp scissors	1, 2
xi	Buttonhole scissors	2
xii	Post office scissors (parrot billed)	2
xiii	Canvas scissors	1, 2, 3
xiv	Paper hanger's scissors	1, 2, 3, 4
xv	Camel-trimming scissors	1, 2, 3
xvi	Nail-cutting scissors	2
xvii	Grape scissors	2

7 Manufacture

7.1 Scissors shall be manufactured to the shapes given in the corresponding figures. All forgings shall be sound. The handles when made of mild steel or malleable iron shall be soundly welded or neatly riveted to the blades. Brass handles shall be riveted. The blades shall be countersunk and the riveting done properly so as to make the joint rigid. The rivets shall be filed and made flush. The finger loops shall be well proportioned and properly shaped.

7.2 Scissors shall be properly hollow ground with the cutting edges true, and adjusted for smooth operation.

7.3 In case of scissors having screws as fasteners, one blade shall be tapped to engage the screw. The threads shall be full and true. The other blade shall be counter bored to accommodate the head of the screw or bolt as shown in the respective figures. After assembly, the ends of the shanks of fasteners shall be neatly burred over.

8 Workmanship and Finish

8.1 Scissors shall be free from cracks, seams, burrs, flaws and other defects. They shall be finished smooth and plated all over except at the inner surface of the blades. Barber's scissors shall be supplied without any plating if so desired by the purchaser but in that case the exposed surfaces shall be highly polished to prevent them from rusting.

8.2 Scissors, except the cutting and inner faces of the blades, shall be either nickel plated or chromium plated over nickel as desired by the purchaser. The thickness of nickel coating and chromium coating shall be 5 microns and 0.3 micron respectively. Screws and nuts, where ever used, shall also be nickel plated or chromium plated over nickel corresponding to the plating on the scissors on which they are used.

8.3 Scissors shall work freely without any undue play or stiffness. The cutting edges of the blades shall not over-ride. Scissors shall be supplied sharpened and ready for use.

8.4 If required by the purchaser, scissors may be supplied with handles enamelled or lacquer black. Handles shall be free from rust and foreign depositions before painting. Any good quality approved enamel or lacquer may be used for the purpose.

9 Designation

9.1 The designation of scissors shall indicate:

a) commonly used name,
b) type, and
c) nominal size

Example:
Stationery scissors of nominal size of 125 mm and type 1 shall be designated as:
Stationery Scissors, Type 1, 125.

10 Sampling

Sampling and acceptance criteria for scissors shall be as agreed to between the purchaser and the supplier. A suitable scheme for the same is given in Appendix A.

11 Tests

11.1 Performance Test

10.1.1 Each pair of scissors shall be tested by cutting a piece of silk (weighing not less than 60 g per square metre) or cambric cloth, which shall not be kept taut during the test. In doing so, the scissors shall be opened as wide as possible and then gradually brought to the closed position. The scissors shall cut the cloth neatly without drag or pull, from pinch to tip and the cut portion of the cloth shall fall freely from the cutting edge.

11.2 Plating Test

The plating shall neither peel off nor show any sign of damage when rubbed with back of a knife ten to fifteen times.

12 Chemical Analysis

When the purchaser requires an actual analysis of the materials used in the manufacture of scissors, this shall be made in accordance with ISO/TR 9769 for iron and steel, and ISO 1811-1/ ISO 1811-2 for cast brass, at a place to be mutually agreed upon between the purchaser and the supplier, the cost of the scissors used for analysis being met by the supplier. The expense of the analysis shall be borne by the purchaser if the scissors comply with the test requirements and by the supplier if they fail.

13 Marking

Each pair of scissors shall be legibly and indelibly stamped with the manufacturer's name or initials or registered trade-mark. When specifically required by the purchaser, the year of manufacture shall also be marked.

14 Preservative Treatment and Packing

14.1 The cutting edges and unplated portions of the scissors shall be coated with suitable rust preventive.

14.2 Unless specified otherwise each pair of scissors shall be wrapped in moisture-proof paper. Five or ten scissors of the same class, type and size shall be packed in a cardboard box. Cardboard boxes shall be labeled on one end to indicate the class, type and size of the scissors and the name or trade-mark of the manufacturer. The other end shall be labeled to indicate the type of plating and the finish of handles.

For example:

Fully Nickel Plated, or
Fully Nickel and Chromium Plated, or
Nickel Plated and Black Handles, or
Nickel and Chromium Plated and Black Handles, or
Unplated

APPENDIX A

RECOMMENDED SAMPLING SCHEME AND CRITERIA FOR CONFORMITY FOR SCISSORS FOR GENERAL PURPOSES

A-1. LOT

A-1.1 All the scissors of the same classy, type and dimensions manufactured from the name material under essentially similar conditions of manufacture shall constitute a lot.

A-2. SELECTION OF SAMPLE

A-2.1 To ascertain the conformity of the lot with the requirements of the standard, the number of scissors to be selected at random from the lot shall be in accordance with column 1 and 2 of Table 1.

Table 1: Sample Size and Criteria for Conformity

Lot Size (Number of Scissors in the Lot)	**Sample Size (Number of Sizes to be Selected)**	**Acceptance Number**
Up to 50	8	0
51 - 100	13	1
101 - 150	20	1
151 - 300	32	2
301 - 500	50	3
501 and above	80	5

A-2.1.1 In order to ensure the randomness of selection, the random number tables shall be used (See ISO 24153).

A-3. NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

A-3.1 Any pair of scissors not conforming to any of the requirements specified in this standard shall be treated as 'defective'.

A-3.2 The scissors selected according to A-2.1 shall be tested for (a) shapes and dimensions (see 2.1), (b) hardness (see 5.3), (c) workmanship and finish (see 8) and plating (see 11.2).

A-3.3 Criteria for Conformity - The lot shall be declared conforming to the requirements of this standard if the number of scissors found defective for one or more characteristics mentioned in A-3.2 is less than or equal to corresponding acceptance number given in column 3 of Table 1.