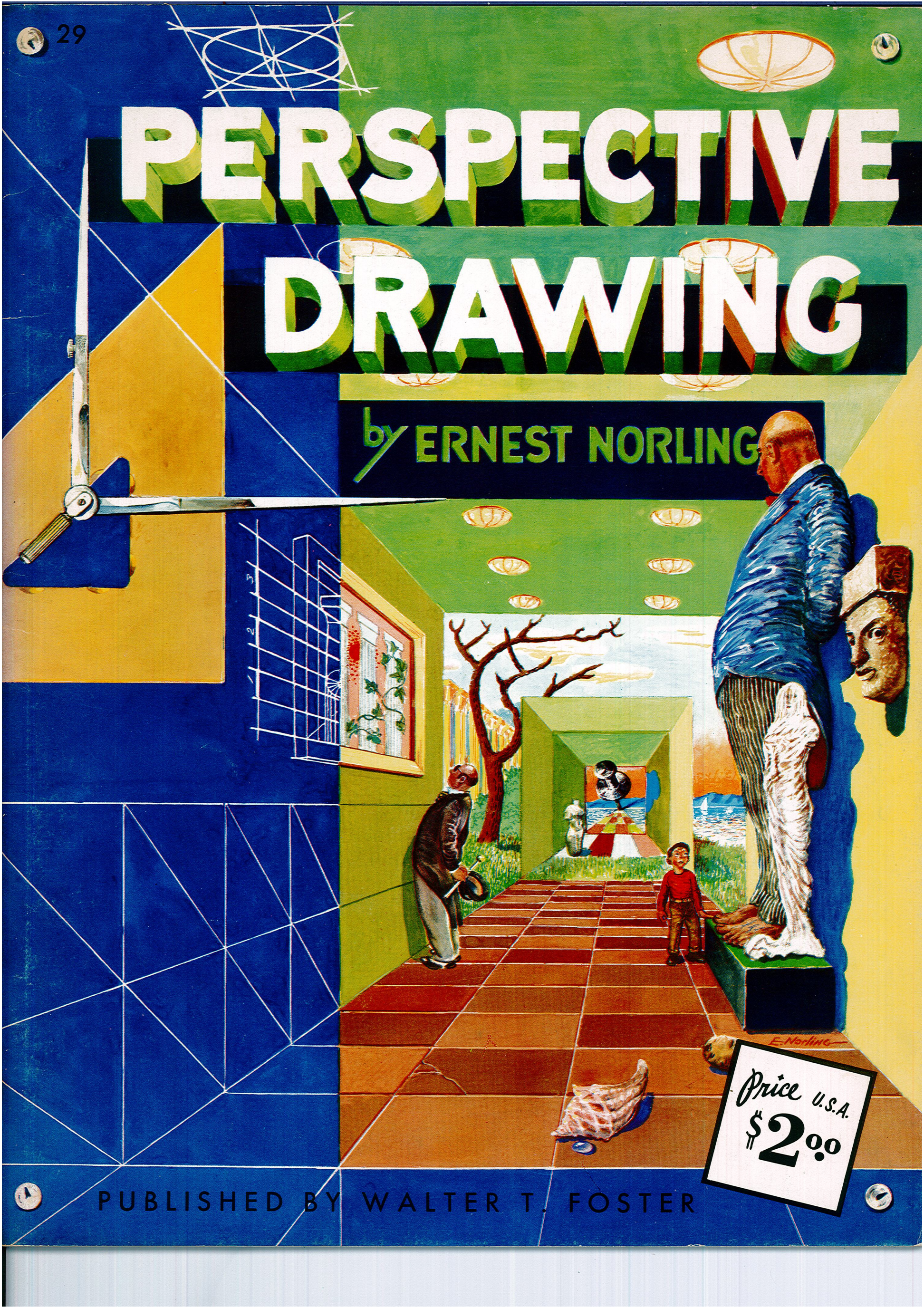


PERSPECTIVE DRAWING

by ERNEST NORLING



Price U.S.A.
\$2.00

PUBLISHED BY WALTER T. FOSTER

The PURPOSE OF THIS BOOK
IS TO DISSOLVE THE FEARS OFTEN
ASSOCIATED WITH PERSPECTIVE
DRAWING — AND TO FURNISH
A WORKING KNOWLEDGE OF
THE SUBJECT. ■ ■ ■ ■ ■

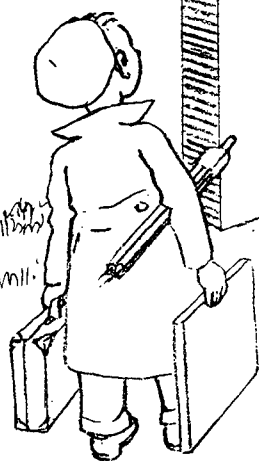
SIMPLE OBJECTS HAVE BEEN
CHOSEN AND SIMPLE DIAGRAMS
HAVE BEEN USED TO SHOW HOW
IT IS DONE AND WHY. ANY
PERSON WHO STUDIES THIS BOOK
CAREFULLY WILL FIND, TO HIS
SURPRISE, THAT IT HAS GIVEN HIM
WHAT HE NEEDS TO TURN OUT A
GOOD PERSPECTIVE DRAWING.

VERY TRULY YOURS,

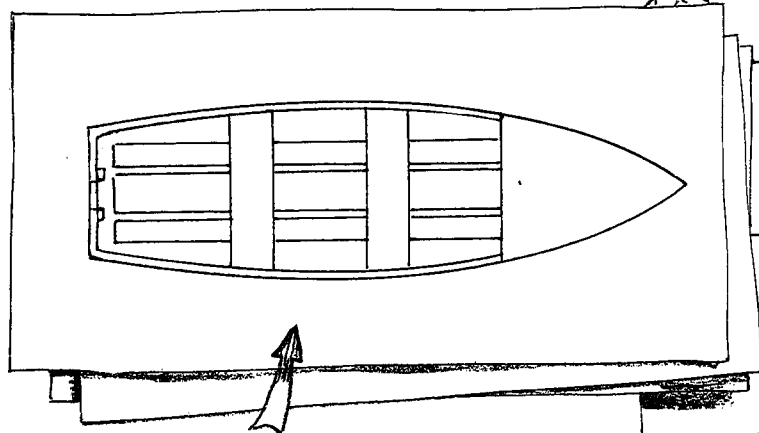
Ernest Horn

PERSPECTIVE DRAWING

PERSPECTIVE MAKES THE
THING WE ARE DRAWING
LOOK SOLID.

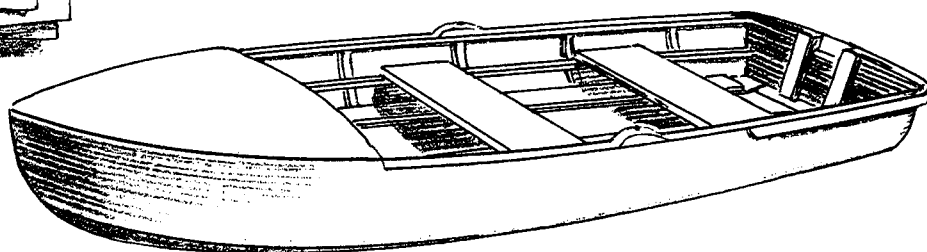
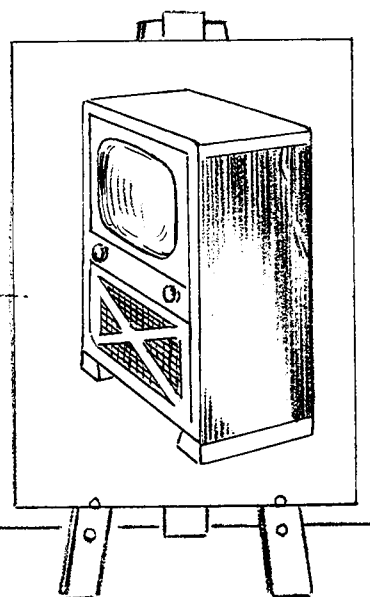
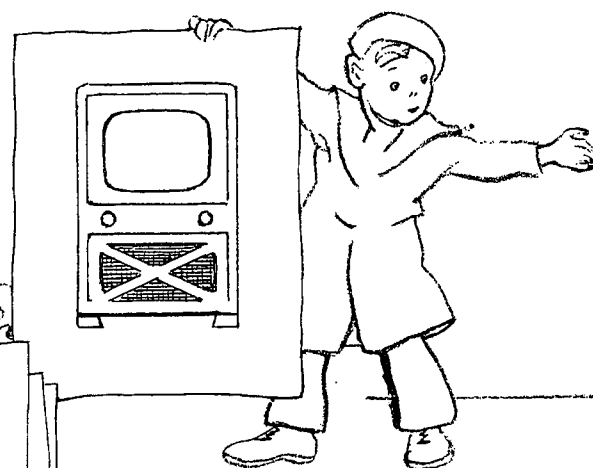


THE PLAN—THEN
THE DRAWING IN
DIMENSION.

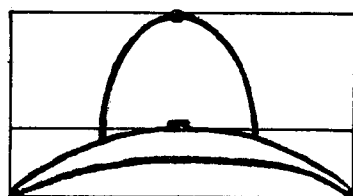
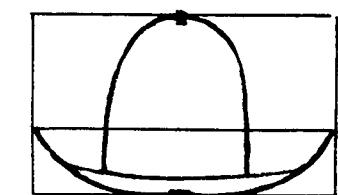


A PLAN OR A DIAGRAM
IS FLAT.

A PERSPECTIVE DRAW-
ING APPEARS SOLID.

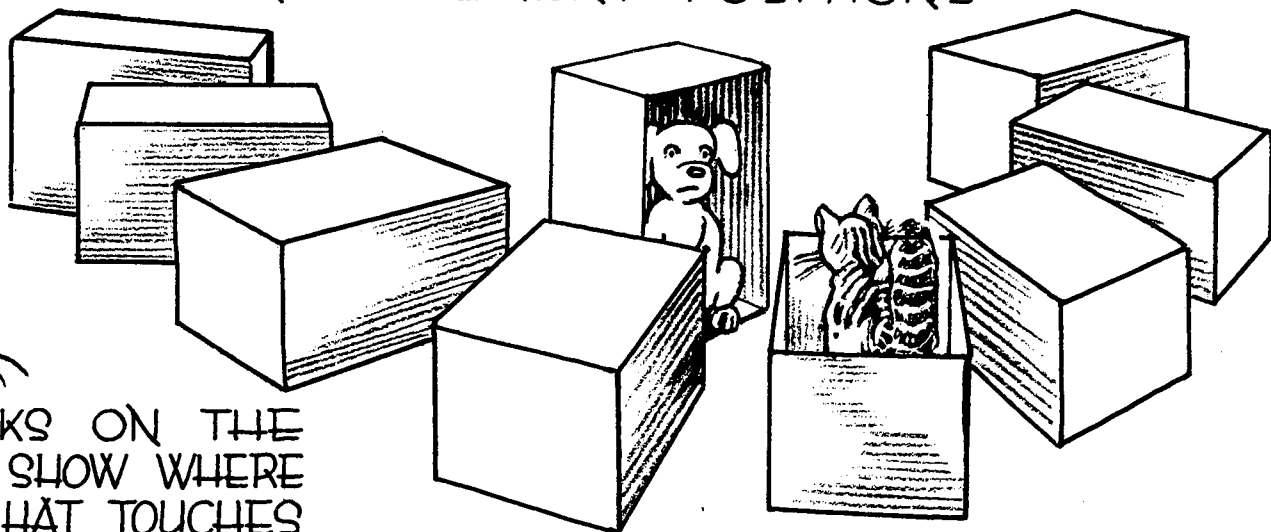


HAT IN A BOX



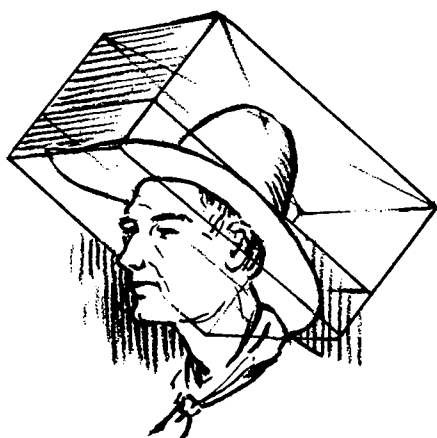
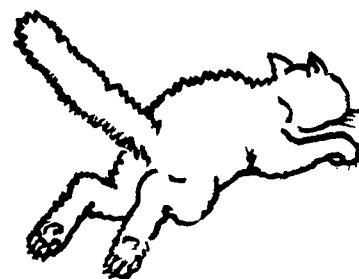
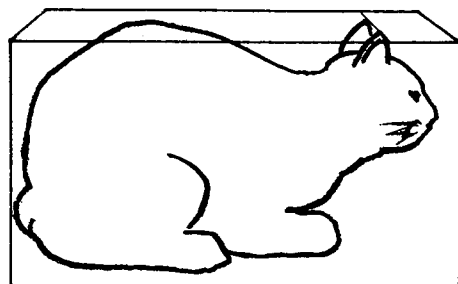
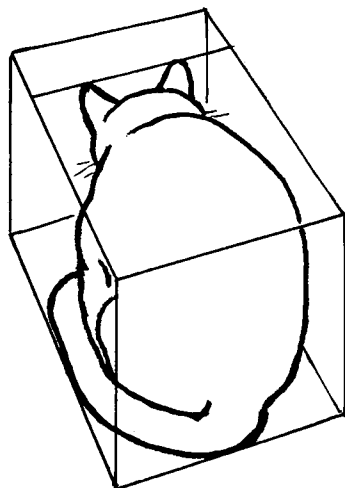
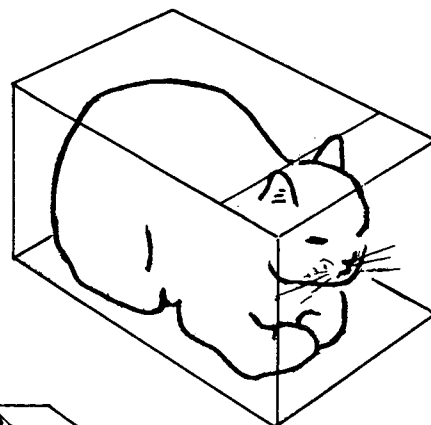
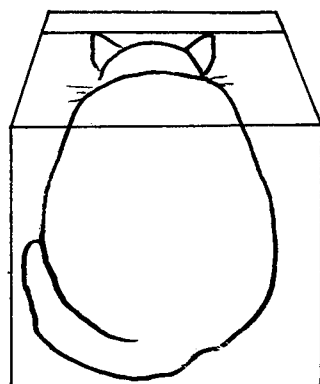
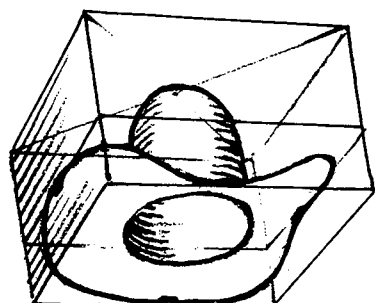
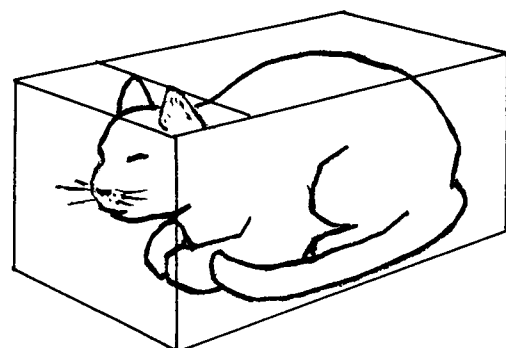
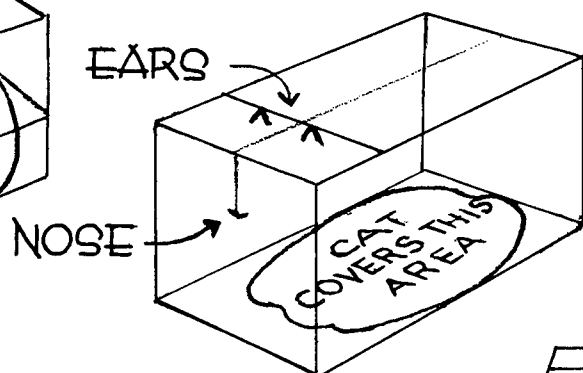
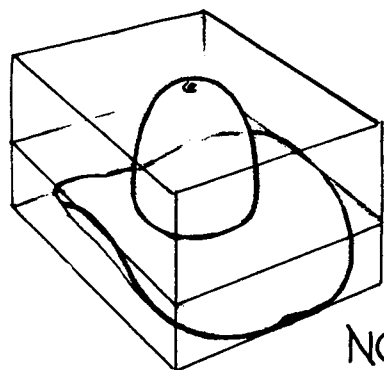
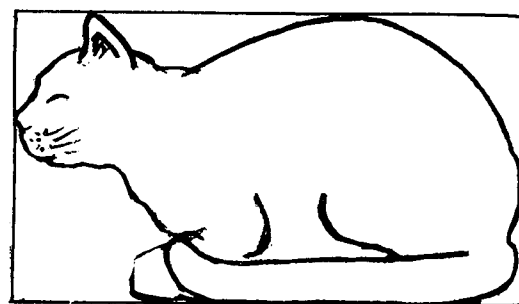
MARKS ON THE BOX SHOW WHERE THE HAT TOUCHES

IT ISN'T HARD TO DRAW A BOX IN DIFFERENT POSITIONS—

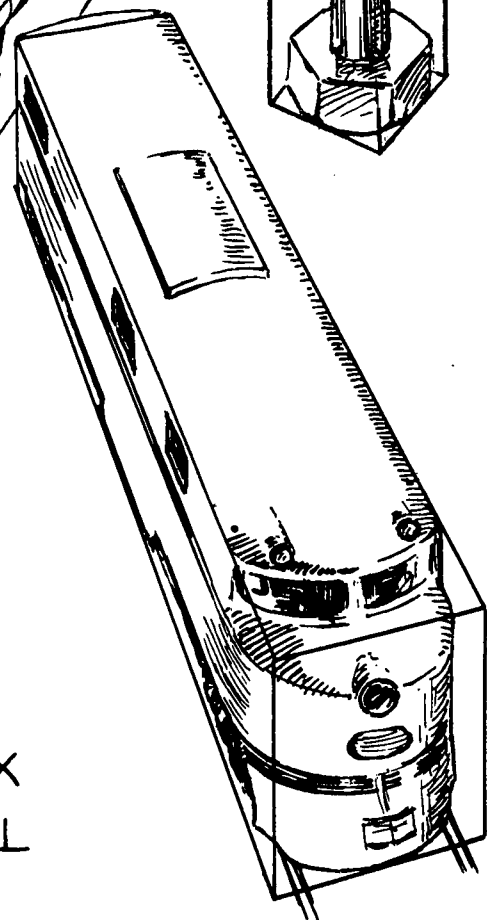
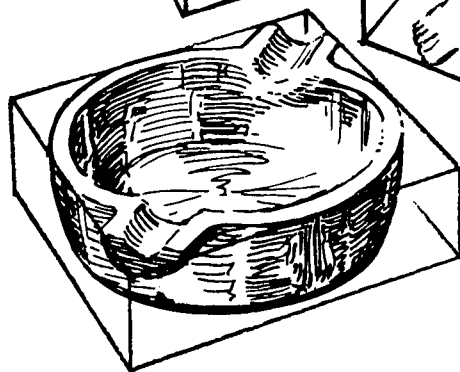
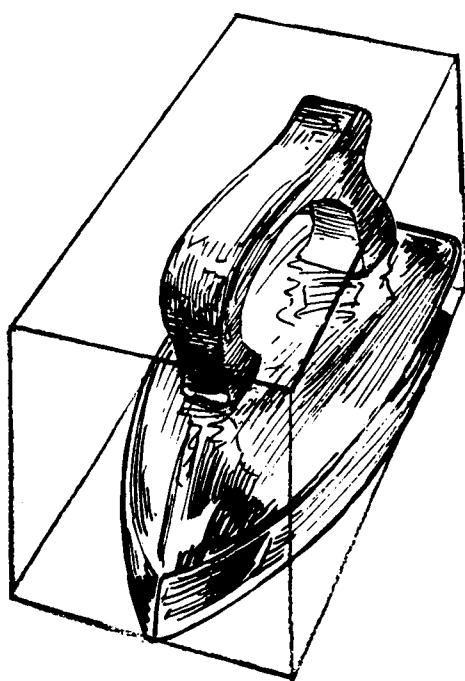
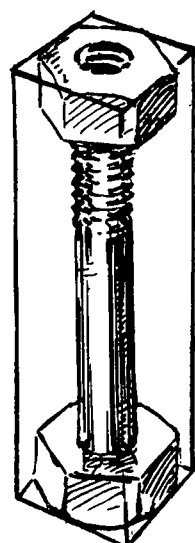
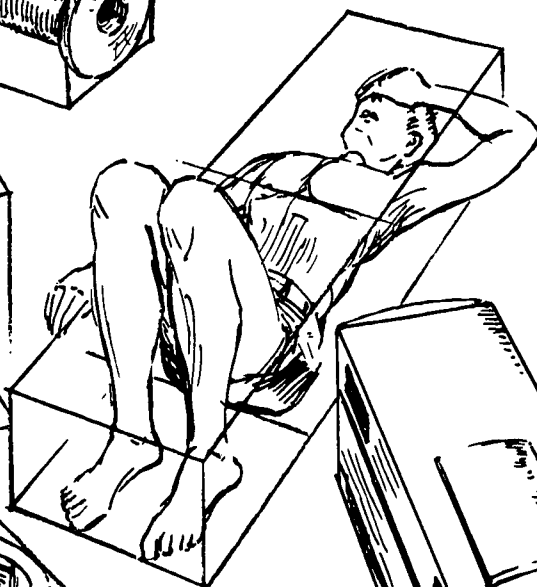
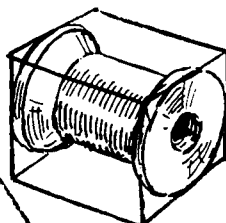
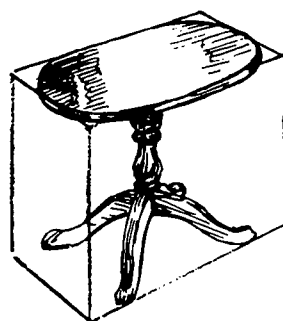
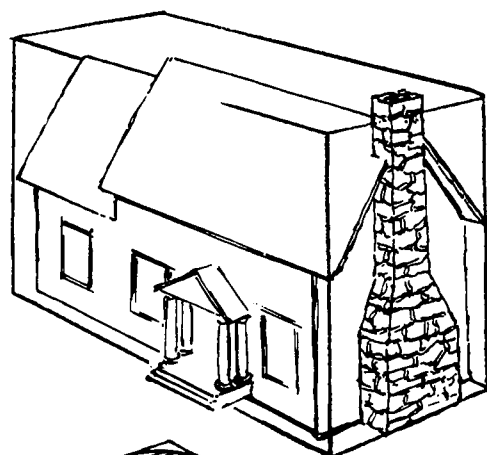
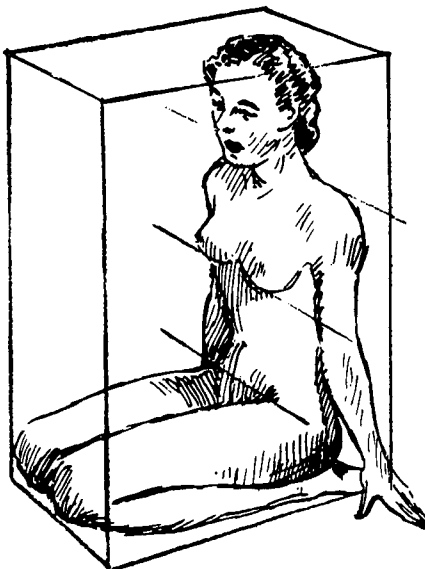


—OR THE SIDE VIEW OF A LAZY CAT

NOW HERE IS AN EASY WAY TO MAKE PERSPECTIVE DRAWINGS OF THE CAT — JUST PUT THE CAT IN AN IMAGINARY BOX.



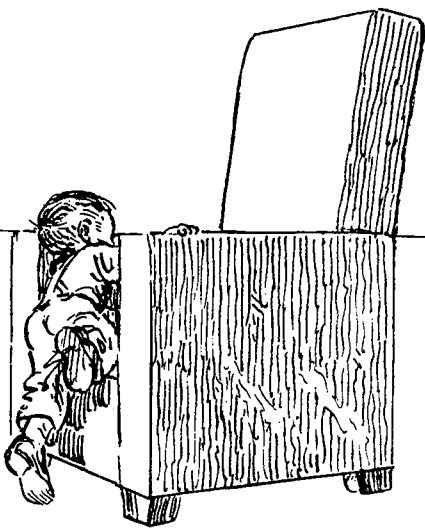
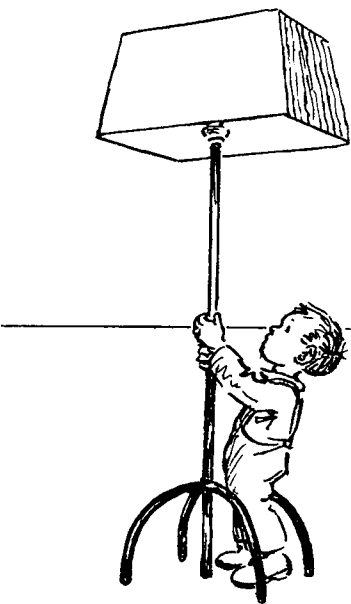
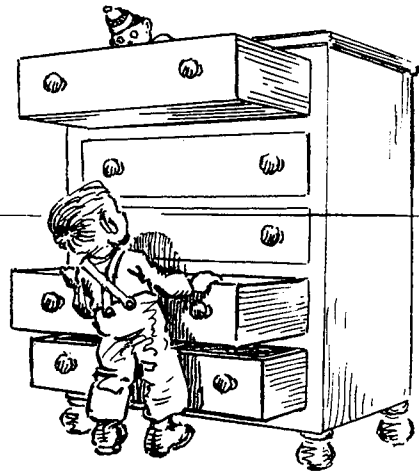
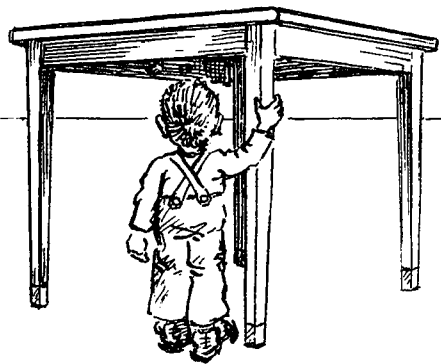
YOU WILL FIND THAT MANY
THINGS CAN BE EASILY DRAWN
IN PERSPECTIVE BY PLACING THEM
IN BOXES.



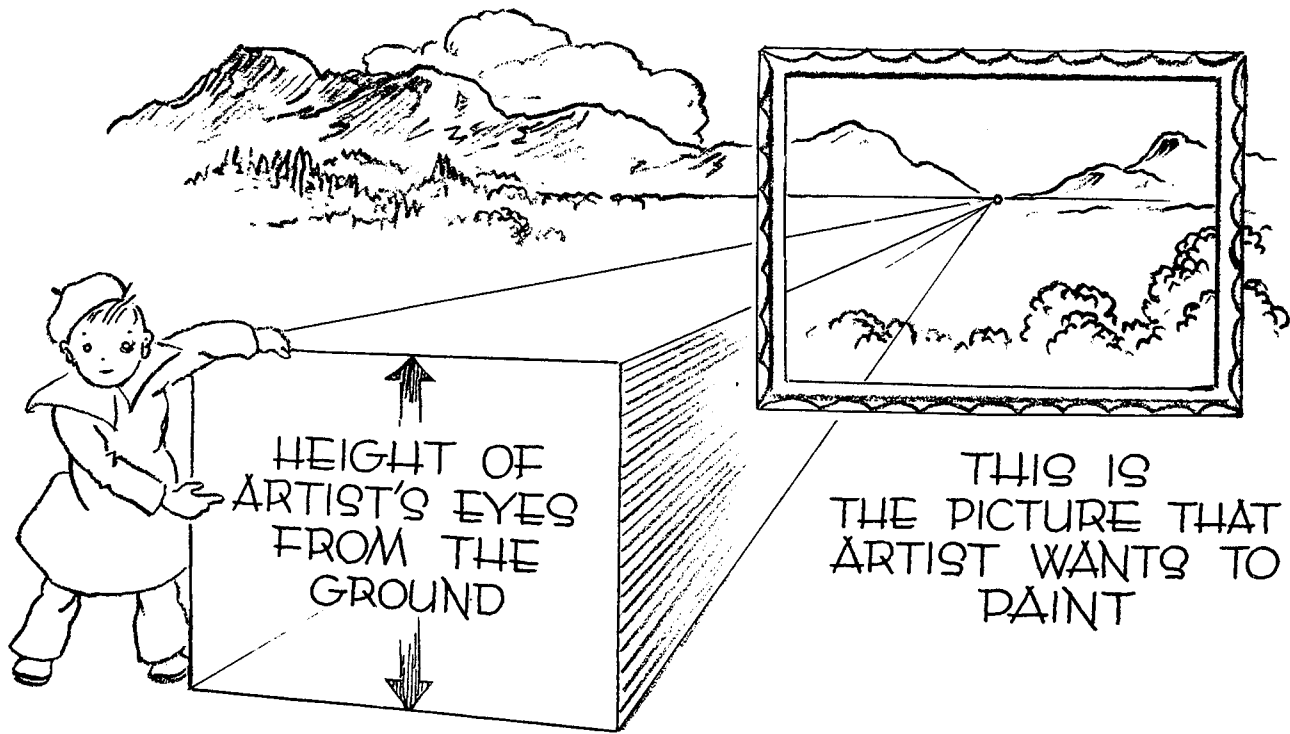
TRY IT!

IF THE PERSPECTIVE OF THE BOX
IS CORRECT, THE THING INSIDE WILL
BE BASED ON ACCURACY.

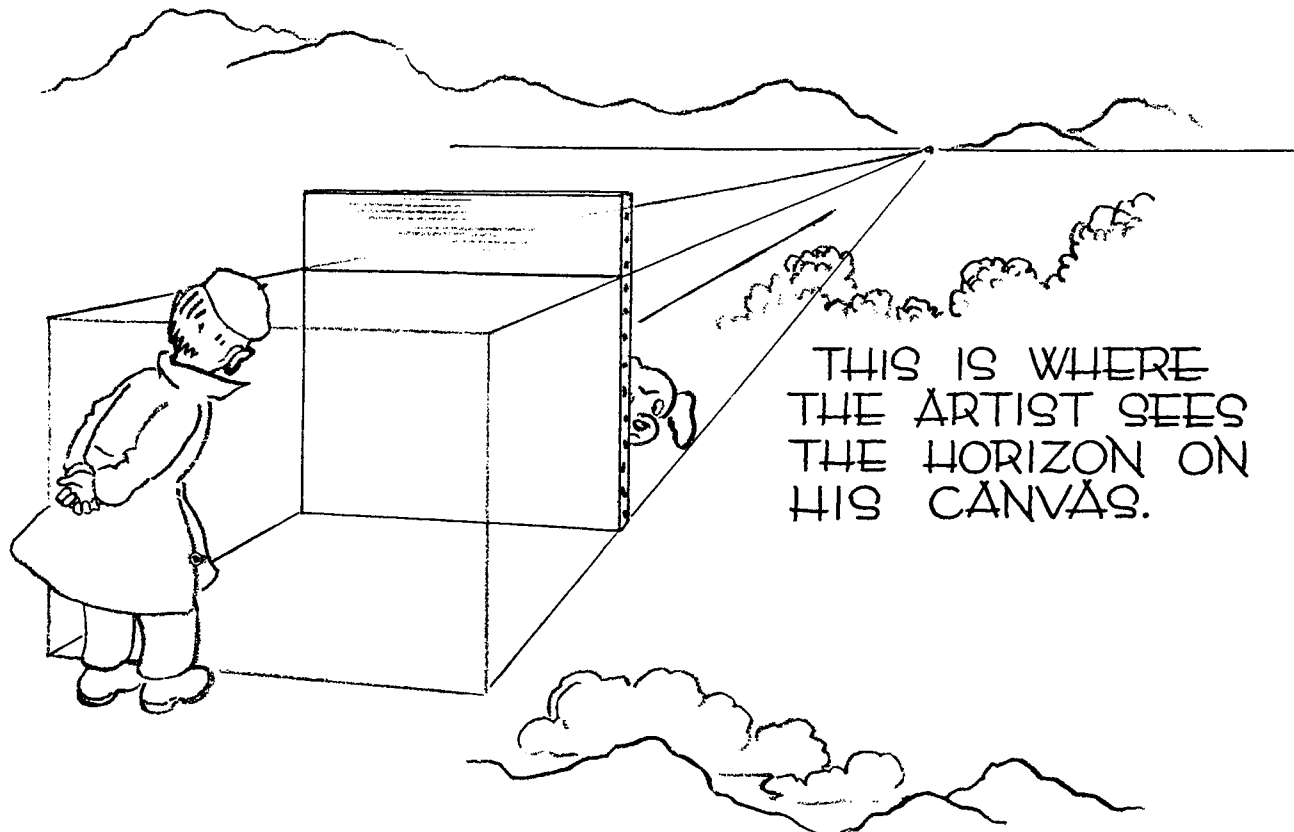
BEFORE DRAWING A BOX LET US INVESTIGATE THE EYE LEVEL



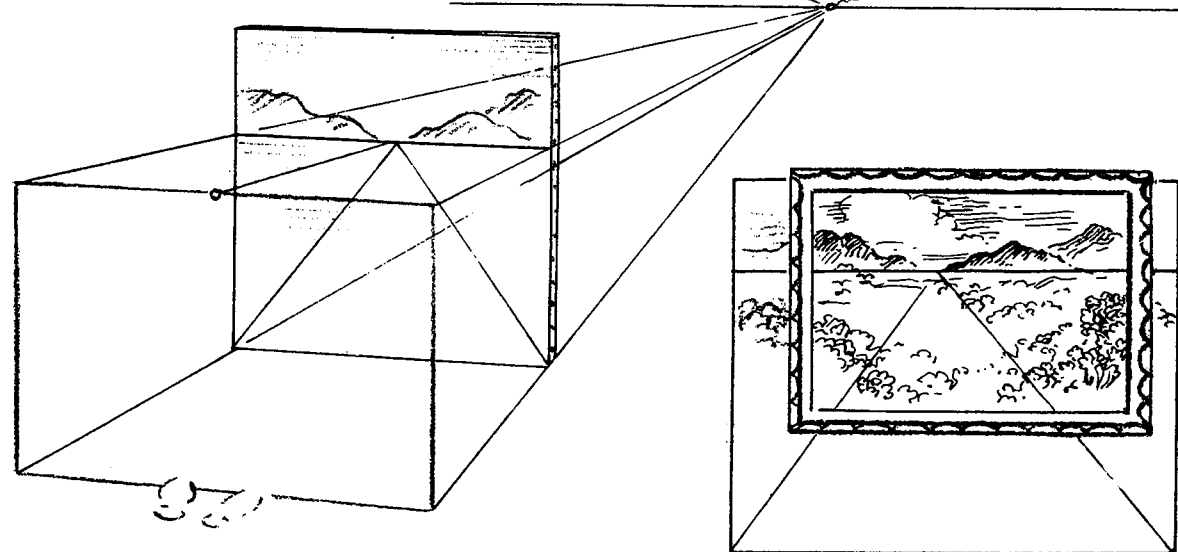
A CHILD'S EYE LEVEL



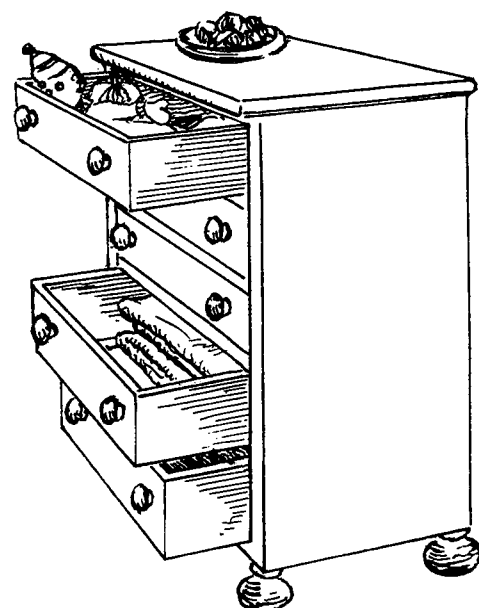
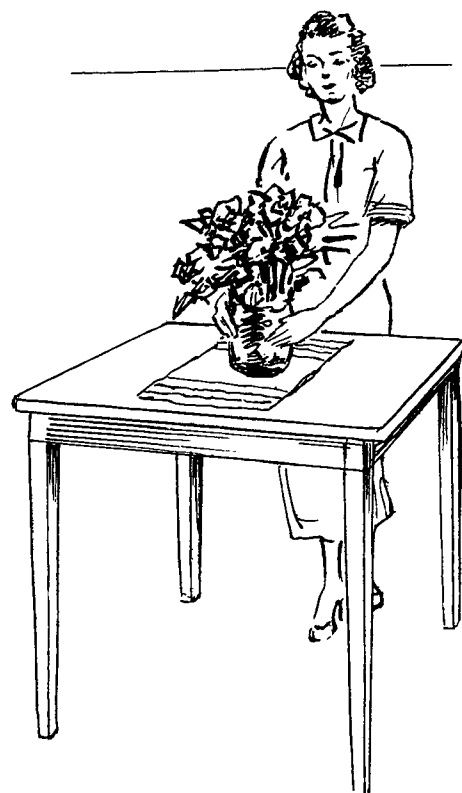
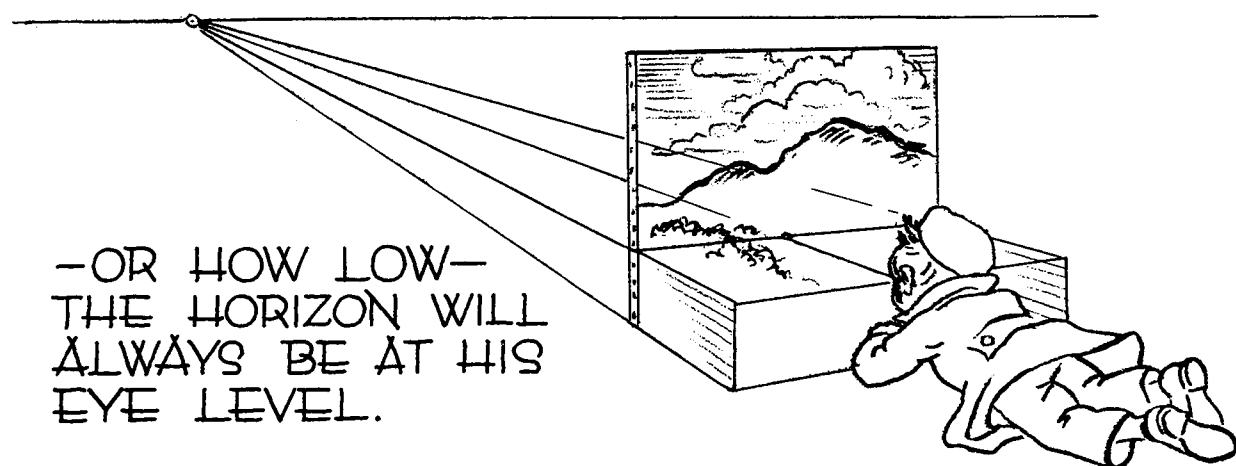
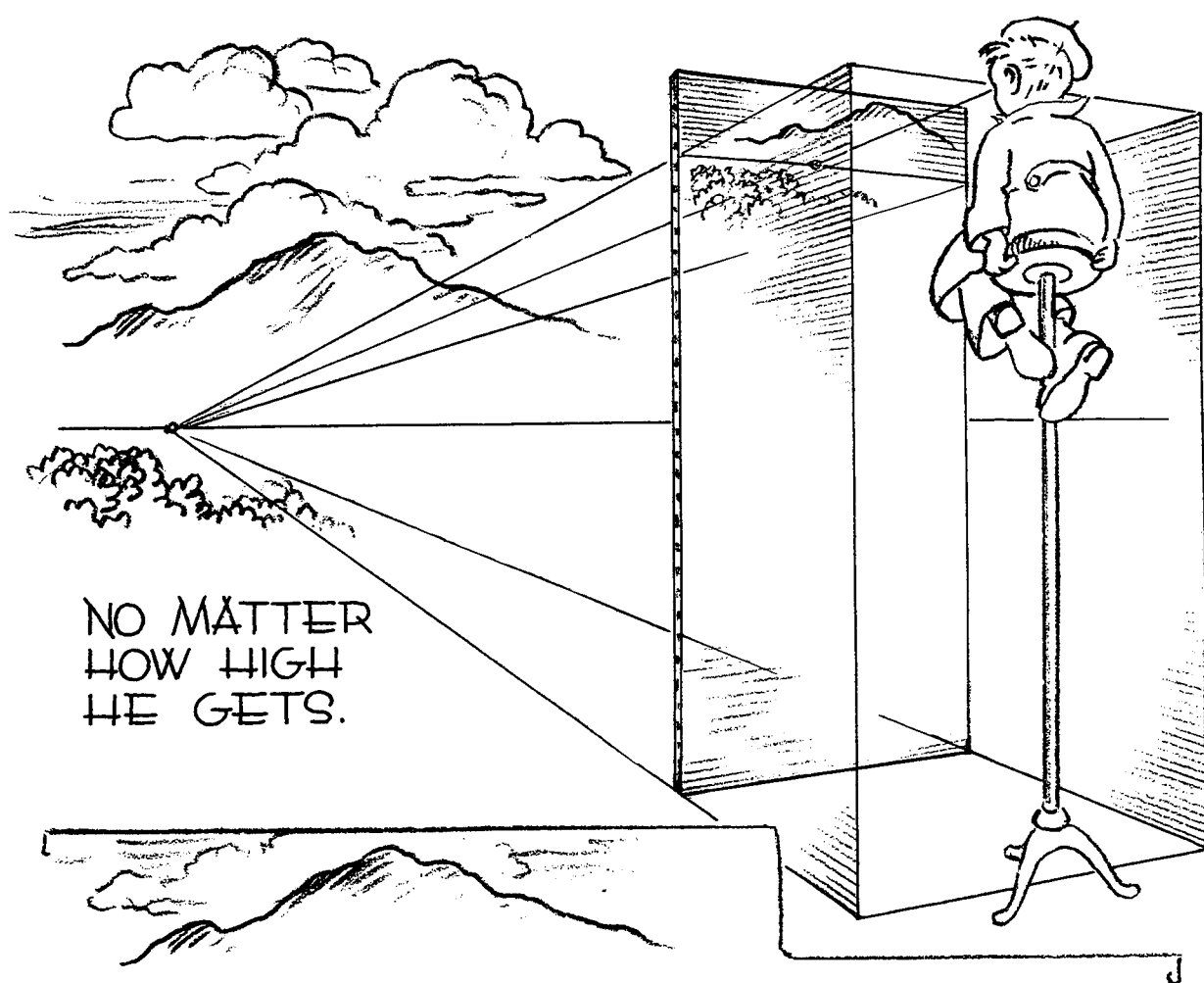
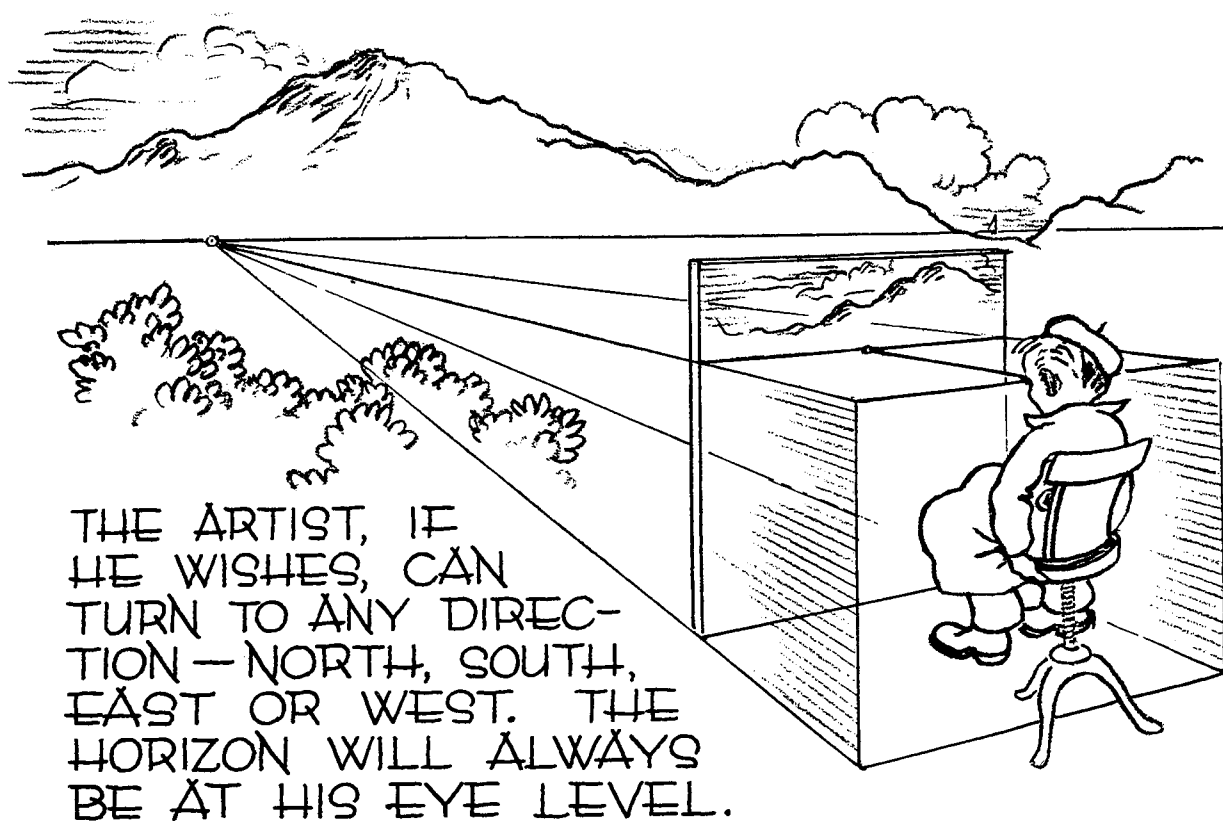
THIS IS THE PICTURE THAT ARTIST WANTS TO PAINT



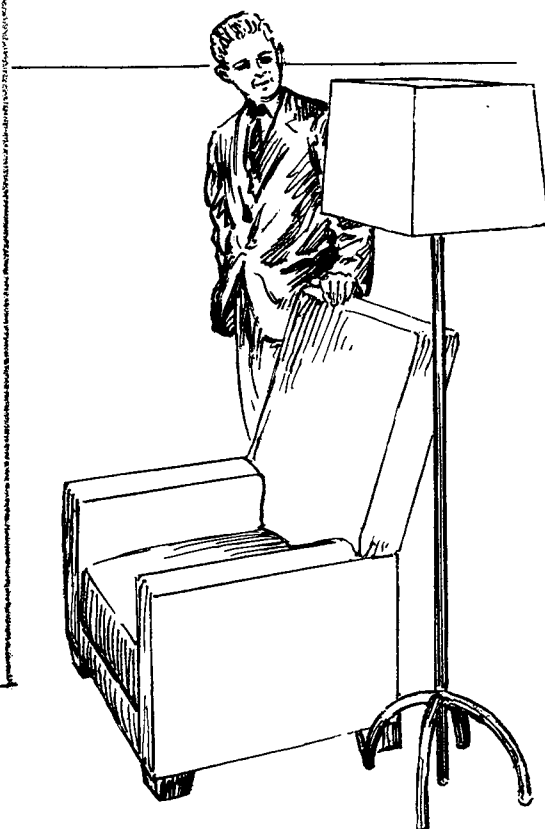
THIS IS WHERE THE ARTIST SEES THE HORIZON ON HIS CANVAS.

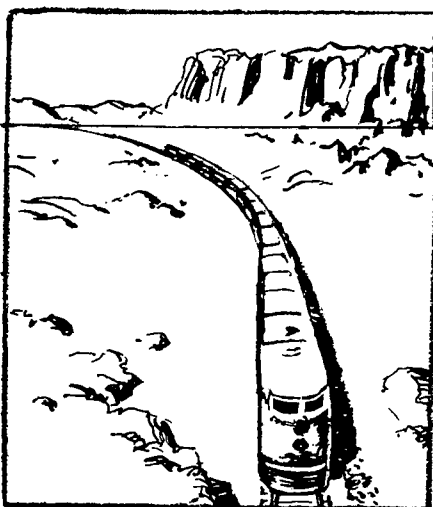


THE FINISHED PICTURE

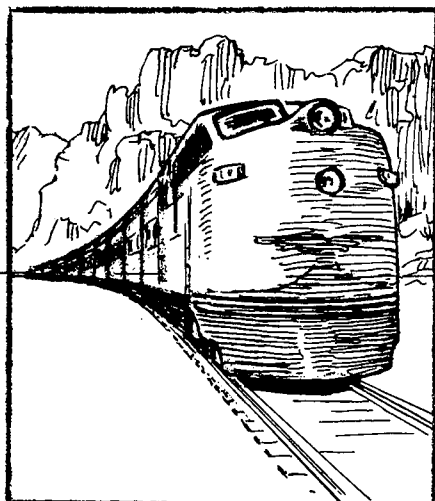


A GROWN UP'S EYE LEVEL

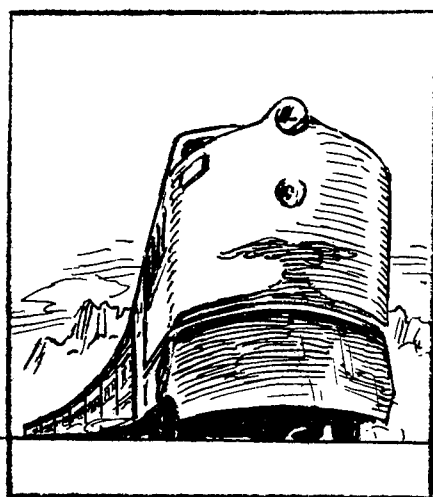




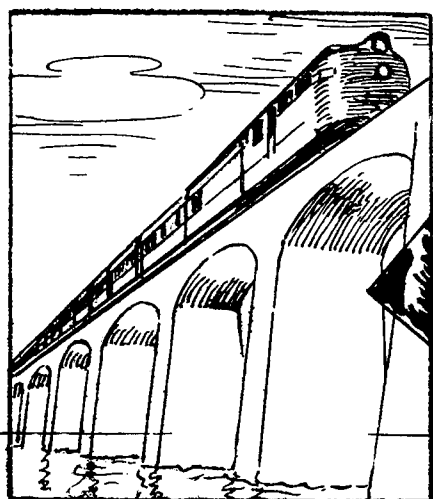
BIRDSEYE



NORMAL VIEW

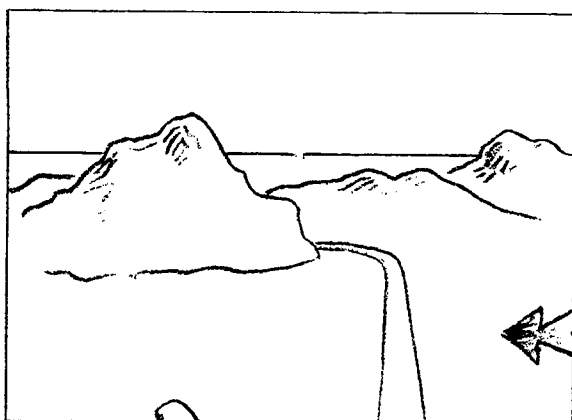
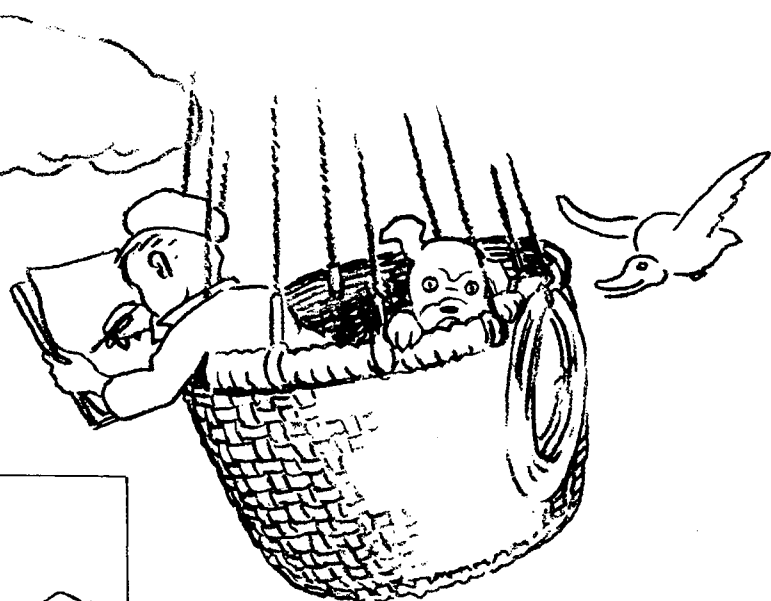


WORMSEYE

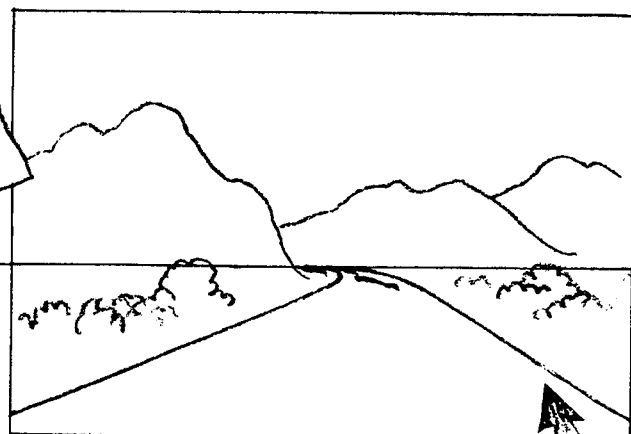
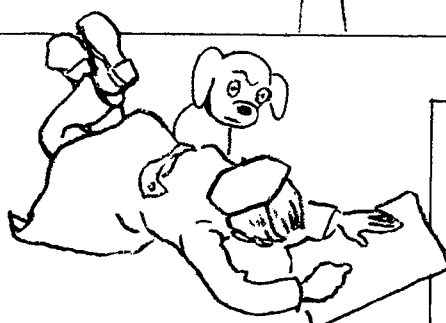


OVERHEAD

FROM A
BALLOON



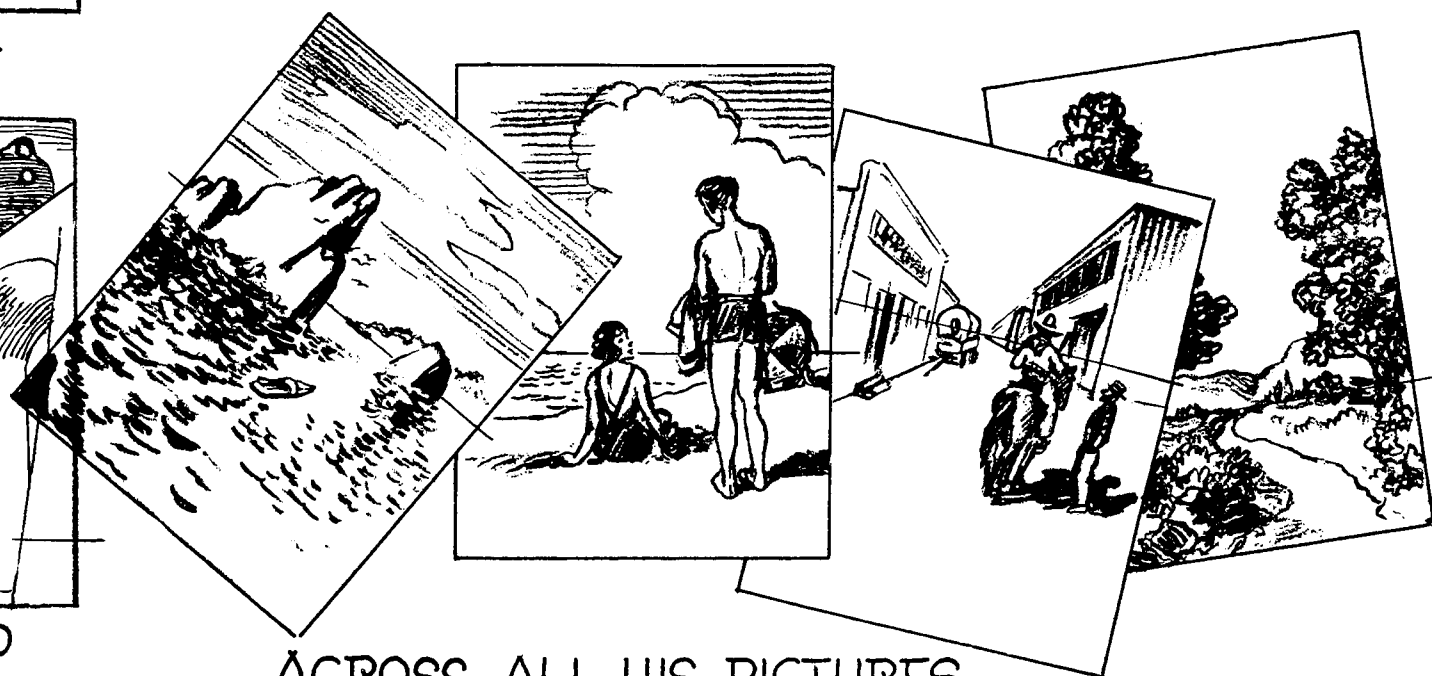
HIS PICTURE
WILL LOOK LIKE
THIS



AND FROM THE
GROUND —

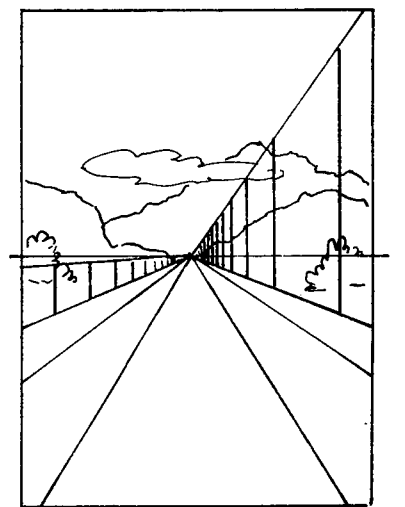
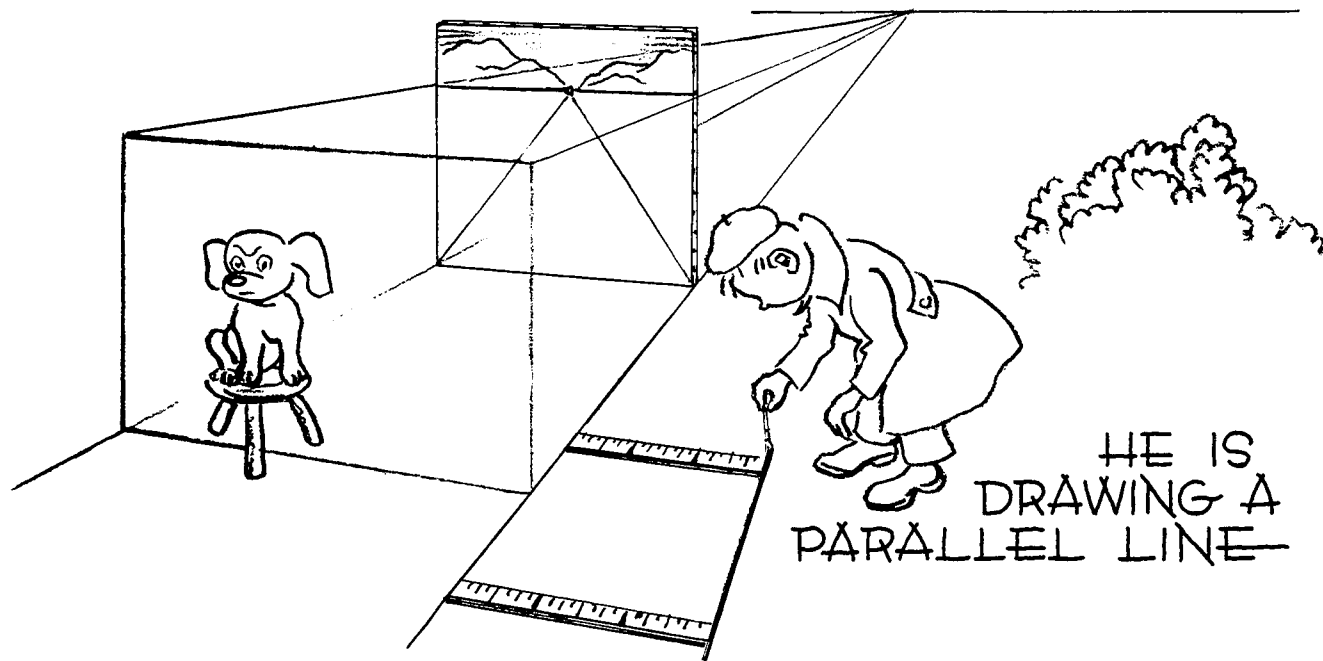
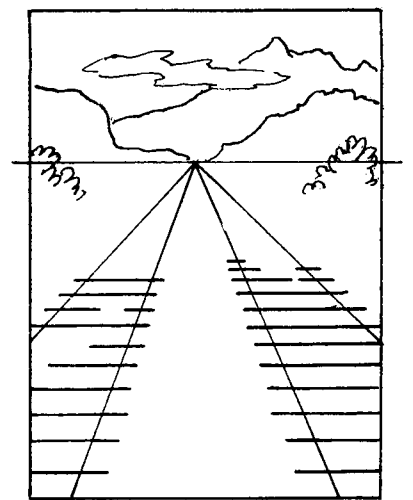
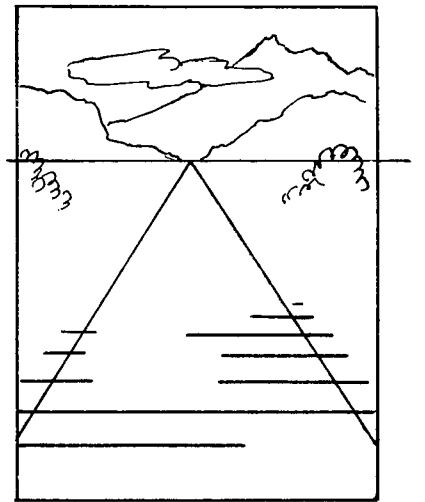
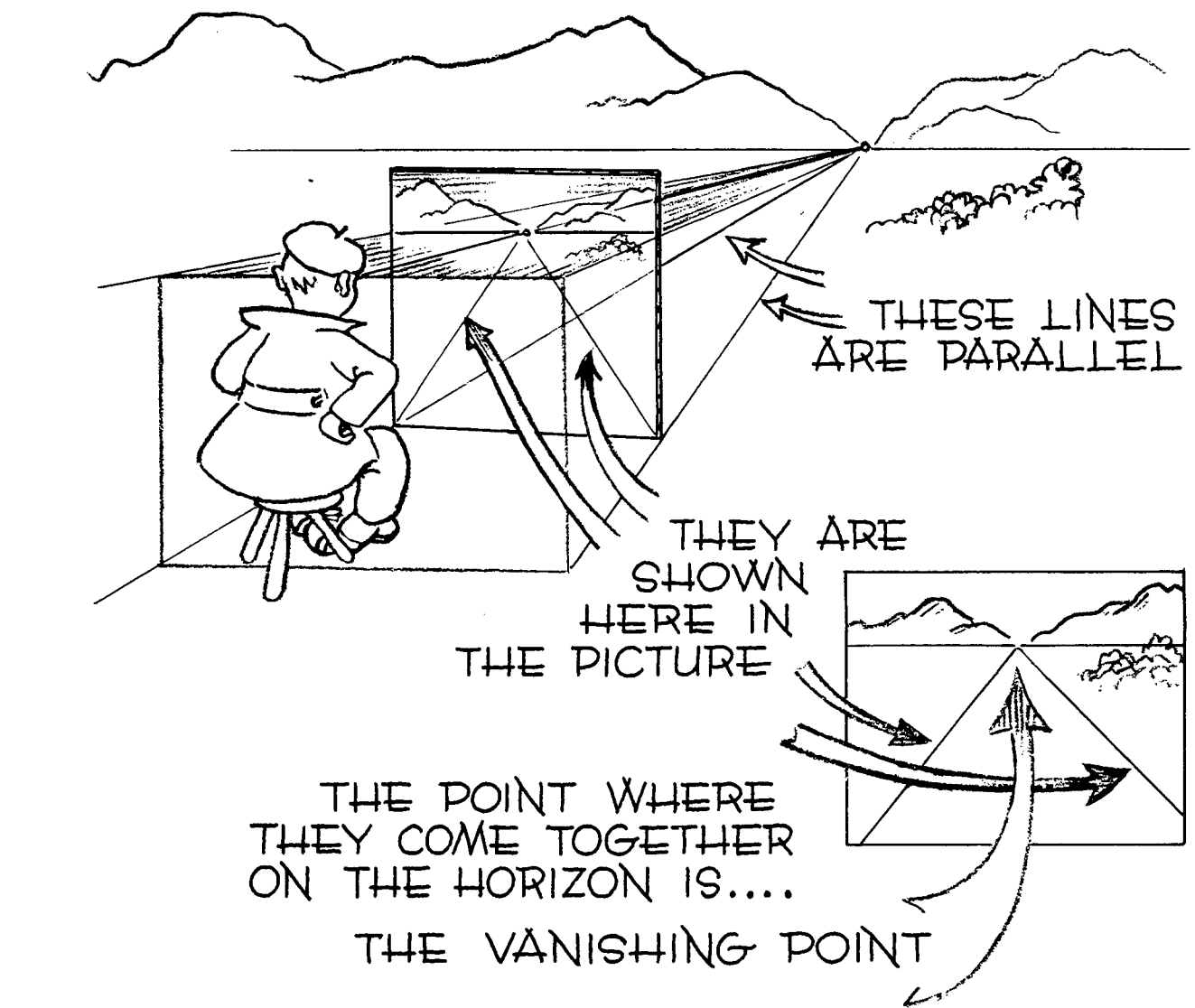
HIS PICTURE WILL LOOK THIS WAY

HE FINDS THAT IN BOTH INSTANCES
THE HORIZON IS LEVEL WITH HIS
EYES. HE DRAWS IT AS A STRAIGHT
LINE ACROSS HIS PICTURE AND—

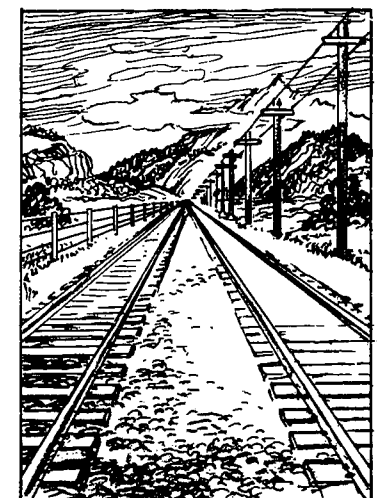
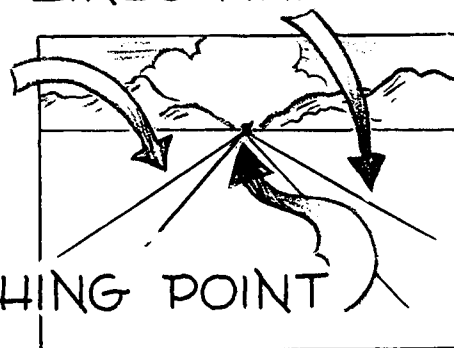


ACROSS ALL HIS PICTURES

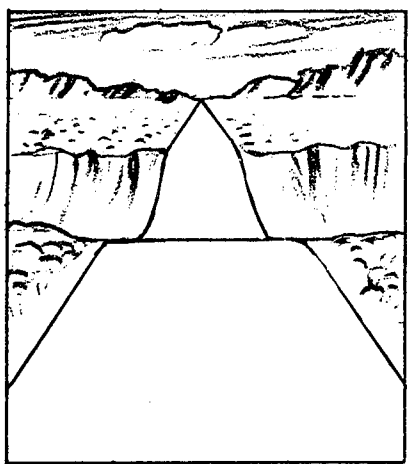
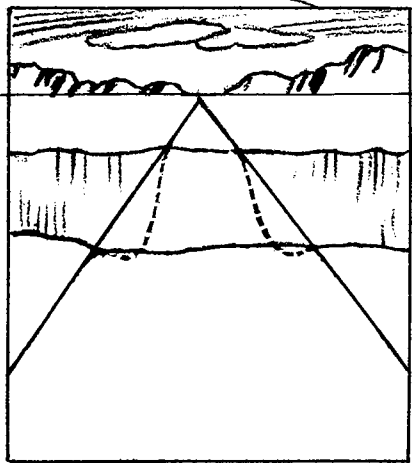
THE VANISHING POINT



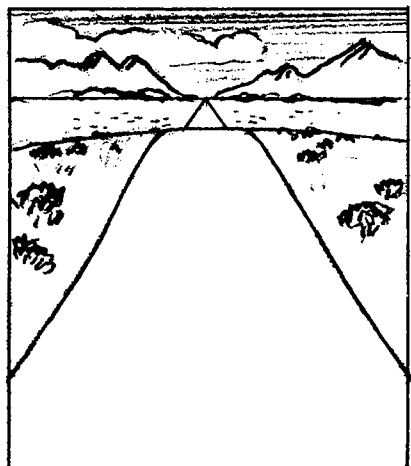
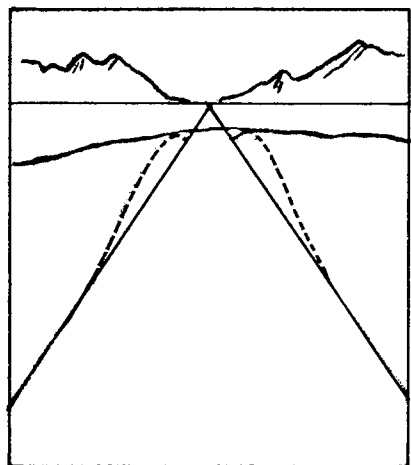
IF OTHER PARALLEL LINES ARE DRAWN THEY WILL COME TOGETHER ON THE PICTURE AT THE SAME VANISHING POINT



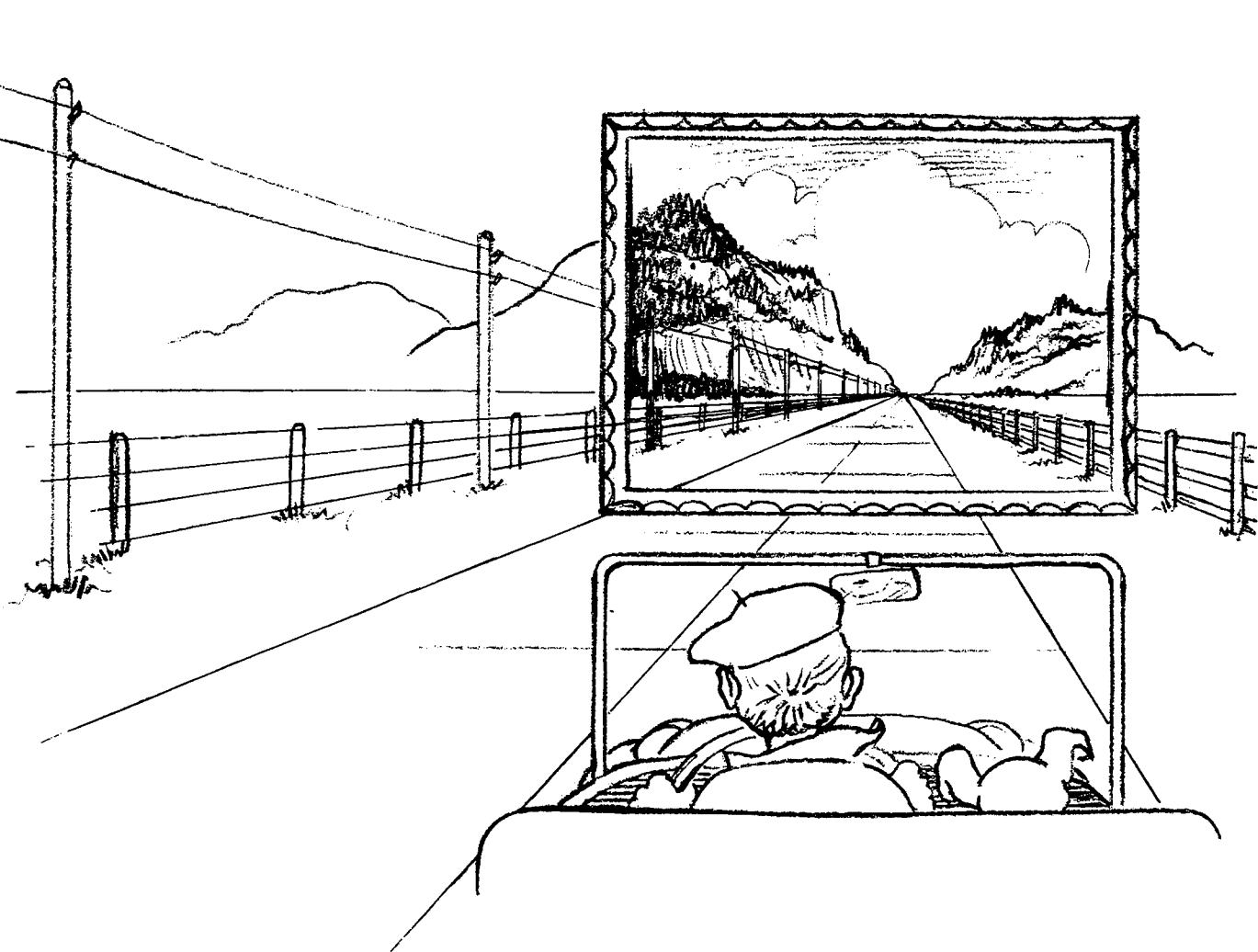
PARALLEL LINES



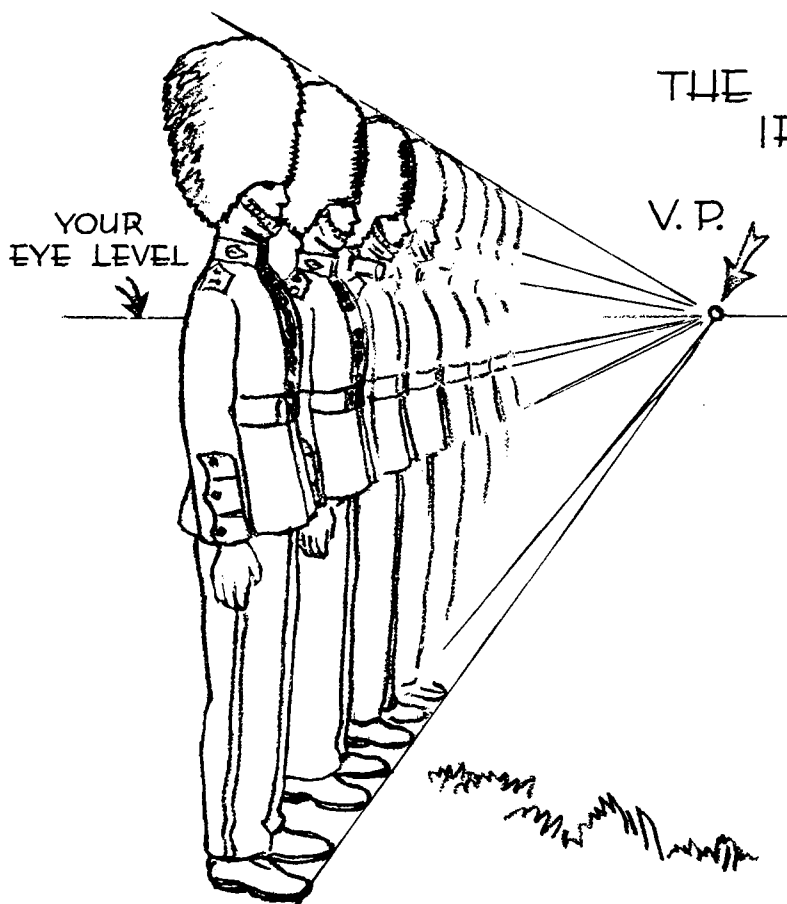
THERE IS A
DIP IN THE
HIGHWAY



A RISE AHEAD

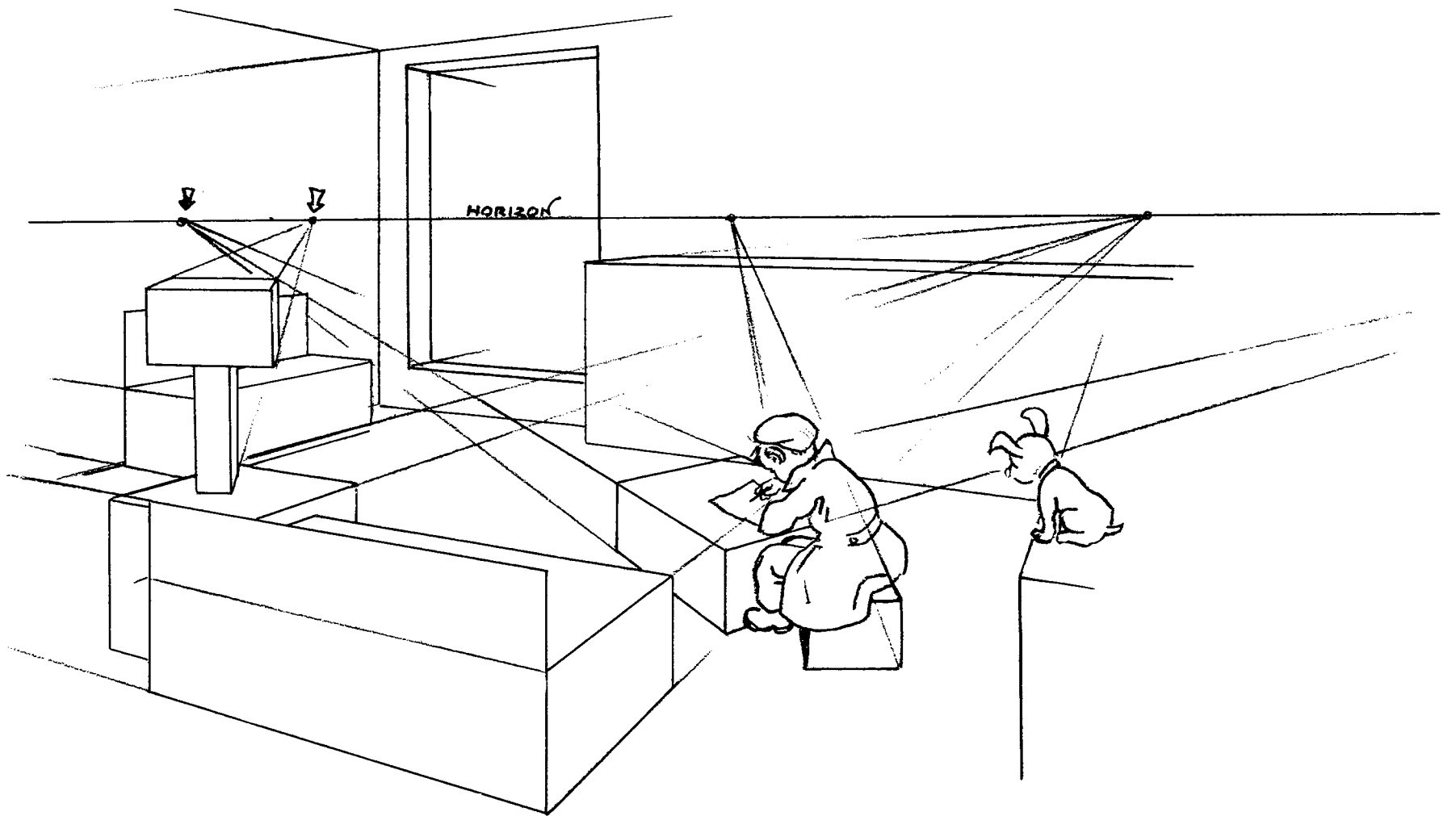


WHEN YOU ARE DRIVING ON THE
HIGHWAY, NOTICE THE PICTURE
STRAIGHT AHEAD.
THE HIGHWAY, THE FENCES, THE
TELEPHONE LINES — ALL GO TO
ONE VANISHING POINT.



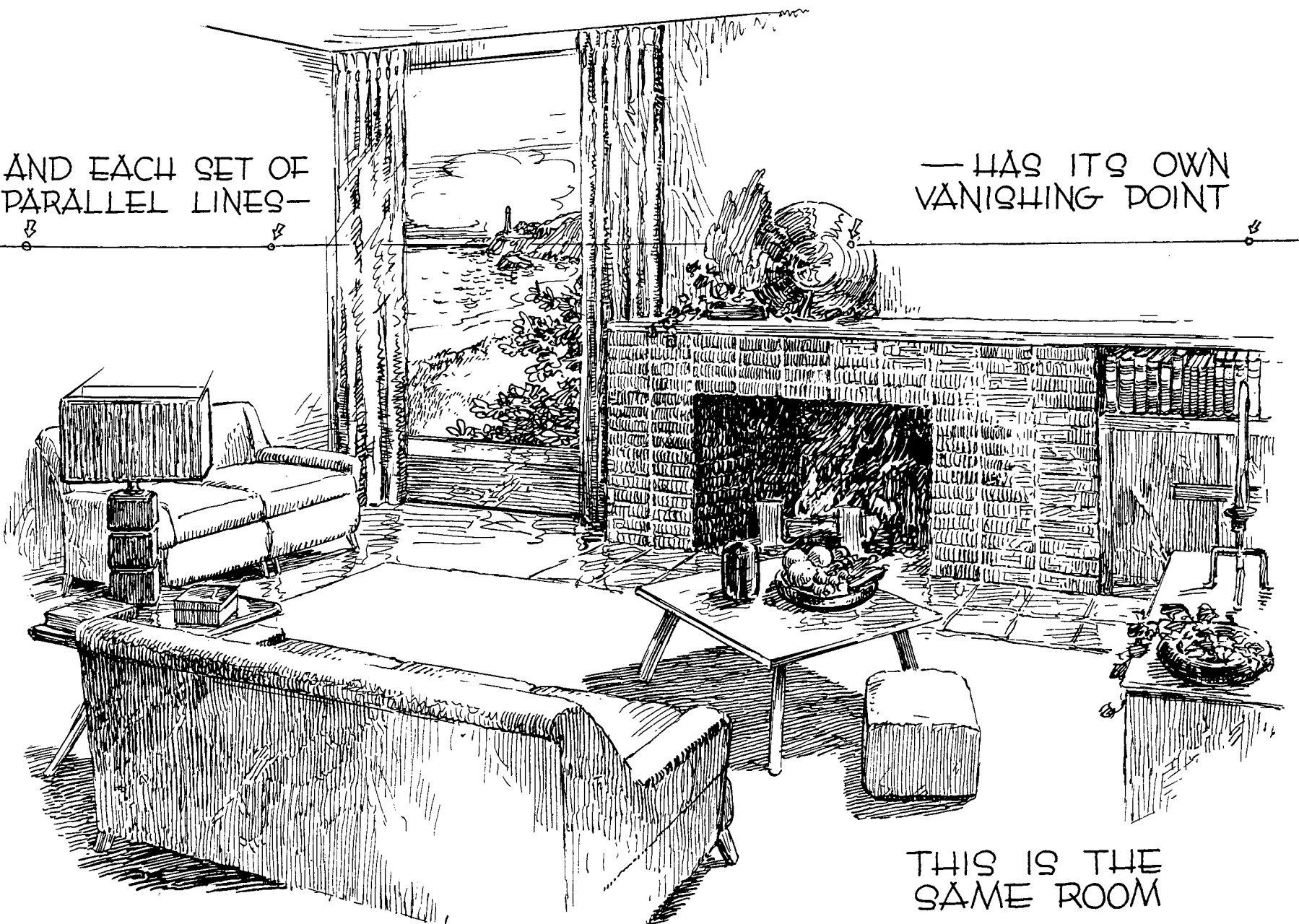
THE SOLDIERS DO TOO.
IF YOU CAN DRAW
ONE SOLDIER
YOU CAN DRAW
A LINE OF SOL-
DIERS AND THE
VANISHING POINT
IS ON THE HORIZON
AT YOUR OWN EYE
LEVEL.





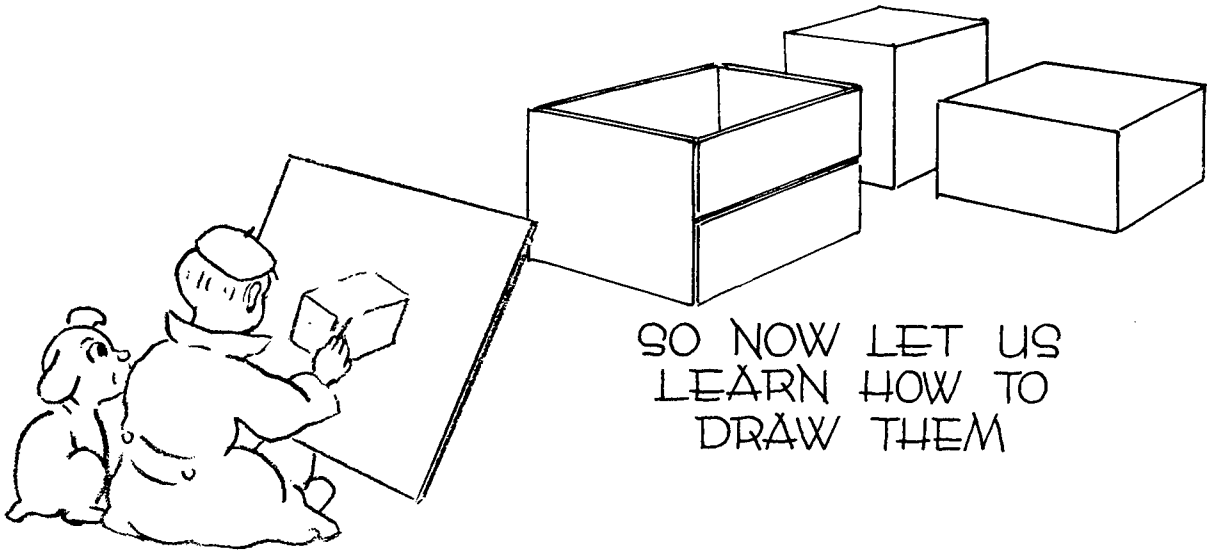
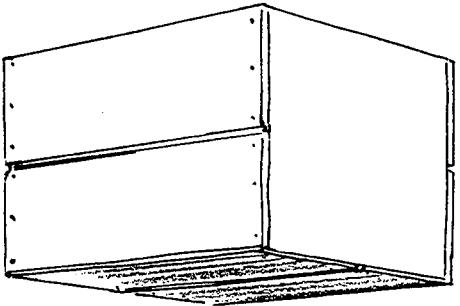
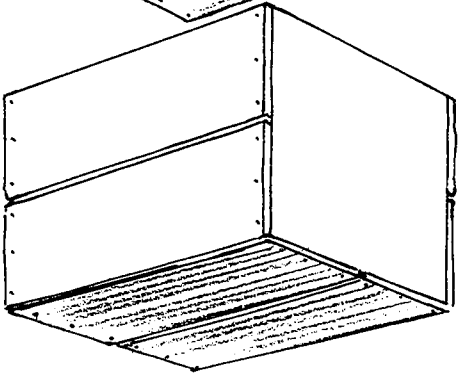
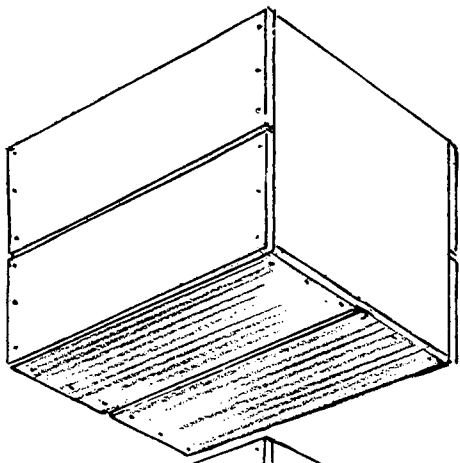
AND EACH SET OF
PARALLEL LINES—

—HAS ITS OWN
VANISHING POINT

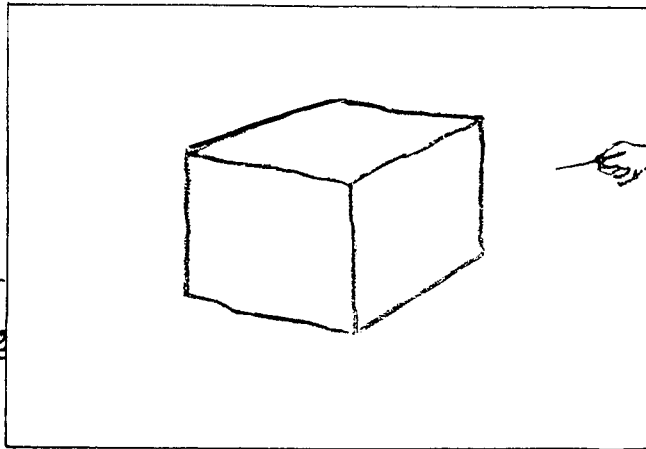


THIS IS THE
SAME ROOM

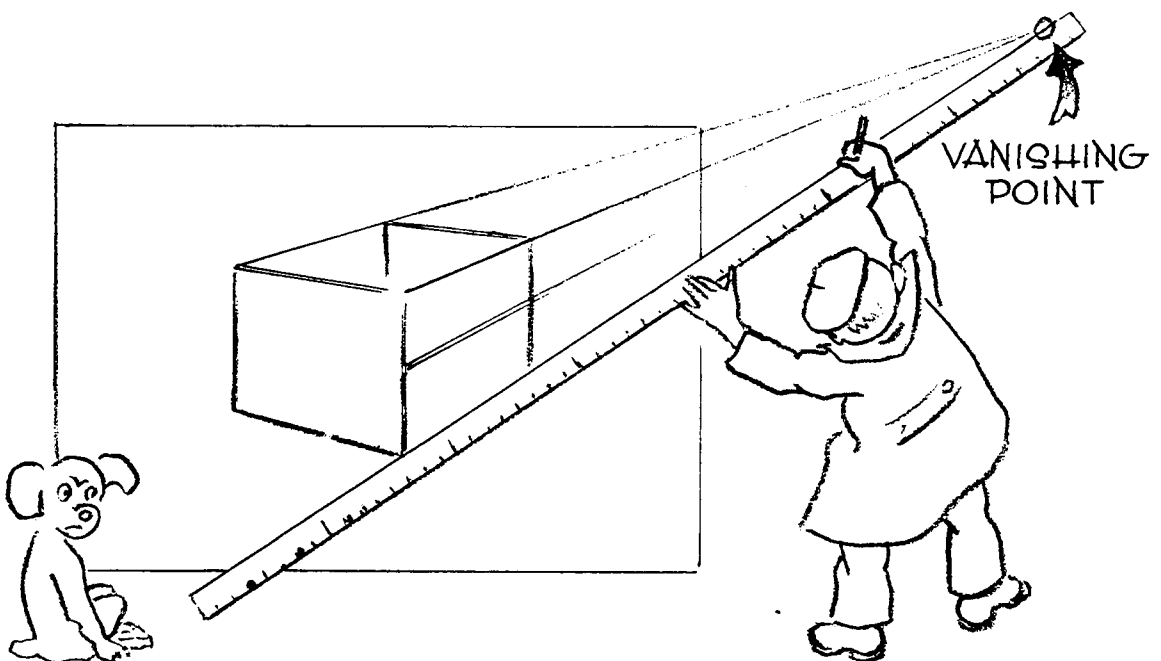
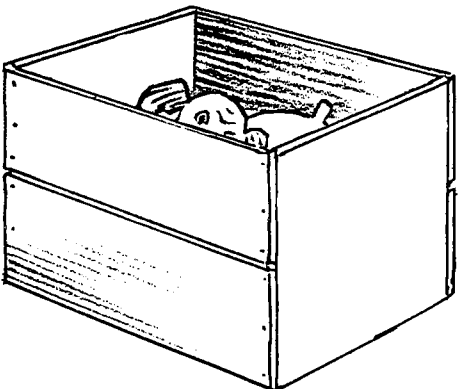
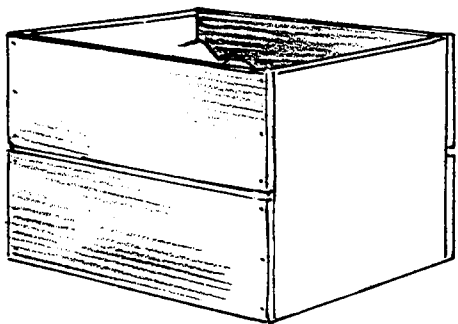
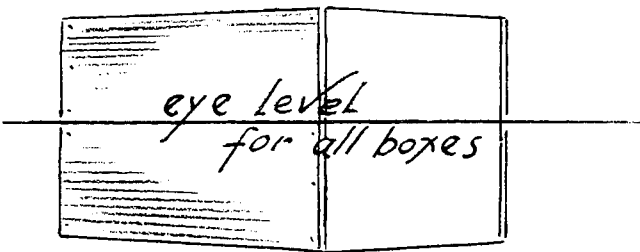
WE HAVE FOUND BOXES USEFUL
AIDS IN DRAWING



SO NOW LET US
LEARN HOW TO
DRAW THEM

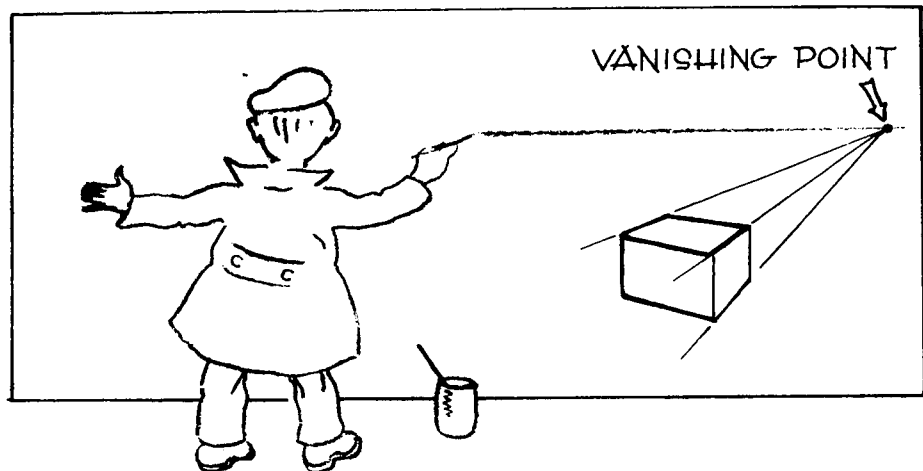


SKETCH THE BOX AS CAREFULLY
AS YOU CAN — JUST AS YOU SEE IT.
YOU KNOW THAT ALL PARALLEL
EDGES EXTEND TO A VANISHING
POINT — SO TAKE THE SKETCH



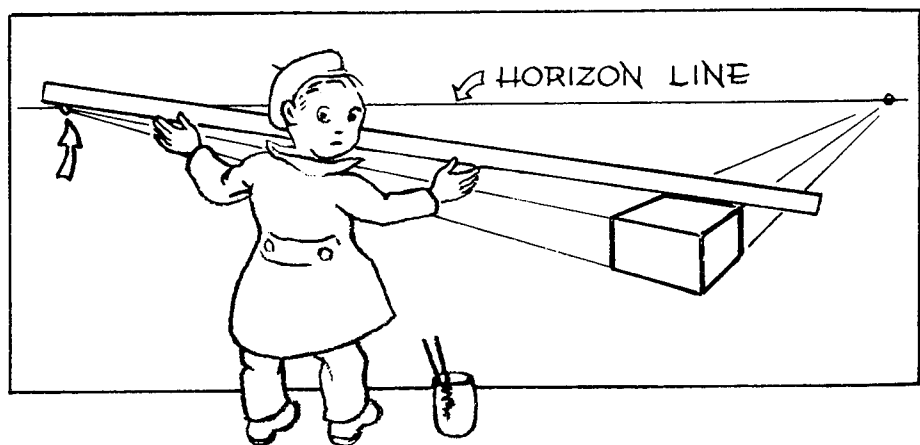
AND DRAW STRAIGHT LINES FROM
THESE EDGES. CORRECT THE DRAWING
SO THE LINES MEET AT ONE POINT.

AFTER ONE OF THE VANISHING POINTS HAS BEEN FOUND, THE REST IS EASY.



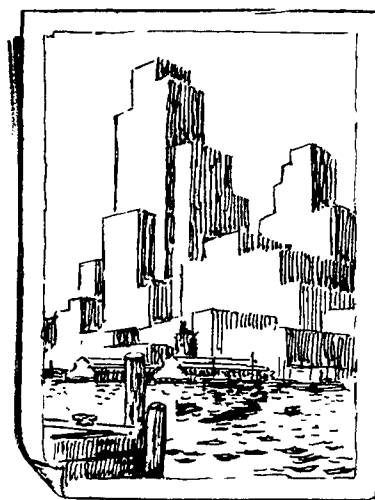
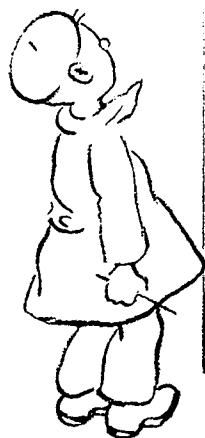
THE HORIZON MUST BE LEVEL AND IT MUST PASS THROUGH THAT POINT.

SO DRAW THE HORIZON LINE THROUGH THE POINT AND ACROSS THE PAPER.

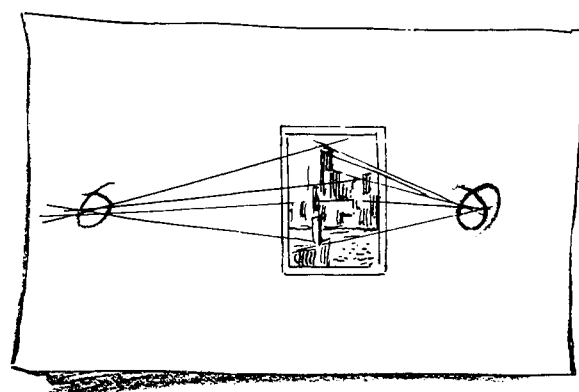


THE OTHER PARALLEL LINES OF THE BOX CAN NOW BE EXTENDED. THEY SHOULD MEET ON THIS LINE. THIS GIVES US THE OTHER VANISHING POINT FOR THE BOX.

THE PERPENDICULAR LINES DO NOT COME TOGETHER. THEY HAVE NO VANISHING POINT.

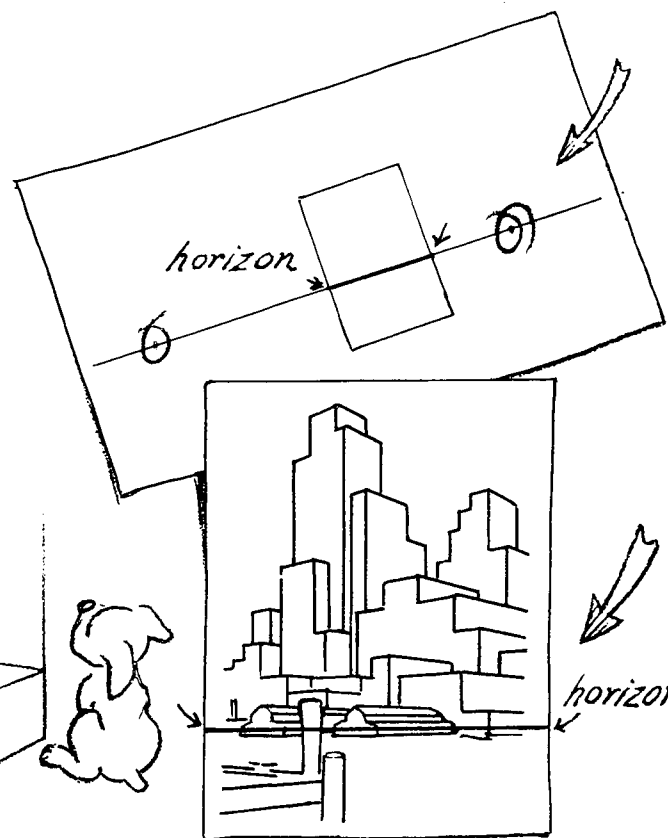


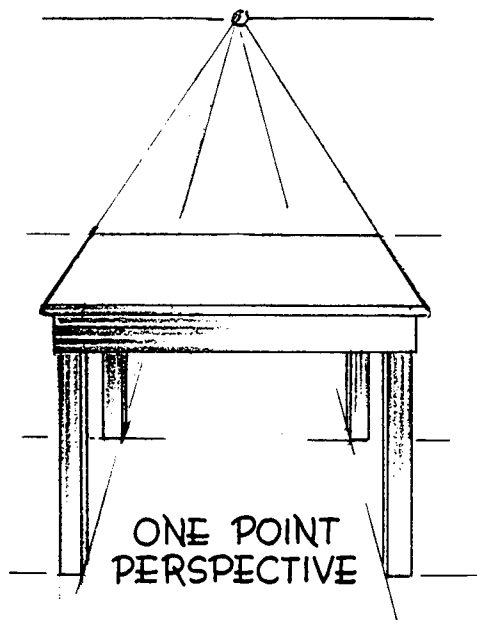
A SNAPSHOT OR A PICTURE FROM A MAGAZINE



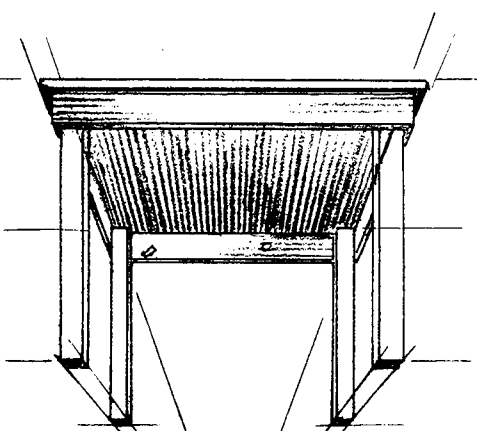
PASTE IT ON A LARGE SHEET OF PAPER—

EXTEND THE PERSPECTIVE LINES THE TWO POINTS AND THE HORIZON CAN BE LOCATED.

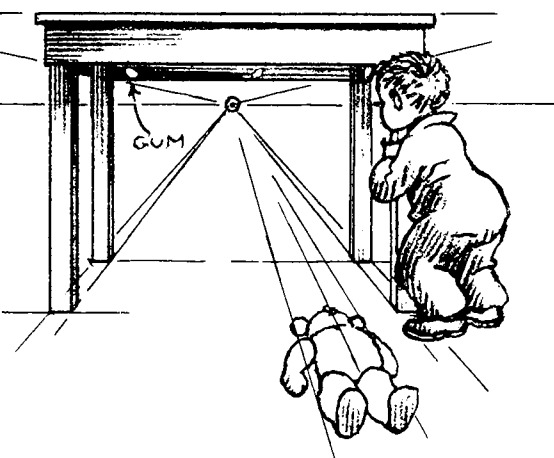




TABLES ARE SEEN WITH THE EYE-LEVEL ABOVE

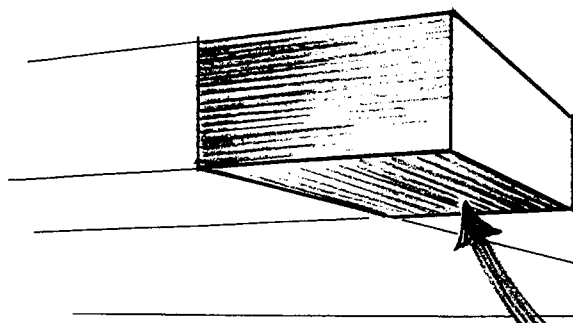


THEY ARE SELDOM SEEN WITH THE EYE-LEVEL BELOW

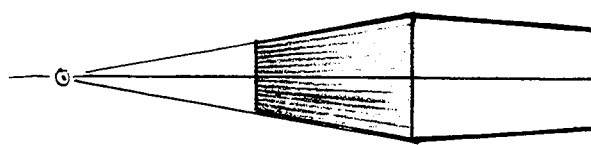


SMALL CHILDREN SEE THEM AT EYE-LEVEL

IF THE BOX IS BELOW THE EYE LEVEL (OR HORIZON LINE) YOU WILL SEE IT'S TOP

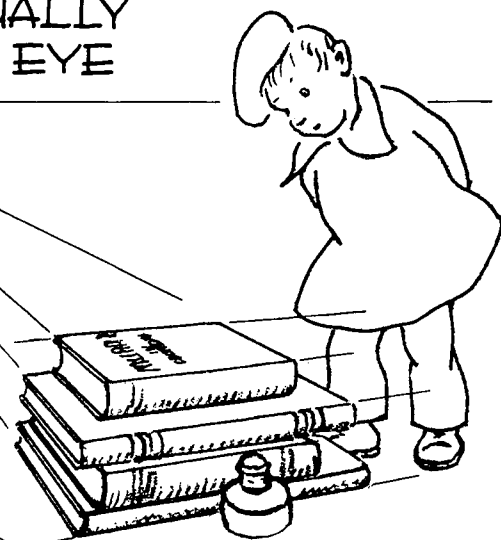
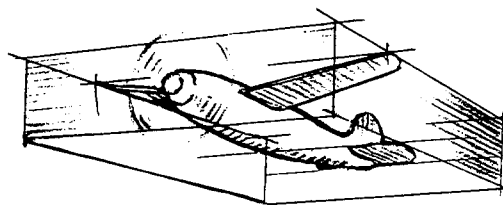


IF THE BOX IS ABOVE THE EYE LEVEL YOU WILL SEE IT'S UNDER-SIDE



YOU SEE NEITHER TOP NOR BOTTOM IF THE BOX IS AT EYE LEVEL

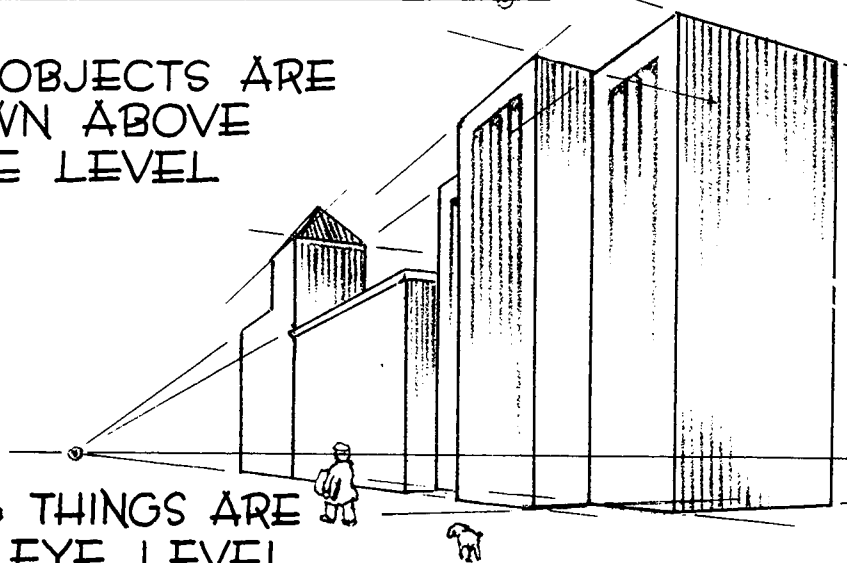
SMALL THINGS ARE USUALLY SHOWN BELOW YOUR EYE LEVEL



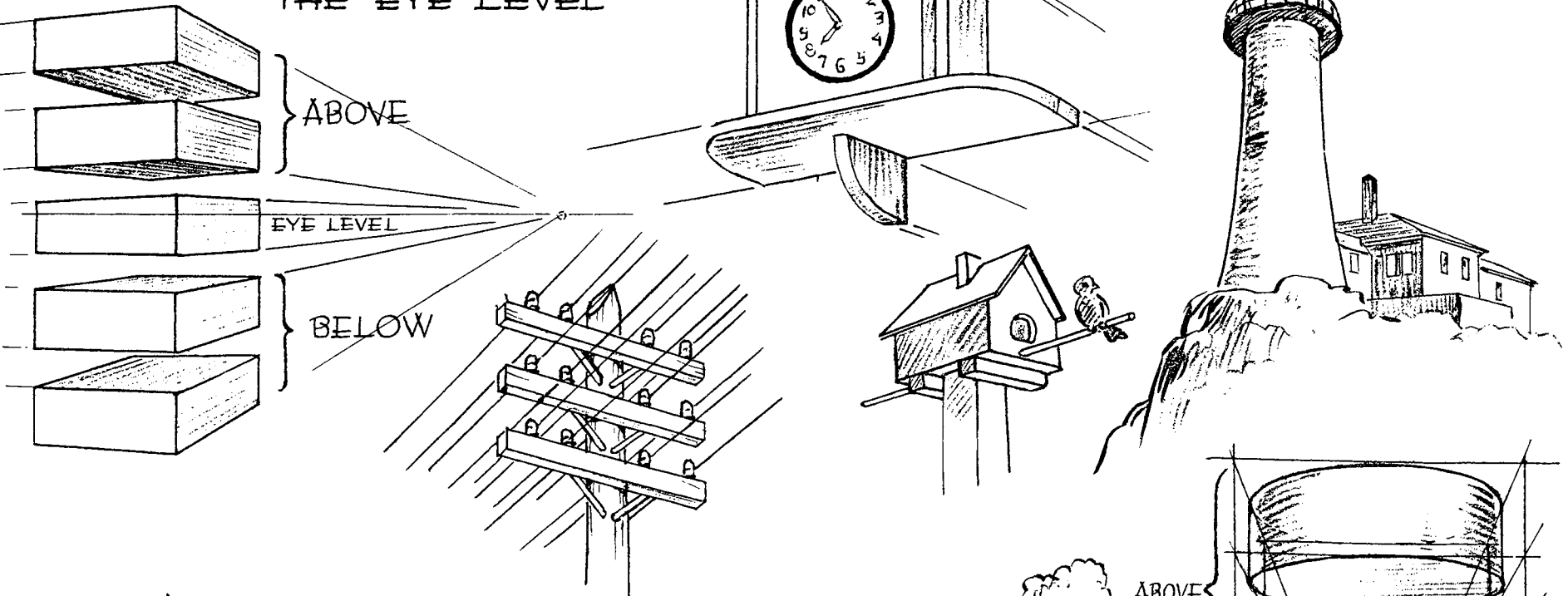
HIGH OBJECTS ARE SHOWN ABOVE EYE LEVEL



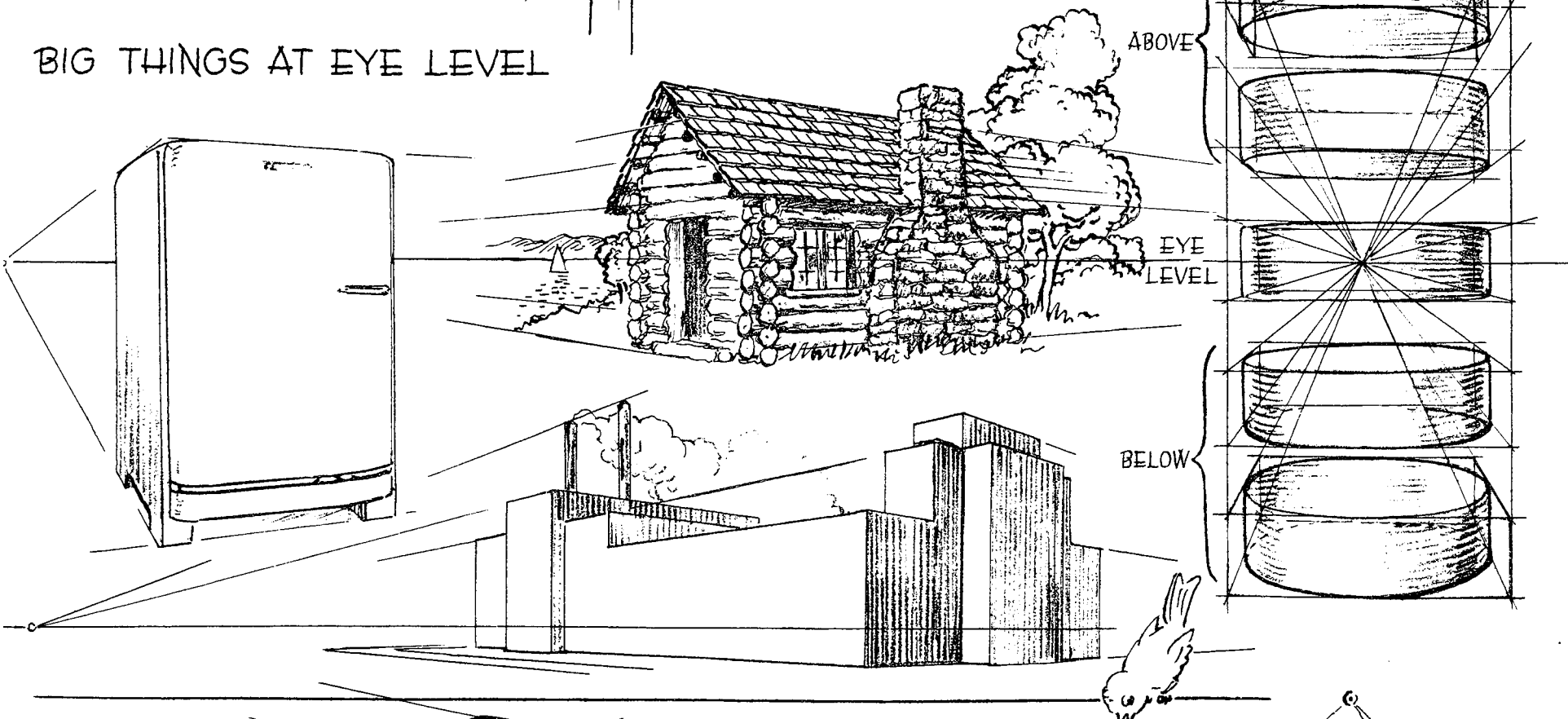
BIG THINGS ARE AT EYE LEVEL



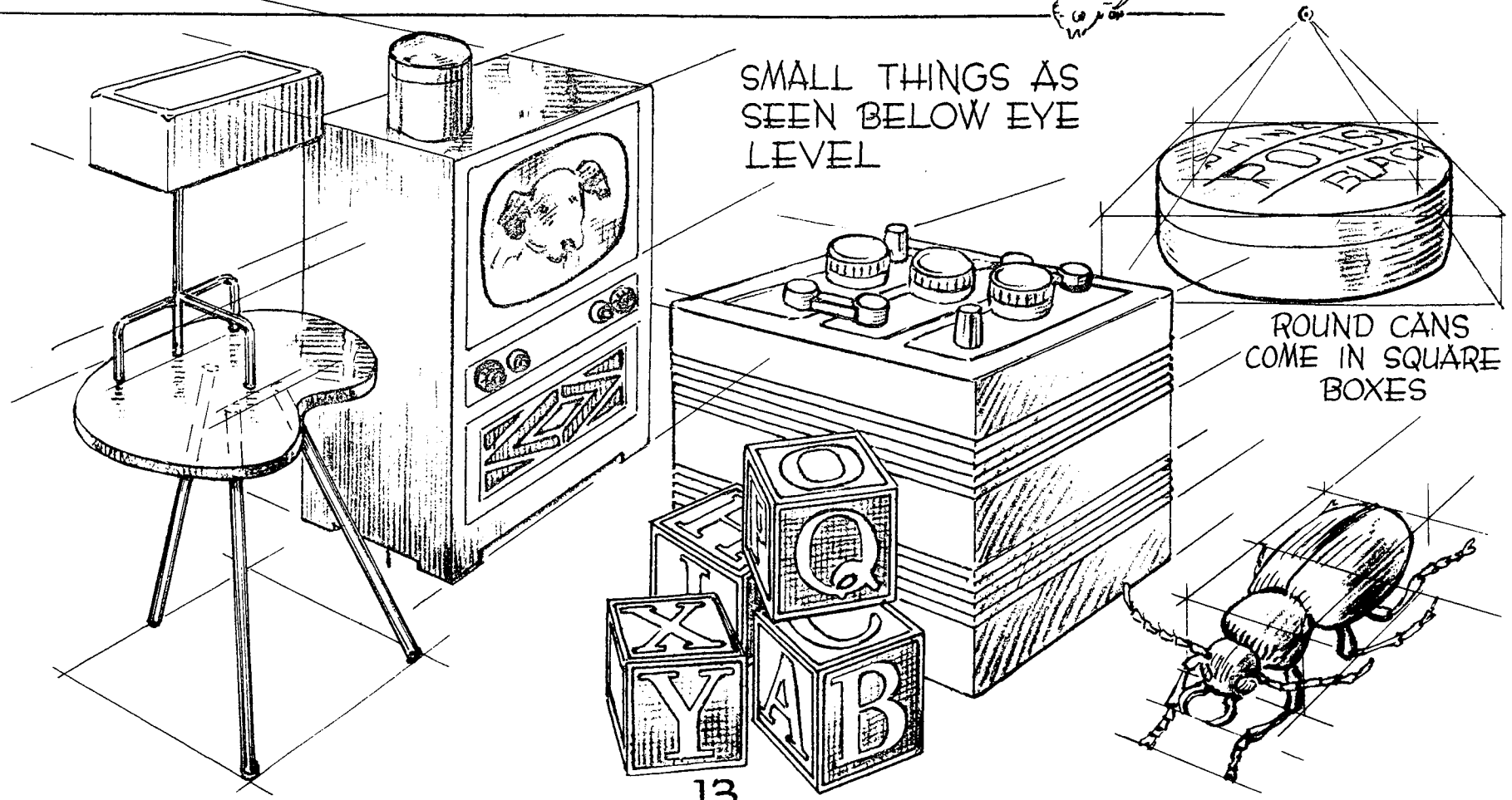
HIGH THINGS AS SEEN ABOVE THE EYE LEVEL



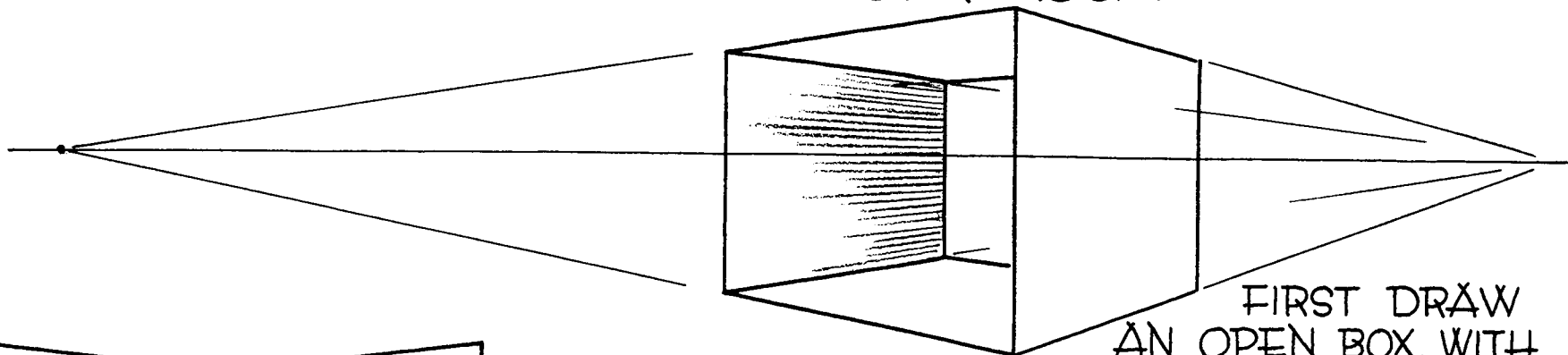
BIG THINGS AT EYE LEVEL



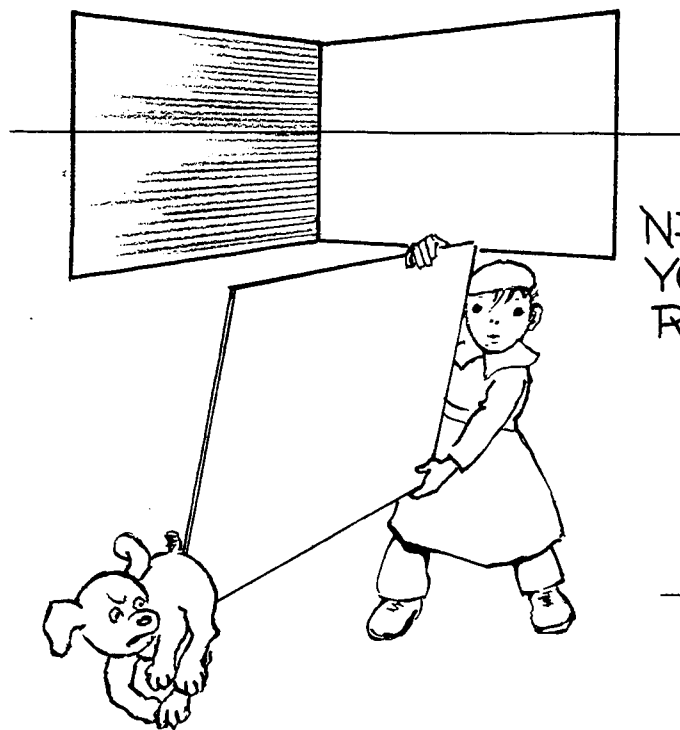
SMALL THINGS AS SEEN BELOW EYE LEVEL



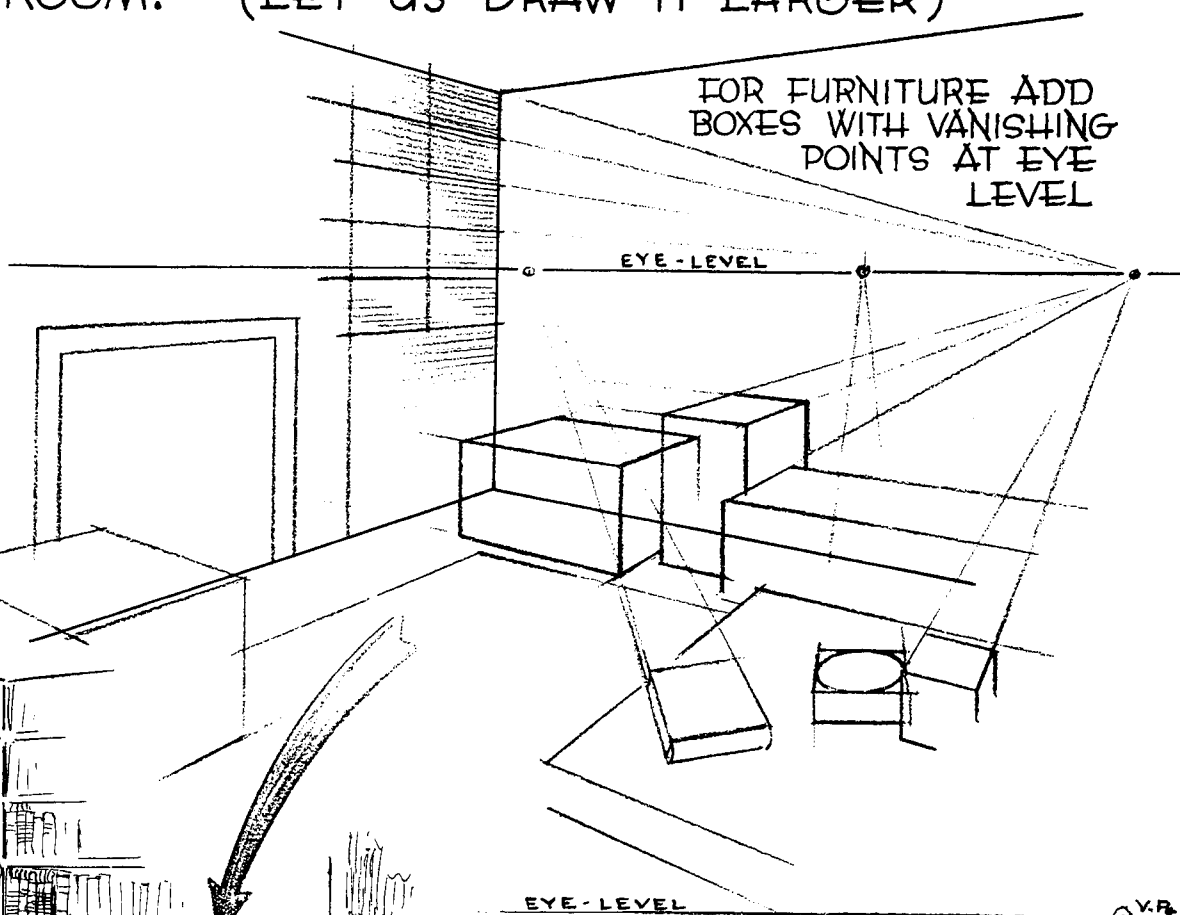
YOU CAN MAKE A PERSPECTIVE DRAWING OF YOUR OWN ROOM



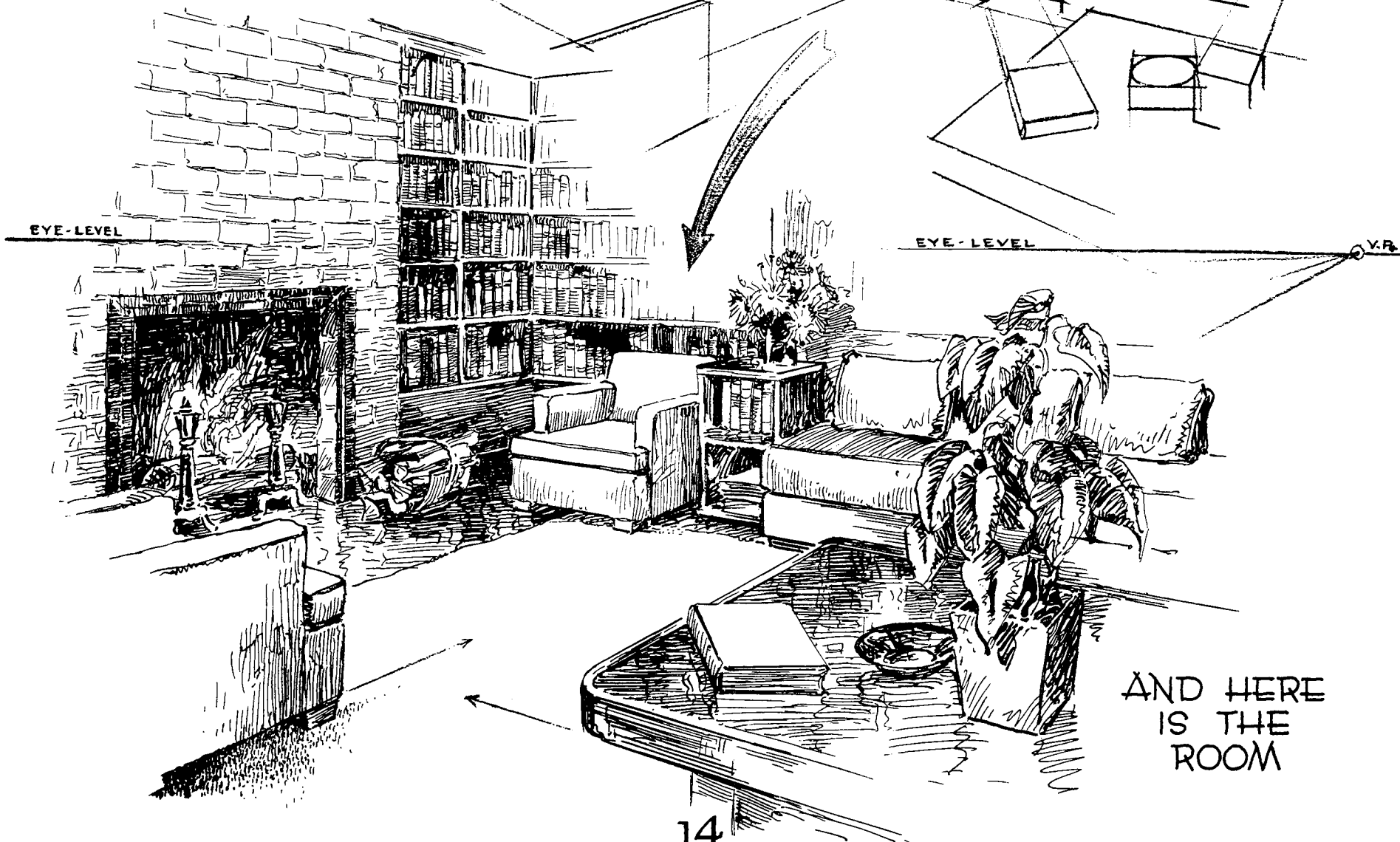
FIRST DRAW
AN OPEN BOX, WITH
TWO VANISHING POINTS
....EYE LEVEL



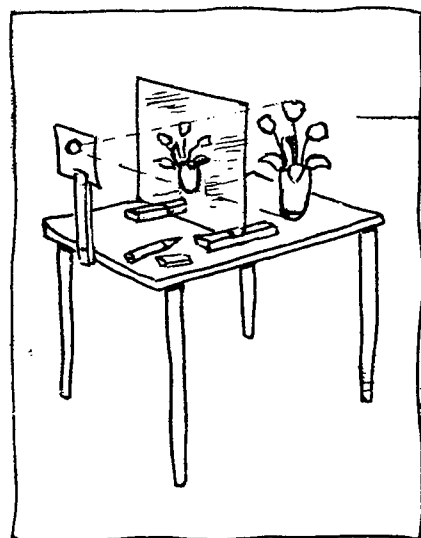
NEXT REMOVE THE SIDES NEAREST TO
YOU—THIS LEAVES A CORNER IN YOUR
ROOM. (LET US DRAW IT LARGER)



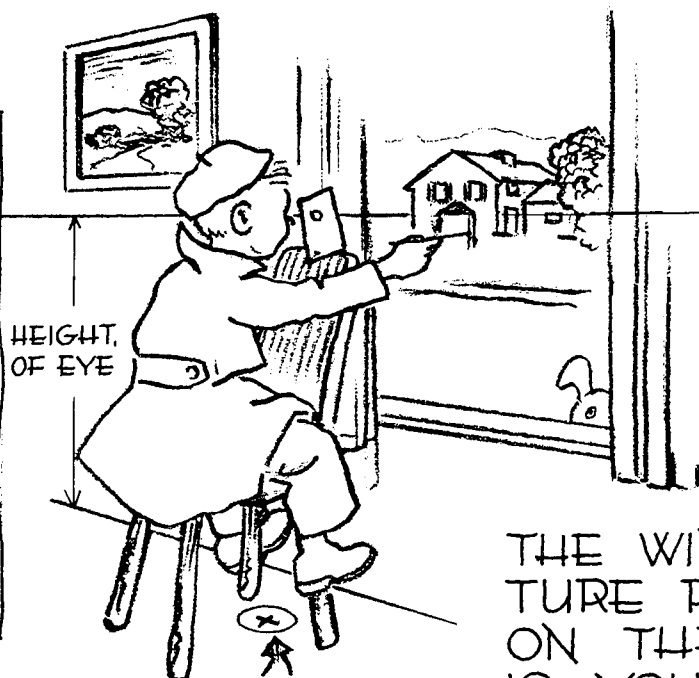
FOR FURNITURE ADD
BOXES WITH VANISHING
POINTS AT EYE
LEVEL



AND HERE
IS THE
ROOM



EYE LEVEL, PICTURE PLANE AND OBJECT

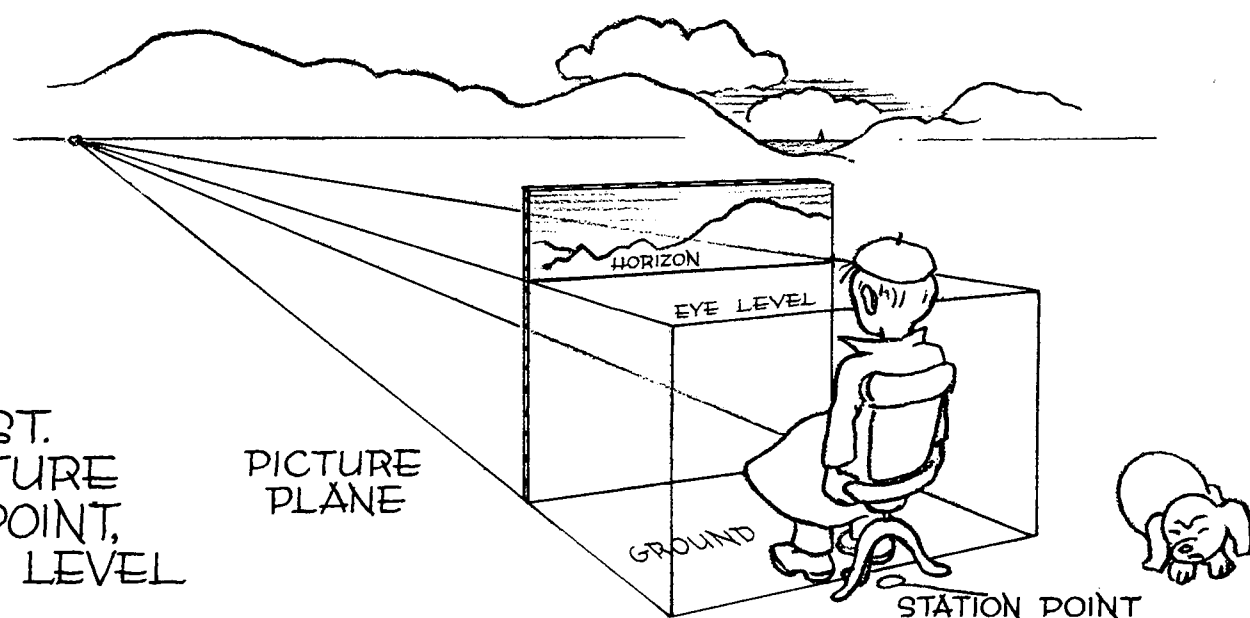


HEIGHT OF EYE

STATION POINT ON THE FLOOR

YOU CAN MAKE A PERSPECTIVE DRAWING ON A WINDOW PANE WITH A GREASE PENCIL BY LOOKING THROUGH A HOLE AND TRACING WHAT YOU SEE. THE HOLE IS YOUR "EYE LEVEL" AND IT IS THE SAME HEIGHT AS THE "HORIZON LINE."

THE WINDOW PANE IS THE "PICTURE PLANE" AND THE SPOT ON THE FLOOR BELOW YOU IS YOUR "STATION POINT."

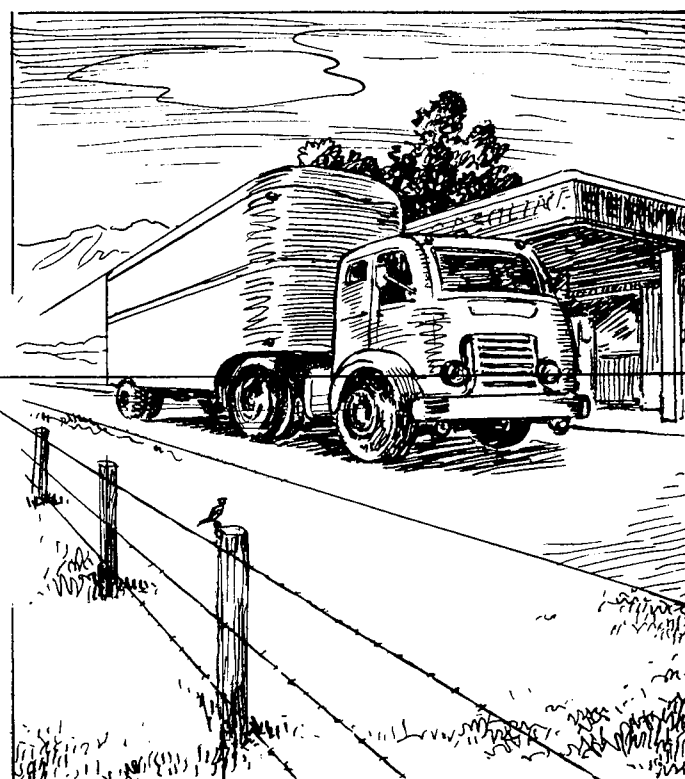


PICTURE PLANE

STATION POINT

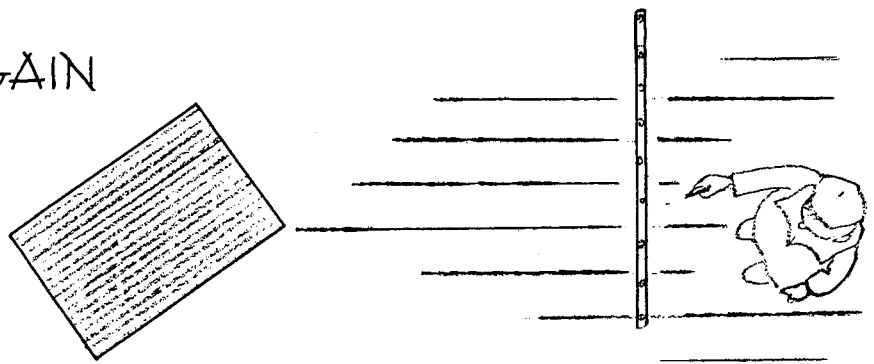
BACK TO THE "OUTDOOR" ARTIST. HE TOO HAS A PICTURE PLANE, A STATION POINT, A HORIZON AND EYE LEVEL

THE VANISHING POINTS ARE SOMEWHERE ON THE HORIZON LINE - BUT WHERE?



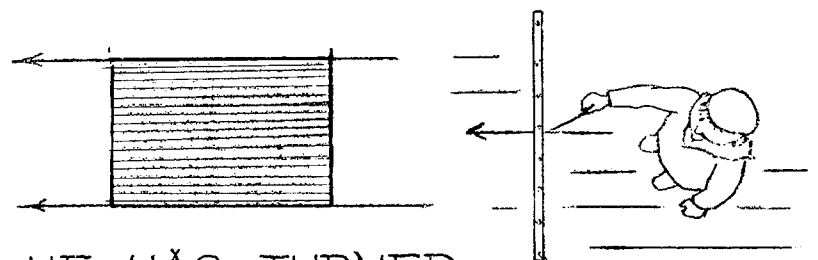
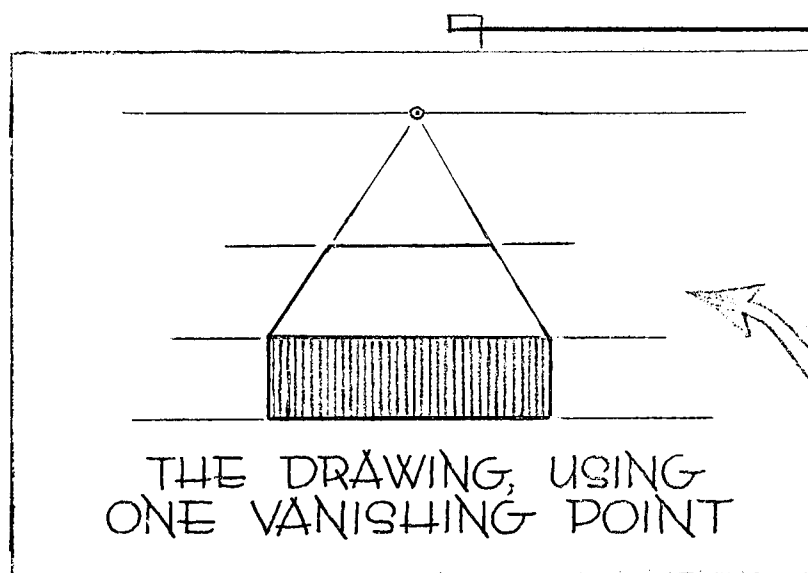
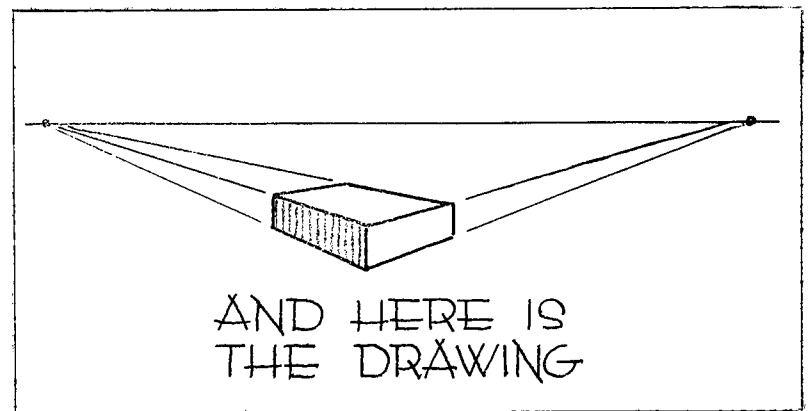
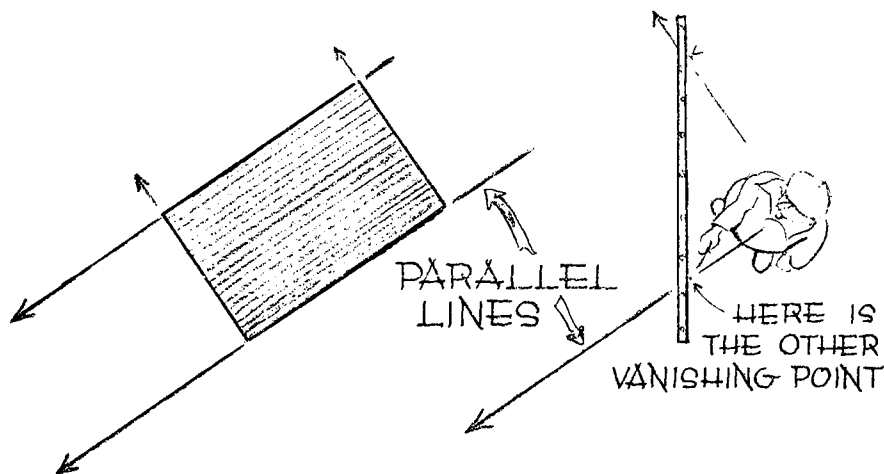
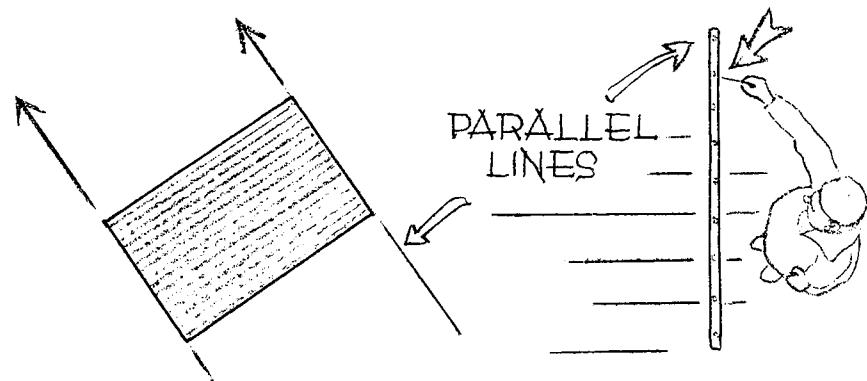
LOCATING THE VANISHING POINTS

HERE IS THE ARTIST AGAIN
DRAWING A BOX

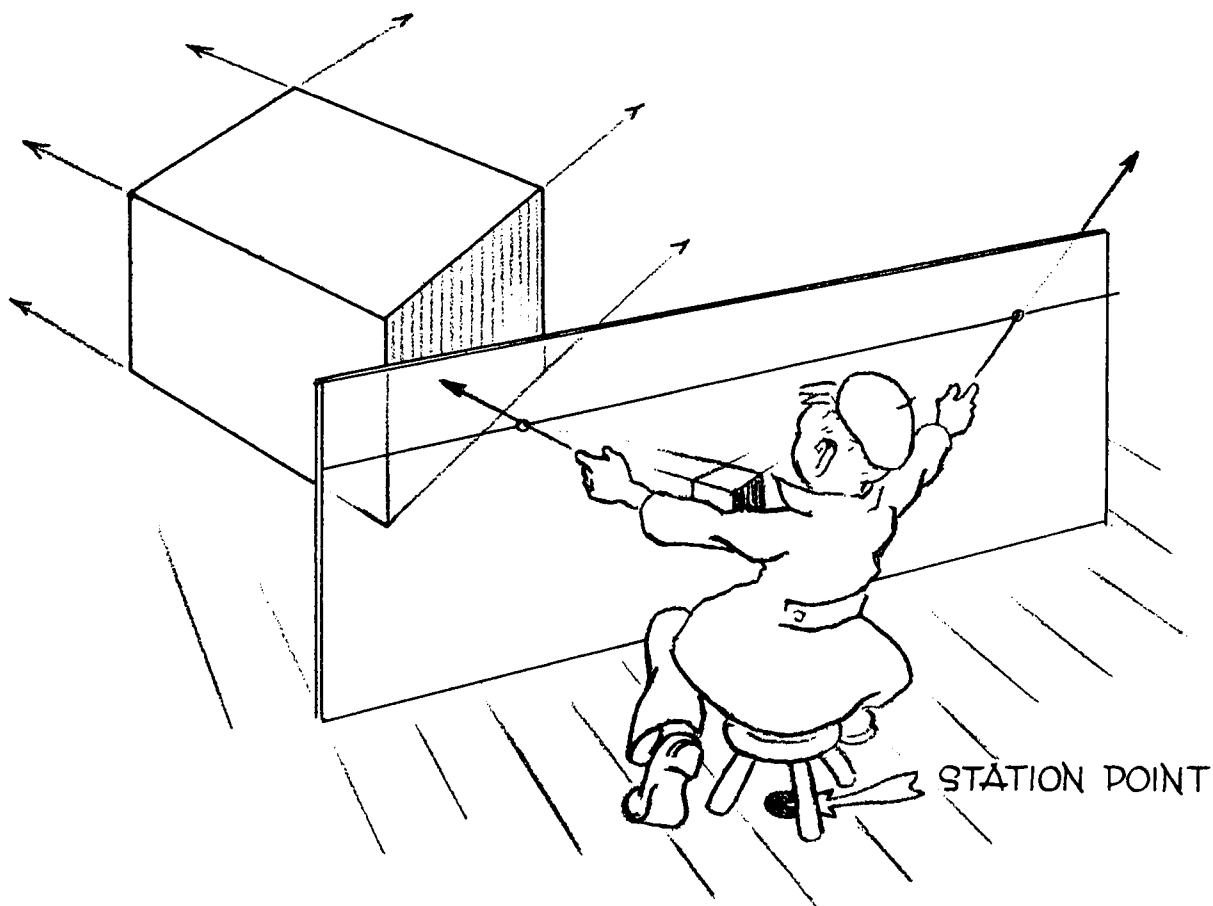


WE ARE LOOKING STRAIGHT DOWN ON HIM. HE IS STANDING ON HIS STATION POINT AND HE IS DRAWING ON A TRANSPARENT PICTURE PLANE. WE ARE LOOKING DOWN ON ITS TOP EDGE.

NOW IN ORDER TO FIND A VANISHING POINT ON HIS HORIZON LINE HE WILL HAVE TO LOOK IN THE DIRECTION PARALLEL TO THE SIDES OF THE BOX.

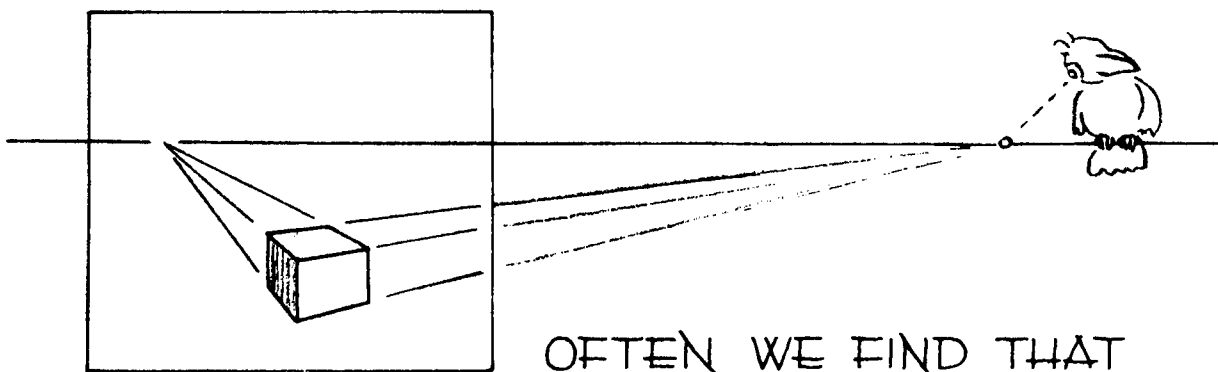
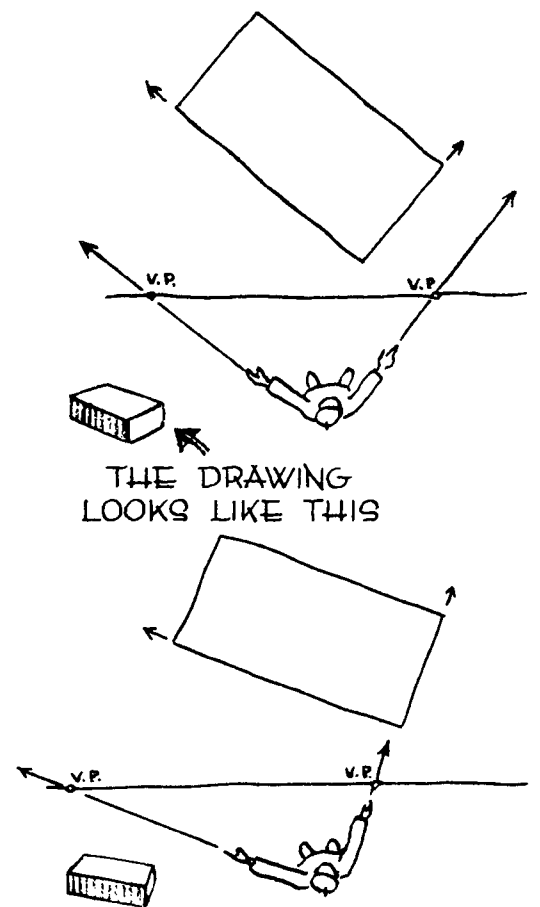


HE HAS TURNED THE BOX SO THE VANISHING POINT IS STRAIGHT AHEAD

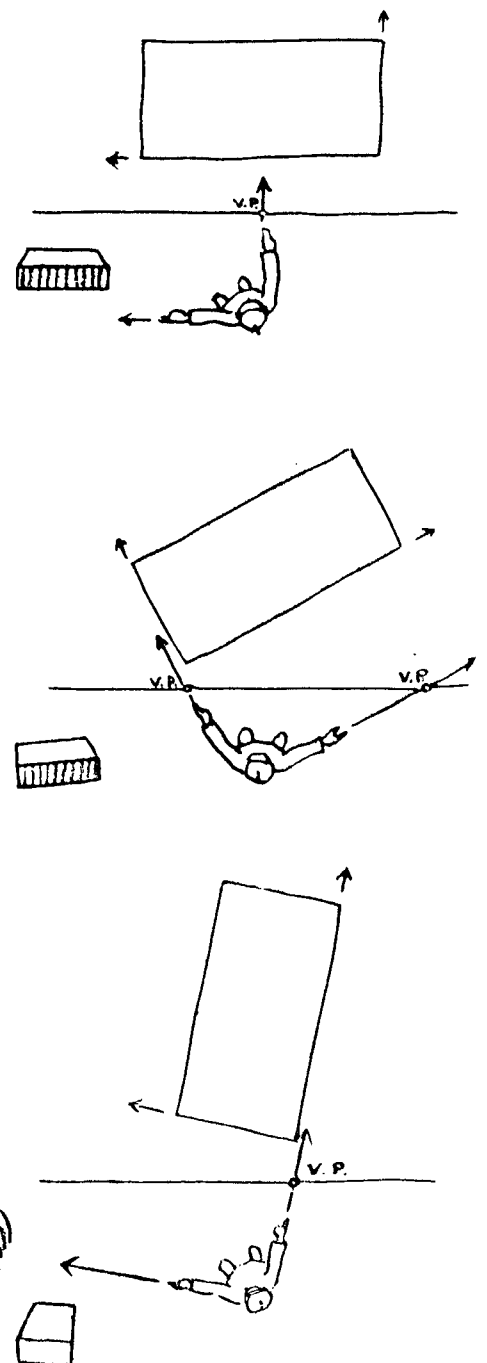


AND SO WE FIND THE VANISHING POINTS SIMPLY BY POINTING IN THE SAME DIRECTION AS THE SIDES OF THE BOX.

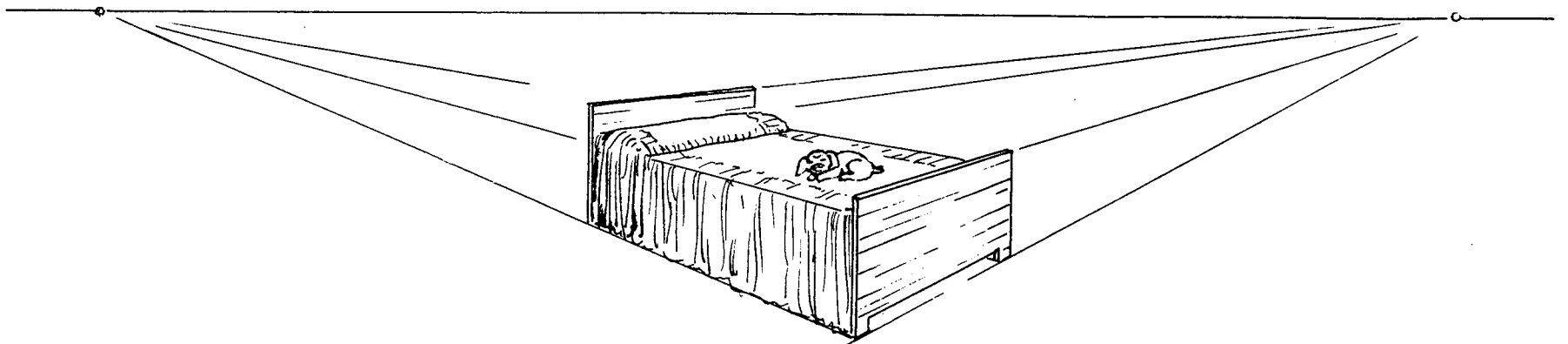
THE DRAWING LIES BETWEEN THESE TWO POINTS ON THE PICTURE PLANE.



OFTEN WE FIND THAT ONE OF THE VANISHING POINTS IS CLEAR OFF THE DRAWING-BOARD. A LONG RULER AND A PIN WILL BE A GREAT HELP.

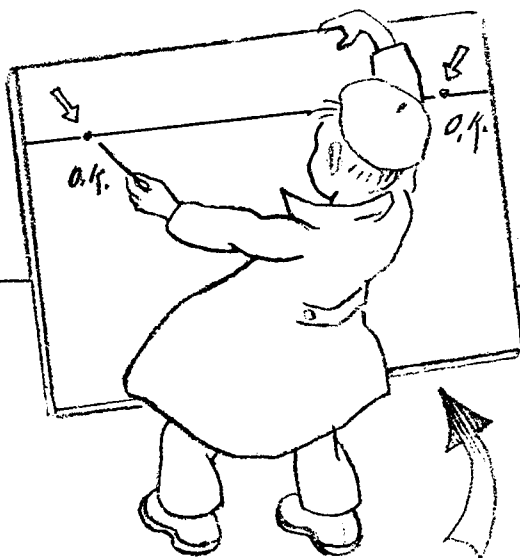
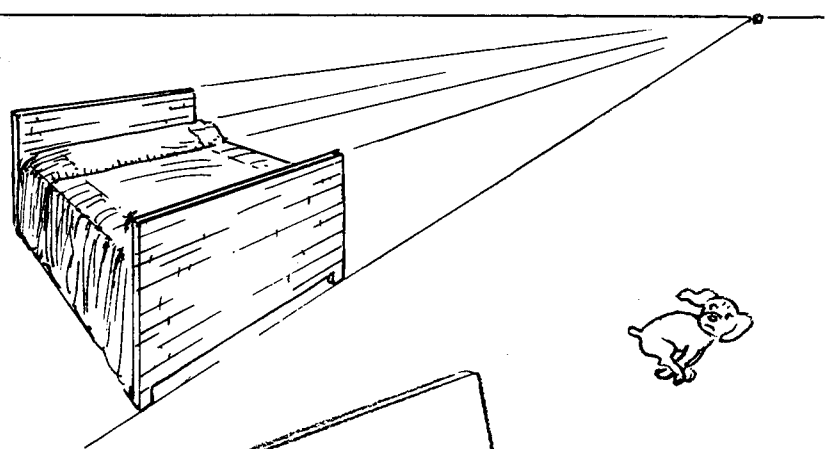


VANISHING POINTS
SHOULD BE PLACED FAR APART—LIKE THIS

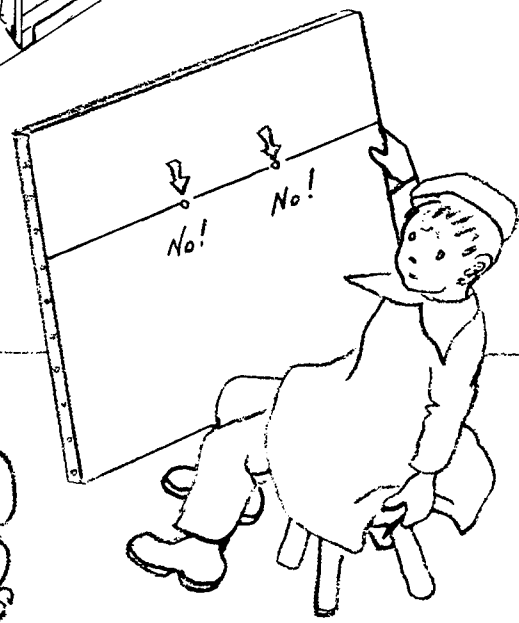


GOOD SPACING

SPACING WITH VANISHING
POINTS TOO CLOSE

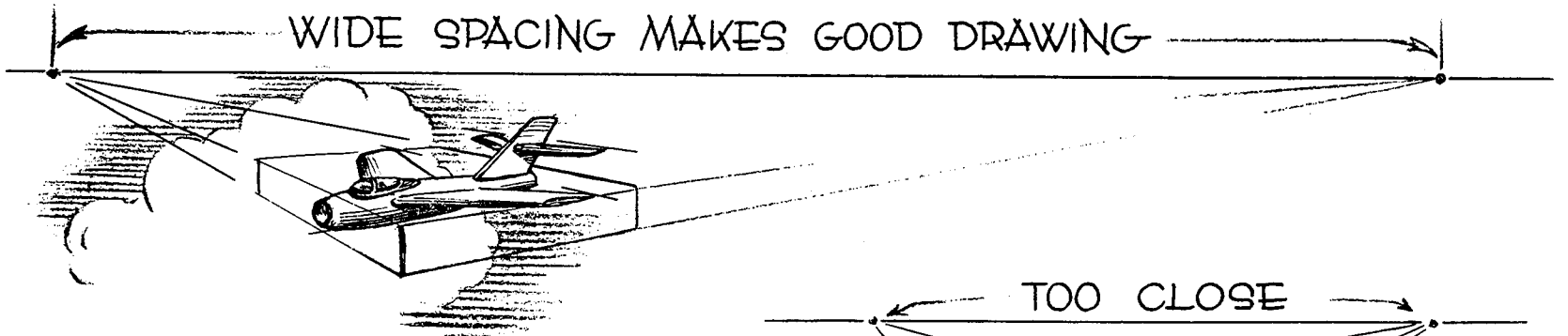


THIS WAY

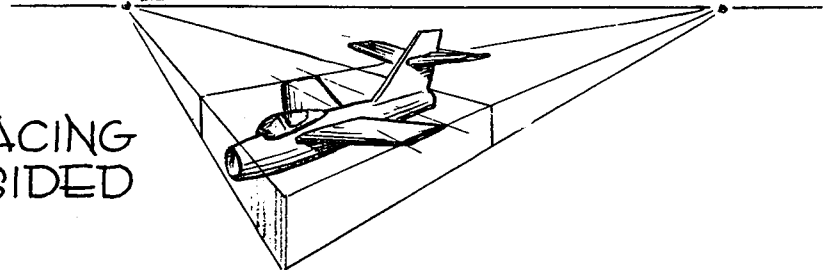


AND NOT THIS WAY

WIDE SPACING MAKES GOOD DRAWING

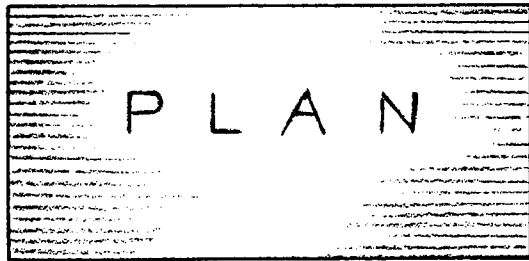


TOO CLOSE



CLOSE SPACING
THE AIRPLANE LOOKS LOP-SIDED
AND POORLY DRAWN.

WE ARE READY TO MAKE A TRUE
PERSPECTIVE DRAWING



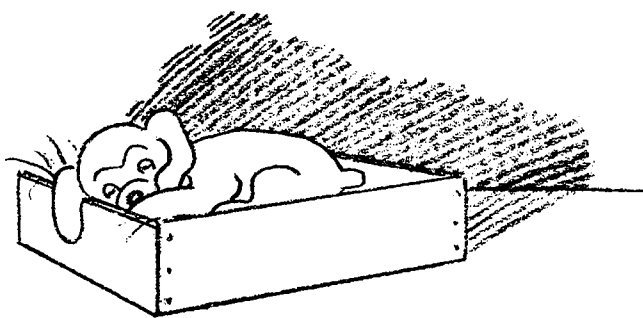
THIS IS THE TOP VIEW (THE
PLAN) OF A BOX.



THIS IS THE SIDE VIEW
(THE SIDE ELEVATION) OF
THE SAME BOX.

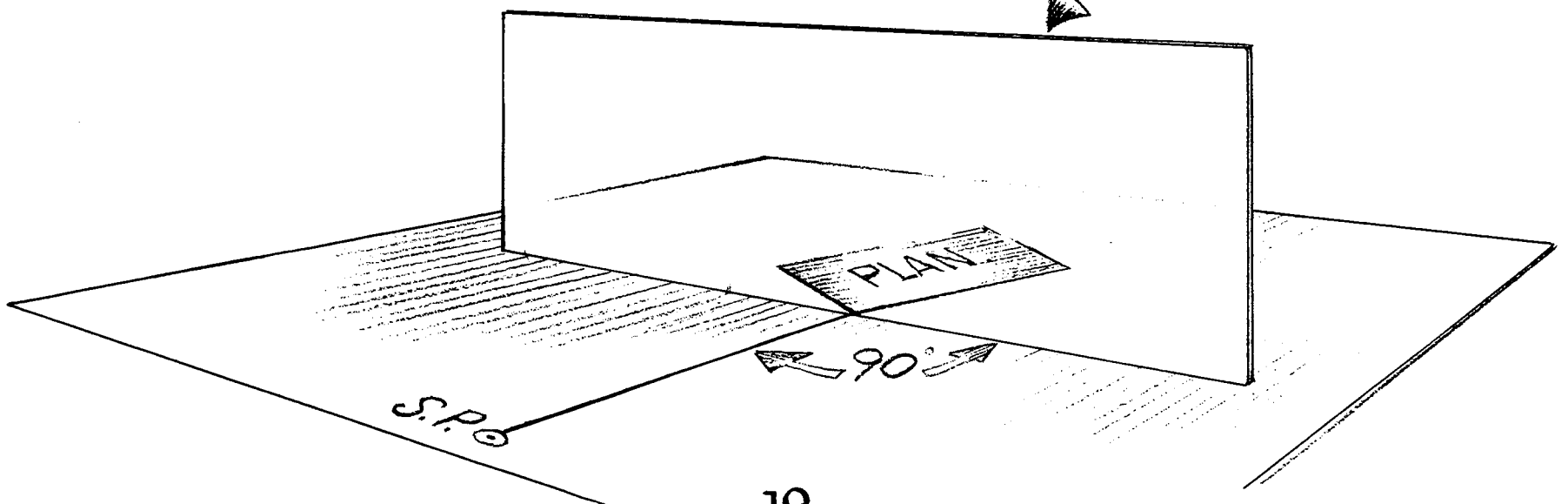
WE WISH TO MAKE A
DRAWING OF THE BOX—
LOOKING AT IT CORNERWISE.

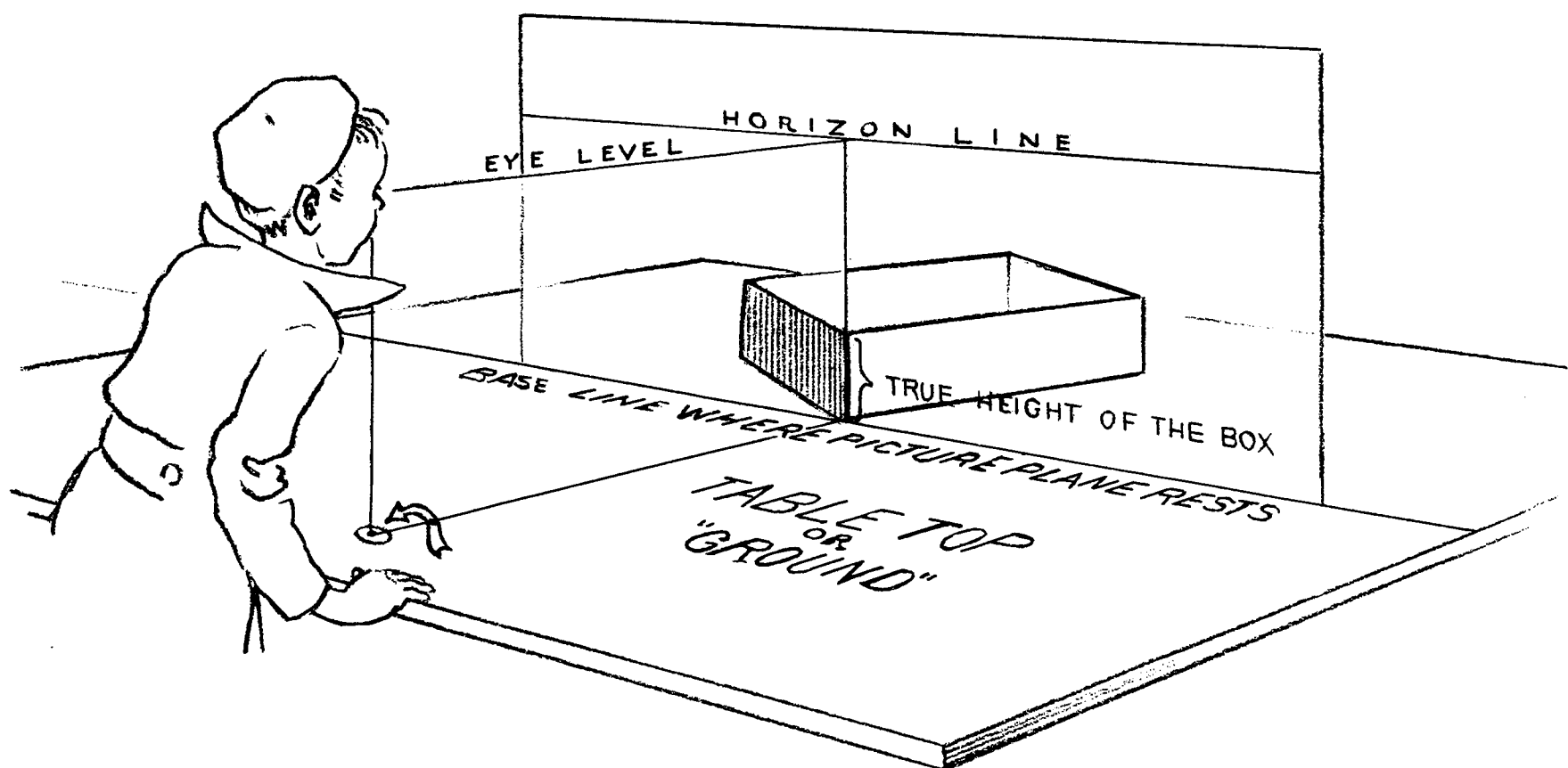
SO WE STAND AWAY
FROM IT AT ANY DISTANCE
WE PLEASE AND MAKE
A DOT AT OUR STATION
POINT.



A SQUARE
CORNER (90°)

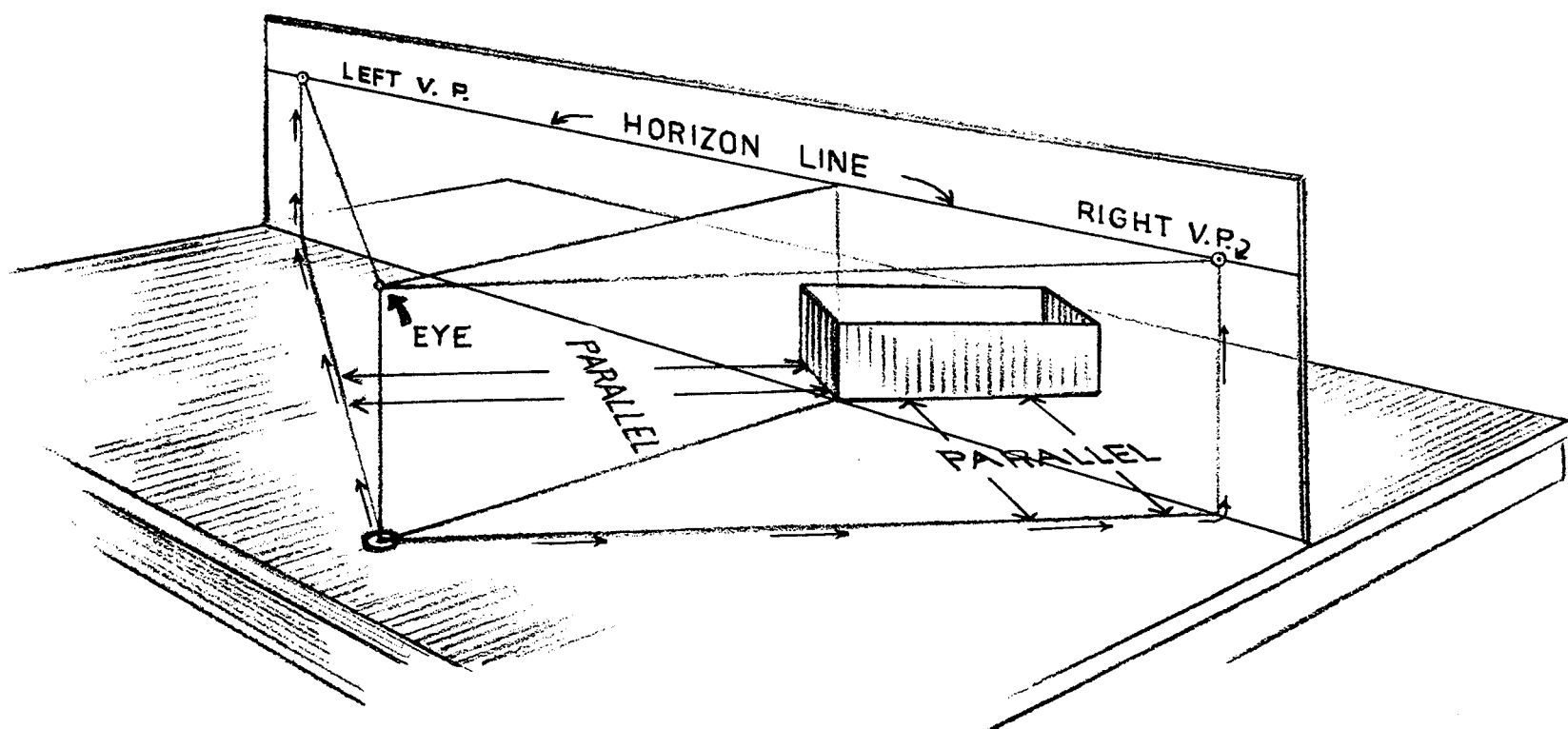
NOW WE DRAW THE
LINE WHICH REPRESENTS
THE PICTURE PLANE REST-
ING UPRIGHT AGAINST THE
CORNER OF THE PLAN
LIKE THIS!



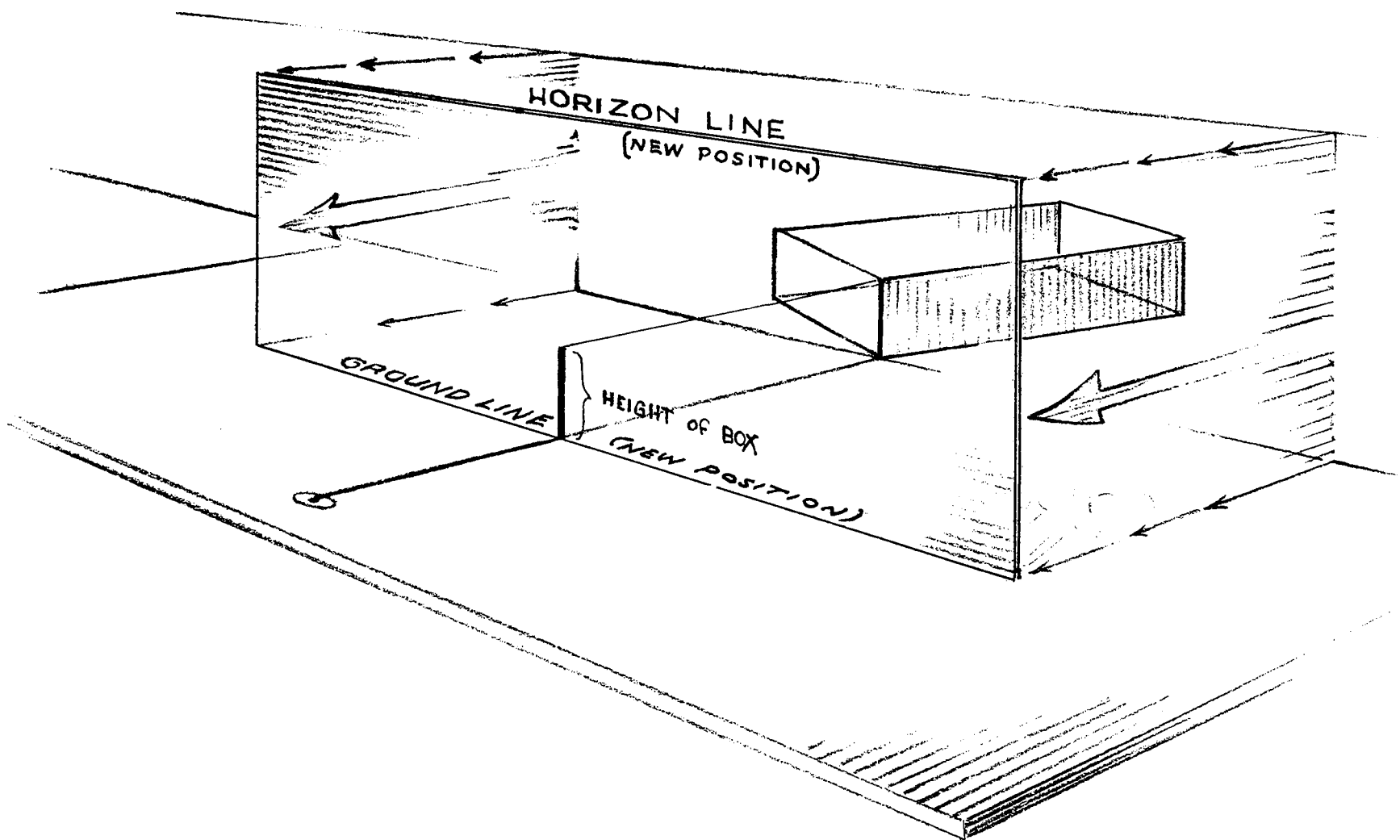


IF THE BOX COULD BE PLACED ON THE PLAN IT WOULD LOOK LIKE THIS.

WE WOULD LOOK AT IT FROM A POSITION DIRECTLY ABOVE THE STATION POINT AT ANY CONVENIENT HEIGHT. (THE HEAVY BLACK LINE AT THE CORNER OF THE BOX IS ITS TRUE HEIGHT ON THE PICTURE PLANE.)

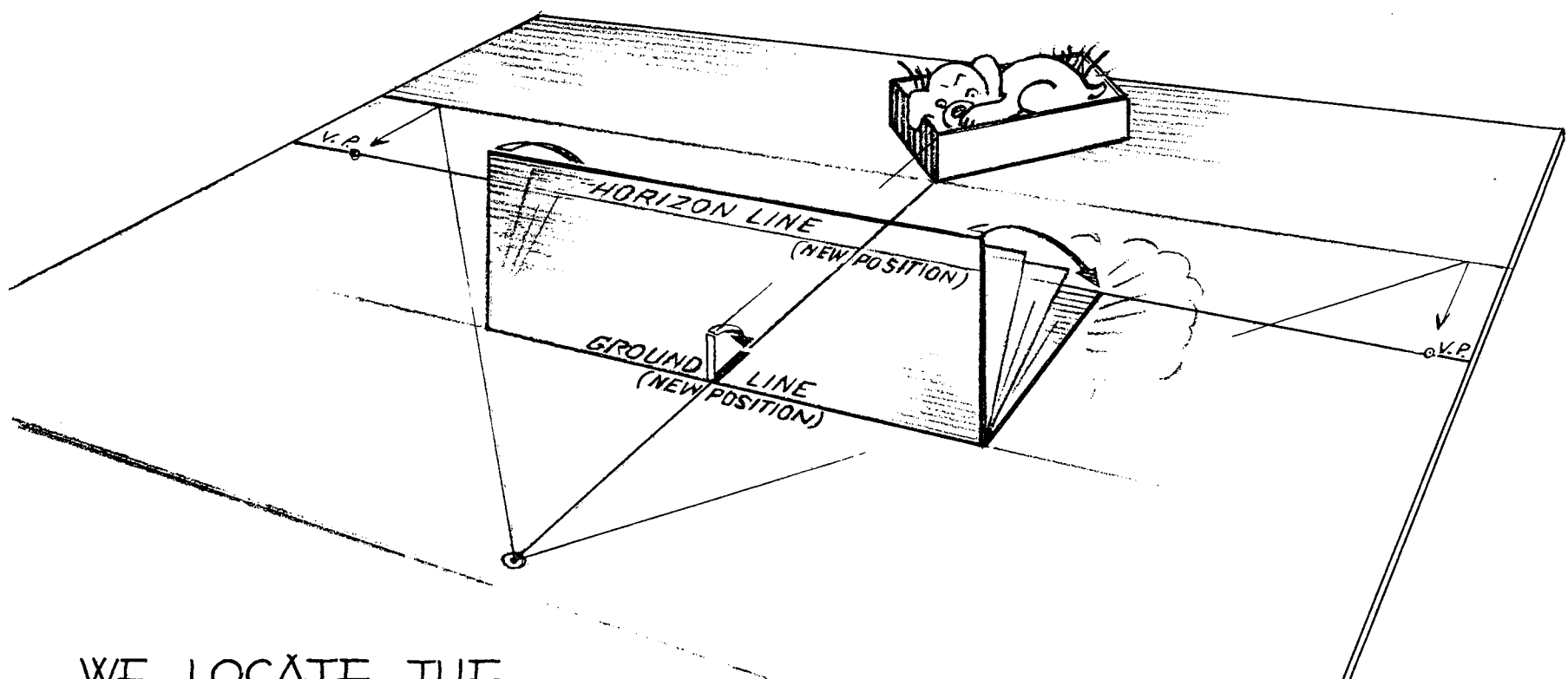


WE LOCATE THE VANISHING POINTS BY RUNNING LINES FROM THE EYE TO THE PICTURE PLANE, PARALLEL TO THE SIDES OF THE BOX.



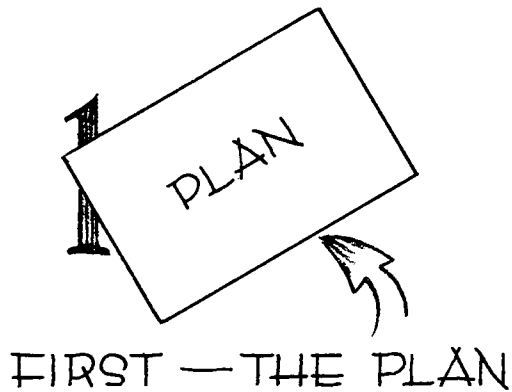
WE ARE MAKING THE DRAWING ON THE PICTURE PLANE. WE WANT IT FOR CONVENIENCE TO LIE FLAT ON THE TABLE TOP, OR GROUND. TO DO THIS WE SLIDE IT — AS SHOWN — TOWARDS US INTO THE OPEN SPACE BETWEEN THE STATION POINT AND THE PLAN.

VANISHING POINTS COME FORWARD TOO.

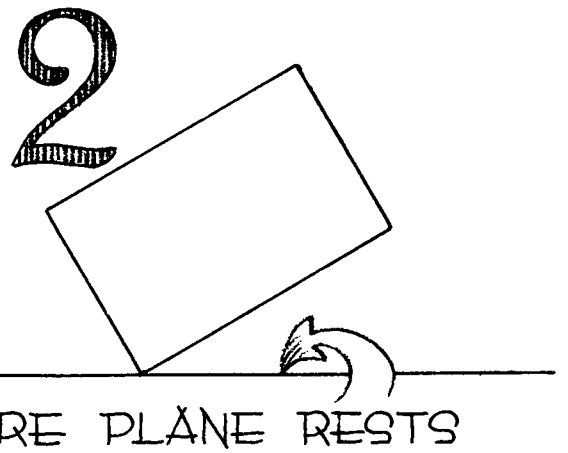


WE LOCATE THE VANISHING POINTS BY RUNNING LINES FROM THE EYE TO THE PICTURE PLANE, PARALLEL TO THE SIDES OF THE BOX.

HERE'S AN EASY WAY TO REMEMBER
THE LAYOUT FOR A PERSPECTIVE
DRAWING



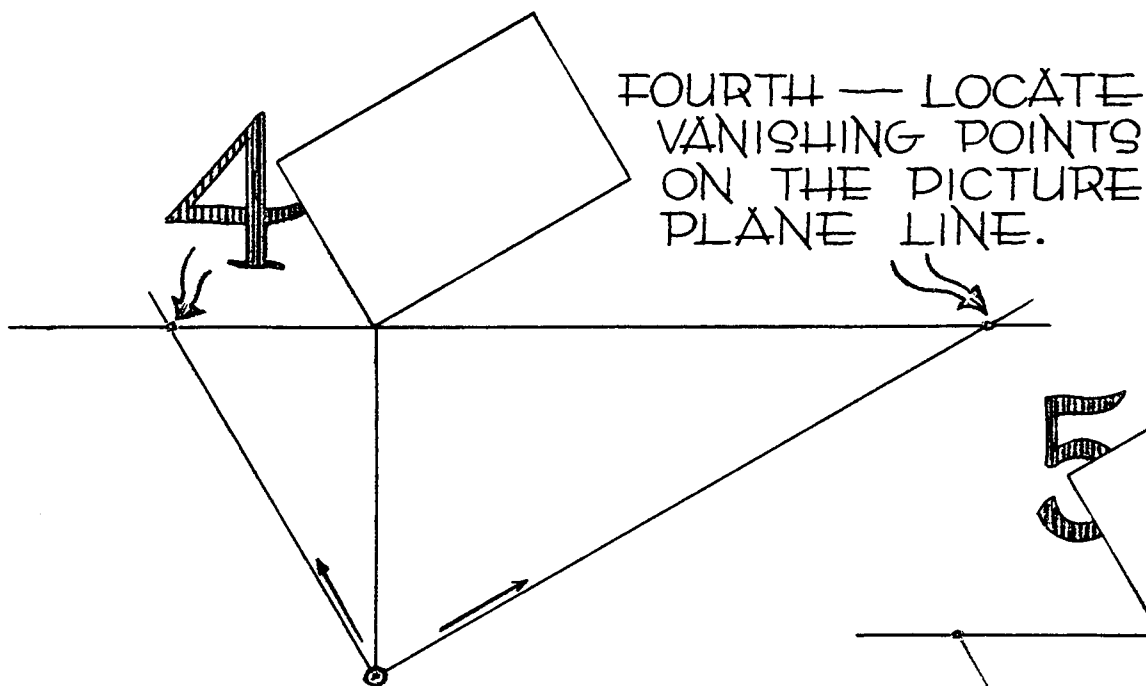
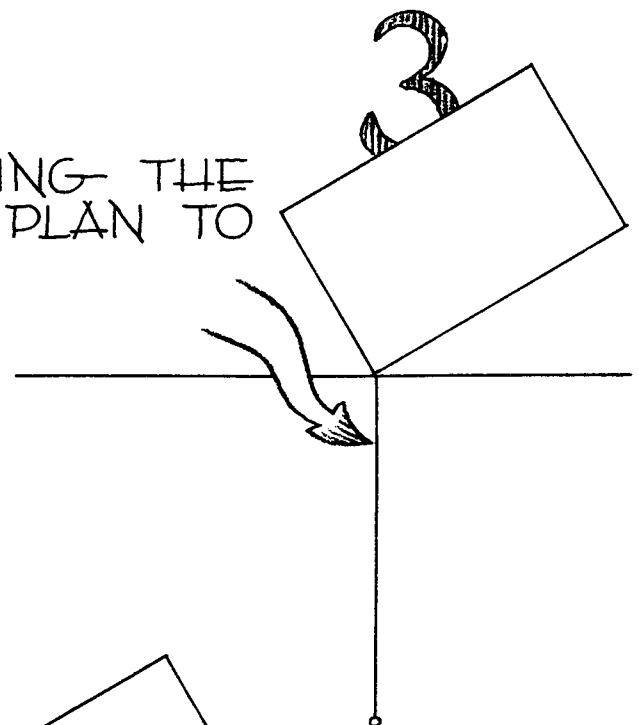
FIRST — THE PLAN



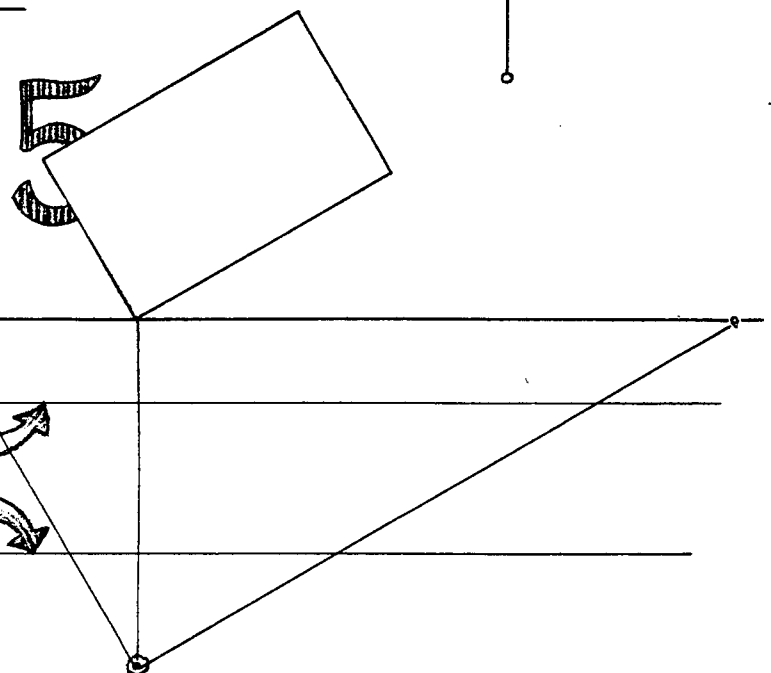
NEXT — THE LINE
WHERE THE PICTURE PLANE RESTS



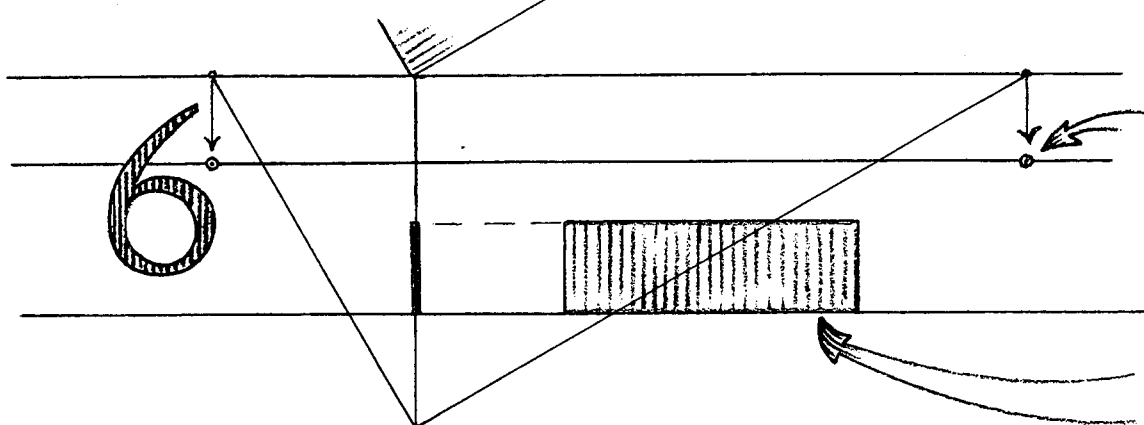
THIRD — THE LINE SHOWING THE
DISTANCE FROM PLAN TO
STATION POINT



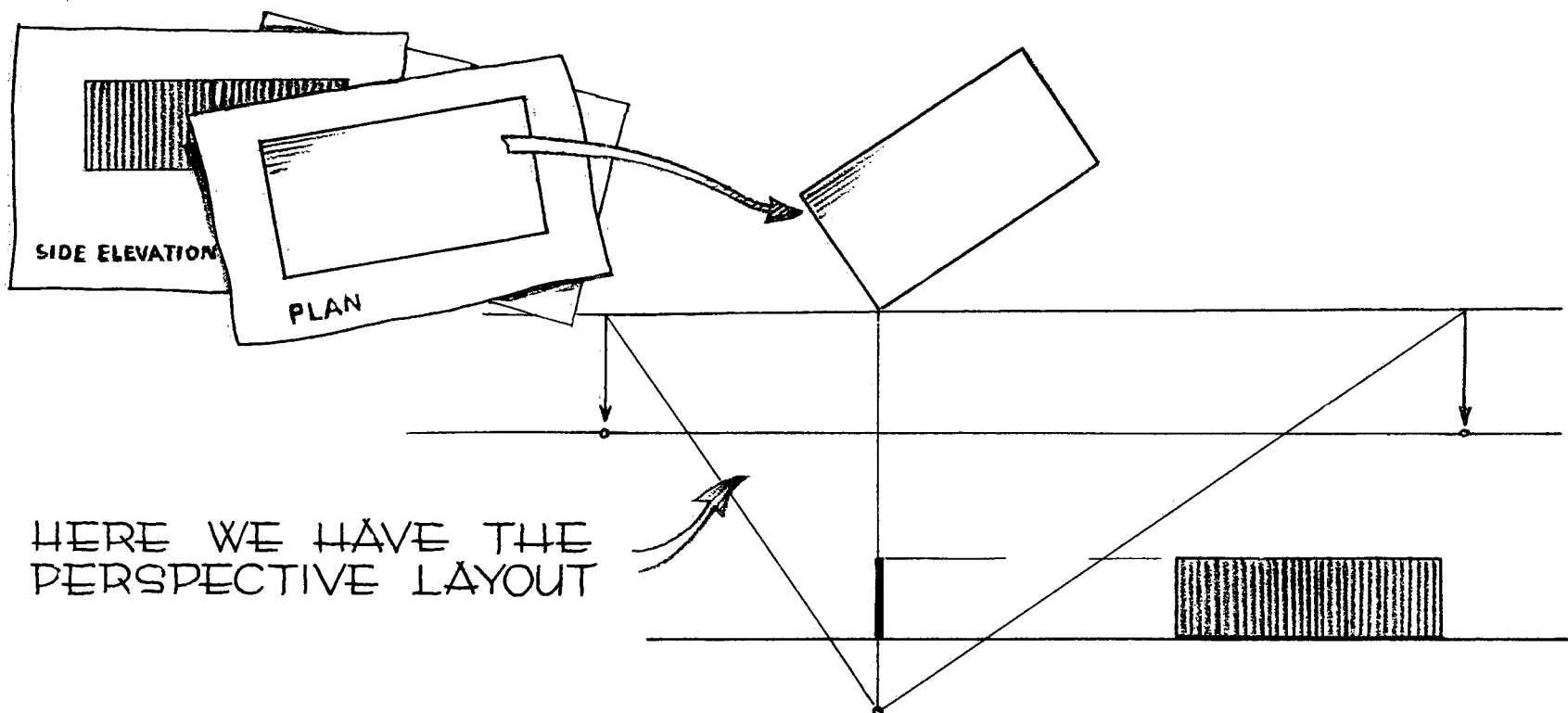
FOURTH — LOCATE
VANISHING POINTS
ON THE PICTURE
PLANE LINE.



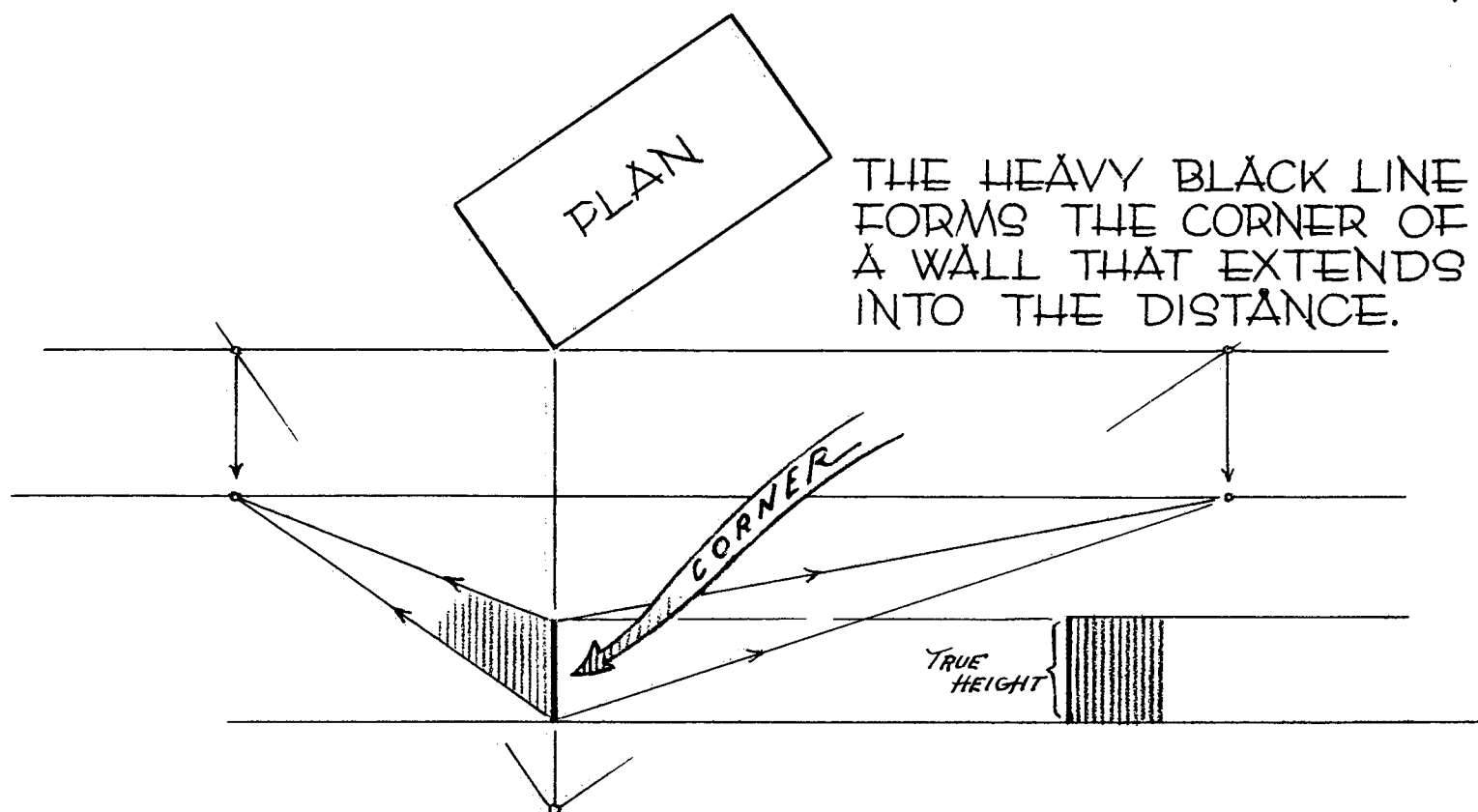
FIFTH — PLACE HORIZON LINE
AND BASE LINE ANY CONVENIENT
PLACE BELOW THE PICTURE
PLANE LINE.



LOCATE THE
VANISHING POINTS,
ALSO PLACE THE
SIDE ELEVATION
ON THE BASE LINE



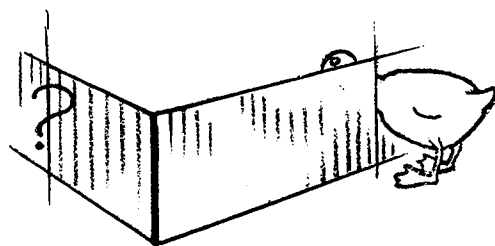
WE ARE NOW READY FOR THE PROJECTION

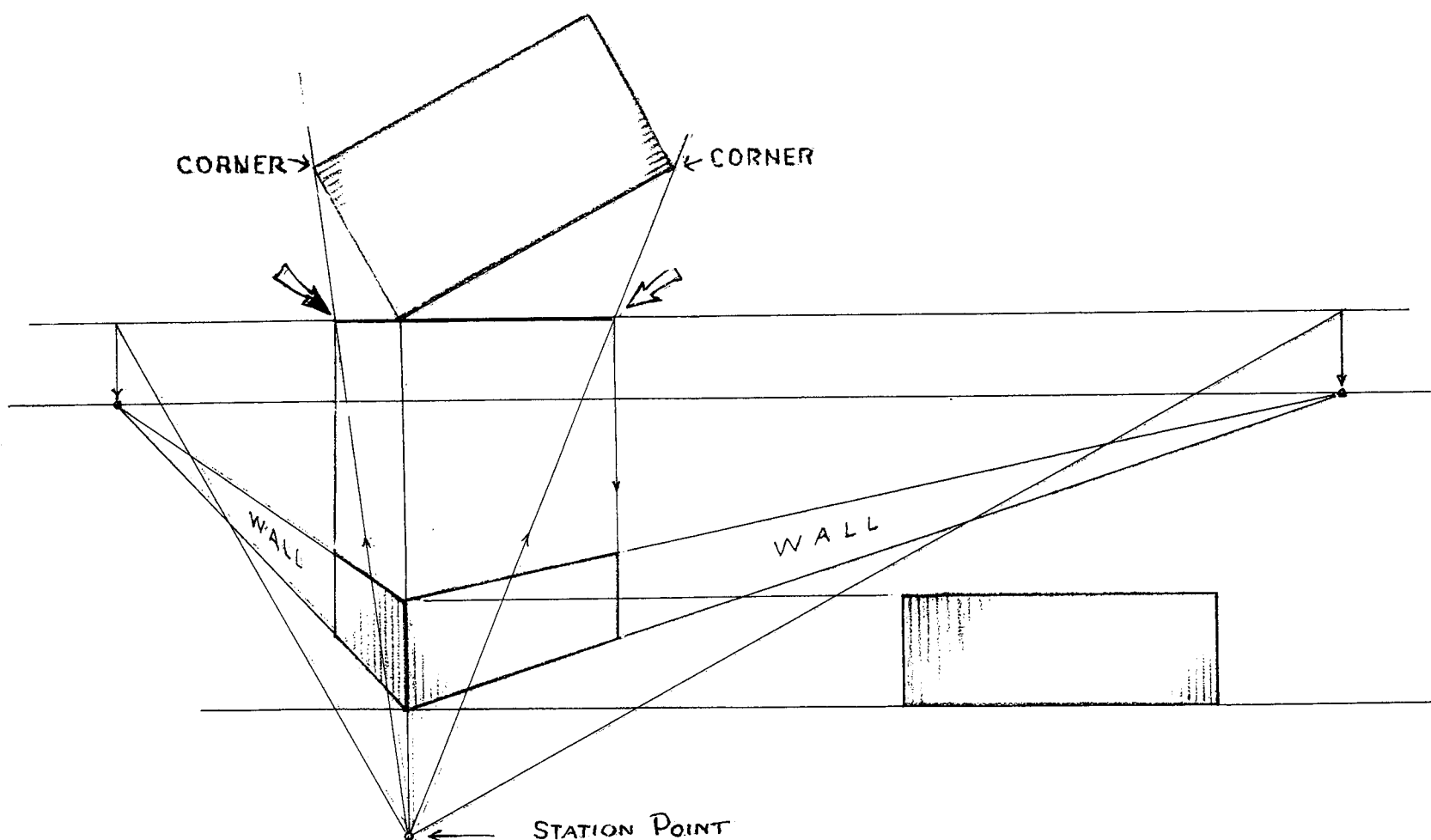


THE WALL, LIKE THE RAILROAD TRACK, DISAPPEARS AT THE VANISHING POINTS ON THE HORIZON.

THE WALL IS THE HEIGHT OF THE BOX; — IT IS MADE BY DRAWING FOUR LINES FROM THE TOP AND BOTTOM OF THE HEAVY LINE OUT TO THE VANISHING POINTS. NOW ALL WE HAVE TO DO IS TO CUT THE TWO WALLS OFF AT THE PROPER LENGTH SO AS TO MAKE TWO SIDES OF THE BOX.

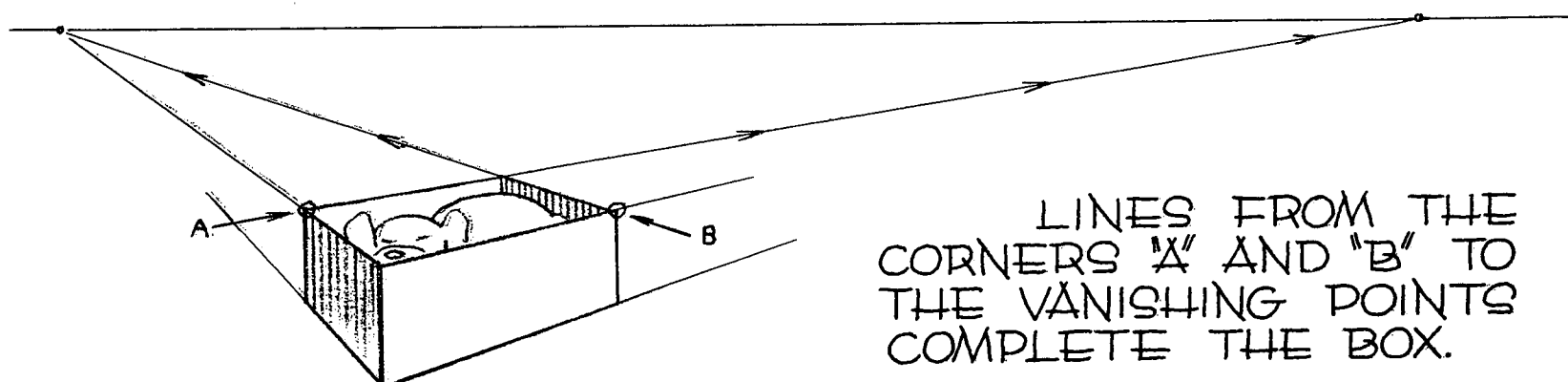
LET'S SEE HOW IT'S DONE





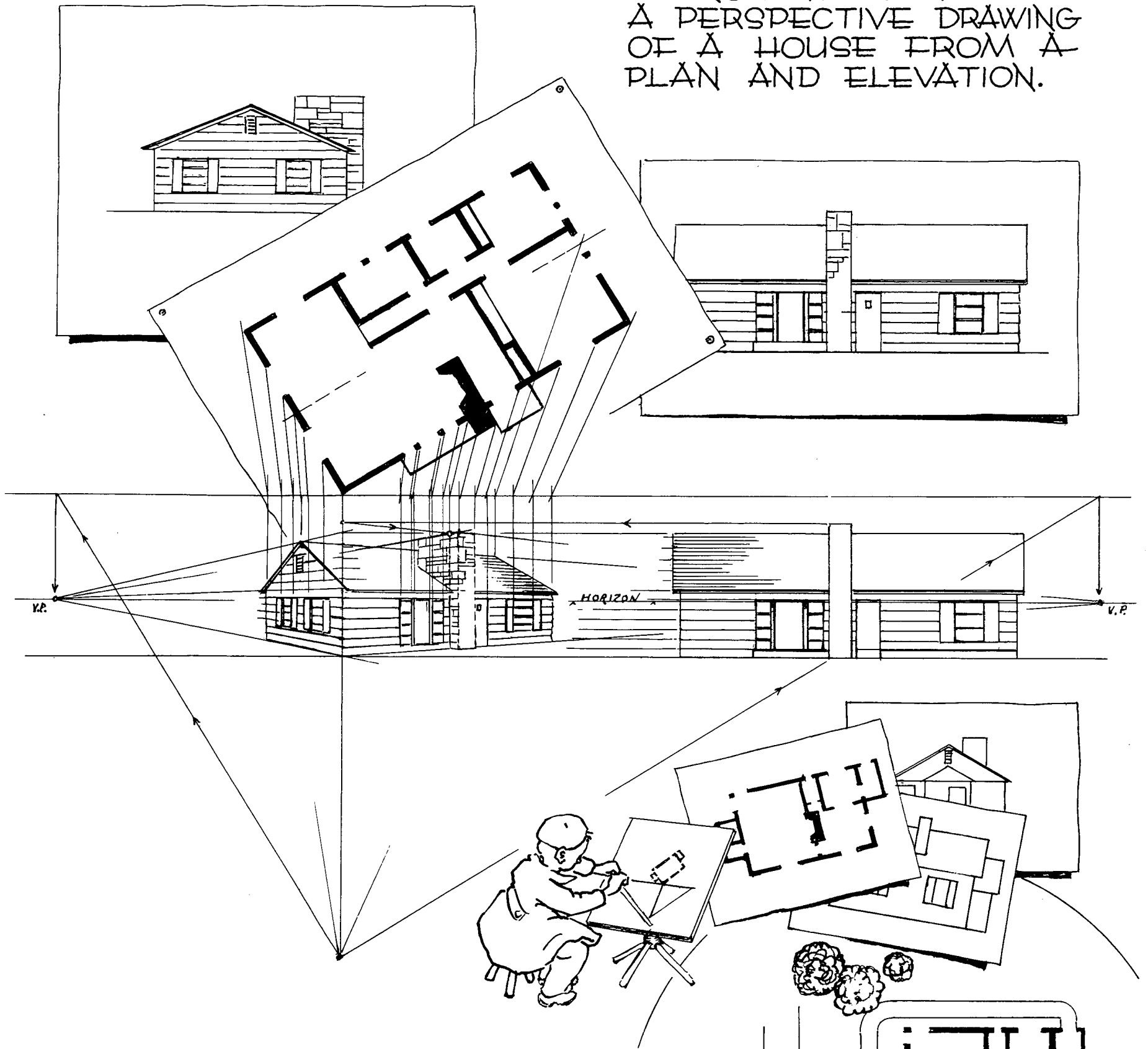
WE ARE STANDING AT THE STATION POINT LOOKING AT THE PLAN. FROM HERE WE LOOK ALONG A STRAIGHT LINE TO A POINT AT THE CORNER OF THE PLAN. THIS LINE PASSES THROUGH THE PICTURE PLANE AT THE POINT INDICATED BY THE ARROW. THERE ARE TWO OF THESE POINTS, ONE FOR EACH CORNER.

NOW THE BOX AS WE SEE IT ON THE PICTURE PLANE LIES IN THE SPACE BETWEEN THE ARROWS. IT IS NO WIDER THAN THIS SPACE. SO LINES FROM THE POINTS, DRAWN STRAIGHT DOWN, CUT THE WALLS OFF AT THE RIGHT WIDTH. WE NOW HAVE TWO SIDES OF THE BOX DRAWN IN PERSPECTIVE.

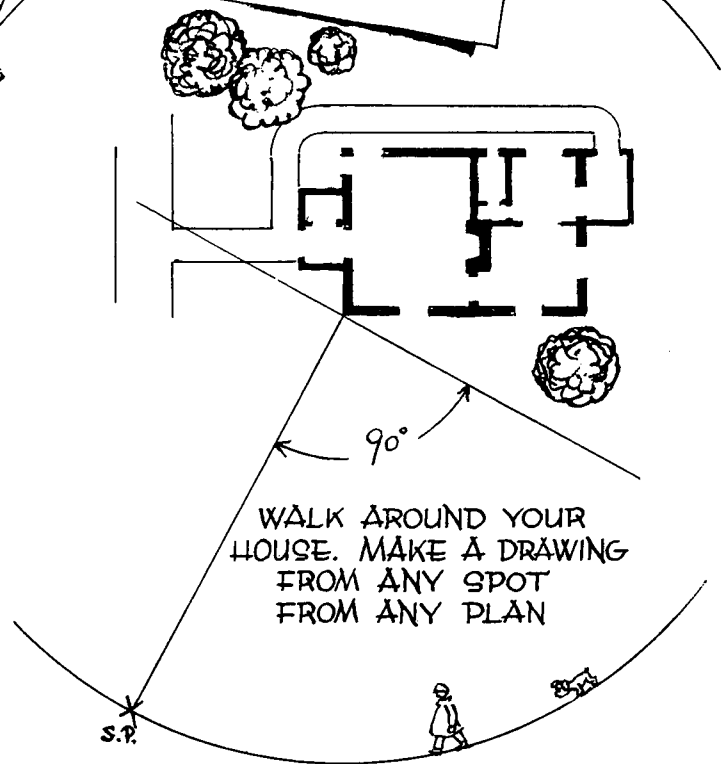


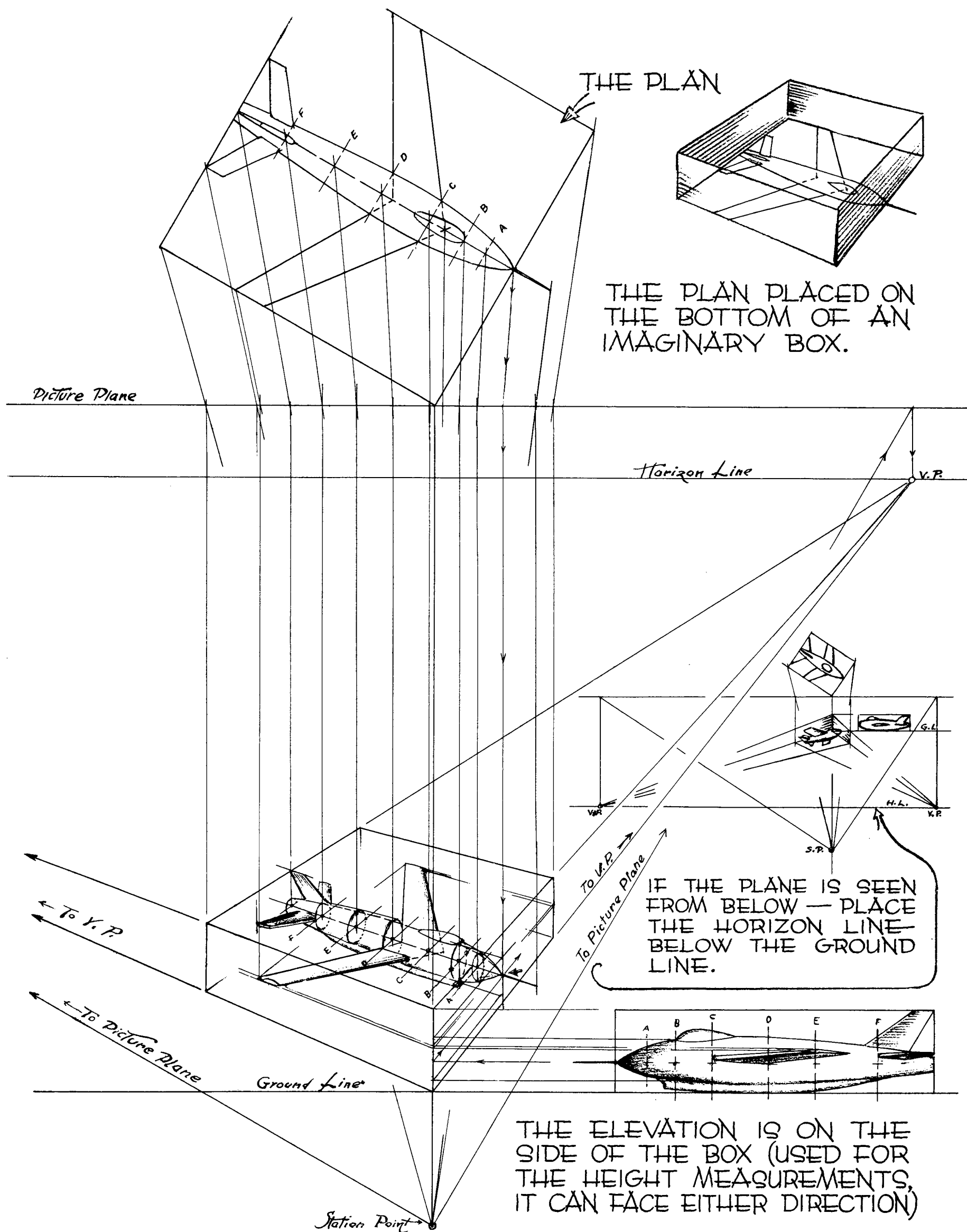
LINES FROM THE CORNERS "A" AND "B" TO THE VANISHING POINTS COMPLETE THE BOX.

NOW WE CAN MAKE
A PERSPECTIVE DRAWING
OF A HOUSE FROM A
PLAN AND ELEVATION.



YOU CAN NOW MAKE A
PERSPECTIVE DRAWING OF YOUR
OWN HOME FROM THE BLUE-
PRINTS AND FROM ANY VIEWPOINT

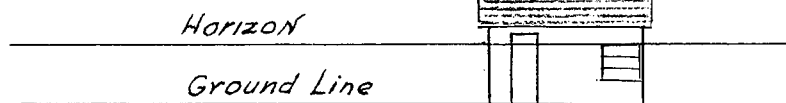




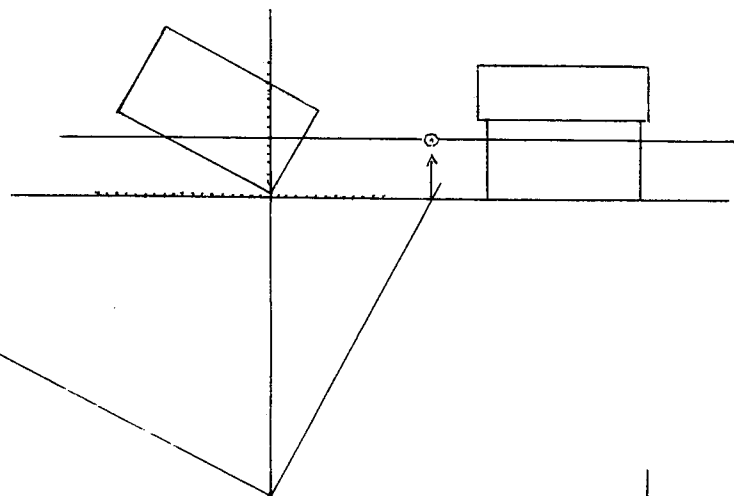
A PERSPECTIVE PROJECTION OF A JET PLANE DRAWN FROM A PLAN AND A SIDE ELEVATION

ANOTHER METHOD!

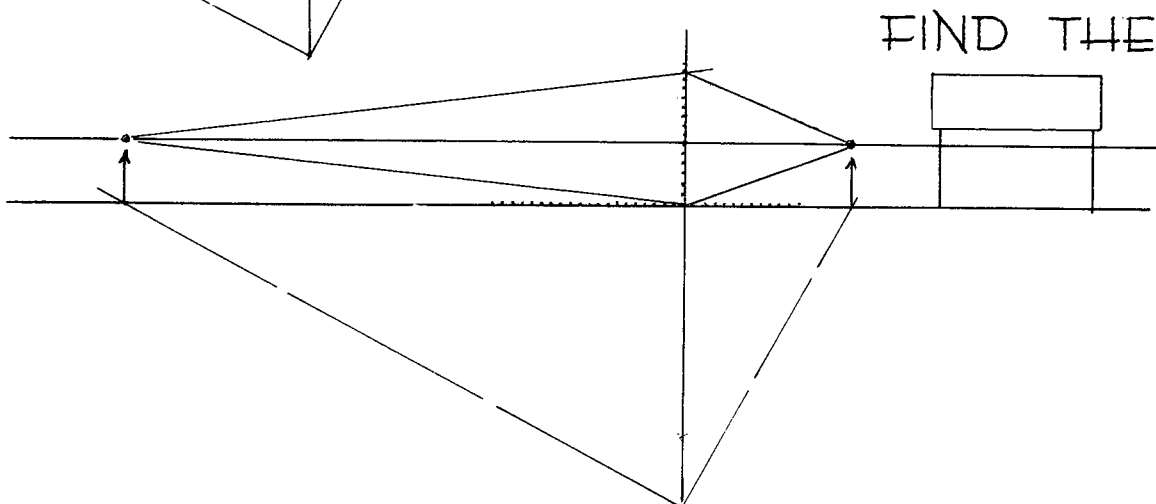
FIRST—STAND BACK AND LOOK AT THE HOUSE FROM THE VIEWPOINT S.P. DRAW THE PERSPECTIVE TRIANGLE.



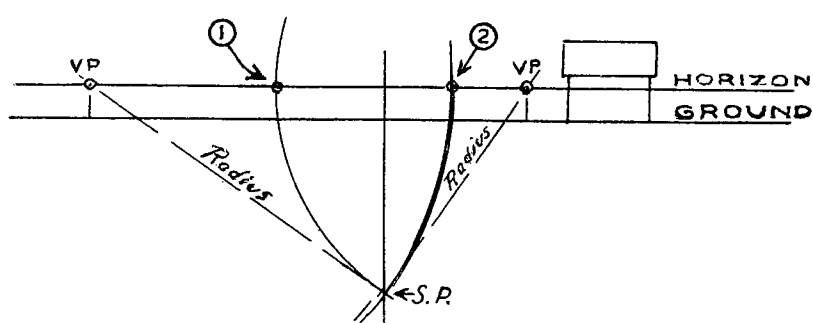
NEXT—DRAW A GROUND LINE AND ON IT PLACE THE "SIDE ELEVATION". PUT IN THE HORIZON LINE.



THROUGH ANY POINT ON THE GROUND DRAW A PERPENDICULAR LINE. SCALE OFF FOOT LENGTHS ON THE LINES STARTING FROM THIS POINT.

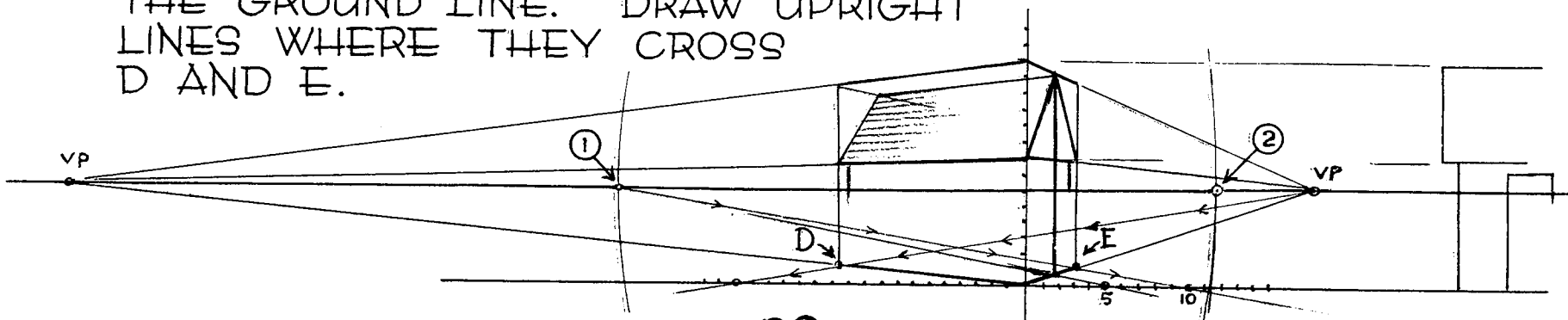


FIND THE HEIGHT ON THE MEASURING LINE AND EXTEND TO THE VANISHING POINTS ON THE HORIZON.



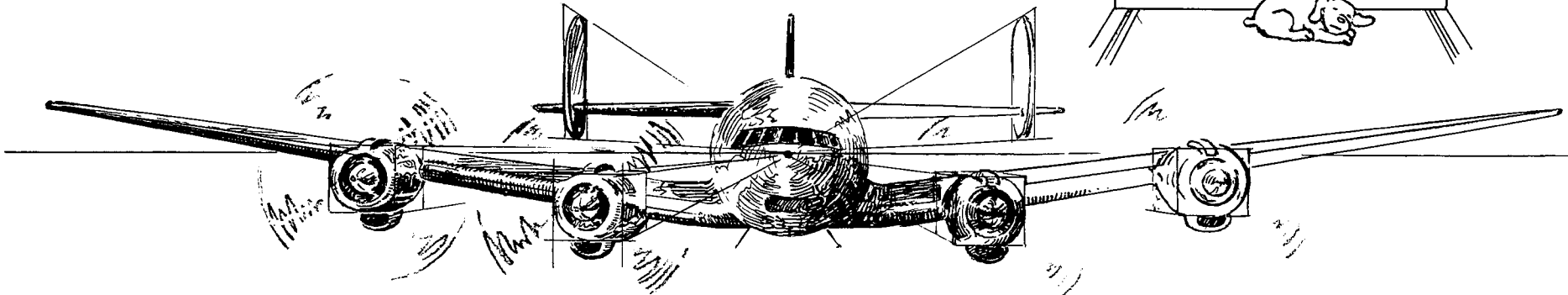
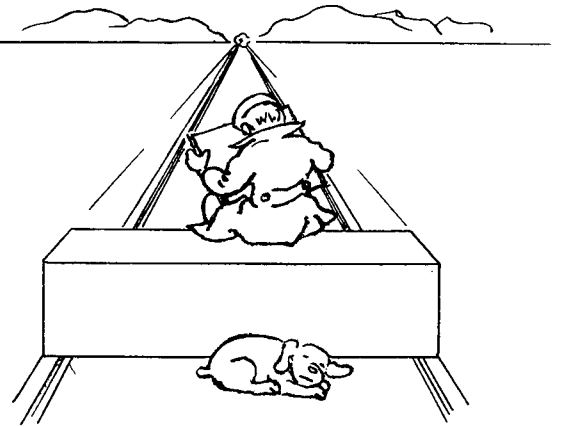
WITH A COMPASS USE THE TWO VANISHING POINTS AS CIRCLE CENTERS AND DRAW ARCS FROM S.P. TO THE HORIZON.

FINISH BY MEASURING THE HOUSE (8 FT. x 16 FT.) AND DRAWING LINES FROM ① AND ② TO WHERE THOSE MEASUREMENTS COME ON THE GROUND LINE. DRAW UPRIGHT LINES WHERE THEY CROSS D AND E.

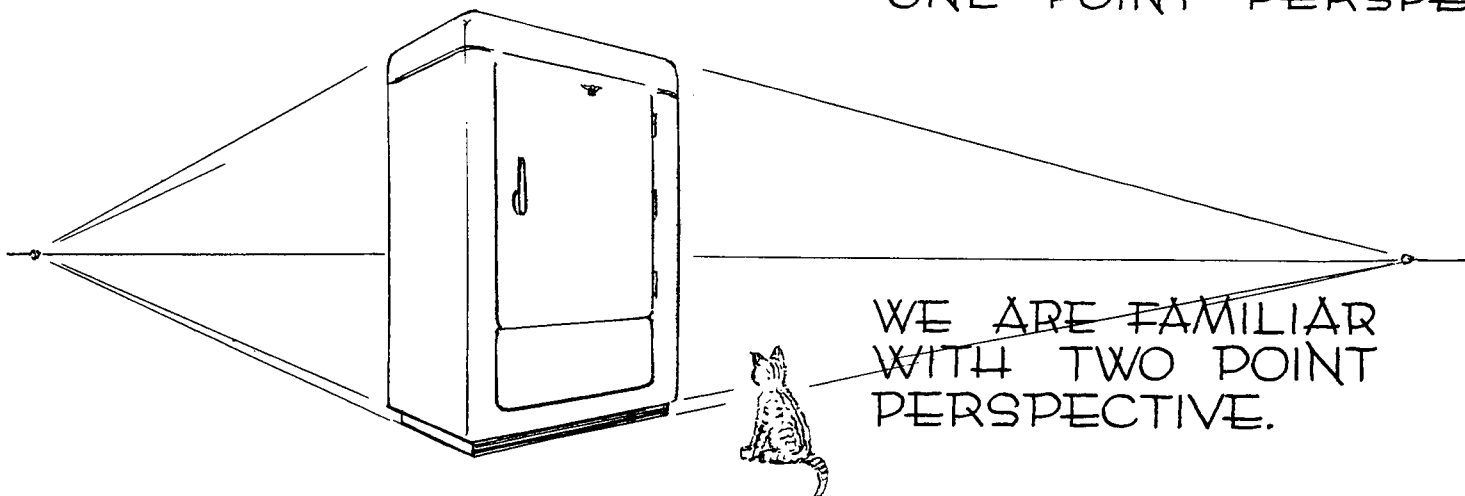


THREE KINDS OF PERSPECTIVE

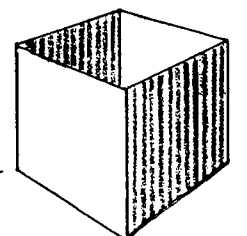
ONE POINT PERSPECTIVE IS DRAWN AS IF WE WERE DRAWING A RAILROAD TRACK.



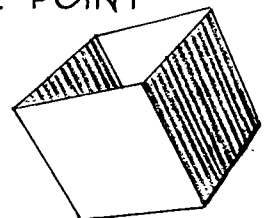
HERE IS AN EXAMPLE OF ONE POINT PERSPECTIVE



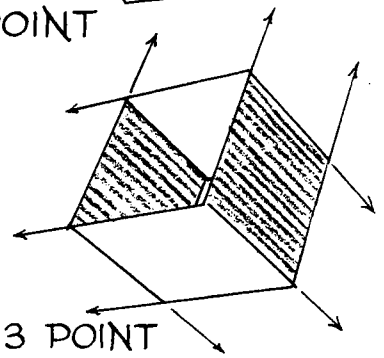
WE ARE FAMILIAR WITH TWO POINT PERSPECTIVE.



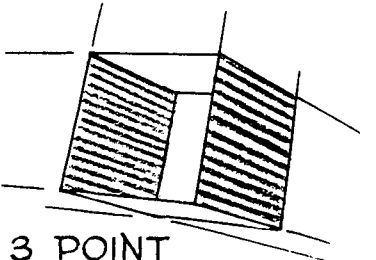
2 POINT



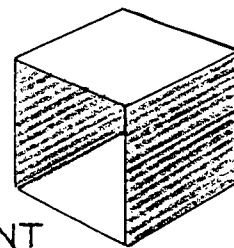
3 POINT



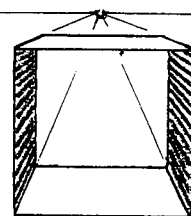
3 POINT



3 POINT

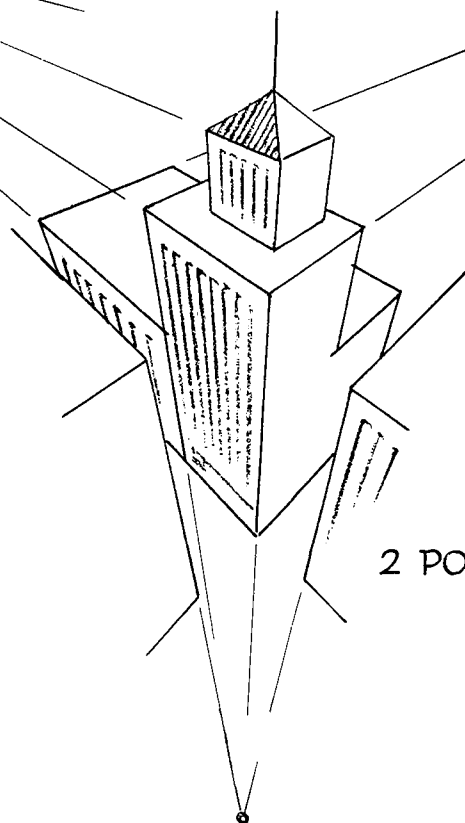


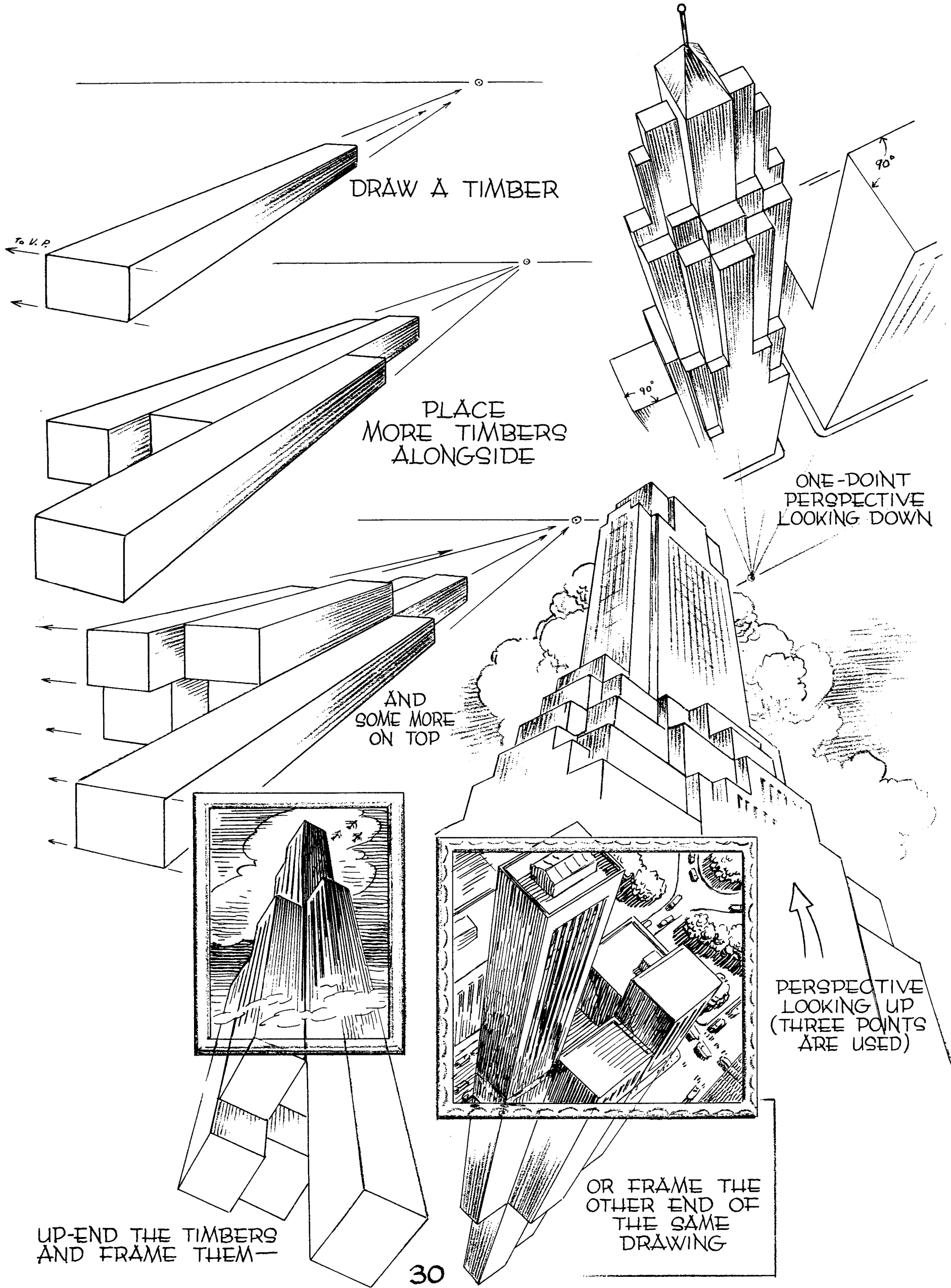
2 POINT



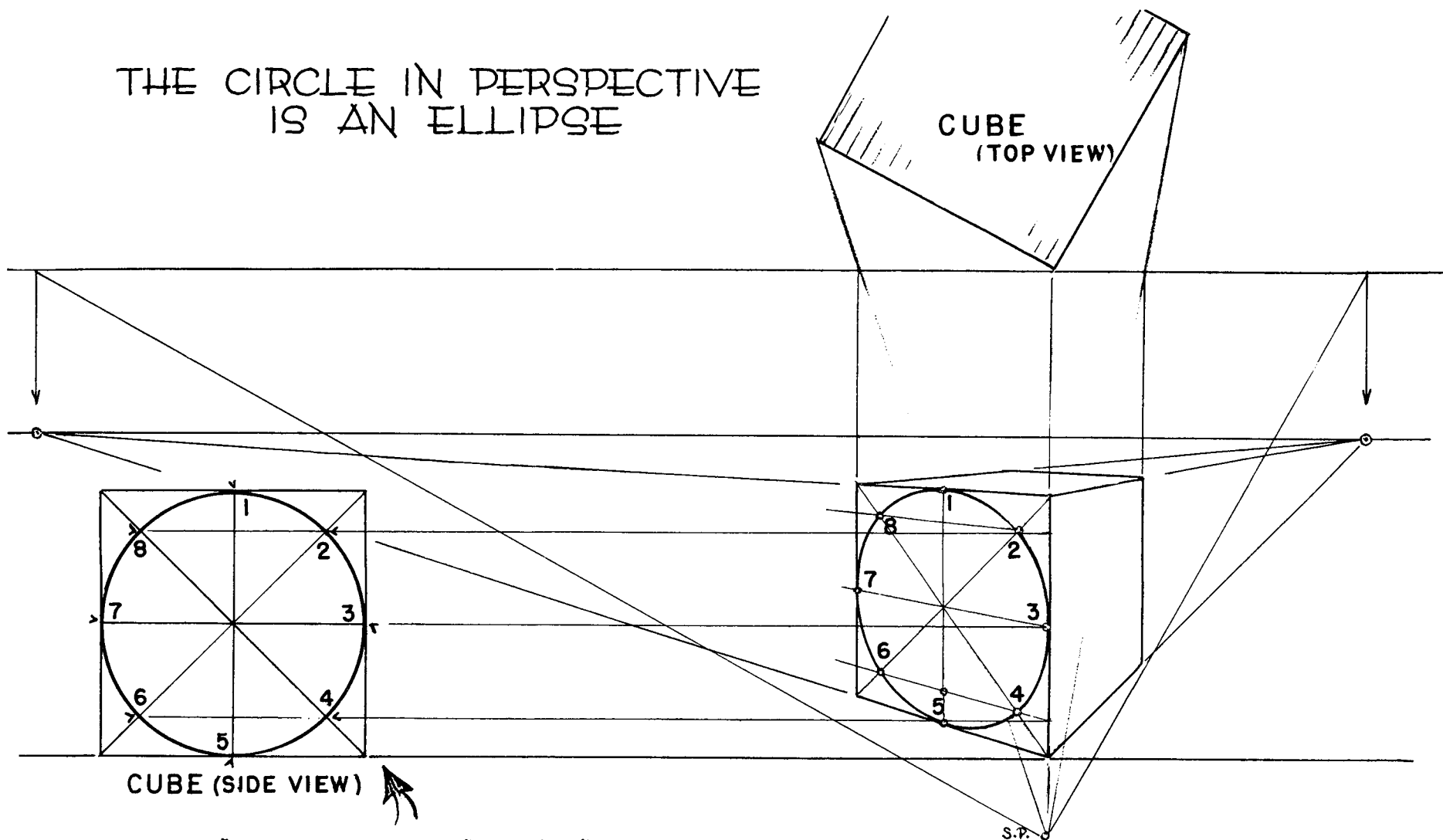
1 POINT

THREE POINT PERSPECTIVE IS USED WHEN LOOKING DOWN - OR UP. (SPACING OF POINTS SHOULD BE WIDER THAN THIS DIAGRAM SHOWS.)



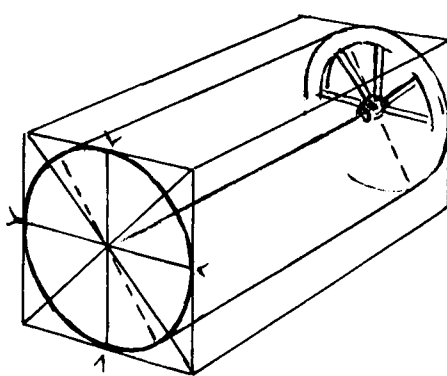
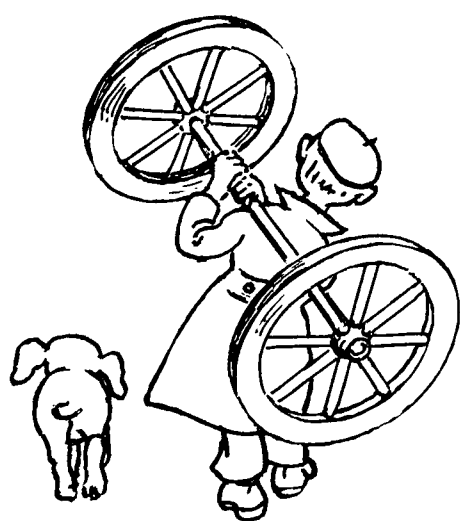
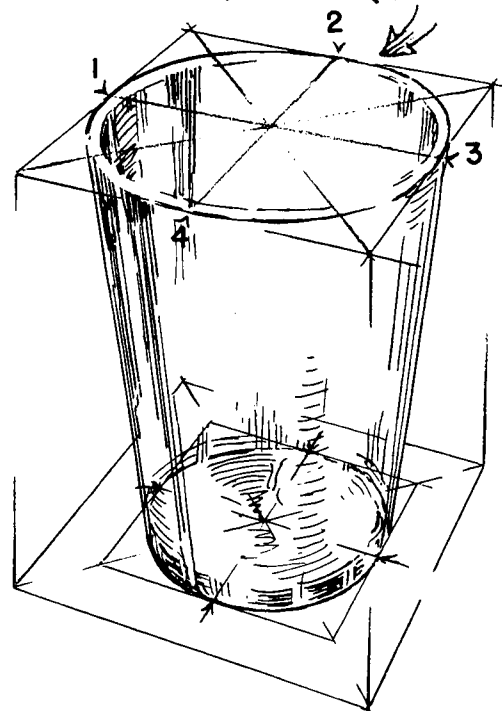


THE CIRCLE IN PERSPECTIVE
IS AN ELLIPSE

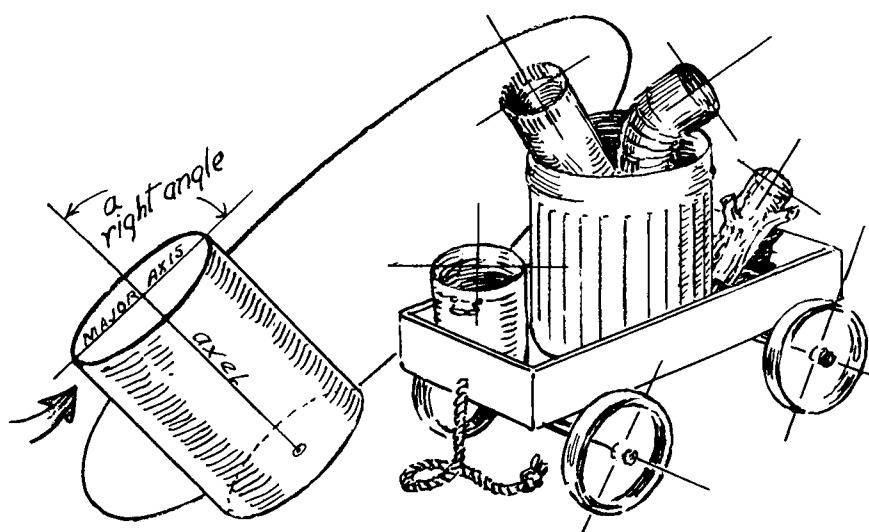


DRAW THE DIAGONALS ON
THE SIDE VIEW. THEY
CROSS AT THE CENTER
OF THE CIRCLE. DRAW
THE CIRCLE.

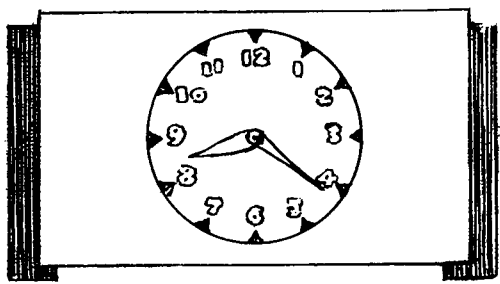
CIRCLES IN A
SQUARE TOUCH
AT 4 POINTS



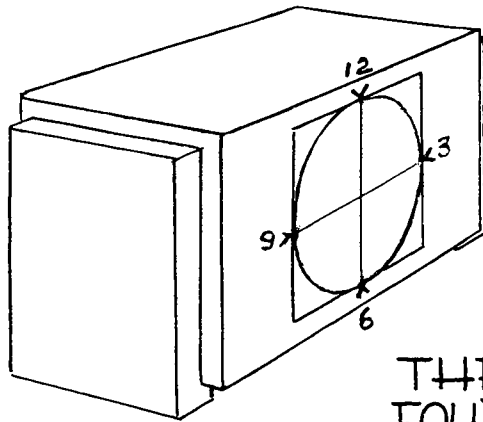
A CYLINDER IS LIKE
A PAIR OF WHEELS ON AN
AXEL. ALWAYS DRAW
THE LONG LINE OF THE
ELLIPSE — (CALLED THE
MAJOR AXIS) — SO IT MAKES
A RIGHT ANGLE WITH THE
AXLE.



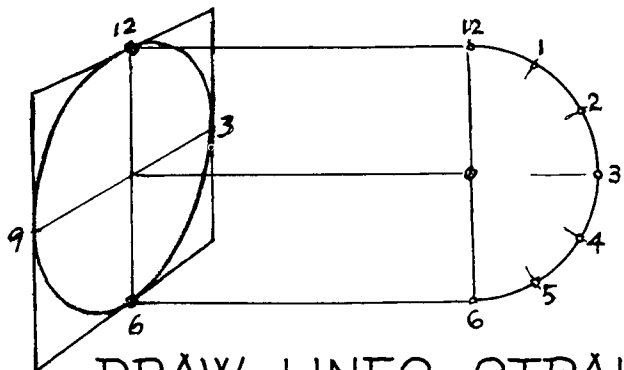
DIVIDING A CIRCLE IN PERSPECTIVE



THE CLOCK



FIRST YOU DRAW THE CLOCK IN PERSPECTIVE. DRAW A SQUARE WHICH REPRESENTS THE DIAL. THE LOCATION OF THE ELLIPSE CAN BE FOUND WHERE IT TOUCHES

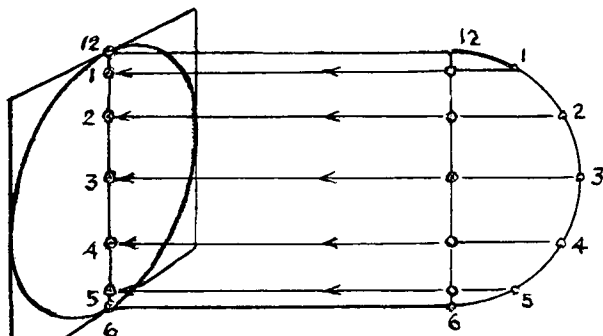


THE SQUARE AT 12, 3, 6 AND 9 O'CLOCK. NOW TO FIND THE LOCATION OF THE HOURS.

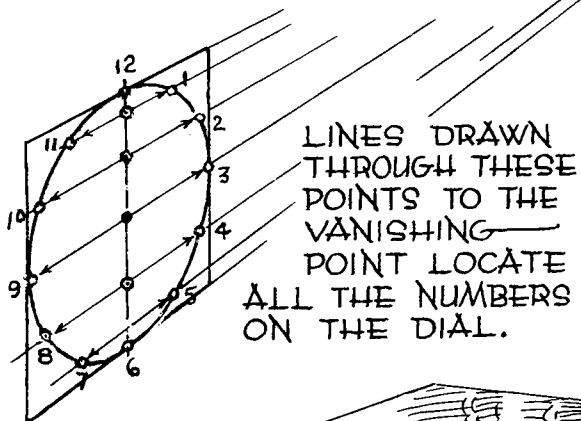
FIRST —

DRAW LINES STRAIGHT OUT FROM THE CENTER OF THE CLOCK AND FROM "12" AND "6"

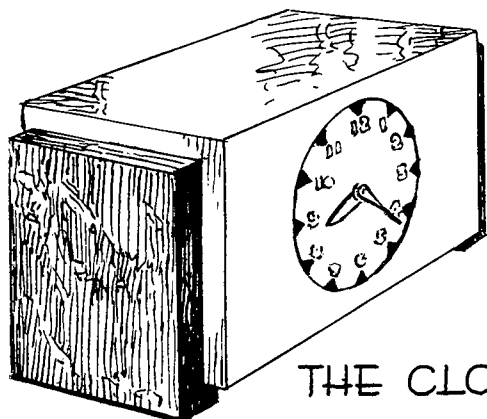
THEN FILL THE SPACE WITH A COMPASS CIRCLE AND LOCATE THE HOURS "12" TO "6".



FROM HERE WE MAKE LINES TO FIND NEW POINTS.



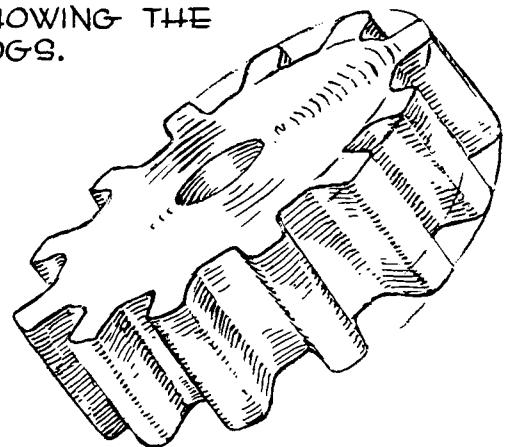
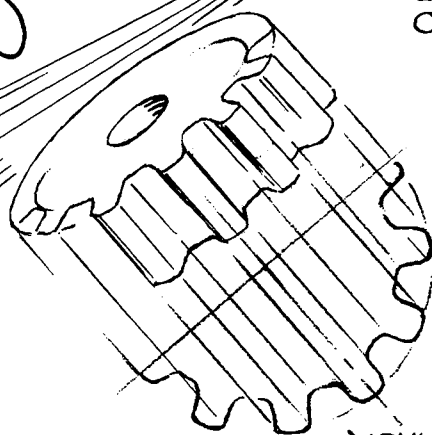
LINES DRAWN THROUGH THESE POINTS TO THE VANISHING POINT LOCATE ALL THE NUMBERS ON THE DIAL.



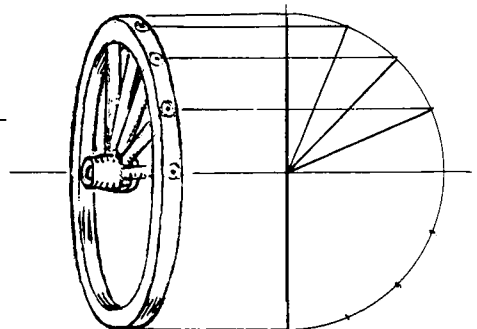
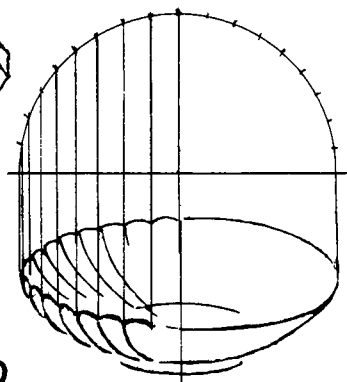
THE CLOCK

VANISHING POINT FOR THE CLOCK

SO FIRST YOU DRAW HALF THE GEAR WITH A COMPASS SHOWING THE COGS.

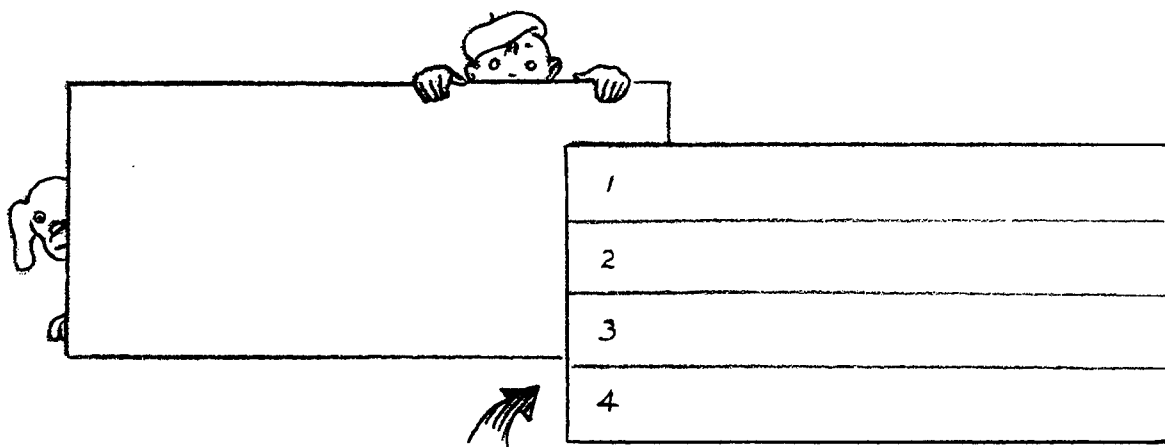


NOW YOU DRAW LINES AS SHOWN FROM THE PLAN TO THE CORRESPONDING POINTS ON THE WHEEL.

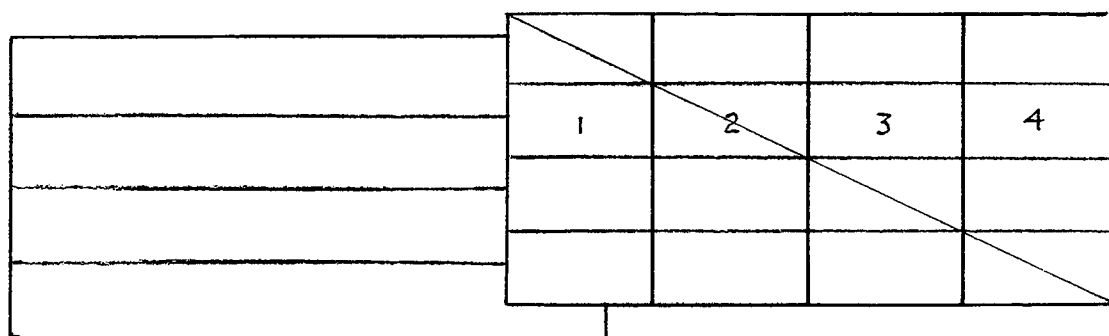


HERE ARE SOME MORE SAMPLES

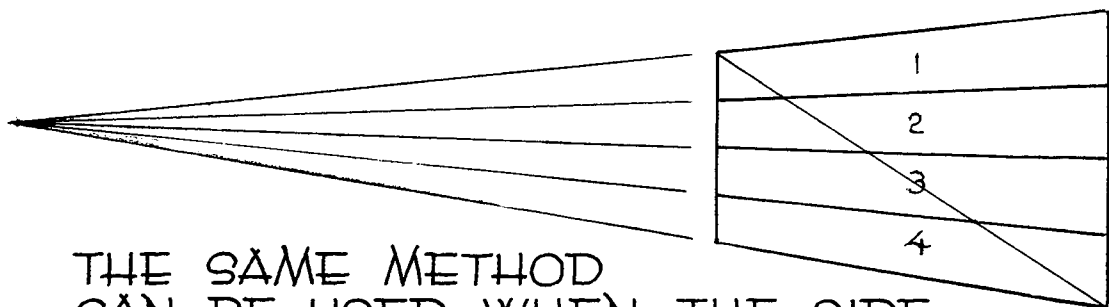
PERSPECTIVE SPACING



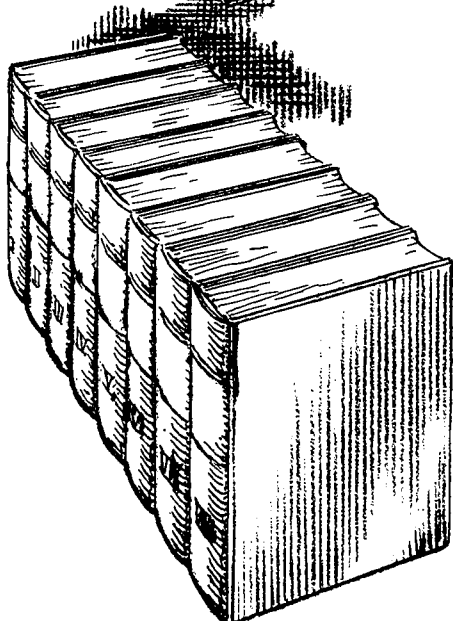
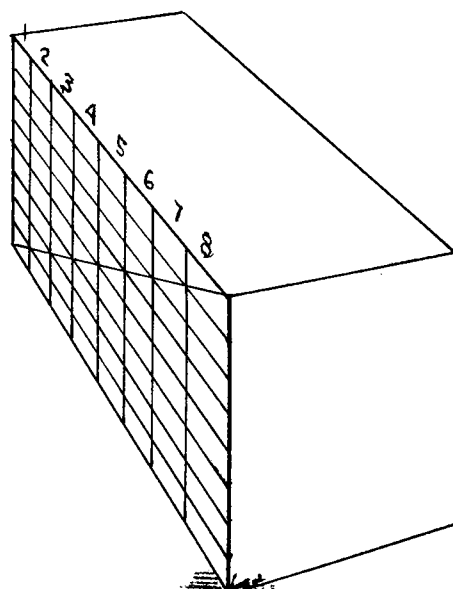
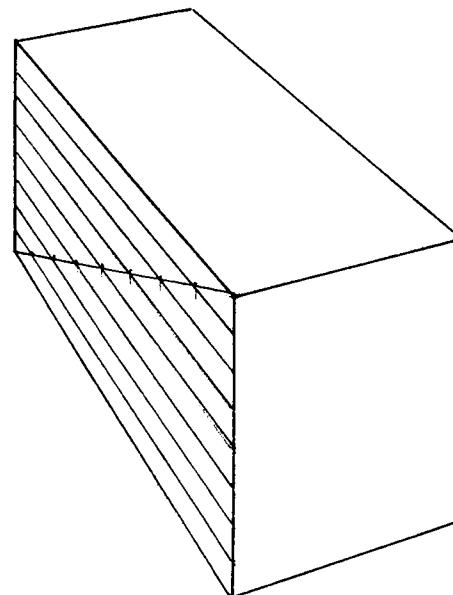
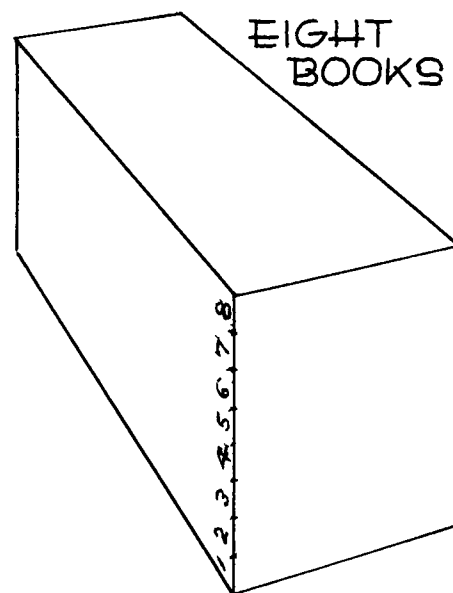
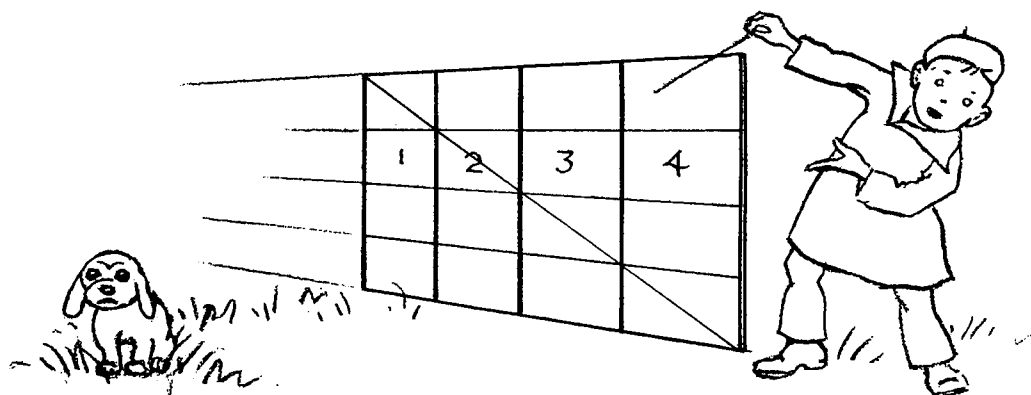
THE SIDE OF A BOX CAN BE DIVIDED INTO EQUAL HORIZONTAL PARTS.



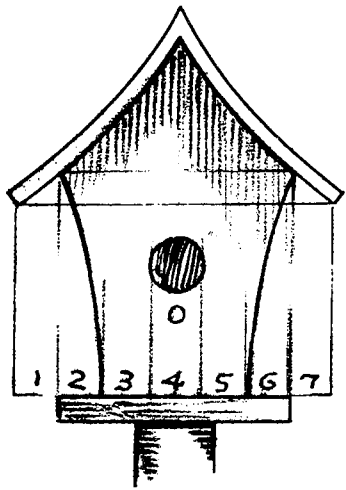
DRAW A DIAGONAL AND NOTE WHERE IT CROSSES THE HORIZONTAL LINES. LINES DRAWN UPRIGHT THROUGH THESE POINTS WILL DIVIDE THE AREA INTO THE SAME NUMBER OF UPRIGHT PARTS.



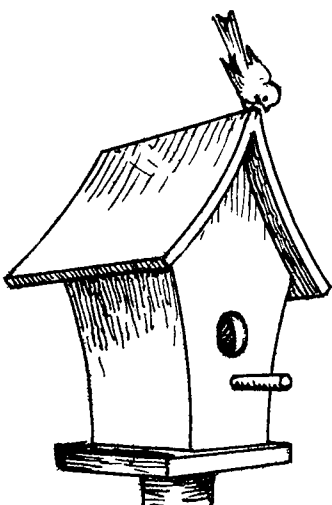
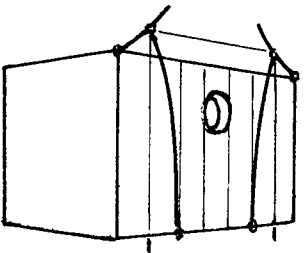
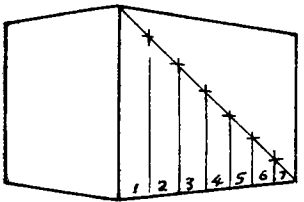
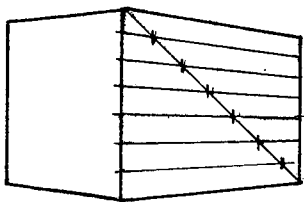
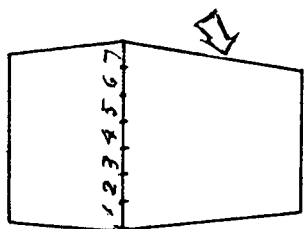
THE SAME METHOD CAN BE USED WHEN THE SIDE OF THE BOX IS DRAWN IN PERSPECTIVE. THE UPRIGHT DIVISIONS ARE IN CORRECT LOCATION AND IN CORRECT PERSPECTIVE.



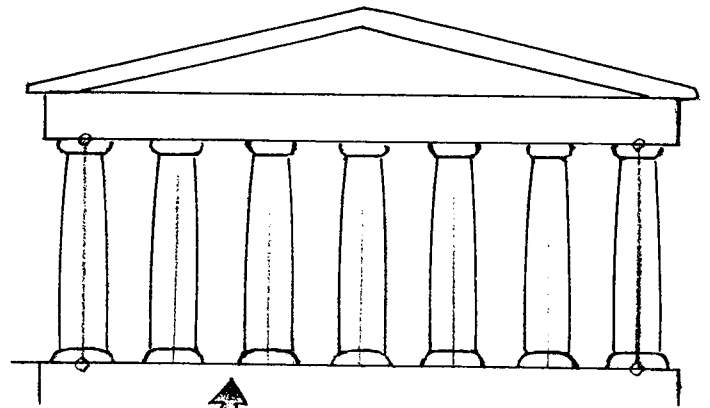
A BIRD HOUSE



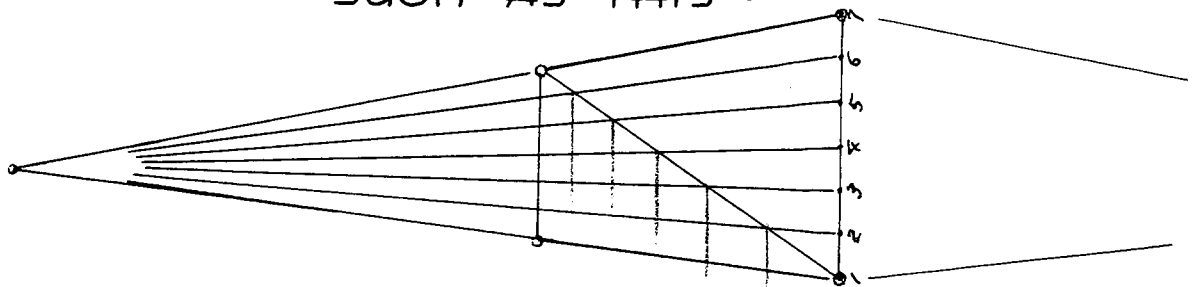
DRAW THE LOWER PART AS IF IT WERE A BOX



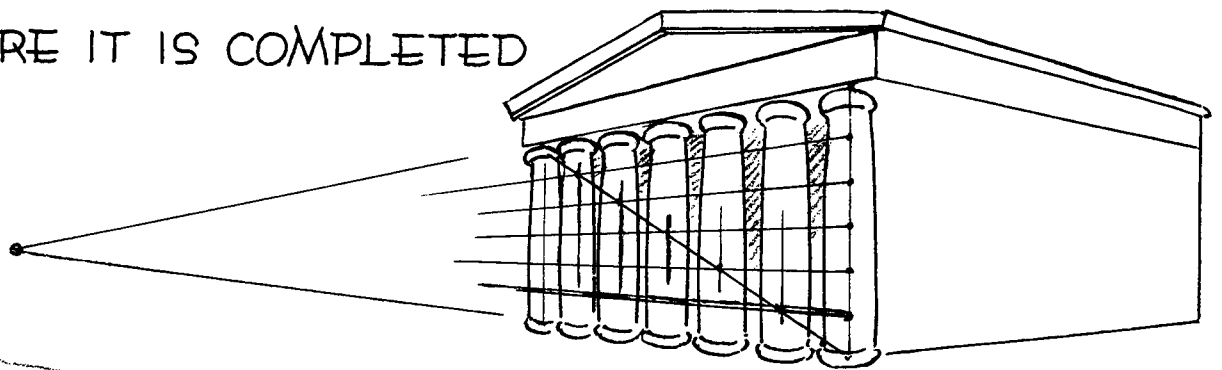
WE NOW KNOW HOW TO DRAW THE FRONT OF A BUILDING IN PERSPECTIVE.



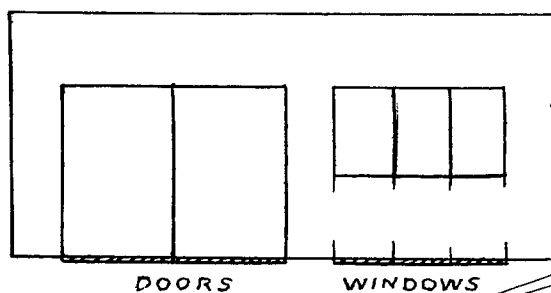
SUCH AS THIS



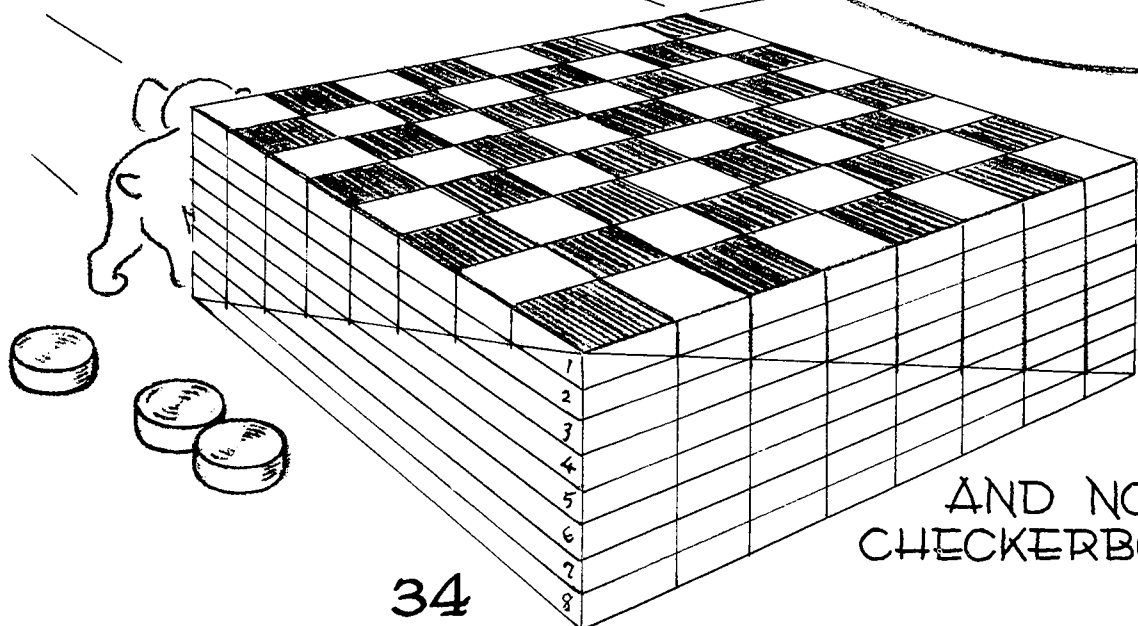
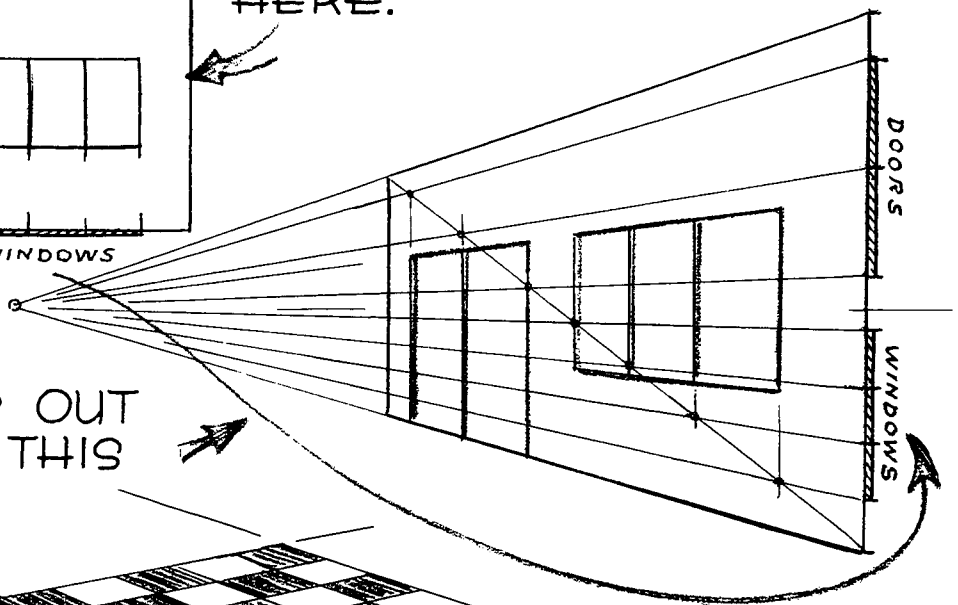
HERE IT IS COMPLETED



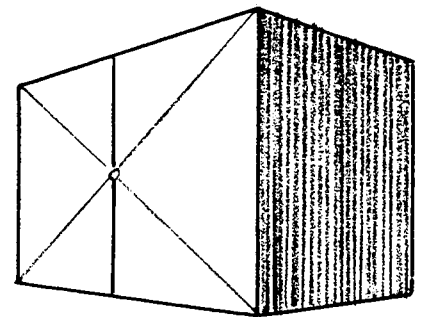
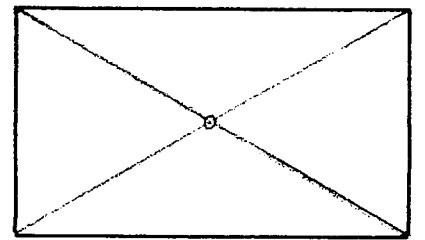
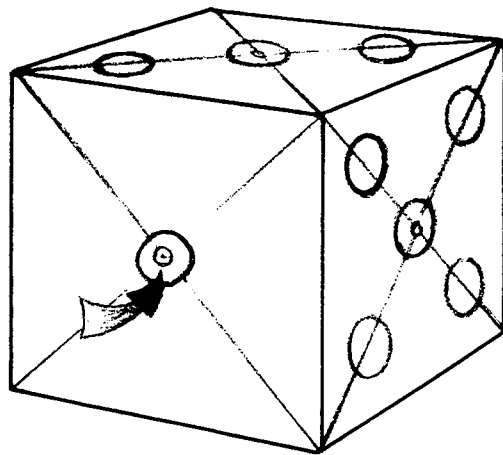
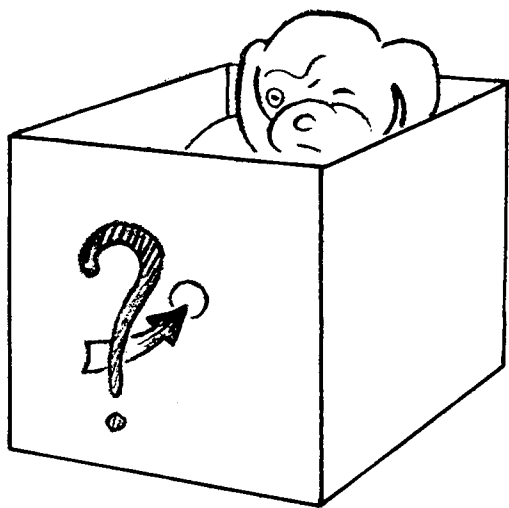
WHEN THE SPACINGS ARE UNEVEN AS SHOWN HERE.



IT WORKS OUT LIKE THIS

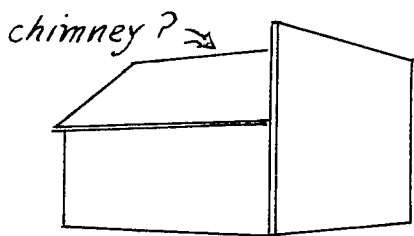
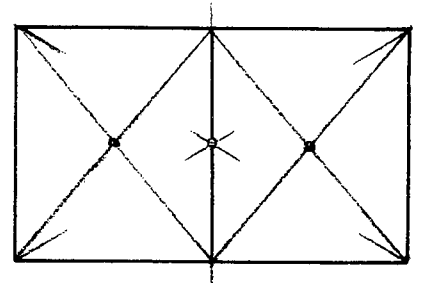


FIND THE CENTER

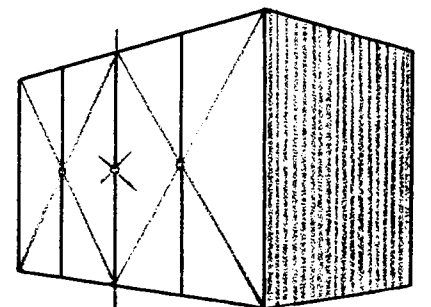
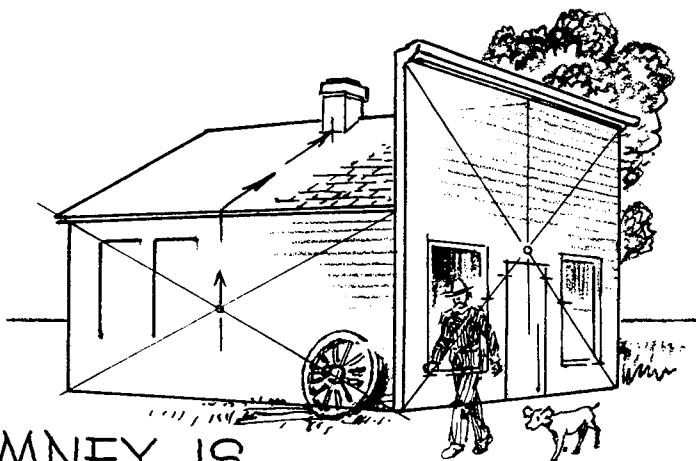


TO FIND THE PERSPECTIVE CENTER OF THE SIDES OF THE BOX: DRAW DIAGONAL LINES FROM THE CORNERS. THEY INTERSECT AT THE CENTER.

BOX DIVIDED INTO HALVES

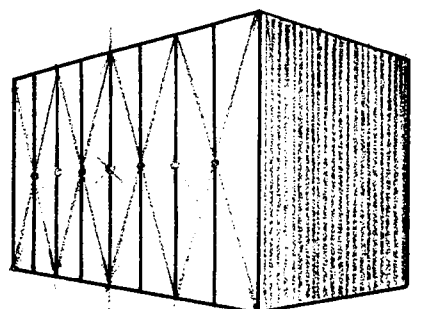
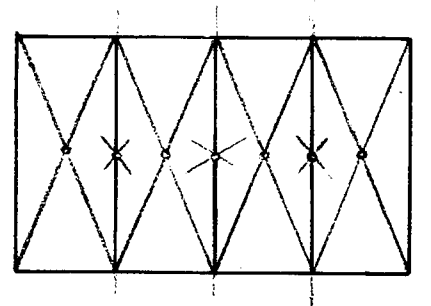


THE DOOR IS IN THE CENTER OF THE BUILDING FRONT. THE CHIMNEY IS IN THE CENTER OF THE ROOF.

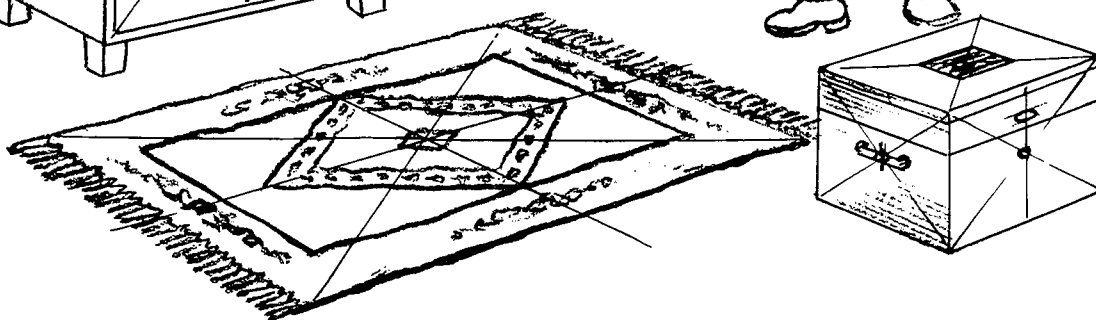
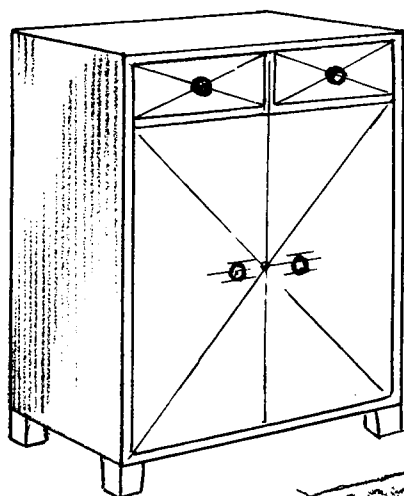


INTO QUARTERS

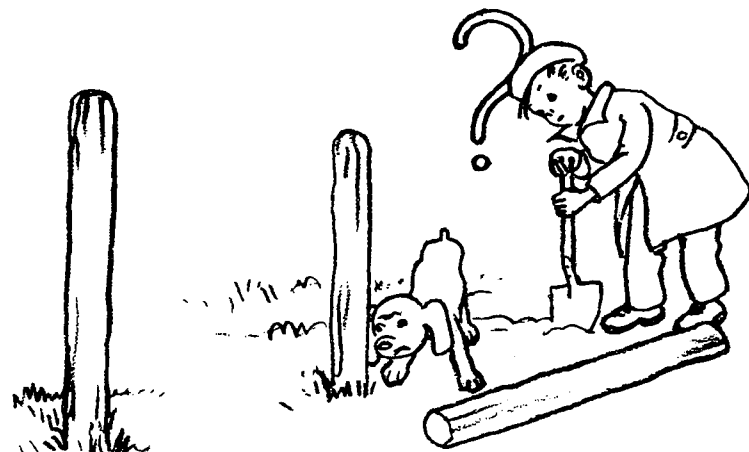
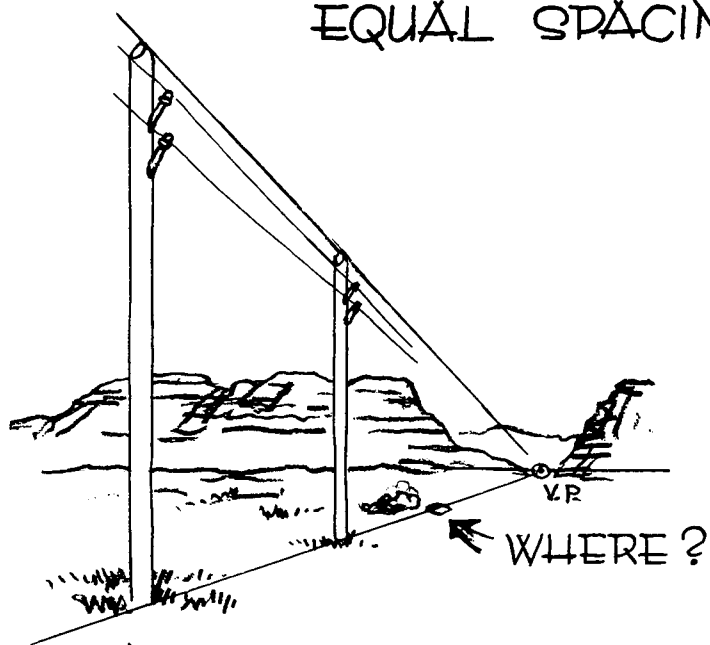
HERE ARE MORE CENTERS.



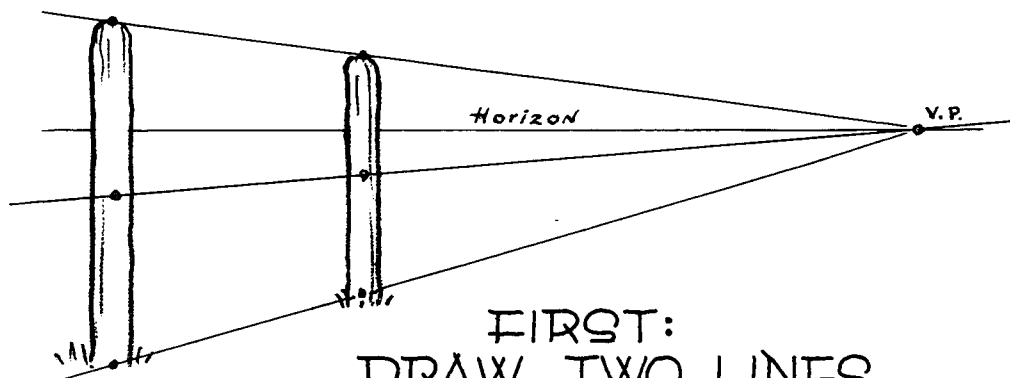
INTO EIGHTHS



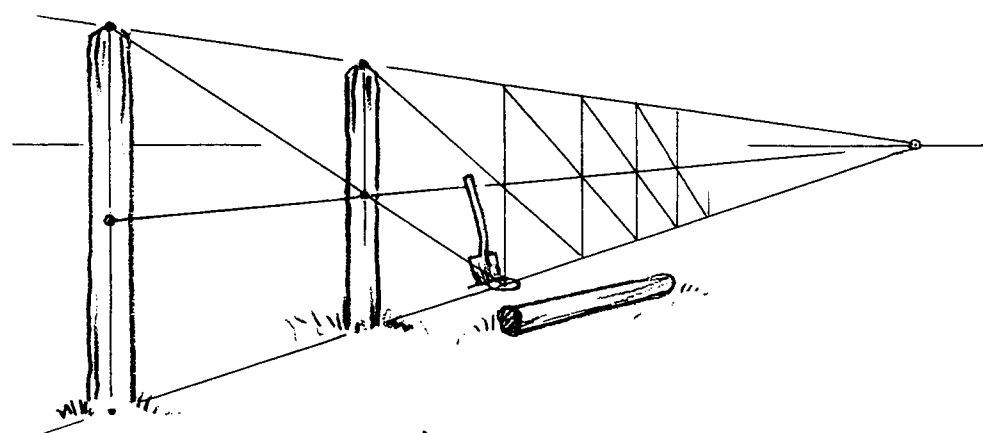
EQUAL SPACING IN PERSPECTIVE



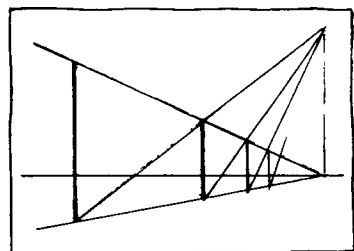
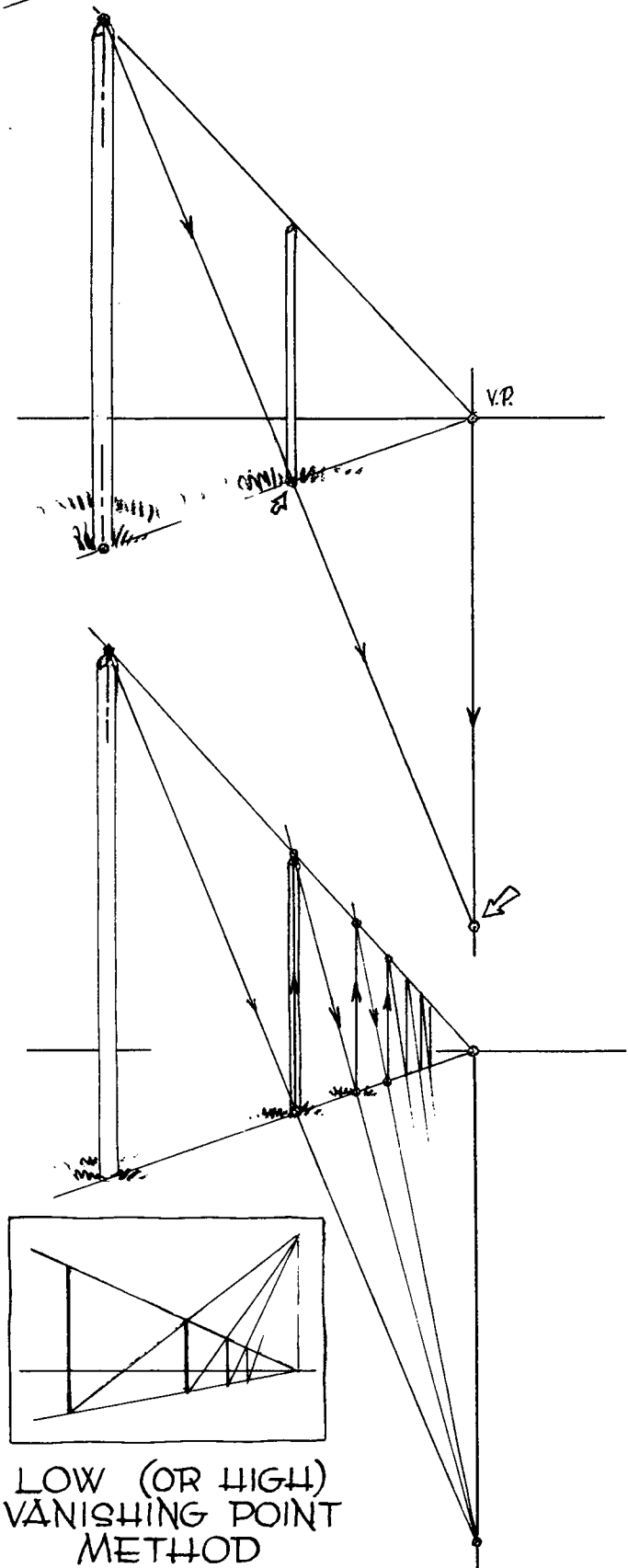
WHERE DOES THE
NEXT POST GO?



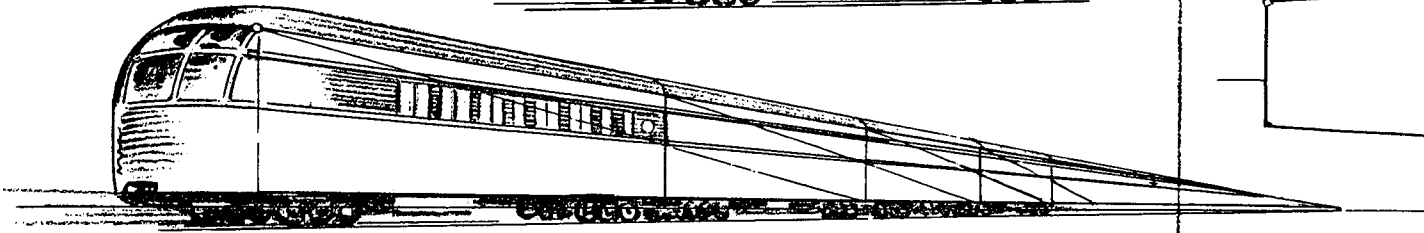
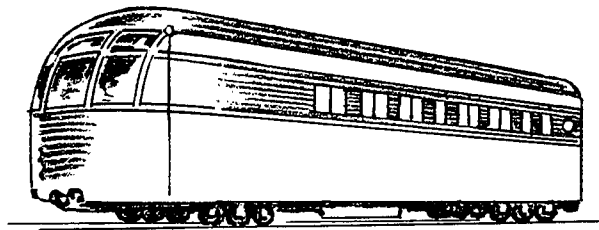
FIRST:
DRAW TWO LINES,
ONE ALONG THE TOP OF
THE POSTS — THE OTHER
ALONG THE BOTTOM.
THESE LINES MEET AT THE
VANISHING POINT. ANOTHER
LINE IS DRAWN HALFWAY
BETWEEN.



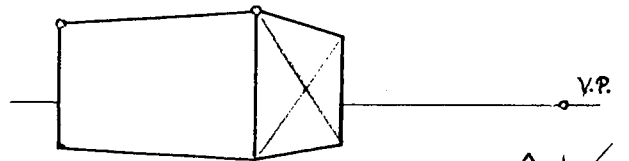
NOW:
DRAW A LINE FROM THE
TOP OF THE FIRST POST AND
ON THROUGH THE CENTER
OF THE SECOND POST TO
THE LOWER LINE.
WE NOW KNOW WHERE TO
PUT THE THIRD POST —
AND ALL THE REST.



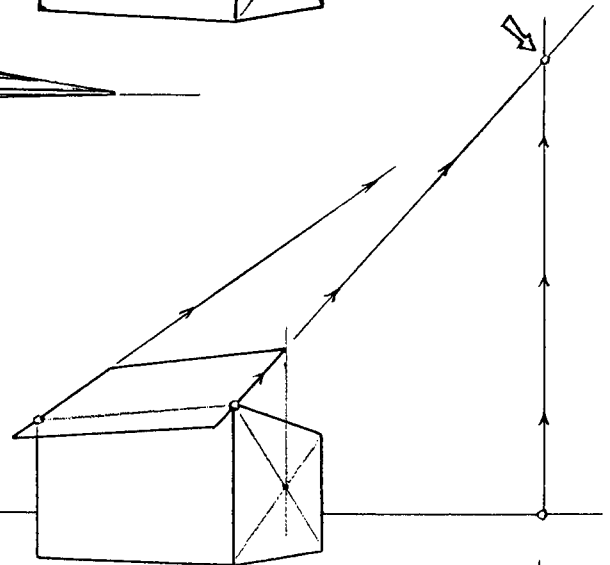
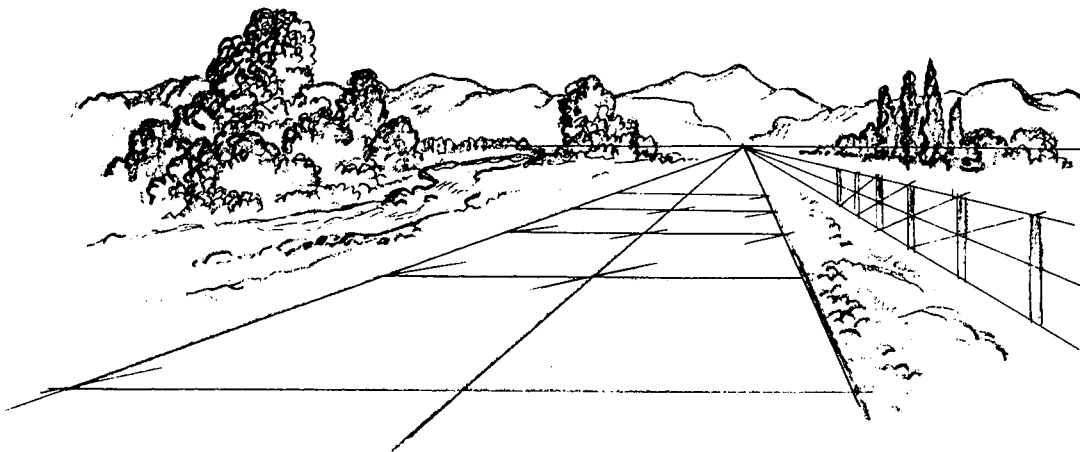
LOW (OR HIGH)
VANISHING POINT
METHOD



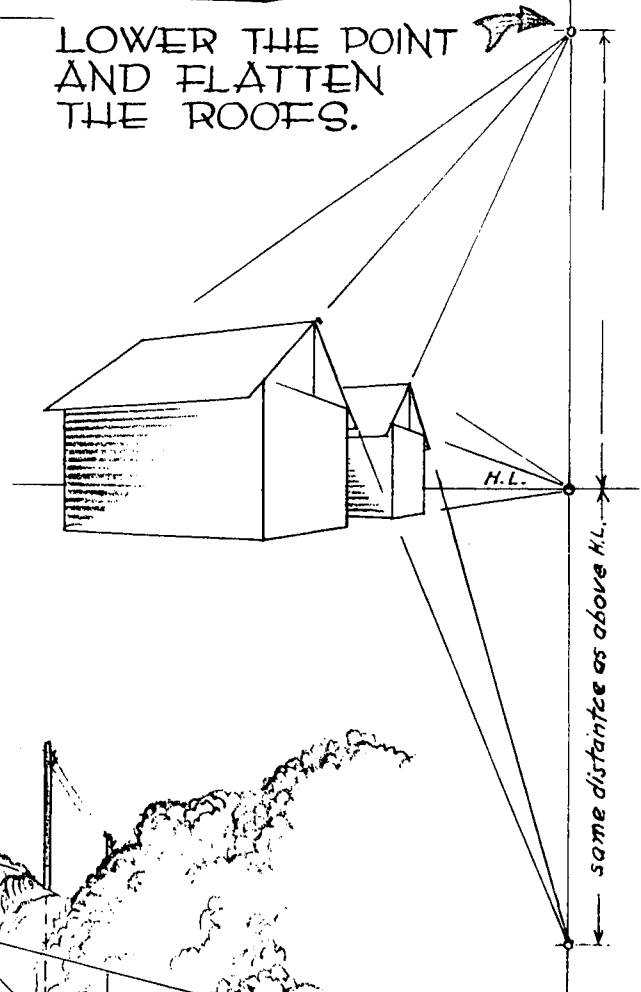
THE SLOPE
OF A ROOF.



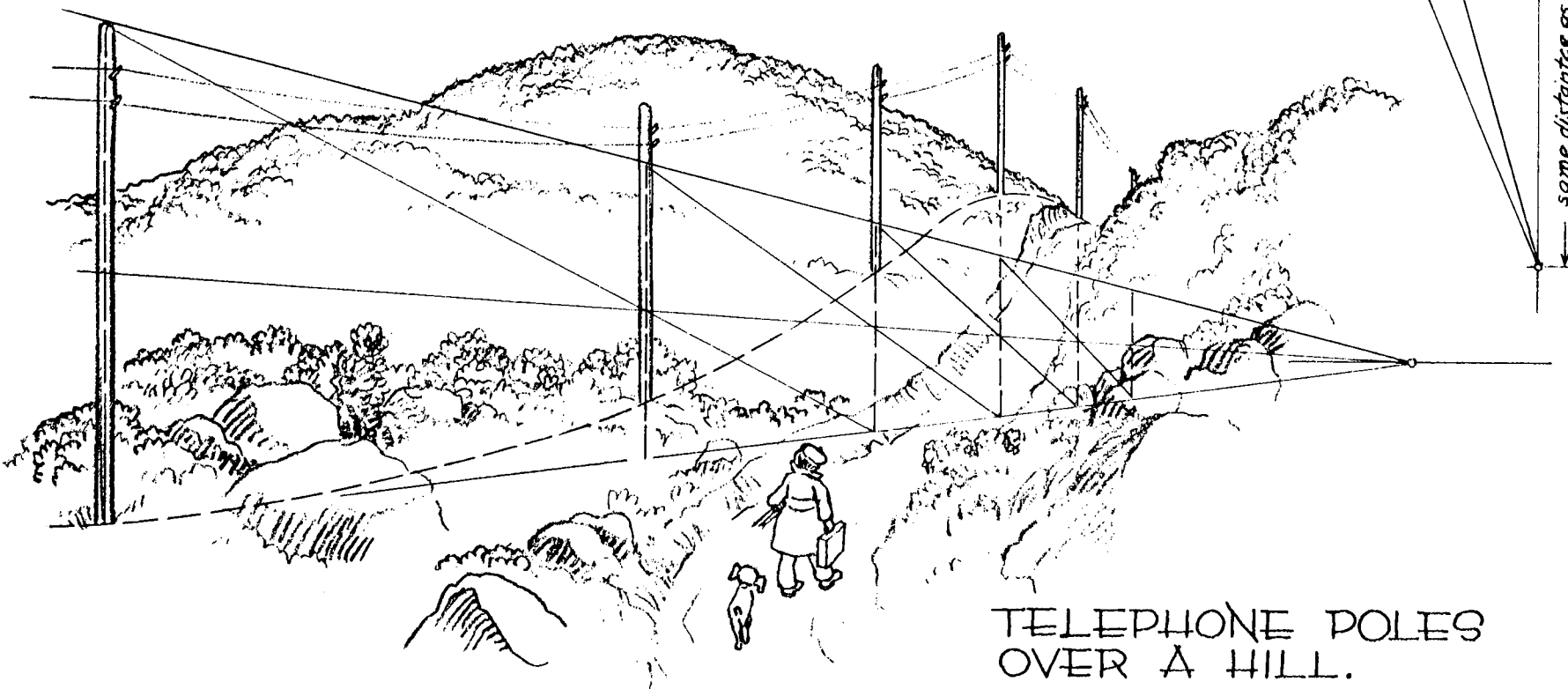
IN THE SAME MANNER YOU CAN
MAKE UP A WHOLE TRAIN FROM
ONE CAR. FIRST — FIND THE
VANISHING POINT — NEXT THE CEN-
TER LINE — THEN THE DIAGONALS.



LOWER THE POINT
AND FLATTEN
THE ROOFS.

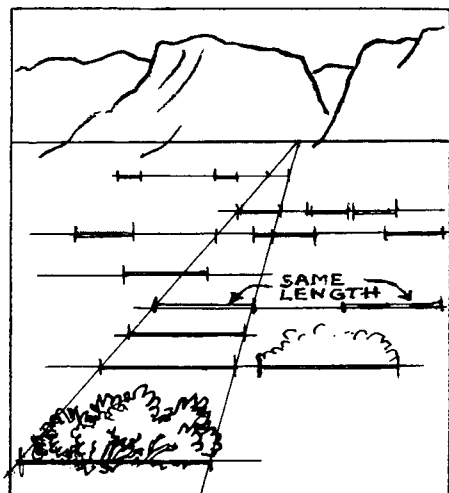


IT WORKS THE SAME ON A FLAT
SURFACE SUCH AS THE EXPANSION
JOINTS ON A HIGHWAY.

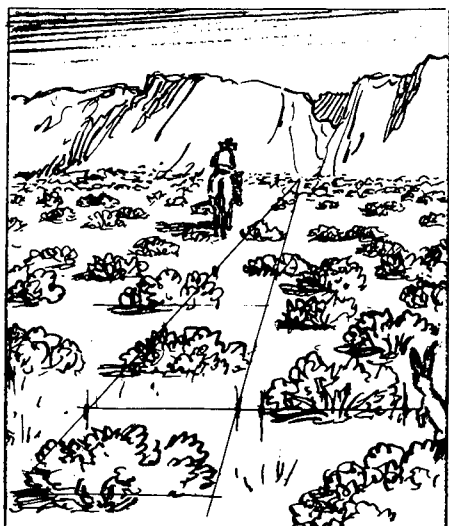


TELEPHONE POLES
OVER A HILL.

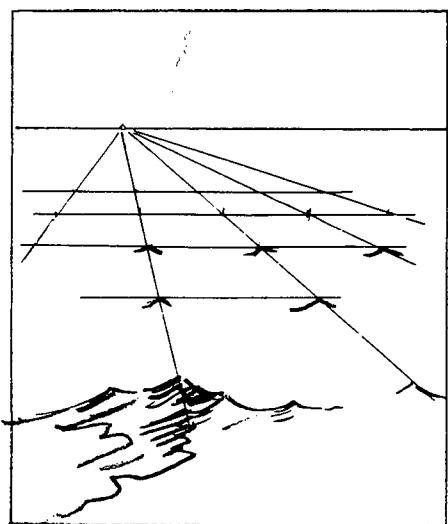
HEIGHTS OF PEOPLE NEAR AND FAR



ONE SAGE BRUSH



MORE SAGE BRUSHES



ONE WAVE

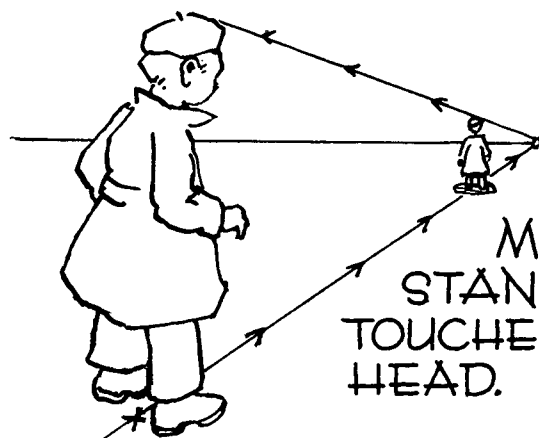
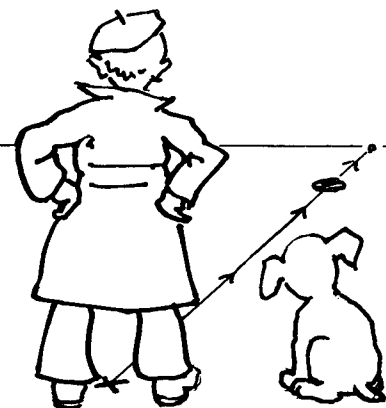


MORE WAVES

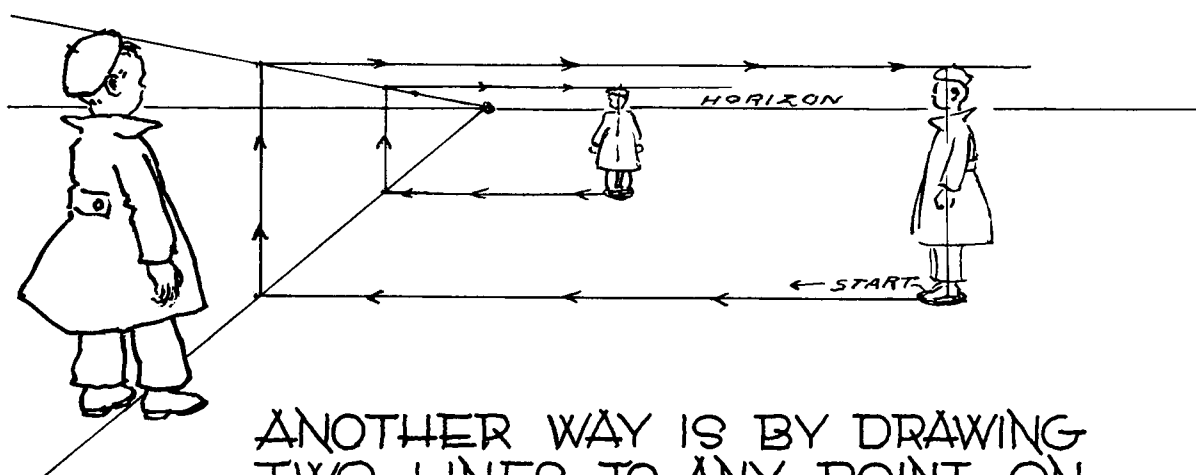


HOW TALL DO
WE DRAW A PERSON
STANDING ON THIS SPOT?

FIRST — A LINE
THROUGH THE SPOT
TO THE HORIZON.
WE START THE LINE
AT THE MAN'S FEET.



NEXT — FROM THE
POINT ON THE HORIZON
DRAW THE
LINE BACK TO THE
MAN'S HEAD. A MAN
STANDING ON THE SPOT
TOUCHES THIS LINE WITH HIS
HEAD.

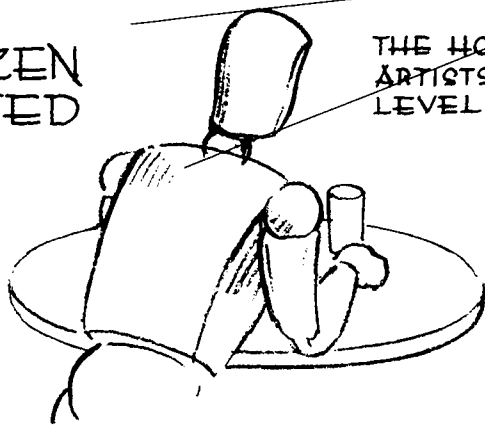


ANOTHER WAY IS BY DRAWING
TWO LINES TO ANY POINT ON
THE HORIZON. THEN START FROM
THE SPOT AND DRAW THE HORIZONTAL
AND PERPENDICULAR LINES SHOWN
BY ARROW.

HEIGHTS OF PEOPLE

WE HAVE A HORIZEN
AND A MAN SEATED
AT A TABLE.

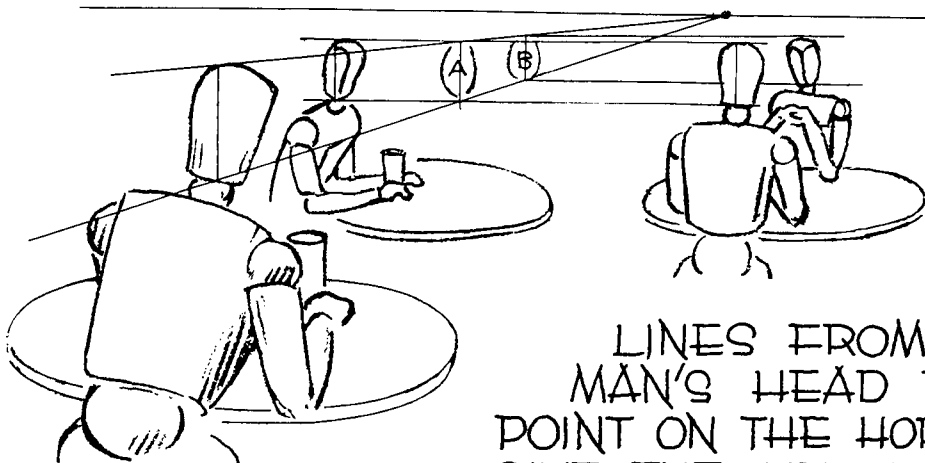
WE WANT TO
DRAW MORE TABLES
AND MORE PEOPLE
SEATED.



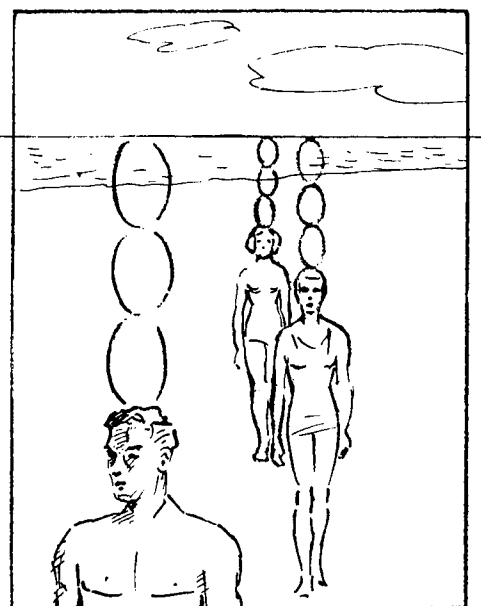
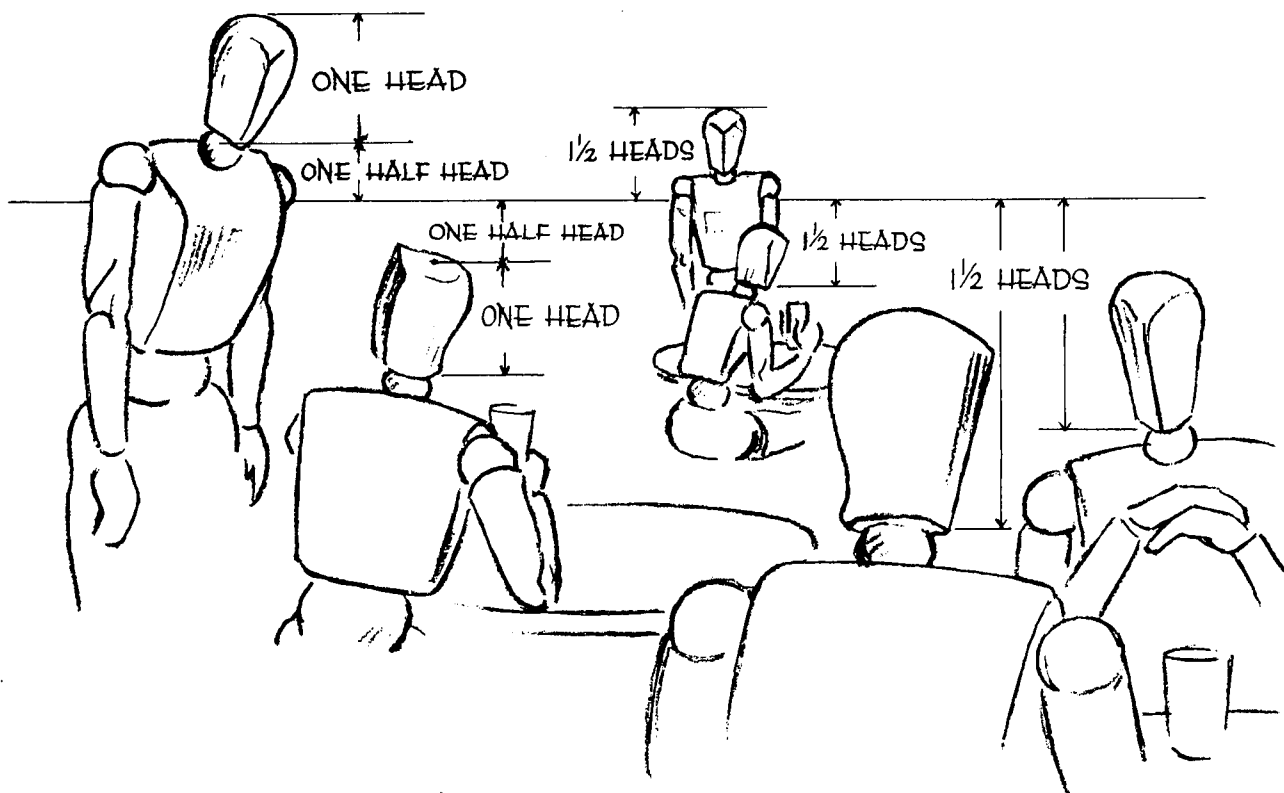
MEN MAY BE SHOWN
HALF A HEAD
TALLER THAN
WOMEN



EYES ON HORIZON



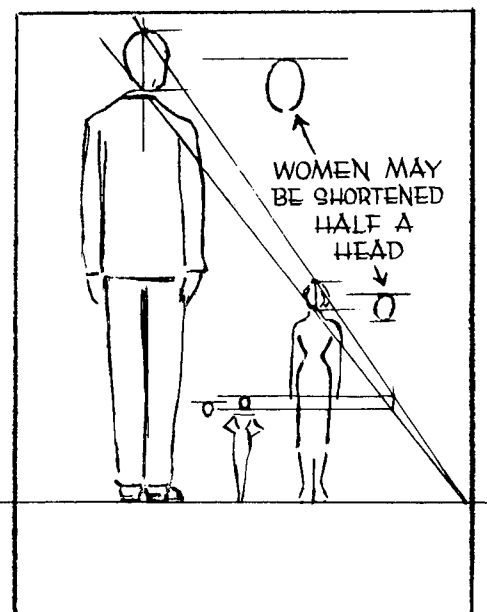
LINES FROM THE
MAN'S HEAD TO A
POINT ON THE HORIZON
GIVE THE HEIGHT OF
A HEAD AT ANY DISTANCE: "A" AND
"B," FOR INSTANCE.



SAME NUMBER OF
HEADS BELOW (OR ABOVE)
THE HORIZON ~ ~ ~

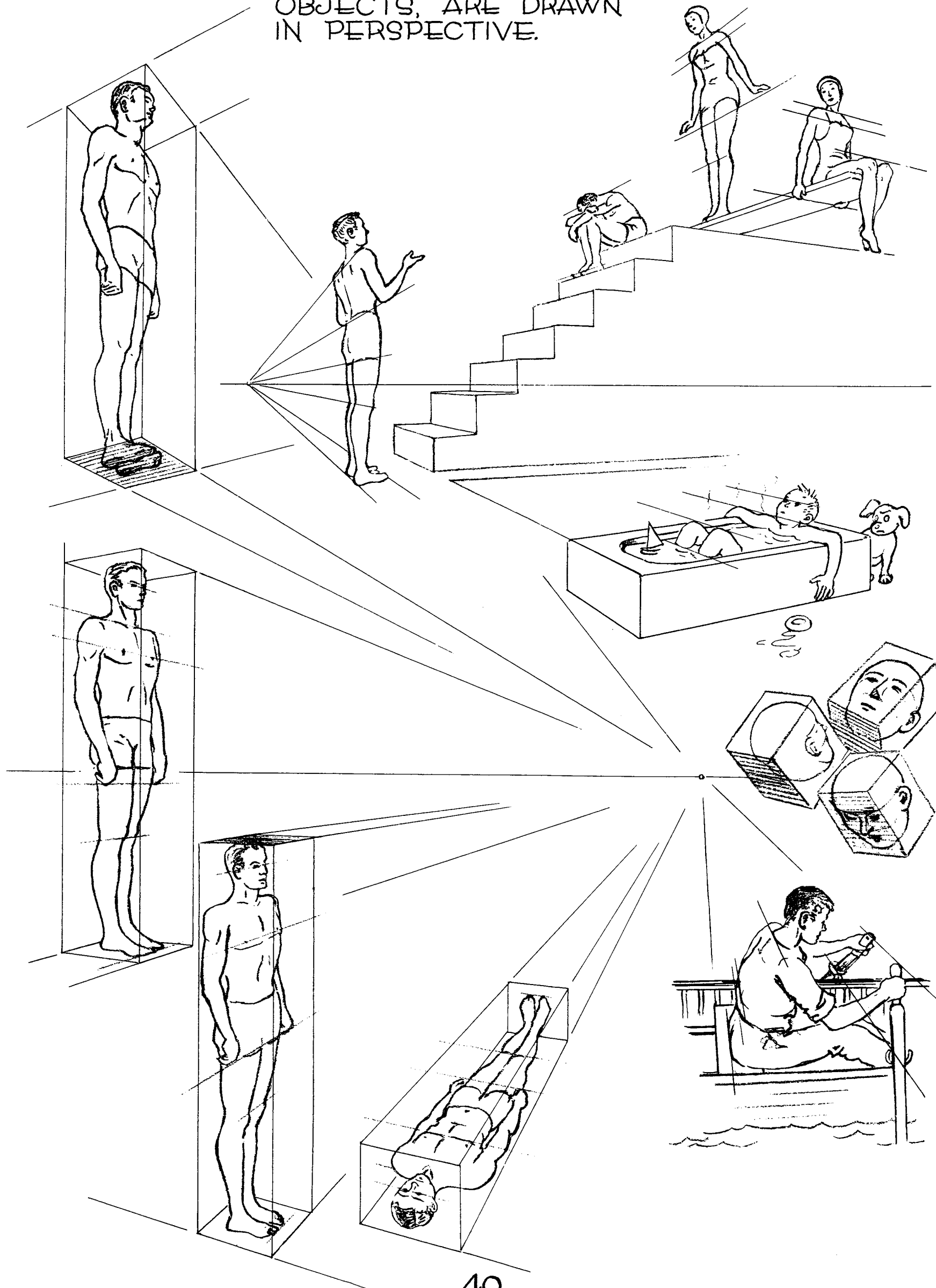
ANOTHER METHOD

IF THE MEASUREMENT IS — SAY A
HEAD AND A HALF BELOW THE HORIZON
FOR ANY ONE HEAD — THEN ALL SEATED
FIGURES CAN BE MEASURED IN THE
SAME MANNER. STANDING FIGURES
ARE MEASURED ABOVE THE HORIZON.



ARTIST'S EYE LEVEL
AT FLOOR LEVEL

FIGURES, LIKE
OBJECTS, ARE DRAWN
IN PERSPECTIVE.



LIST OF THE

Walter Foster

"HOW TO DRAW" ART BOOKS

PLEASE ORDER BY NUMBER

1. Drawing Simplified (cover in color) - Walter Foster
2. How to Draw (cover and center spread in color) - Walter Foster
3. How to Draw Trees (12 pages in color) - Frederick J. Garner
4. Oil Painting (all color) - Walter Foster
5. How to Do Water Colors (27 pages in color) - Walter Foster
6. How to Draw with Pastels (30 pages in color) - Walter Foster
7. How to Draw and Paint Flowers (31 pages in color) - Walter Foster
8. How to Draw and Paint Landscapes (all color) - Walter Foster
9. How to Draw and Paint Seascapes (27 pages in color) - Walter Foster
10. How to Draw Dogs (cover and center spread in color) - Walter Foster
11. How to Draw Horses (7 pages in color) - Walter Foster
12. How to Draw Animals (cover in color) - Walter Foster
13. How to Draw Cats (cover and center spread in color) - Walter Foster
14. Portraits and How to Do Them (10 pages in color) - Stella Mackie
15. Portraits in Oils (31 pages in color) - Stella Mackie
16. 101 Heads (cover in color) - Walter Foster
17. How to Draw the Head (cover in color) - Walter Foster
18. Heads from Life (cover and center spread in color) - Walter Foster
19. Figures from Life (24 pages in color) - Walter Foster
20. Drawing the Figure (cover in color) - Russell Iredell
21. Anatomy (cover in color) - Walter Foster
23. Comics (cover and center spread in color) - Walter Foster
24. Modern Cartoon (cover and center spread in color) - Walter Foster
25. Animated Cartoons (cover in color) - Walter Foster
26. Animation (cover in color) - Preston Blair
29. Perspective Drawing (cover in color) - Ernest Norling
30. How to Make your Art Commercial (12 pages in color) - Dixi Hall
31. How to Draw and Paint Children (cover and center spread in color) - Viola French
34. ABC of Lettering (cover in color) - Carl Holmes
35. How to do Ceramics (cover in color) - Hellen Lion
36. How to do Ceramics No. 2 (cover in color) - Hellen Lion
37. Enamel on Copper (cover and center spread in color) - Catherine M. Henson
38. Sculpture for Beginners (cover in color) - Henry Lion
42. How to do Linoleum Block Printing (16 pages in color) - Mary E. Hicks
45. Designs to Trace or Copy (cover in color) - Frederick J. Garner
48. Fine Prints to Copy (all color) - Walter Foster
51. Drawing in Charcoal (cover and center spread in color) - Charles LaSalle
52. How to do Still Life (all color) - Leon Franks
53. How to Paint with Acrylic, Casein, Oils (18 pages in color) - Eugene M. Frandzen
54. How to Draw and Paint Birds (16 pages in color) - Lynn Bogue Hunt
55. More Trees (cover in color) - Frederick J. Garner
56. How to Mix Colors and Materials to Use (31 pages in color) - Walter Foster
57. The Art of Rakusan Tsuchiya (31 pages in color)
60. Around the World and Then Some (522 color shots) - Walter Foster
61. How to Draw and Paint Fashions (cover and center spread in color) - Viola French
62. Clowns and Characters (16 pages in color) - Leon Franks
63. Color with Palette Knife and Brush (16 pages in color) - Merlin Enabnit
64. How to Paint from Your Color Slides (30 pages in color) - Walter Foster
65. How to Use Color in Portraits (16 pages in color) - Merlin Enabnit
66. Robert Wood Paints Landscapes & Seascapes (all color)
67. Outdoor Sketching-Indoor Painting (16 pages in color) - Eugene M. Frandzen
68. Color in Trees, Shrubs and Weeds (16 pages in color) - Frederick J. Garner
69. Easy Ways to do Chinese Painting (16 pages in color) - The Chows
70. The Cats in Action (16 pages in color) - Walter J. Wilwerding
71. Understanding & Painting Abstract Art (26 pages in color) - Elsa Nelson
72. How Linford Donovan Paints Heads (16 pages in color)
74. From India, Paintings by Arul Raj (Watercolor - 16 pages in color)
75. How Claude Parsons Paints Flowers (16 pages in color)
76. Color Simplified (16 pages in color) - Merlin Enabnit
77. Painting on Location (all color) - Blaine Henrie
78. How to Draw and Paint Hoofed Animals (14 pages in color) - Walter J. Wilwerding
80. Horses and Riders of the Old West (16 pages in color) - Ernest Tonk
81. How to Begin Painting for Fun (8 pages in color) - Estelle Fedelle
82. How Nell Walker Warner Paints in Oils (16 pages in color)
83. The Sea in Action (16 pages in color) - Earl Daniels
84. How to Paint Exotic Butterflies & Moths (16 pages in color) - Ralph S. Coventry
85. The Art of Costume Design (16 pages in color) - Marilyn Sotto
86. Trends and Techniques in Modern Art (16 pages in color) - Elsa Nelson
87. Dancers in Action (16 pages in color) - Claretta White
89. How to Draw Bears (16 pages in color) - Joseph Maniscalco
90. How to Draw and Paint Textures of Animals (16 pages in color) - Walter J. Wilwerding
91. Sketches Abroad (16 pages in color) - Mary E. Hicks
92. Leon Franks Paints Fruits and Vegetables (all color)
93. Moods in Oils and Felt Pens (16 pages in color) - Alfred Nestler
94. The Folk Art of Mexico (16 pages in color) - Linford Donovan
95. The Beginners Guide to Art Materials (16 pages in color) - Dixi Hall
96. The Nude (16 pages in color) - Fritz Willis
97. A Fun Book on Painting & Mixing Colors (all color) - Walter Foster
98. How to Paint Boats (16 pages in color) - Ralph S. Coventry
99. How to Draw and Paint Animal Expressions (16 pages in color) - Walter J. Wilwerding
100. Oil Painting No. 2 (all color) - Walter Foster
101. Painting Sunsets (all color) - Violet Parkhurst
102. Painting People and Places (16 pages in color) - Ralph Hulett
103. Drawing in Industry (cover in color) - Emile B. Willes
104. Drawing in Industry No. 2 (cover in color) - Emile B. Willes
106. Faces and Features (16 pages in color) - Fritz Willis
107. Collage (16 pages in color) - Dixi Hall
108. Color and Composition (16 pages in color) - Alfred Nestler
109. Painting for Pleasure (16 pages in color) - Merlin Enabnit
110. Seapower (30 pages in color) - Earl Daniels
111. Red Barns and other scenes (all color) - Arden von Dewitz
112. Still Life is Exciting (30 pages in color) - Nan Greacen

All books are \$2.00 — Please add 25c on each book for packing and postage. (Calif. Residents Add Sales Tax)

113. 32 Painting Lessons in Oil (all color) Bela and Jan Bodo - (Mona Mills)
114. How to Compose Pictures & Achieve Color Harmony (16 pages in color) - Hal Reed
115. Quick Sketching (8 pages in color) - Paul Coze
116. Indians of the Northwest (all color) - Winold Reiss
117. The Model (16 pages in color) - Fritz Willis
118. It's Fun to Sketch with Pencil and Crayon (sepia and black) - Joanne Thompson
119. Painting City and Village Streets (16 pages in color) - Ralph Hulett
120. Indians and Scenes of the Southwest (all color) - Gerard Curtis Delano
121. A Fun Book on Acrylic Painting (Polymer-all color) - Arden von Dewitz
122. Painting at the Seashore (all color) - Violet Parkhurst
124. How to Draw and Paint Today's Fashions (cover in color) - Viola French
125. Common Faults in Oil Painting (20 pages in color) - Claude Parsons
126. So You Want Snow Scenes to Paint (all color) - Mannie Gonsalves
127. My Adventures in Europe (all color) - Mary E. Hicks
128. Chinese Painting #2 (28 pages in color) - The Chows
129. The Magic of Flower Painting (all color) - Nan Greacen
130. How to Paint Roses and Other Flowers (all color) - Lola Ades
131. Paintings by the Famous French Artist (all color) - Robert Duflos
132. Dramatic Paintings from Familiar Scenes (25 pages in color) - Jack Laycox
134. Animals are for Fun (cartoons-cover in color) - Ed Nofziger
135. Horses' Heads in Oils and Pastels (all color) - Don Schwartz
136. Scenes from Southeast U.S.A. (all color) - Carsten Jantzen
137. Painting the Desert (all color) by Wilton McCoy
139. Claretta White Paints Still Life (all color)
140. How to Paint with Felt-Tip Pens (all color) - A. V. Almazar
141. The Artists-History of Old and Modern Masters - Dixi Hall
142. How to Paint Aircraft & Space Ships (16 pages in color) - Ralph S. Coventry
143. Art Secrets and Shortcuts (all color) - Fritz Willis
144. Painting From the Family Album (all color) - Maxine Runci
145. Painting the American Landscape (all color) - Carl Stricker
147. Architectural Rendering (all color) - Bernard Atkins
148. Landscape—Seascape in Acrylics (all color) - Maurice Harvey
149. Painting in Oils Coast to Coast (all color) - Carl Stricker
150. How to Paint Rocks and Surf (all color) - Arden von Dewitz
151. Flowers and Still Life (all color) - Herbert Parrish
152. Painting with Oil Pastels (all color) - H. P. McLaughlin
153. Frederick Waugh's Paintings of the Sea (all color)
154. Understanding Color (all color) - William F. Powell
155. Painting Water and Weather (all color) - Charles L. Cochrane
156. Of Course You Can Paint (all color) - Dorothy Dunnigan
157. Flowers & Designs to Copy (all color) - Lola Ades
158. Heads of People (all color) - Verily Hammons
159. Stella Mackie Paints Heads in Oil Pastels (all color)
160. How Frances O'Farrell Paints Portraits (all color)
161. Mistakes can be your Best Friends (all color) - Walter Foster
162. The Magic of Oil Painting (all color) William Alexander
163. Creative Painting (all color) - Lenore Sherman
165. How to Paint Horses and Other Animals (all color) - Mona Mills
166. How to Paint Mountains (all color) - Alfred Wands
167. 46 Painting Lessons in Oil No. 2 (all color) - Mona Mills
168. Painting the Four Seasons (all color) - Carl Stricker
169. It's Fun to Paint Old Shacks and Barns (all color) - LaVere Hutchings
170. Lettering (cover in color) - Al Mack
171. How to Paint on China and Porcelain (all color) - Lola Ades
172. Landscapes You Can Paint (all color) - William Palluth
173. Wildlife Portraits (all color) - H. P. McLaughlin
174. Horses in Action - Walter Foster
176. Experimental Painting (all color) - Lenore Sherman
178. Paintings of the Sea By 20 Artists (all color)
180. How to Paint Beautiful Landscapes & Seascapes (all color) - Anton Gutknecht
182. Color Thick and Thin (all color) - Wm. Powell
183. How Vernon Kerr Paints Seascapes and Landscapes (all color)
184. How to Paint Cats & Kittens (all color) - Leslie B. DeMille
- 185. It's Fun to Paint Roads and Rivers (all color) - LaVere Hutchings
186. Adventures in Acrylics and Oils (all color) - Bob Bates
187. How to Put Life into your Portraits (all color) - S. M. Shinn
188. Water and Weather #2 (all color) - Charles L. Cochrane
189. How to Draw Our Little Furry Friends (all color) - Sadako Mano
190. How to Animate Film Cartoons - Preston Blair
191. Figure Drawing For All It's Worth (8 pages in color) - Andrew Loomis
192. How to do Tole Painting (all color) - Lola Ades
- 193. Figures From Life In Color #2 - Walter Foster
- 194. Composition Made Easy (all color) - William Palluth
195. How to Improve Your Painting (all color) - Dorothy Dunnigan
- 196. Magic Art (all color) - Lea Myles
197. Drawing the Head (cover in color) - Andrew Loomis
198. How to Paint Beautiful Landscapes and Seascapes #2 (all color) - Anton Gutknecht
- 199. Scenes From the Northwest (all color) - Betty Paeth
- 200. Adventures in Acrylics and Oils #2 (all color) - Bob Bates
- 201. Small Paintings that Sell (all color) - Lola Ades
- 202. How to Paint Dramatic Skies (all color) - Carl Stricker
- 203. Painting Flowers with Augie (all color) - Augie Reis

•AVAILABLE SOON

PRINTED IN U.S.A.

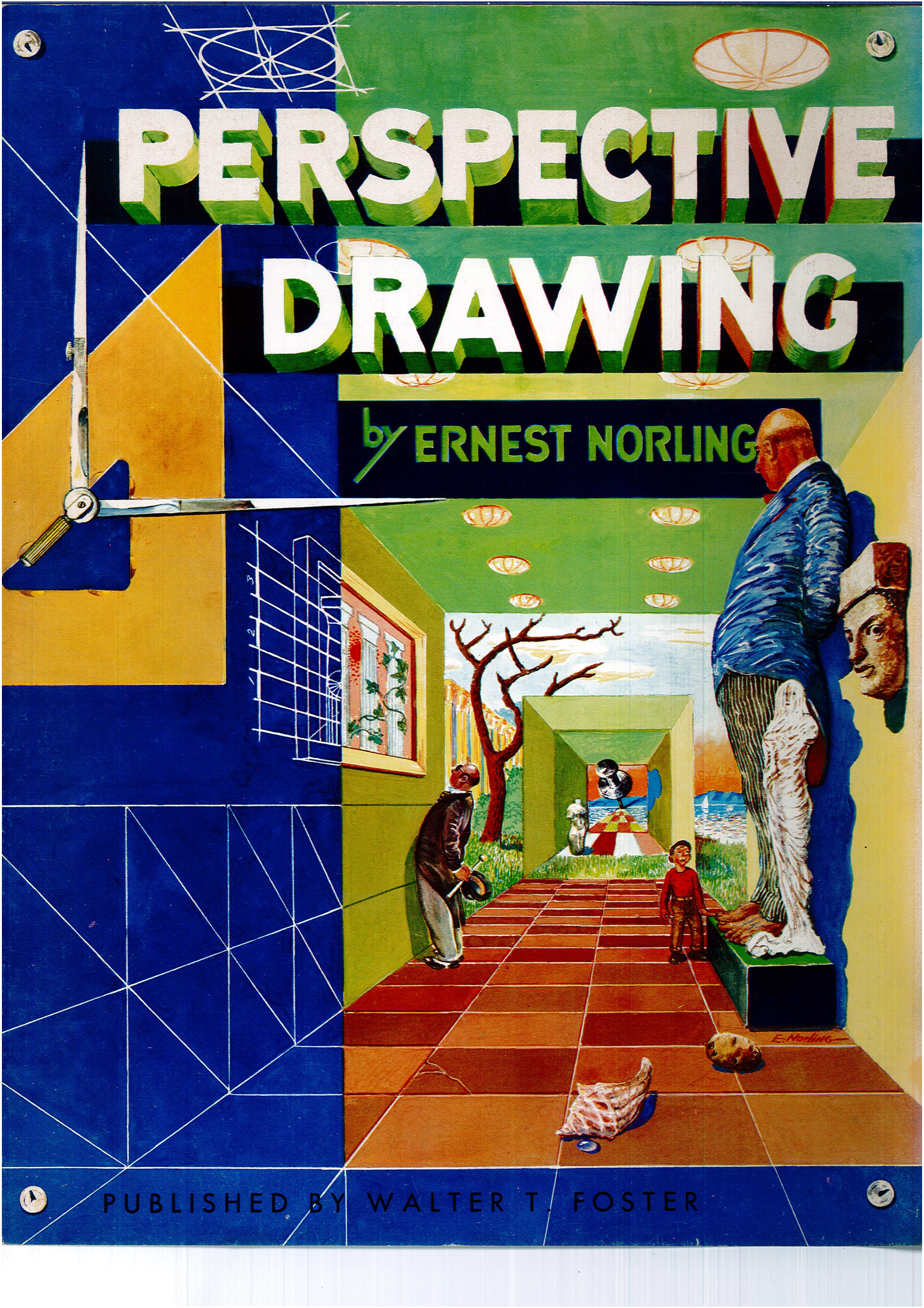
Walter Foster Art Books



430 WEST SIXTH STREET, TUSTIN, CALIFORNIA 92680

PERSPECTIVE DRAWING

by ERNEST NORLING



PUBLISHED BY WALTER T. FOSTER