BY HOUND & EYE
A PLAIN & EASY GUIDE TO DESIGNING FURNITURE WITH NO FURTHER TROUBLE

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ILLUSTRATED BY ANDREA LOVE
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   OF US, BY US, AND FOR US
We dedicate this book first to the memory of the geometers of Antiquity who came up with this stuff, second to the artigiani of the Renaissance who refined it to perfection, and finally to the joiners and cabinetmakers of the 18th century who recognized its value and wove it into the fabric of their work.
BY WAY OF
AN INTRODUCTION
FROM POINTS TO PATTERNS

FEATURING
JOURNEYMAN
AND SNIDELY!

VII
LET'S TAKE A JOURNEY—AN ADVENTURE EXPLORING THE TOOLS OF OUR IMAGINATION.

YOU'LL BE EQUIPPED WITH A WORKING KNOWLEDGE OF PLANE GEOMETRY AND A SMALL BACKPACK OF SIMPLE TOOLS.

...THE SAME COLLECTION OF TOOLS AND KNOW-HOW THAT MAKERS USED SINCE ANTIQUITY TO CREATE THE WORLD'S FOREMOST ICONS OF STRUCTURAL INTEGRITY AND TIMELESS BEAUTY.
SO, WHAT'S IN THE BACKPACK?

- A STRAIGHT EDGE

- A PAIR OF DIVIDERS

- A COMPASS

- A SECTOR

- STRING
...AND WHAT'S IN THE GEOMETRY?

**A ONE-MINUTE INTRODUCTION**

- A **POINT** HAS NO DIMENSION, BUT CAN SPRING OFF IN A DIRECTION, WHICH CAN BE LIMITED TO A CERTAIN LENGTH BY AN **ENDPOINT** ALONG WHICH

- AN **INTERVAL POINT** CAN CREATE A **PATTERN** (HERE 1:1), THE INTERVAL POINT CAN BECOME A **TRANSITION POINT** IF IT SERVES TO SPRING OFF IN ANOTHER DIRECTION.
If you place an end point on this new direction line

and connect the end points to one another, you get

a shape which has two dimensions (length + width) which defines

a plane, and if you place a point away from the plane and connect all the points, you get

a three-dimensional solid.
So armed with the simple tools of practical geometry, you'll tap into your intuitive eye to move from:

- A point to
- A circle to
- A square to

A rectangle to

A 3-D form of harmonious proportions in simple ratios

To which you'll imbue a symphony of functional and eye-pleasing patterns.
THEN BUILD IT AND GIVE IT TO YOUR KID TO PUT IN THEIR DOLL HOUSE.

EASY! SINCE ALL THE DIMENSIONS RELATE INTERNALLY THROUGH WHOLE-NUMBER RATIOS, ALL YOU NEED TO DO TO CHANGE THE SCALE IS OPEN YOUR DIVIDERS TO A NEW SETTING (THE "MODULE") AND STEP IT OUT TO THE SAME RATIOS.
EVERY DESIGN WE WILL DEVELOP ON THIS JOURNEY IS SIMPLY A CONSTELLATION OF STRAIGHT, AND OCCASIONALLY CURVED, LINES. THE TRICK IS TO FIGURE OUT WHERE TO LOCATE THE POINTS TO WHICH THEY COME AND GO. AND THAT, FELLOW TRAVELERS, IS THE SUBJECT OF THE REST OF THIS BOOK.
SECTION III

CURVES

~THE SWEETEST DISTANCE BETWEEN TWO POINTS~
We're not in Kansas anymore!

Ya think?
A STRAIGHT LINE IS THE SHORTEST DISTANCE BETWEEN TWO POINTS, BUT A CURVED LINE BRISTLES WITH MOTION, ENERGY AND LIFE.

SO TO BEGIN EXPLORING CURVES, PULL OUT YOUR STRAIGHT EDGE FROM YOUR BACKPACK.

WAIT! TIME OUT! WHAT DOES A STRAIGHT EDGE HAVE TO DO WITH CURVES?

Uh... LIKE EVERYTHING!
OK, so I got that we form lines from a couple of points.

Which we organize into patterns using simple proportions.

And it took a while, but I understand that we get squares and rectangles from a circle.

Which we also organize into patterns using simple proportions.
Remember how snidely formed a circle by anchoring a line to a stake and walking around it?

The stake marks our focal point to draw with a compass.
Both our straight line and circle have something in common. Without transition points to mark beginnings and endings, they extend endlessly.

But when we strike a line across our circle, we find something quite useful to us, an arc.
Yet arcs are uniquely different from straight lines.

Arcs can be concave...

... or convex.

Arcs can be...

... slow and gradual...

... or fast and steep.
THESE UNIQUE DIFFERENCES COMPARED TO STRAIGHT LINES OPEN UP COUNTLESS POSSIBILITIES AND COMBINATIONS.