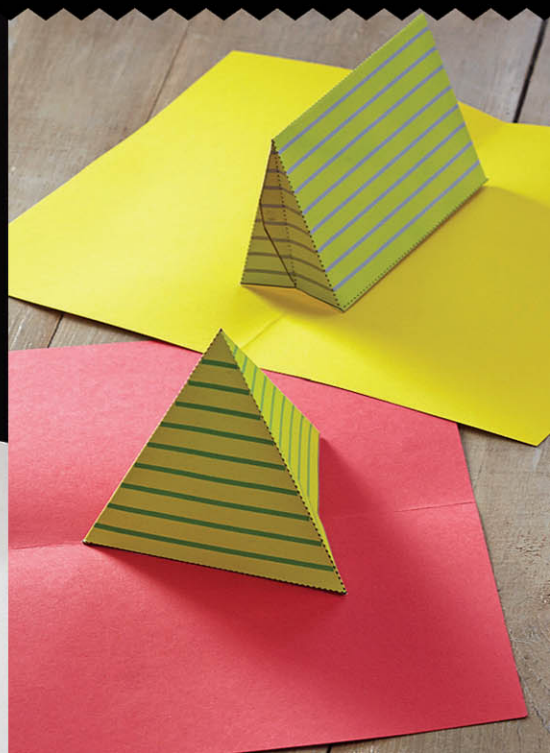
HELEN HIEBERT

PLAYING WITH POP-UPS

THE ART OF DIMENSIONAL, MOVING PAPER DESIGNS



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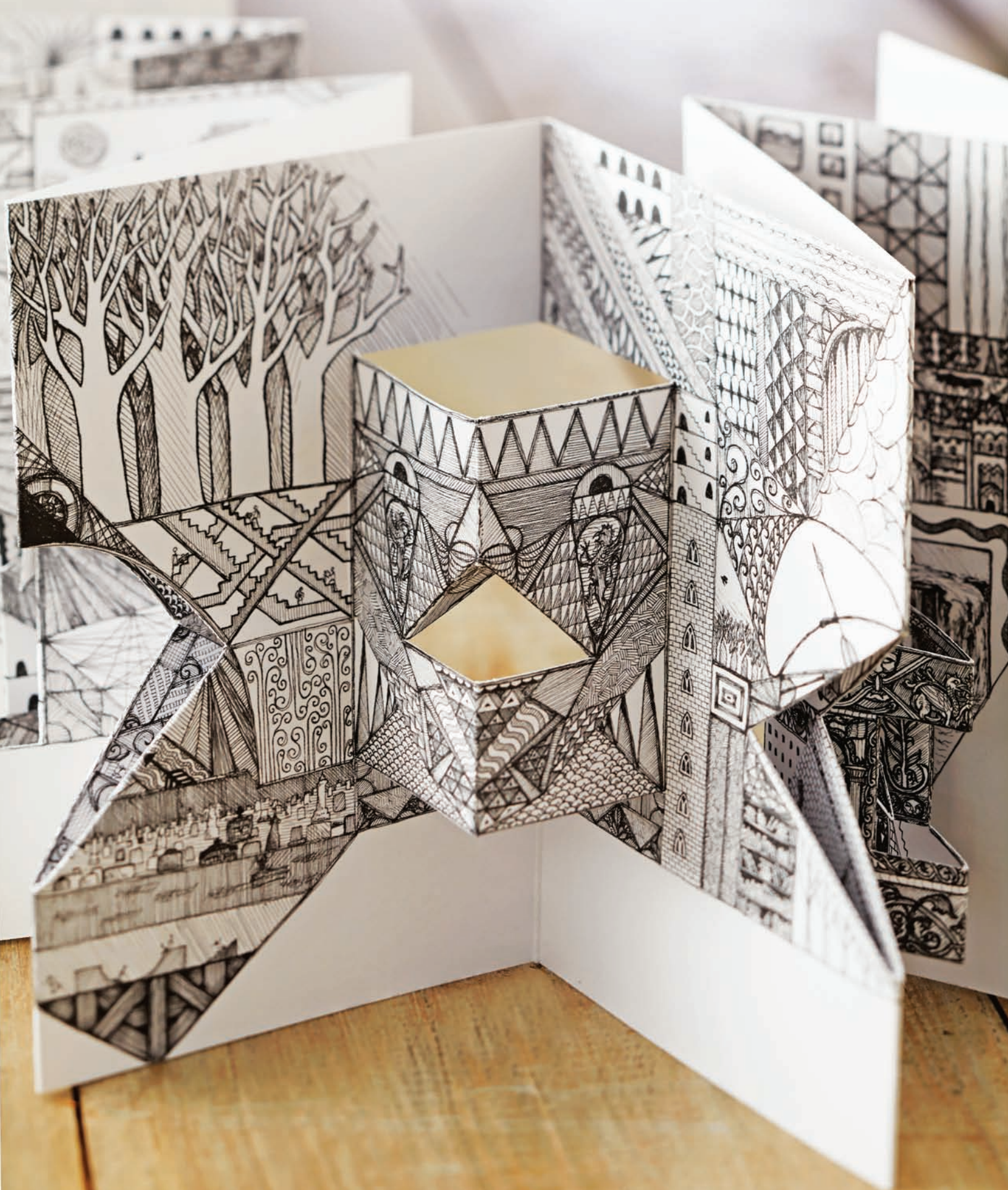
Access downloadable project templates at: www.quarrybooks.com/pages/pop-ups

Printed in China

Title: POP-UP CONCERTINA
Artist: Shelby Arnold
Description: Printed card stock, accordion folded with hand-cut pop-ups. 6" x 38" (15.2 x 96.5 cm) wide when opened up flat, 6" x 3¾" x ½" (15.2 x 9.5 x 1.3 cm) folded, the Pop-Up Concertina was printed in an edition of 1,000. Each copy is hand-cut and folded by the artist. The Pop-Up Concertina is an accordion-folded booklet with cut-out pop-ups, covered on both sides with detailed pen illustrations. As the viewer manipulates the pages into different configurations, the cut-outs, folds, and illustrations interact in various combinations.



Robert Sabuda

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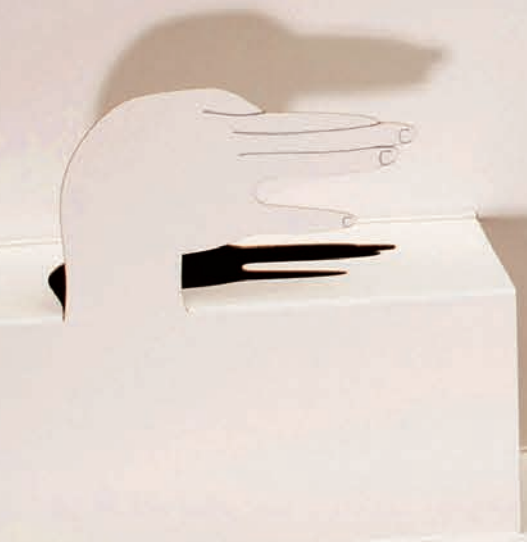
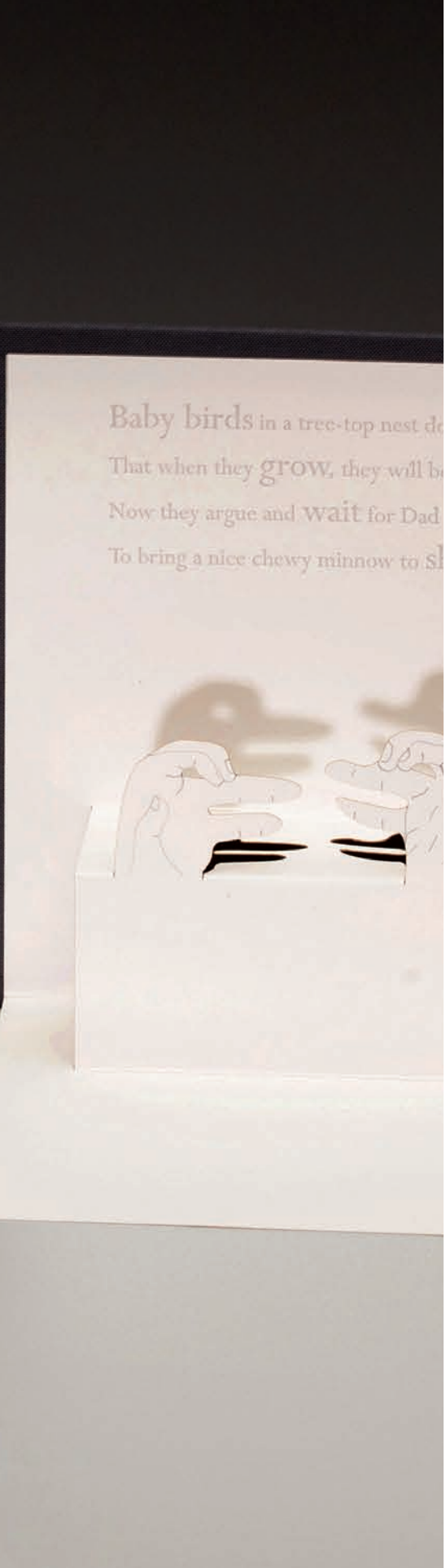
, Goose likes to go outside
de, upstairs, downstairs, everywhere,
loooong cold night
les up, close and safe.



In the dark swamp, little Gator,
Golden eyes above green water,
Tiny teeth like rows of razors,
Waits to pounce.



Introduction

During my junior year abroad in Germany, I took a class in letterforms and became enamored with a font called Block Up.

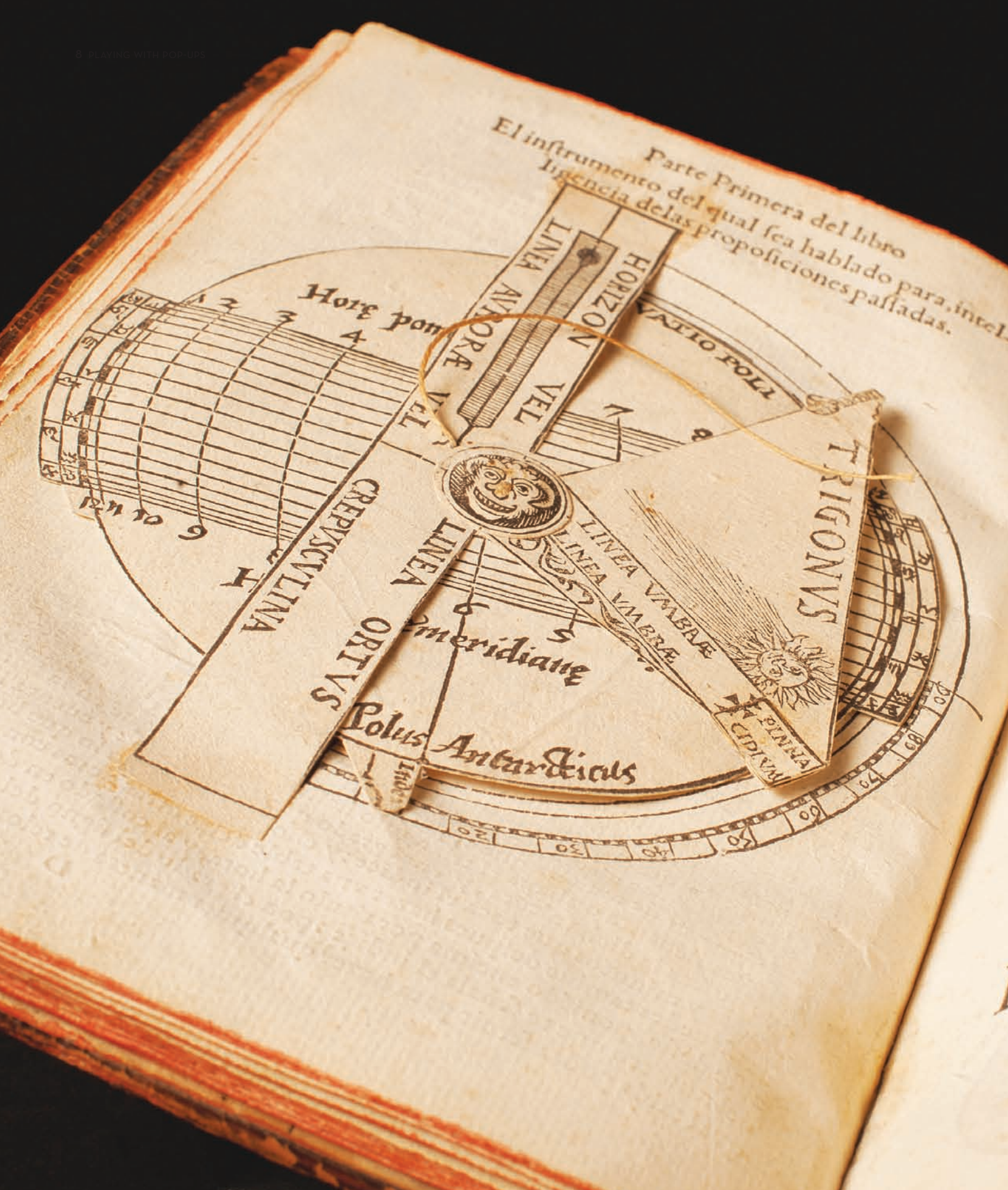
I found a two-dimensional rendering of this three-dimensional alphabet so intriguing that I set out to fabricate the block letters in three dimensions—literally. Soon afterward, I discovered origamic architecture (OA), a Japanese form of paper sculpture. I returned from Germany and created a series of sculptures based on OA techniques I learned by studying the few books on the subject and created my first body of work for my college art thesis based on the art form.

After college, I moved to New York City and my love of working with paper continued. During a brief trip to Japan, I fell in love with hand papermaking and dedicated myself to learning all about that craft, which I was able to do by landing a job at Dieu Donné Papermill in New York City. And along the way, I discovered book arts and took courses from masters in the field at the New York Center for Book Arts. Fast-forward almost twenty years, and just last year, I produced my first limited edition pop-up book, *The Pop-Up Hand Shadow Book*. The pop-ups come to life when the viewer shines a flashlight on the pop-up animals, casting shadows onto the pages.

When given the opportunity to write this book, I decided the best approach would be to ask paper engineers from around the world to contribute projects. Thankfully, they were up to the task and designed a smashing array of projects that will introduce you to a wide variety of pop-up techniques. The gallery section at the back of the book shows off the professional work of these amazing artists and serves to inspire. When talking with the top paper engineers in the field, I was pleased to discover that most of them begin each new project armed with paper, scissors, and glue or tape—that's it! Knowing that, my deduction is that we are all capable of paper engineering if we put our minds to it, and I have no doubt that there are countless pop-ups waiting to be born!

Title: THE POP-UP HAND SHADOW BOOK
Description: The Pop-Up Hand Shadow Book features four illustrated animal hand shadows in a theatrical book structure. The animals are brought to life as the viewer plays with a mini flashlight (packaged with the book), casting shadows onto panels behind the pop-ups. A verse about each animal, by poet Nora Robertson, appears on each page; letterpress printed and laser cut paper pages, book board, book cloth, cherry & plywood laser cut box;
Box: 6¾" x 7⅜" x 1¼" (17 x 19 x 3 cm); Book: 6⅛" x 6⅛" x ¾" (15.2 x 15.4 x 2 cm);
Extended: 6⅛" x 18" x 8" (15.2 x 45.7 x 20.3 cm).

PHOTO: DAN KVITKA


Parte Primera del libro
El instrumento del qual sea hablado para, intel
ligencia delas proposiciones passadas.
LINEA AVRORÆ VEL
HORIZON VEL
VATIO POLI
TRIGONVS
LINEA VMBRÆ
LINEA VMBRÆ
PINNA CIDIVM
CREPVSCVLINA
LINEA ORTVS
Polus Antarcticus

CHAPTER 1

Getting Started: Cut, Score, Fold, Pop!

Pop-ups are magical. As children's book author Robert Sabuda says, there is a "wow" factor involved when you open a page and something moves. It is surprising . . . exciting . . . it's magic! Adults and children alike are enchanted as they watch a scene literally unfold—a dragon popping out of a page, a tower rising up from the paper's surface, or a word springing from between the folds.

Created in 1548, *Libro dela Cosmographia* by Peter Apian is an incredible example of one of the earliest volvelles created. Owned by the University of Rochester's Rush Rhees Library, Department of Rare Books and Special Collections.

PHOTO: J. ADAM FENSTER/UNIVERSITY OF ROCHESTER

A Brief History of Pop-Ups

Pop-ups and movables have a surprisingly long history. Some of the earliest movables were created in the thirteenth century in the form of volvelles, rotating paper disks, which were simple calendars (try your hand at making a volvelle, see page 85). Flaps that were adhered to a page and could be lifted to reveal something underneath were another early invention, commonly used in anatomical illustrations. Soon, a variety of mechanisms started appearing on the pages of books, bringing them to life, such as hinged flaps that folded out of the page and shaped pieces that pulled out of pockets. Tunnel books (you can make your own, see page 76) appeared in the eighteenth century, evolving from traveling peep shows that were often carried on the backs of showmen.

Up until this time, movable books were almost always educational and geared toward adults. In the nineteenth century, children's pop-up books came into vogue, and companies in England and other parts of Europe set up specialized departments for hand assembly. Some notable names from the early days are Ernest Nister, a nineteenth-century German publisher who, among other things, produced movables with dissolving images, in which a pull tab enables one set of images to slide over another.

The first company in the United States to produce movable books was McLoughlin Brothers of New York. Blue Ribbon, an American publishing house founded in 1930, actually registered the term *pop-up* to describe movable illustrations, and paper engineering branched out to include greeting cards and advertising around this time as well.

Czechoslovakian artist Vojtech Kubasta was an innovator in the field around the middle of the century, developing new mechanisms and illustrating shaped books with windows cut out of the covers, as well as large-format pop-ups.

During the 1960s, book packagers (companies that coordinate entire book projects, from conception to shipping) helped revive the pop-up book industry, which had slowed down during World War II and the Great Depression. The term *paper engineer* became official, and paper engineers began receiving credit for their work. In the 1980s, numerous pop-up books wielding innovative engineering were produced, and the term *pop-up* became a household term.

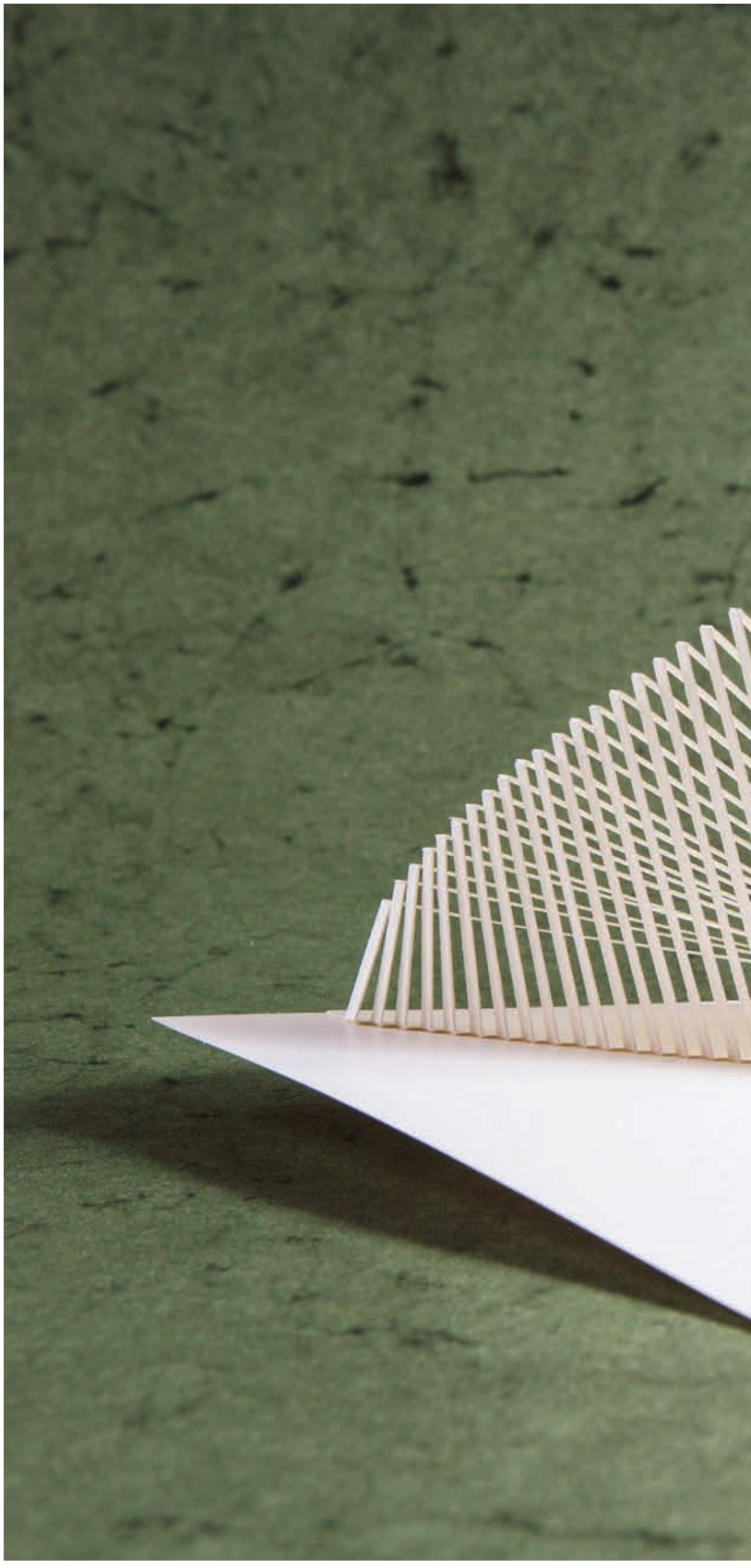
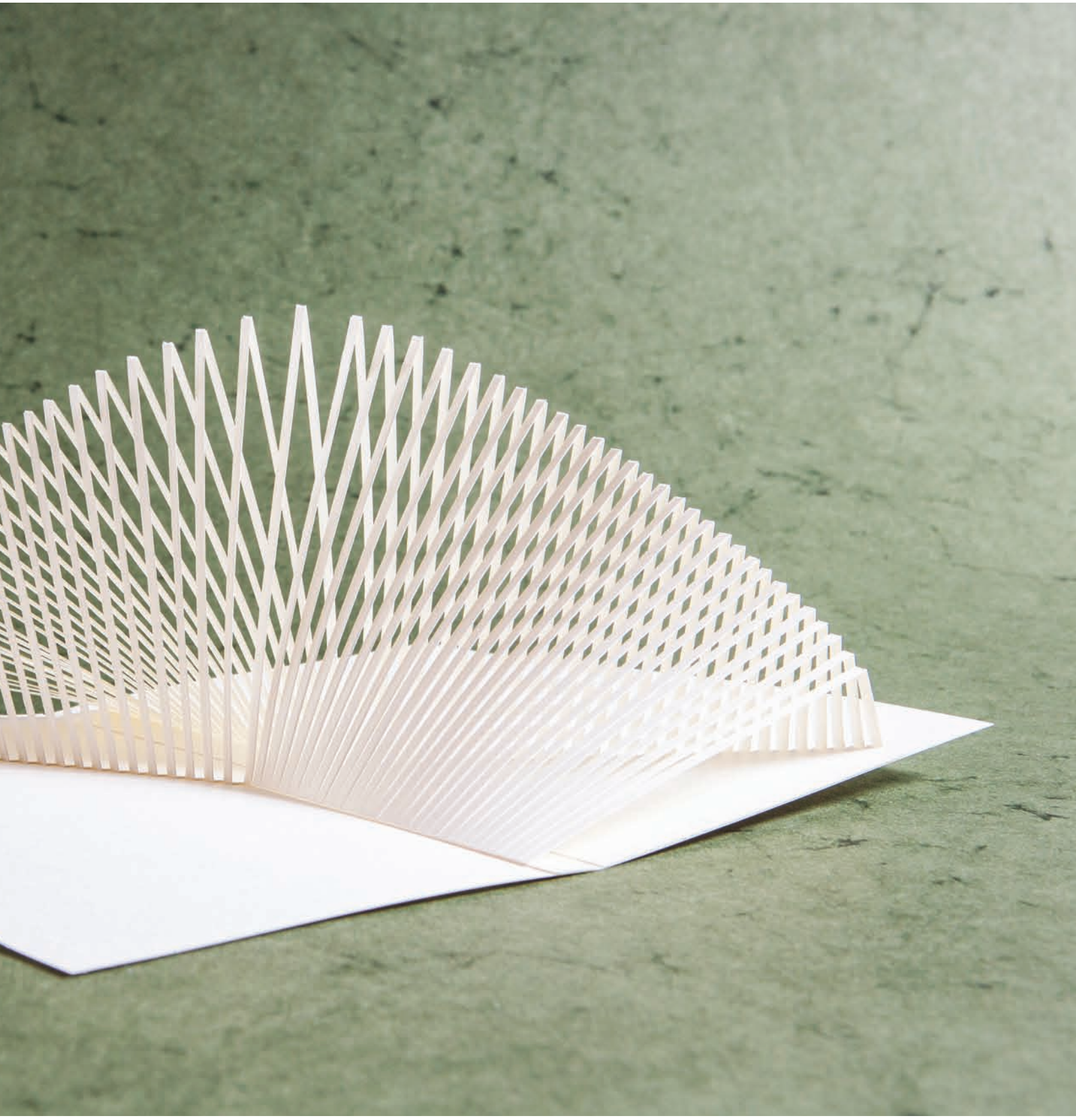
Title: *UNTITLED (Father Christmas) by Vojtech Kubasta*, MID-1950s
Description: Large 13" × 9" (33 × 22 cm) double-page pop-up showing Santa with a bag of toys approaching a house. Tabs on the cover slide from side to side moving the eyes and mouth of Father Christmas.

PHOTO: ANN MONTANARO

Pop-Ups Today

Currently, there are pop-up books for children and adults ranging in theme from the simple to the sublime, and paper engineers continue to develop amazing creations to knock our socks off. There are pop-up greeting cards that incorporate sound and light (see Jie Qi's work on page 114) and innovations in advertising that incorporate Wi-Fi into print communication.

One other form of pop-up that began in the 1980s and deserves recognition is origamic architecture; its development is attributed to professor Masahiro Chatani (1934–2008) of Japan. Chatani's experiments with cutting and folding, accompanied by his experience in architectural design, led to a distinct form of pop-ups, engaging shadow play, utilizing repetitive forms, and featuring elegant paper sculptures cut in plain white card stock. Chatani published more than fifty books on origamic architecture, exhibited his work, and frequently collaborated with Keiko Nakazawa and Takaaki Kihara, who are both still active in the field today. There are also protégés around the world who practice the technique of origamic architecture (see the work of Elod Beregszaszi on page 100).



Title: *INFINITY*
Description: Pop-up greeting card designed by Masahiro Chatani. Countless lines produce 3-D space beyond reality, 4" × 8½" × 6½" (10.2 × 21.6 × 16.5 cm).