

# COFFEE LIDS

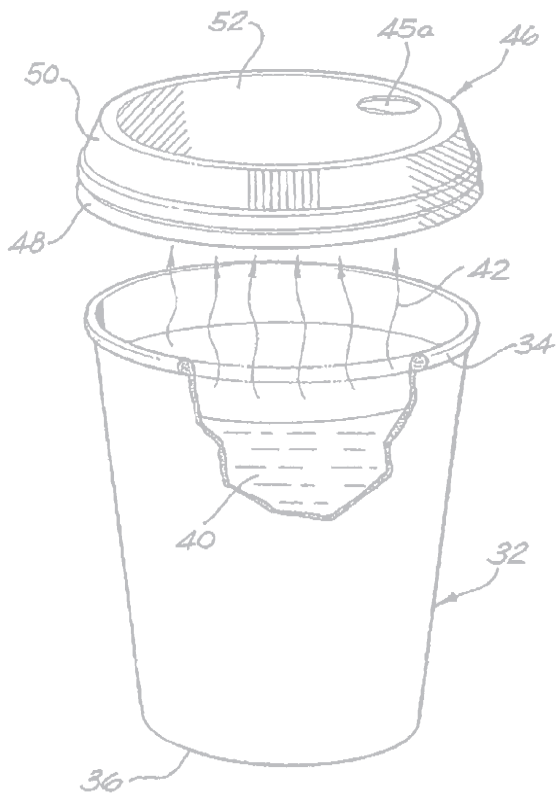


<sup>1</sup> PEEL   <sup>2</sup> PINCH   <sup>3</sup> PUCKER   <sup>4</sup> PUNCTURE

LOUISE HARPMAN AND SCOTT SPECHT



CAUTION  
CONTENTS  
HÔTI



# COFFEE LIDS

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<sup>1</sup> PEEL  
<sup>2</sup> PINCH  
<sup>3</sup> PUCKER  
<sup>4</sup> PUNCTURE

LOUISE HARPMAN

SCOTT SPECHT

FOREWORD BY ALEX KALMAN

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## FOREWORD

The instinct to invent and the nature to spill are two of humanity's most defining qualities. Observing what happens when these two fundamental narratives intersect can provide insight into what it means to be human.

The history of the universe can be understood through three distinct phases of evolution: Pre-Spilling, Spilling, and Post-Spilling.

There was a long time—billions of years—when the concept of Spilling did not even exist. Liquids of various types, often extremely hot, continuously exploded, flowed, and oozed everywhere without anyone around to care.

Eventually, due to the evolution of *Homo sapiens* and the development of basic tools including spoons, bowls, and buckets, Spilling was elevated to a concept but was still not cause for much concern. Things splashed, slipped, and poured everywhere, and there was usually never a big fuss.

Today, the act of Spilling is seen as careless, impolite, and an all-around nuisance. Spilling is considered to be one of the leading causes of staining, slipping, and sometimes even bodily harm. So from an early age we regularly practice the art of not spilling. We practice thoughtfully holding things. We practice balance. We practice not being startled too easily. But the laws of physics still dictate that we are more likely to spill than not.

Our modern world has made it increasingly difficult not to spill. Cities are more crowded than ever before. More people are moving more

regularly, farther and at faster speeds. They are doing so with drinks in their hands. The more people there are and the faster, farther, and more often they move, the more exhausted they become, the more thirsty they become, the more likely spilling is to occur.

What this means is that we have created a paradoxical society: while the act of spilling is increasing, our tolerance and acceptance of it is simultaneously decreasing. So how does humanity cope with this defining paradox of modern life?

This is where our two fundamental narratives collide and the coffee lid is born. The coffee lid is like a strand of our cultural DNA—a tiny, almost invisible detail that when looked at carefully can reveal lots about who we are. To look at the endless variations of the humble coffee lid is to see humanity's hopes and fears, its aspirations, and its limitless ingenuity. The collection in this book offers the discerning reader more than just an encyclopedia of the coffee lids. It offers the opportunity to better understand where we have come from, where we currently stand, and where we may be going. With hot, mostly not spilling cups of coffee in our hands.

Alex Kalman

Alex Kalman is a designer, curator, writer, and creative director and the founder of Mmuseumm. His work has been exhibited at the Museum of Modern Art, the Metropolitan Museum of Art, the Venice Architecture Biennale, and the Victoria and Albert Museum. Kalman is the co-author of the book *Sara Berman's Closet* (2018).

INTRODUCTION

**MODEST MODERN  
MARVELS**

Louise Harpman

I am one of the owners of the world's largest collection of coffee lids, or, more precisely, the world's largest collection of unique, patented, drink-through, disposable hot-beverage lids. The other owner is Scott Specht and we each began to collect coffee lids before we even knew each other. We discovered this shared enthusiasm when we were architecture graduate students at Yale in the early 1990s. One lid in the collection most certainly traces its origin to a late-night latte from the long-gone, overlit Wawa convenience store on the corner of York and Elm Streets in New Haven, Connecticut.

Our coffee lid collection is a group of ordinary items found in ordinary places—gas stations, grocery stores, diners, and delis. The current collection in no way claims to be complete. Comprising over five hundred items, including multiples of certain lids, the collection is growing all the time. We regularly add new lids but rarely go out of our way to find different examples. Our selection of specimens has been supplemented by fellow design enthusiasts who mail us their finds. In the last decade, as our American coffee-drinking conventions have taken hold in many

other countries, friends from France, South Korea, Taiwan, China, Ireland, and the Netherlands have made most welcome contributions. Though we might not experience the "passion bordering on chaos" that Walter Benjamin describes in his famous essay "Unpacking My Library," we nonetheless feel a frisson of pleasure every time we discover or receive a new lid.

Since the art and culture quarterly *Cabinet* first featured the lids in 2005, they have been shown at the Proteus Gowanus Gallery, the Morgan Library, and Mmuseumm in New York and the Smithsonian Institution in Washington, DC. In 2012, a large part of the collection was accessioned for the permanent collection of the Smithsonian's National Museum of American History and, in 2016, was recognized by the World Record Academy. This is the first book to document the world's largest collection of coffee lids.

Any group of things that aspires to become a collection requires a logical way of being organized. The clustering of coffee lids in this book conforms to the bespoke taxonomies that we developed when the collection was first described and displayed. The primary distinction for determining the appropriate category is whether the user removes a part of the lid to drink directly from the rim of the cup or accesses the liquid through the lid itself. The individual categories designate the specific means of interaction with the lid: peel, pinch, pucker, and puncture. Some lids don't reside comfortably in any one group and might be better classified as hybrids, while others are unique, quite possibly the first members of as-yet-unpopulated categories. Some sections include a large number of items, while others have very few. We can only speculate on the reasons for these low-entrant categories. Are there missing items?

Has this type of design solution gone dormant? Is this an actual Darwinian dead end?

The origin of the coffee lid is a distinctly American story and can be traced to the late 1970s, when coffee-loving car drivers, bus riders, train travelers, and walkers forever changed the hot-beverage-drinking landscape in this country. Fast-food outlets, drive-in restaurants, and convenience stores had saturated the highways and byways of the United States by the late 1940s. Menus at these establishments featured a wide selection of cold drinks served over ice in disposable cups, fitted with transparent or translucent plastic lids, which included small cross-cuts to allow for the insertion of a drinking straw. Hot drinks were sold in smaller disposable cups, with tight-fitting, opaque lids, which had no penetrations other than a small pinhole to allow steam to escape. But drivers and riders and walkers wanted to drink their hot liquids like their cold ones—"on the go." In order to enjoy hot coffee without removing the protective cover, these drinkers became accidental DIY designers: they created the first drink-through coffee lids by peeling away small sections of the flat polystyrene, thermoformed lids. Beginning at two points on the outer rim, they tore open the lids to make mouth-size openings. This created a serviceable drinking port but also a wedge-shaped piece of trash, which the late design writer Phil Patton likened to a flimsy guitar pick.

The DIY solution was inelegant, unhygienic, and time-consuming but also very popular. Behavior was changing, and designers took notice. Commuters, college students, and taxi drivers formed an accidental community of "extreme users," similar to those that business writer Jay Greene identifies as drivers of innovation at companies like LEGO, Nike, and OXO in his 2010 book *Design Is How It Works*. At first, coffee



drinkers wanted only a tight-fitting lid with a reliable, easy-open aperture in order to sip their beverages while traveling. They wanted to avoid spills, drips, and, most importantly, burns. The now-famous legal case *Liebeck v. McDonald's Restaurants*, brought against McDonald's for serving too-hot coffee with ill-fitting lids, was settled in the plaintiff's favor in 1994. Confronted with numerous spills that caused third-degree burns, McDonald's is reported to have lowered the serving temperature of its coffee and added a visible warning on all its cup lids. It is the coffee-drinking community that brought awareness to this serious health problem, along with a myriad of pet peeves, which designers set out to remedy and which this collection lovingly, even obsessively, documents.

The US patent registry is a wondrous repository of lid designs, each of which identifies particular features, presenting a dizzying array of fixed and resealable drink-through options. As described on patent applications, some models promote "mouth comfort" and "sealable coupling," while others feature integral fold-back tabs, rotational or sliding closures, or "upstanding thumb catches." Many lids are designed with spill-suppression strategies, including tight-fitting "peripheral skirts." Some lids also include molded wells, slits, slopes, channels, and surface drains to direct overflow liquid back into the cup. Domed or raised lids accommodate frothy specialty coffee drinks. A recently patented lid provides a thin raised edge along the perimeter to promote a "more natural drinking experience." By comparing lids within each of the collection's categories—and especially across categories—the reader can track a series of incremental improvements as well as true Kuhnian paradigm shifts. A quick survey of the US patent registry reveals only nine patents for drink-through hot beverage lids in the 1970s; in the 1980s





the number jumps to twenty-six. By the middle of the 2010s, the patent registry is bulging with examples of lid designs, as we see hundreds of entries in both the utility and design patent categories.

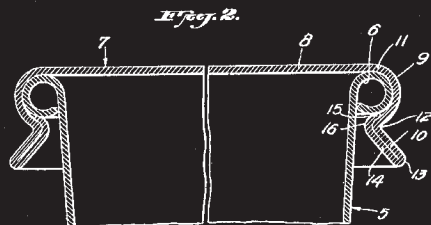
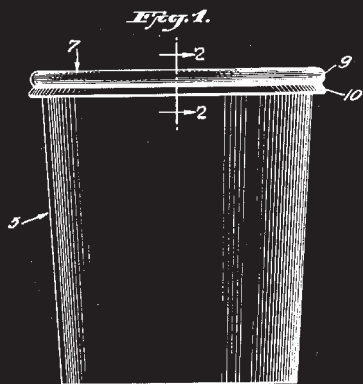
The development of coffee lids is a design story that can be traced to a true beginning, with a distinctive origin and a succession of continuous tweaks and modifications, including false fits and sanguine starts. This is also a game of one-upmanship, as each designer or team patents a new product, identifying specific improvements to its many predecessors, hoping to best all others. This is what innovation looks like.

One might imagine that after more than three decades of continuous development, a best coffee lid would have emerged by now. And yet, the opposite is true. While some models have gone out of production, new versions are introduced all the time. Unlike the ubiquitous Gem paper clip, whose dominance is traced by engineer Henry Petroski in his 1994 book, *The Evolution of Useful Things*, there is, as yet, no winner in the coffee lid competition. It may well be that no group of products undermines the "form follows function" cliché better than this one. Forms, and many of them, have followed this function: the function has remained the same since the late 1970s...the parade of forms seems never-ending.

# A BRIEF FIELD GUIDE TO THE COFFEE LID

Scott Specht

The taxonomy of this book is organized around the methods for accessing a hot beverage through the lid of a disposable coffee cup: peel, pinch, pucker, and puncture. As each method emerged, it was accompanied by the simultaneous development of other characteristics that give each lid a distinct (and patentable) personality. This brief guide will identify the forces that have shaped the lids and present illustrations of some of the more interesting or extreme design solutions that have appeared in response. You will notice these features while perusing the images in this book and when observing lids in the wild.



## THE PROTO-LID

In 1950 James D. Reifsnnyder of the Lily-Tulip Corporation patented the first lid that closely resembles today's snap-on coffee lid. Like nearly every modern successor, it featured a ridge at its perimeter that clasped onto the rolled rim of a typical paper beverage container. This wasn't a drinking lid but simply a lid for covering the contents and preventing spillage. The basic design is still in wide use, and you can spot pristine examples at any supermarket.

## STRUCTURAL REINFORCEMENT

When on-the-go coffee drinking began to catch on, the limitations of the flat lid became apparent: its rigidity depended on it being whole. When coffee drinkers tore the rim and ripped an opening in the lid, the integrity of the diaphragm was destroyed, and the slightest squeeze of the cup would cause the top to pop off. The solution was to restiffen the lid with varying types of structural corrugations.



This example, patented by David H. Herbst and Chris E. Boes for the Imperial Cup Corporation in 1990, has an intimidating web of deeply formed struts and gussets that make it very difficult to bend or distort.

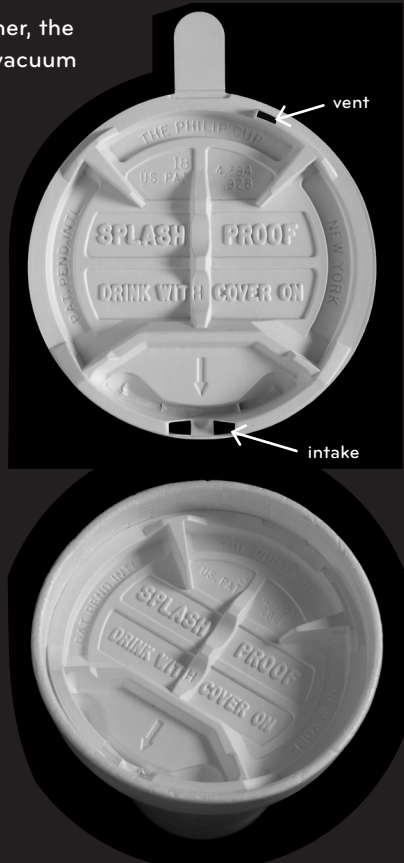


In contrast to the trusswork of the Imperial lid, later lids tend to employ a unibody technique, with compound curves forming a holistically rigid structure. The Mighty Leaf lid takes this approach to an effective but disturbingly melted-looking extreme.

## THE PRESSURE EQUALIZATION PORT

When you drink from any closed container, the liquid leaving the vessel creates a mild vacuum which needs to be equalized; otherwise, the flow will be irregular, intermittent, and prone to splashing—not the best situation for coffee enjoyment.

This problem has been solved by the simplest means possible in virtually every drink lid since the 1970s: a tiny punched air-intake hole in the top of the lid. Only one lid in our collection has attempted to alter this formula (other than the newer aroma lids that have multiple perforations): the unusual Philip Cup lid, which features an elaborate edge-mounted ventilation duct and rectangular intake cutout. In contrast to all other lids that snap onto the outer rim, the Philip lid fits inside a specially formed proprietary cup. Its ventilation duct creates a baffle that limits the possibility of coffee splash while letting in more air for an even smoother drinking experience.





### SLOSH DRAINAGE SYSTEMS

The 1983 Dodge Caravan/Plymouth Voyager was the first minivan. It was also the first vehicle to feature built-in cup holders (if you don't count the 1957 Cadillac Eldorado Brougham, which came standard with magnetic shot glasses that stuck to its steel glove compartment lid). Lacking the shock absorption that occurs when a cup is held by hand, the cup holders transmitted the force of every jolt and bump directly into the liquid, which caused small (and sometimes copious) amounts of coffee to slosh out



of the drink aperture. Lids with deep structural channels often exacerbated the problem: when the next sip was taken, the coffee that had collected in the grooves often would spill back into the face of the drinker.



This Nymans Manufacturing Company Model 11096 is a mess waiting to happen.



In contrast, this elegant International Paper lid has a perimeter channel that drains sloshed coffee back into the cup through the drink aperture.

The most prevalent slosh drainage system, though, is also the most basic. The recessed deck on this Solo Traveler lid simply features a small drain hole.

## SLOSH PREVENTION SYSTEMS

In 2008 the Starbucks idea blog announced that the company was introducing the “splash stick” to eliminate slosh-related spillage. Starbucks seemed to consider this a great innovation, but total slosh prevention has been the issue that has most obsessed coffee lid inventors since the 1980s.

The coffee lid’s entire purpose is to prevent the loss of coffee due to movement of the cup, but it still must have a penetration to enable drinking. The search for a solution to this aperture paradox has driven many of the designs in this book, but no one has yet achieved an elegant and unified answer.

The designs that have gained the most traction have involved devices to close the aperture between sips. These solutions fall into two categories: integrated and separate.

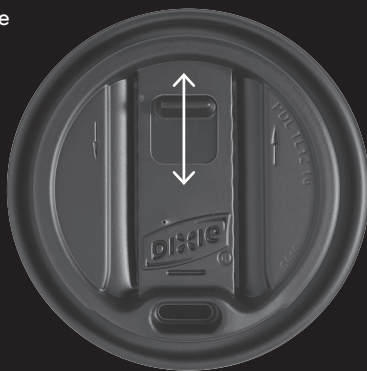


Integrated reclosure systems often have been complicated. The Solo Traveler Plus, designed by Masahiko Ishimitsu, has a lever that rotates a hidden perforated disc to cover the drink aperture. Before its recent discontinuation, the Traveler Plus cost nearly twice as much as the single-piece Solo Traveler. Given that few people choose a coffee shop based on the ingenuity of the lids offered, there seemed to be little incentive for coffee purveyors to select it.

A simpler and more successful example is the Dixie TP9542B, which features an “on-off switch” type of closure and more basic construction. It is still on the market as of this writing.

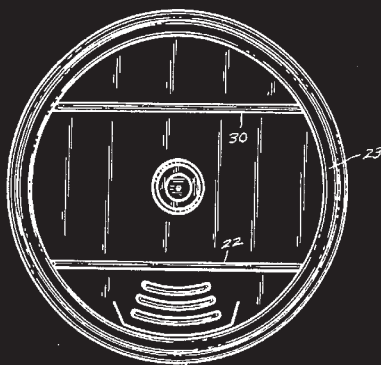
Although integrated closures can be ingenious, simple plugs such as Starbucks’s splash stick seem to be winning the day and are far more prevalent.

Some companies have attempted to have it both ways, with designs such as this model, which features a tethered stopper.



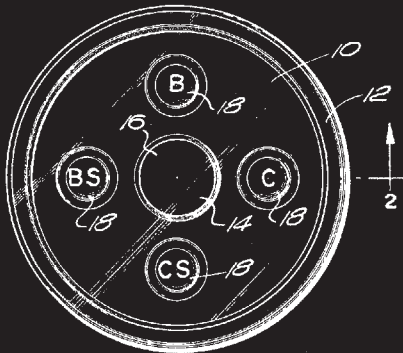
## INTEGRAL TEXT AND IDENTIFICATION

Prior to the 1994 case of *Liebeck v. McDonald's Restaurants*, which revolved around the burns incurred after a spill from a travel cup, coffee lid text was largely limited to manufacturers' or retailers' logos and identification numbers. After the terrible publicity from the case, however, warning statements often became a lid's most prominent visual feature.



This Dart Container Corporation lid is the most alarming in the collection and quite a contrast to its serene 1986 patent drawing.

Another example of a molded-in identification feature is the coffee-type indicator. These press-in dimples are among the most common and least used features of both coffee lids and cold-drink lids. The concept was patented in 1968, and the patent drawings show four protrusions indicating coffee that is black, with cream, with sugar, and with both cream and sugar. The lid on the right, however, has dimples that show C, M, W, L, and B. Feel free to speculate about the W and the L.



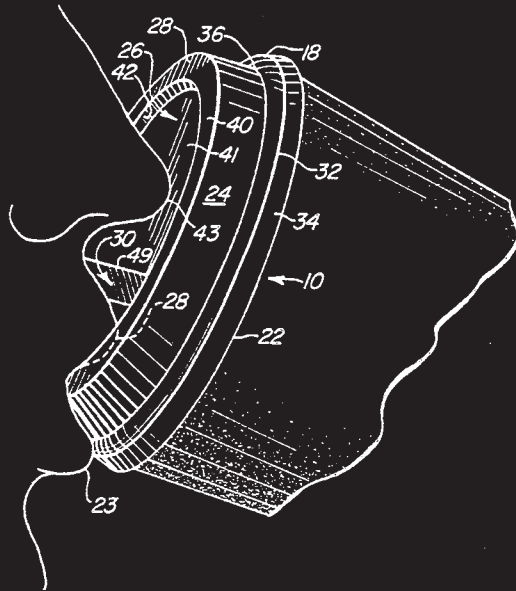
## ERGONOMIC DRINK APERTURES

Flat, peel-type lids all share a major problem: attempting to drink while the face of the lid is pushing against the upper lip is unpleasant and frequently accompanied by leakage because the mouth isn't suited to sealing tightly against the lid's ninety-degree surface. But with the advent of taller lids and the placement of the drink aperture within the body of the lid itself, the plastic surface could (ideally) be molded to suit the configuration of an actual human.



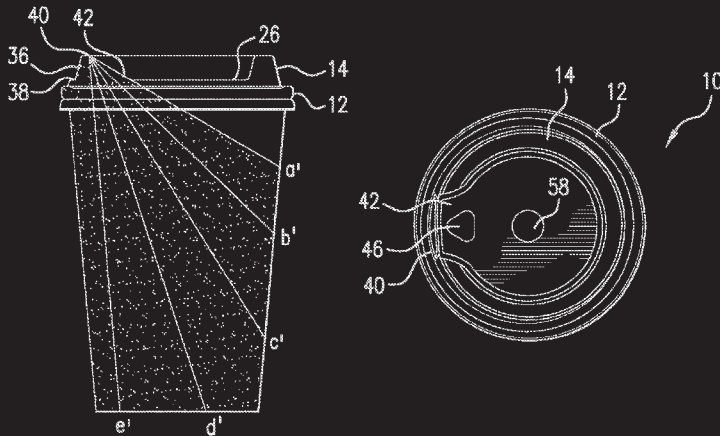
Some of the early attempts were awkward at best. The “sippy cup” lid made a thankfully brief appearance on the scene.

But Jack Clements's Solo Traveler design gave serious consideration to ergonomics and set a standard for most of the lids that appear today. This patent drawing illustrates how the lid is designed specifically to accommodate a natural drinking position (note that item #43 in the illustration is labeled "nose" and item #23 "lip").



## FOAM ACCOMMODATION TECHNIQUES

The proliferation of frothy drinks in the 2000s prompted another change. Lids were starting to grow in height to prevent lofty whipped toppings from being crushed into the coffee and causing overspill.



The FoamAroma lid takes this a step further by providing a larger-than-typical triangular drinking aperture to allow foam to be sipped along with the liquid. Its elaborate patent drawings indicate precisely how much more foam you will be able to enjoy with the FoamAroma compared to those other foam-hostile lids.



## SENSORY ENHANCEMENT FEATURES

The FoamAroma is also in the vanguard of another new trend in lids—features that allow the aroma of the coffee to be enjoyed. Several lids do this through the use of an aperture—sometimes screened with a fine mesh to minimize slosh—combined with a deep well in the lid that concentrates aroma.



The prime example of this trend is the Viora, which has been getting a lot of attention lately. *Wired* magazine declared the Viora to be the lid that “totally changes the drinking experience.”

## ENVIRONMENTAL COMPATIBILITY

Biodegradable lids made their debut in the 1990s. Unlike most other design variations, this material change can affect end-user perception of the establishment where it is used. Certain restaurants and coffee shops promote the fact that they are not generating plastic waste, and lids like this compostable Vegware model occupy a major niche market in the coffee lid world.



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## AESTHETICS

Beauty can result from a rigorous application of engineering criteria to simple objects, but until recently, lid designs haven't often incorporated deliberately decorative or artistic aspects. This, however, seems to be changing, and the "lid as statement" is developing as a major avenue of pursuit for some coffee lid designers. Lids now come in a full spectrum of colors besides the standard black and white, and plastic-forming techniques allow for nearly endless possibilities. The Kiss coffee lid by designer Jang Wooseok has been a massive novelty hit in Korea and may be the precursor of the next wave of lid innovations.



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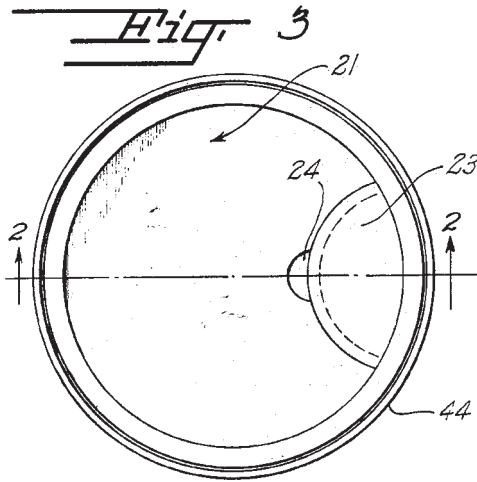
This is primarily a book of images. There is a basic aesthetic pleasure that comes from viewing a succession of similar but not identical objects; this feeling is what drove us to start collecting lids in the first place. The visual result of so many designers trying to solve the same problem within the same tight constraints is fascinating, and our digging into the patents and history followed, adding additional layers of resonance. We hope this introduction to the elements that compose the disposable coffee lid will enhance your enjoyment of the photos to follow.



1

**PEEL**

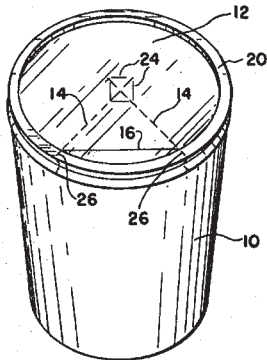
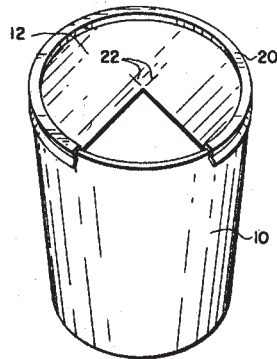
Lids in the “peel” category follow directly from the do-it-yourself hackers who took it upon themselves to modify flat cup covers in the 1980s. And yet the idea for peel-open lids came much earlier.



Delbert E. Phinney may have been the first American designer to patent a drink-through lid for hot beverages. In 1953, he received a patent for a disposable, insulated cup and lid combination, including a removable drink-through section of the lid, which he called a cap, following the language used in a 1935 patent by Roy Irvin Stubblefield. Patent registry documents have no fixed format but always include visual representations of the invention, with specific numbered elements and a text-based description. Phinney's drink-through lid (opposite) identifies three key elements that qualify his invention, and others like it, to be placed into the peel category. Peel-type lids include a designated hand-activated, removable section of the cup's cover; before and after removal, the main body of the lid remains affixed to the perimeter of the cup; and after lid removal, the user drinks from the cup's exposed rim. Or, in patent-speak,

The cap 21 has a part 23 which can be broken away by extending a fingernail into a recess 24 of a main part 25 and beneath the edge of the part 23. When the part 23 is lifted, an opening suitable to receive the lips of the user of the cup is provided at the side of the cup. The main part 25 will remain in place whereby to keep the drink hot and keep the same from being splashed.

Patrick T. Boyle's design for a Splash Proof Drink Through Beverage Container Lid (patented in 1977) features radial score lines "defining a central tear tab" so that removal of the tab can be accomplished with "predictable tears," while the lid remains affixed to the cup (see page 44). Boyle was an active designer, and the patent registry shows two oft-cited examples of his work while he was employed at the Maryland Cup

*Fig. 1**Fig. 2*

Corporation. In 1974, however, three years before Boyle's first patent, James J. Serritella, an independent designer, patented his Non-spillable Cup Lid (above), and this design is also referenced frequently by subsequent designers, even though it was never manufactured by Serritella or assigned to another company. The peel-type lids are the direct progenitors of a well-populated subcategory that we call peel-and-lock lids, where the peel-back section is not removed from the lid but is received in the deck of the coffee lid and can be repositioned to reseal the drinking aperture. LH





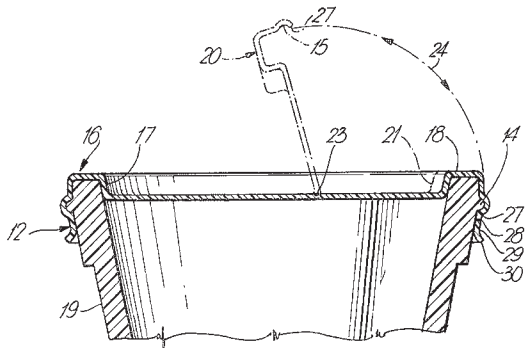


Fig. 3

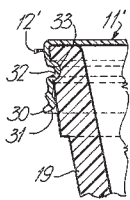


Fig. 4

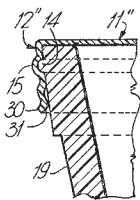


Fig. 5

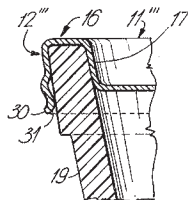


Fig. 6

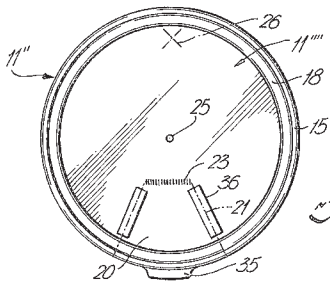


Fig. 7







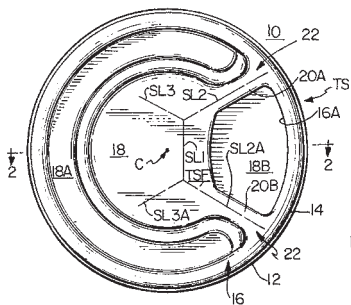


FIG. 1

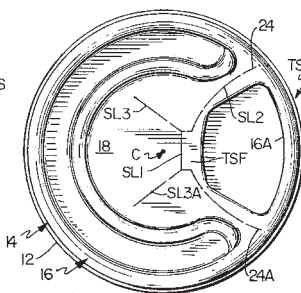


FIG. 3

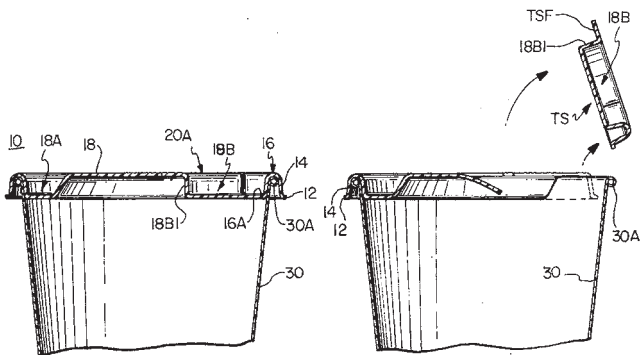


FIG. 2

FIG. 4



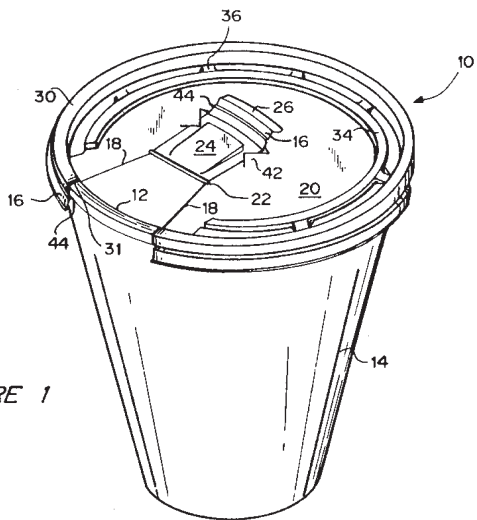


FIGURE 1

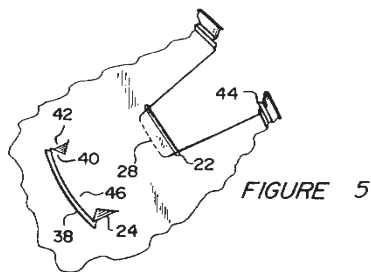


FIGURE 5















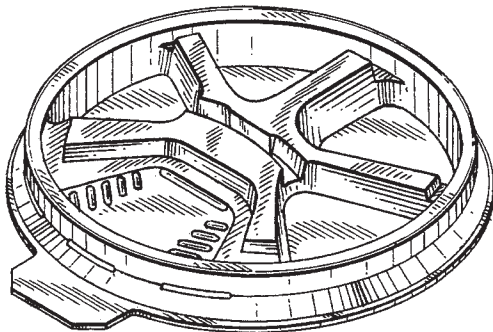








*FIG. 1*



*FIG. 2*



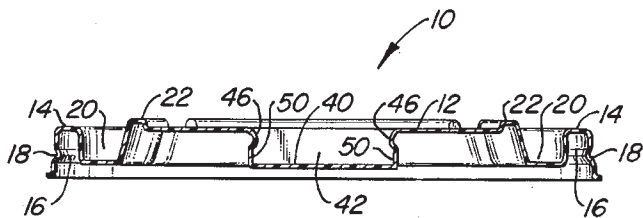


FIG. 3.

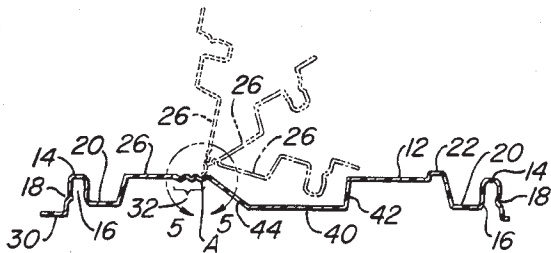


FIG. 4.











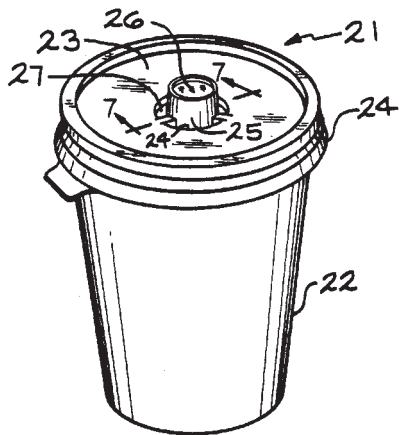




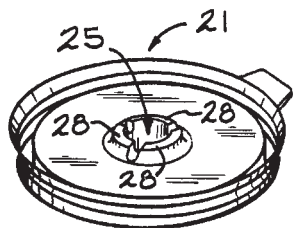








—FIG. 1



—FIG. 2









CAUTION  
CONTENTS  
HOT

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PART<sup>®</sup>

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U.S. PATENT

4953743

LIFT

TAB





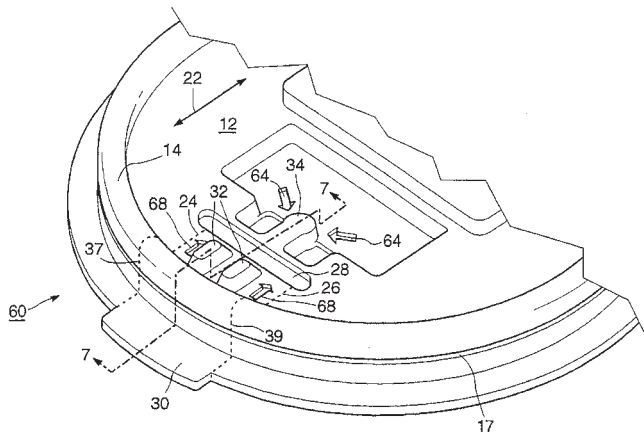


FIGURE 6

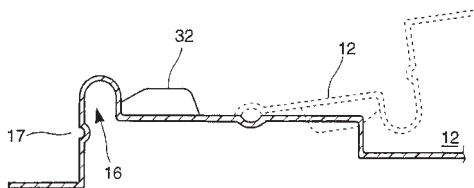


FIGURE 7

























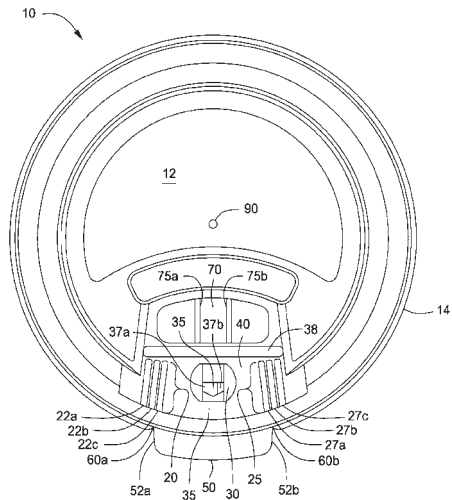


FIG. 1

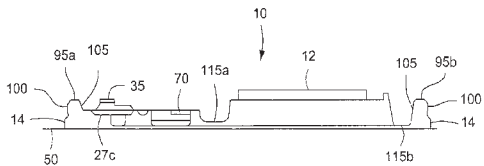


FIG. 2







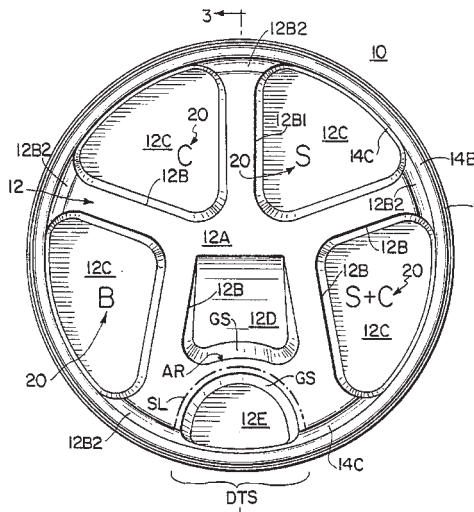




2

**PINCH**

Some of the lids in this thinly subscribed “pinch” category share similarities to the earliest peel-type coffee covers. In one example, a scored section is removed from the deck of the lid to allow the drinker’s lips to access the rim of the cup.



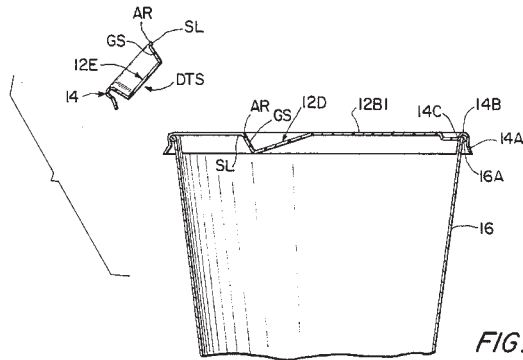


FIG. 4

Though similar to other lids, the means of removal is described as "applied squeezing pressure" and is claimed to be more direct, therefore distinct. In the model patented by Thomas W. Winstead in 1985 and manufactured by the Sweetheart Cup Company (opposite), the thumb and forefinger clasp or pinch the declivity through its prepared "gripping surfaces," thereby effecting a semicircular extraction. After removal, the piece of the pinched lid can be thrown away, "clipped" onto other areas of the lid's perimeter, or replaced in its original location.

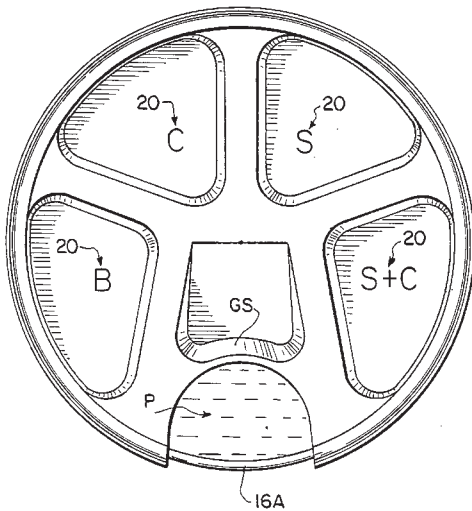
Another lid in this grouping requires the drinker to pinch a protruding piece of polystyrene, then "twist and pull" off this raised section of the lid to create a drinking port. This pinching action, which requires one hand

to hold the cup while the other removes the tab, results in a drinking mode that is similar to the pucker-type lids.

Thermoforming allows for shaping of the features of nearly all contemporary lids, including descriptive or promotional text. In two cases, we see competing claims to use the phrase *smart lid*. A pinch lid in this section (opposite) and another lid in the pucker category (see page 181) both inscribe their intelligence on the decks of their respective inventions. The smart-pinch lid seems to be wishful thinking, as it requires a considerable amount of work and care from its users, only to arrive at the already well-established pucker solution. The smart-pucker lid comes to the head of its class, as it is made from a material with thermochromic properties, which changes color from burgundy to bright red to warn the drinker of the high temperature of the cup's liquid contents. LH







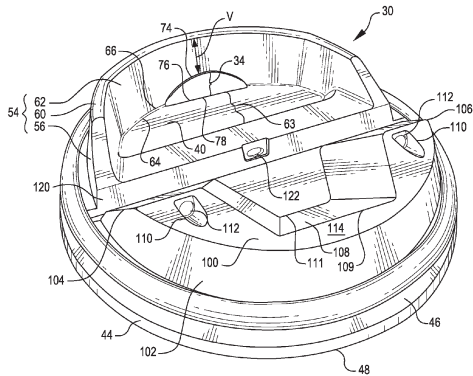




3

**PUCKER**

Lids classified as “pucker” require users to drink through the lid, not from the cup, as is the case in the peel- and pinch-type lids. Drinkers need not mutilate this type of coffee cover; rather, they place their mouths over a prepunched hole on the deck or face of the lid.



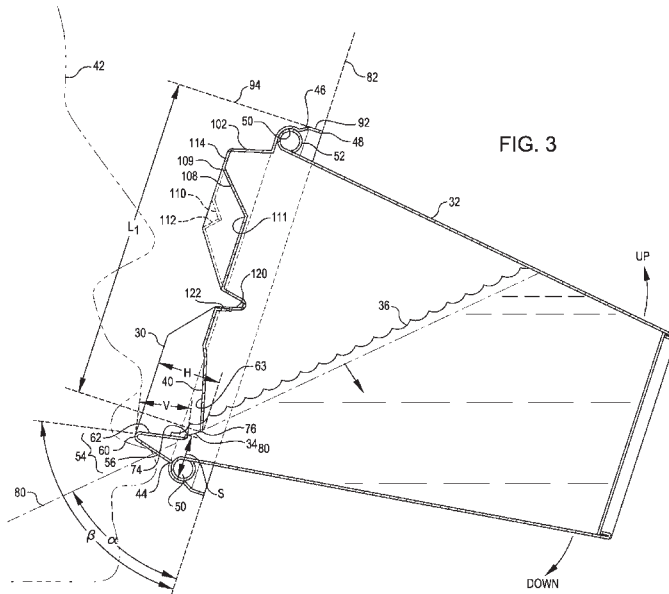


FIG. 3

Certain lids, such as the Solo Traveler, patented by Jack Clements in 1986 (see pages 104 and 105), have achieved a degree of widespread use and even modest fame. This is the lid that was celebrated by the late Phil Patton in *I.D.* magazine in 1996 and selected by Paola Antonelli, senior curator of architecture and design at the Museum of Modern Art, for inclusion in the museum's 2004 show *Humble Masterpieces* and the book

that followed. Pucker-type lids offer “mouth comfort” and also have added “loft” space within the structure of the lid to accommodate beverages with frothy tops.

Many lids populate this category, as designers continue to offer both small and large improvements to solve pet peeves but also to deliver better drinking experiences. At least three new models promote the rate of beverage flow, provide improved mouth feel, and yield enhanced aroma. Some drinkers dislike the childhood “sippy cup” experience that is associated with pucker-type lids, and a number of lids patented within the last five years claim to offer a more “natural drinking experience” that simulates drinking from the rim of a cup. Samuel Lincoln Brannock’s 2014 design features a raised drinking rim and also a deep “basin” to enhance “olfactory experience.” This lid provides an external trapezoidal well so that the coffee can “aerate, evaporate, and cool” directly underneath the nose, en route to the drinker’s mouth (see pages 150 and 151). Another designer, Douglas Fleming, patented a similar lid in 2015. The Viora lid provides a thin, raised rim and moves the coffee aperture to a nearby but distinct location (see pages 152 and 153). In this design, the drinking hole is not coincident with the location of lip placement; this uncoupling solves the problem of “slow flow” that occurs when the drinker’s lips completely cover the drinking port. Fleming’s lid also sets out to remedy the suppressed aroma that on-the-go coffee drinkers routinely suffer. This lid’s “wells, valleys, and baffles” claim to channel fragrant steam directly to the user’s nose. LH





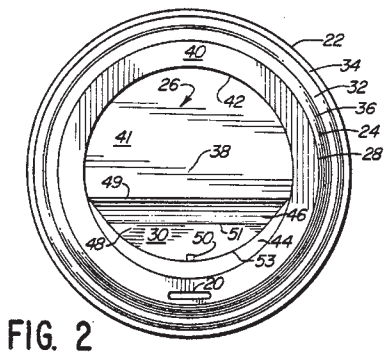


FIG. 2

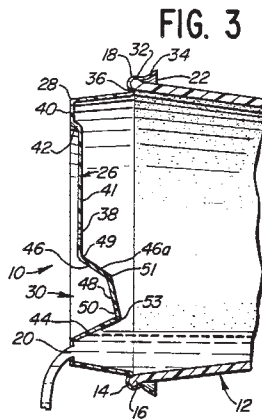


FIG. 3











110 PUCKER







112 PUCKER





























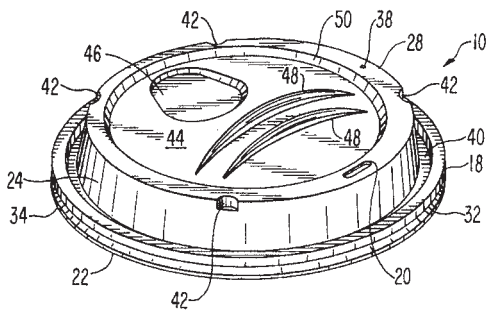




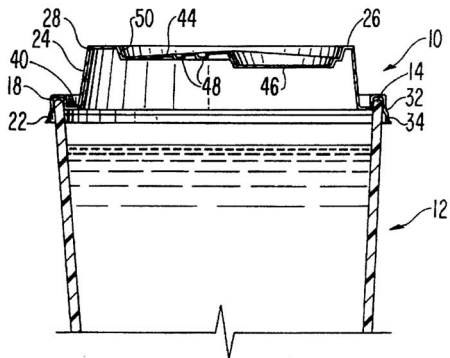




**FIG. 1**



**FIG. 6**



























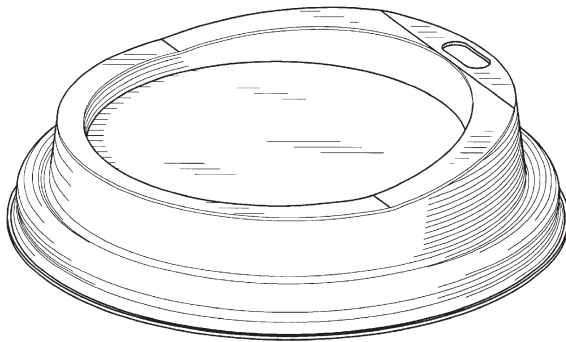


Fig. 2

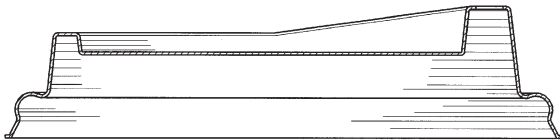


Fig. 6





















FIG. 1

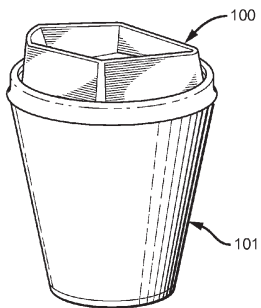


FIG. 2

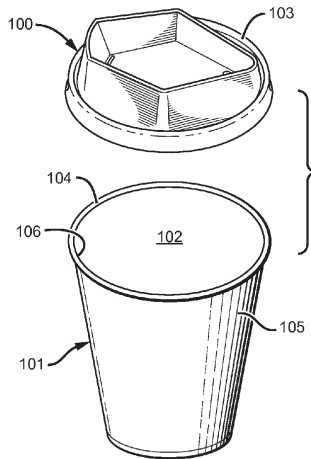


FIG. 4

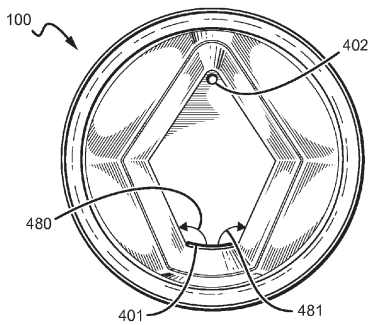






FIG. 25

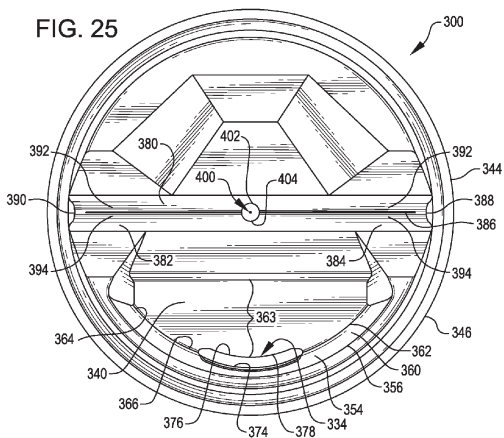
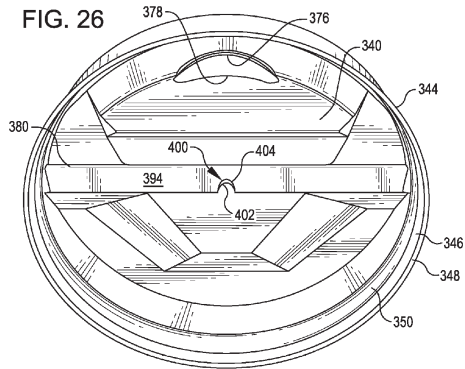


FIG. 26





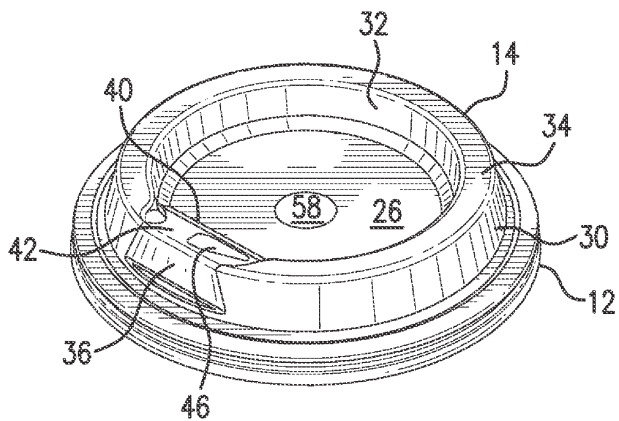


FIG. 9







FIG. 1

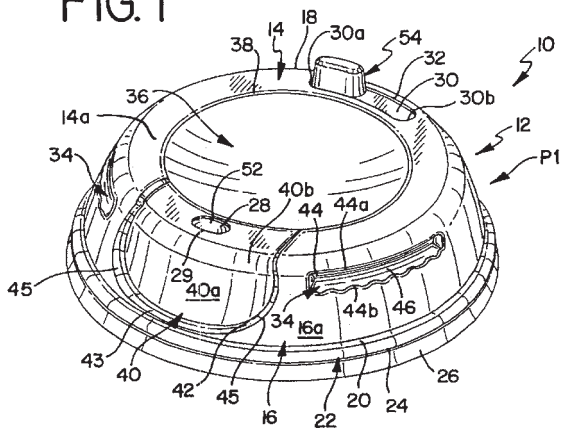
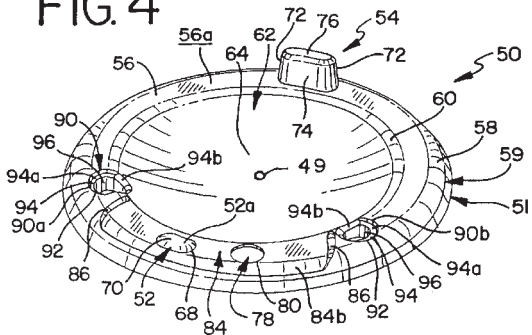
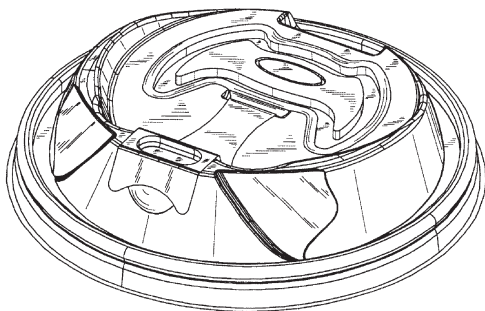


FIG. 4

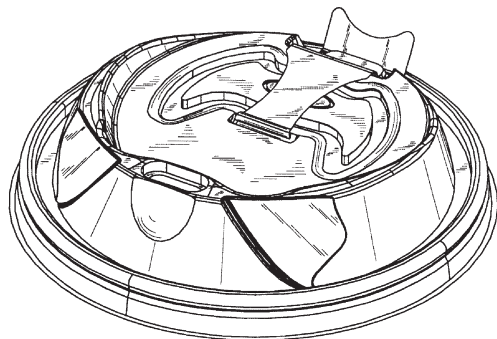








**Fig. 1**



**Fig. 2**







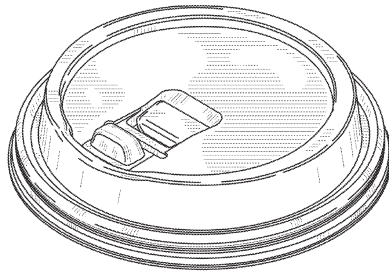


FIG. 1

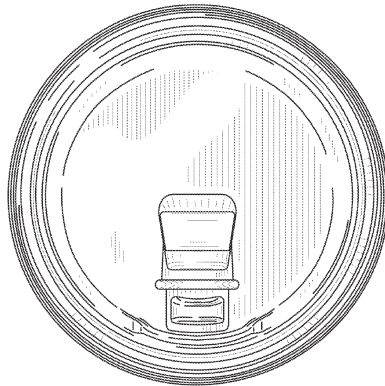


FIG. 2













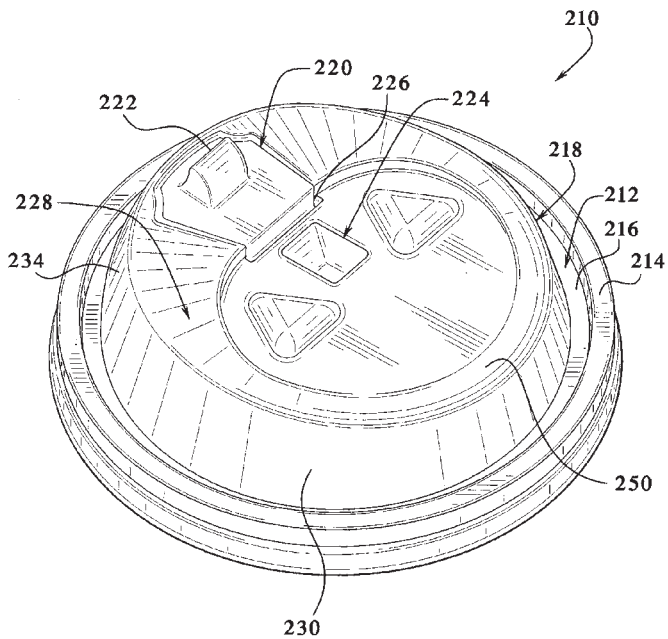








FIG.15







176 PUCKER

FIG.1

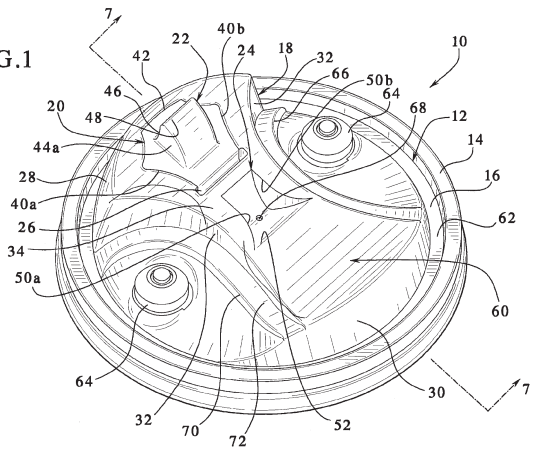
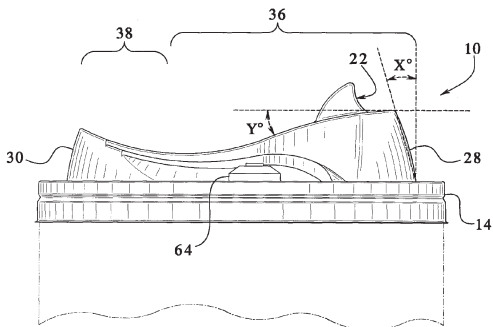


FIG.6









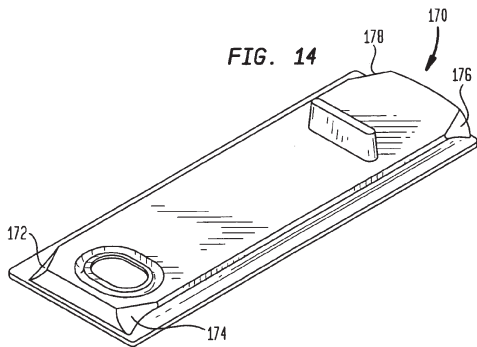
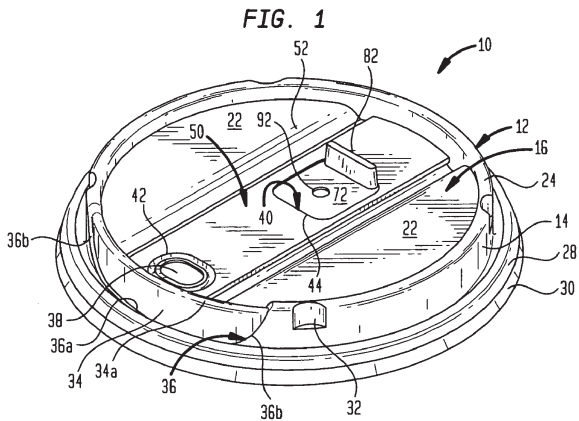






































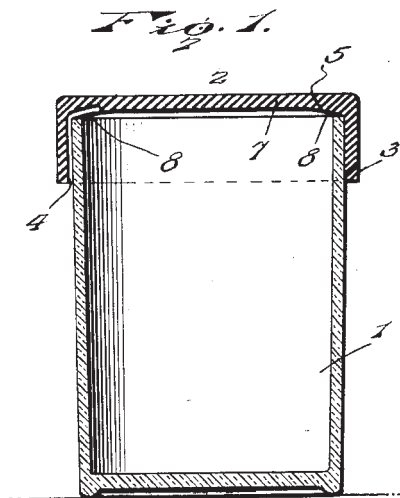


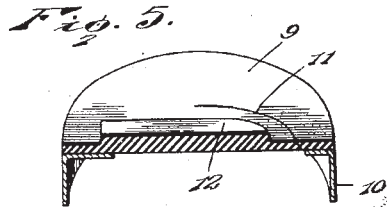
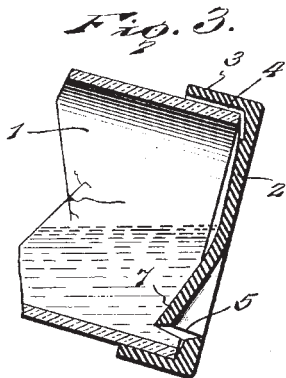




# 4 PUNCTURE

The lids in the “puncture” category permit liquid delivery when the user presses down, fracturing a portion of the plastic cover while the lid itself remains intact and fully attached to the cup.





Roy Irvin Stubblefield's 1935 patent for a "cap for drinking glasses" is widely considered the starting point for all future lid-loving inventors. Stubblefield's cap was designed with children in mind, as an attachment to drinking glasses to prevent spills (opposite and above). The design highlights a tight-fit relationship between the cap and the glass, a long "slit" on the top face of the cap that is pressed by the upper lip "sufficiently" to dispense the liquid, and vents to break the partial vacuum that would otherwise develop during drinking. Stubblefield recommends a thin, lightweight, and durable material, specifically rubber, to make his drink-through caps. Affordable and reliable plastic thermoforming was not yet part of the food and beverage fabrication landscape as Edward L. Helwig's thermoforming patents weren't granted until 1945, with wider

adoption coming much later, enabled by Owen H. Griswold's 1961 methods. Though Stubblefield's patent description does not anticipate the hot-beverage drink-through delirium to follow some decades later, it does present the first known puncture-type aperture.

David H. Herbst and Chris E. Boes's 1990 Push and Drink Lid offers a push-button mechanism that operates by applying "downward force" to a raised element on the lid, thereby puncturing the lid to allow liquid to pass through its surface (see pages 204 and 205). The puncture-type lids are designed to accept enough downward force to create "fractures" or "slits" in the raised portion of the lid, but not so much as to undermine the lid's "curl integrity," the term that describes the fit between the lid and the rim of the container. Once punctured, the small drinking portal in this example remains attached to the body of the lid and retards splash and overflow.

Puncture lids demonstrate a direct and even counterintuitive challenge to other lids in the collection. Where peel- and pinch-type lids guide drinkers to pull away a part of the lid from the heat source, puncture-type lids require drinkers to push their fingers toward the hot beverage, coming closer to potential harm. To retain structural integrity, these lids are often overdesigned, as their activation requires additional stiffening to resist the downward pressure placed on the lid's surface, while maintaining positive attachment to the rim of the cup. The Push and Drink Lid, for example, while enabling one-handed activation, requires no fewer than five lateral braces, in a "web arrangement," to allow for its safe and proper use. LH



204 PUNCTURE

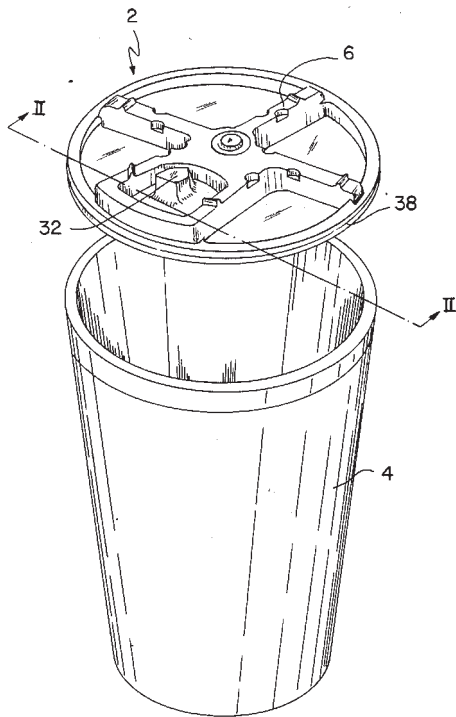


FIG. 1

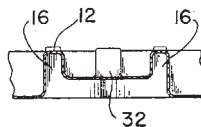


FIG. 2

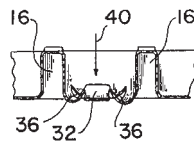
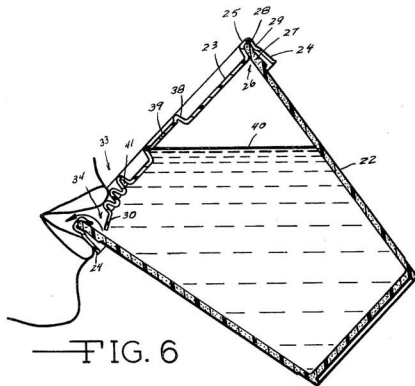
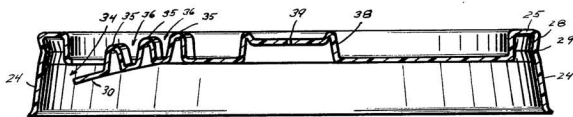


FIG. 3

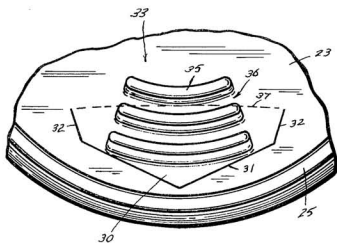




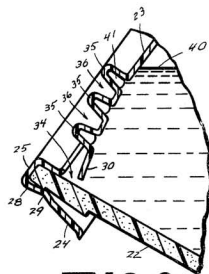
—FIG. 6



—FIG. 7



—FIG. 8



—FIG. 9





FIG-1

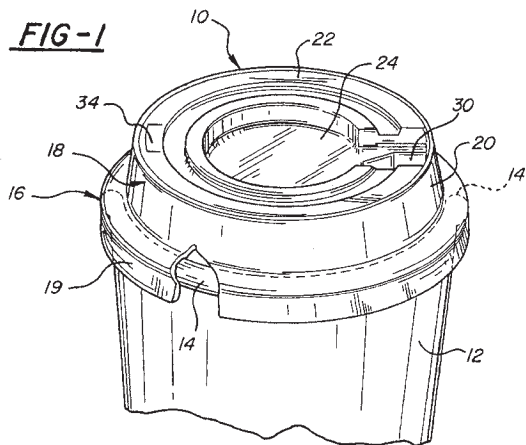
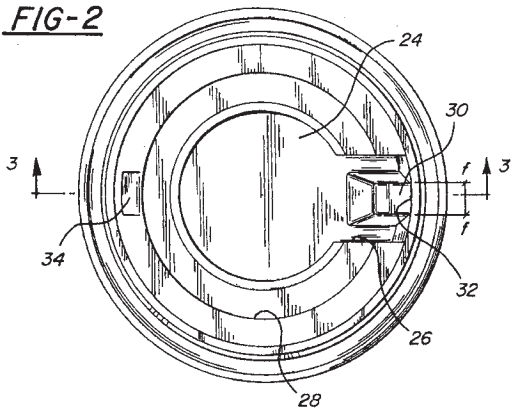


FIG-2











AFTERWORD

**GOOD DESIGN IS HIDING  
IN PLAIN SIGHT**

Louise Harpman

Designers have learned how to look. We see the world in ways that others don't and take great pleasure in the act of noticing. We have a deep sense of curiosity and enjoy sharing our design finds with other people. We love pointing out the "hidden" arrow in the FedEx logo, in part because we've never not seen it. Designers appreciate elegant solutions, independent of scale or complexity, giving equally high praise to mechanical marvels like a reusable rocket booster for travel to and from low Earth orbit, a mile-wide heliostat in the desert, or a safety pin. Designers also enjoy seeing what other people are looking at and experience extraordinary satisfaction in the careful comparison of similar things, like Bernd and Hilla Becher's photographs of water towers, blast furnaces, and grain elevators, or this collection of coffee lids. Designers reference each other's work to create a shared sense of visual literacy.

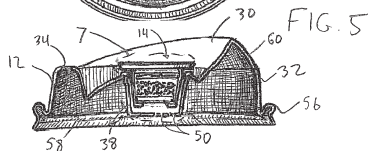
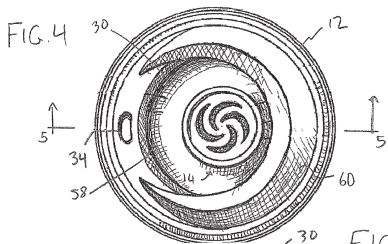
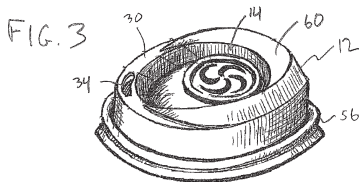
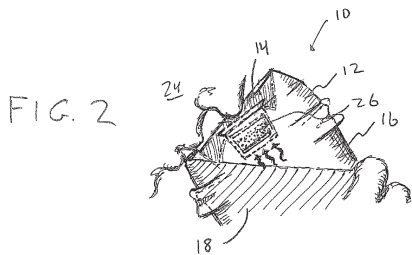


We live in a designed environment where every physical object in the world has been designed by someone, or more accurately, many someones. Designers are inventors and problem solvers, always thinking of why things are the way they are and how they might be better. We engage in a restless process of looking, thinking, making, unmaking, and remaking. On the way to create one thing, we rack up countless mistakes, and yet these errors have inestimable value. The failure-intensive process is what builds a designer's "experience archive" and often yields unexpected discoveries.

Some designers would never use the term to describe themselves. They are more hackers or tinkerers and come by their work very directly, with no formal training but literally by taking matters into their own hands. They modify one thing to become something else. It is from this informal hacking or do-it-yourself community that the contemporary coffee lid came into being, beginning with the earliest peel-type lids.

Some coffee lids are one-offs, while others are new entrants into emerging categories. The lids in this section don't fall neatly into our current taxonomies—peel, pinch, pucker, puncture—so a tentative typology, "peculiar," is hereby proposed. Timothy R. Sprunger's lid is a prime example of this new category, as he set about to create a new kind of coffee experience that would offer drinkers a "flavor enhancement apparatus and method." With little more than a Number 11 X-Acto blade and a steady hand, he crafted prototypes for his lid by piecing together a Solo Traveler and a repurposed single-serve cream thimble to hold his aromatic accompaniments. His lid becomes what I call the "coffee-shop love-child." This 2014 Arom-ah lid, evocatively depicted in hand drawings, allows the user to insert an "aroma pod" into the face of the cup lid, directly beneath the drinker's nose, so the rising steam creates a desirable

fragrance that enhances the flavor of the liquid. Sprunger suggests some familiar additives for the aroma pod, such as "vanilla, cinnamon, hazelnut," but also recommends "aromas associated with products not normally eaten or drunk in connection with food...such as pine or tobacco." He calls his invention a "powerful culinary tool" that allows the mixing of aromas and flavors.





Another proposal to enhance the coffee-drinking experience was promoted by Peet's Coffee & Tea, who offered their customers a disposable lid with an integral single-serve French-press apparatus. This design, patented in 2013 by Jeff Brian Baccetti, seems to have been a short-lived offering, as drinkers either didn't want to do it themselves or didn't care to wait since they were probably pressed for time.

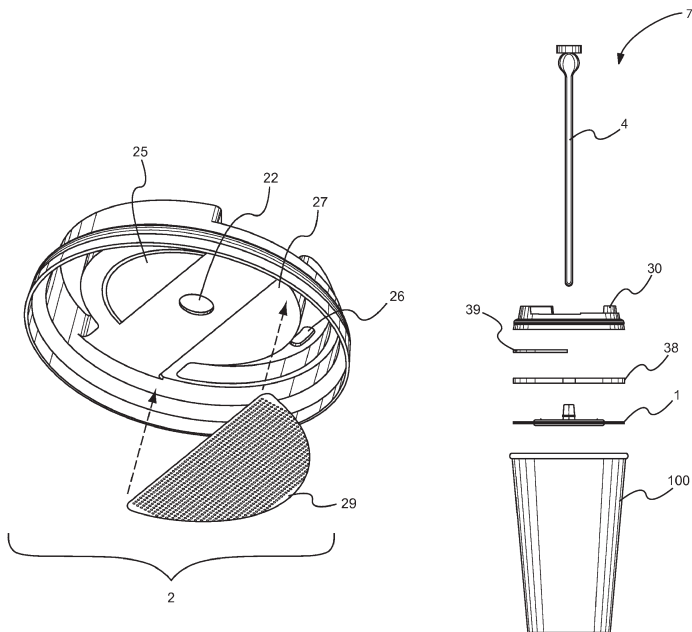
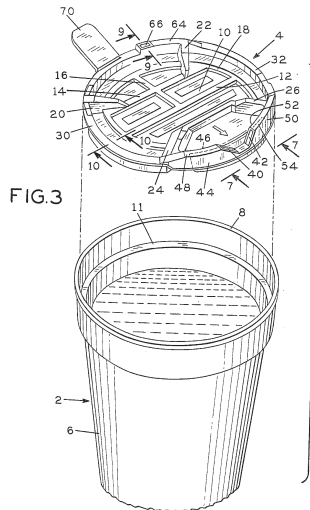
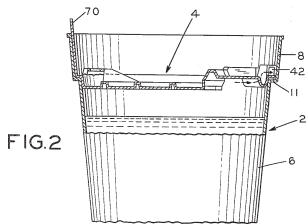
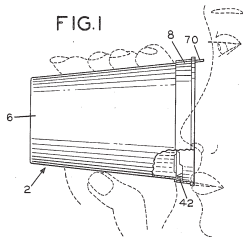


Fig. 5

Fig. 15

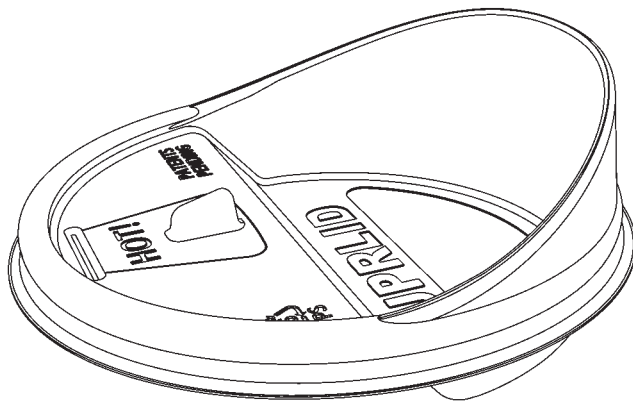


Throughout the short history of drink-through coffee lids, many designers have set out to mitigate negative experiences, with "splash" being a consistent complaint among coffee-drinking clientele. To address this problem, Morris Philip patented a lid and cup together in 1983, a full thirty years after the famous Delbert Phinney cup and lid combination. In this example, most recently sighted at a coffee shop in Lincolnville, Maine, where people board the ferry to Islesboro, the lid acts like a strainer and sits one inch below the rim of the cup, retarding splash and directing any wayward sloshes back into the reservoir.





Another innovation, the Suprlid, integrates a mesh strainer with the lower deck of the coffee lid. This lid, with its extended baseball-cap rim profile, designed specifically for use on airplanes, sets out to solve a number of problems. The thin rim provides a more “natural experience,” while the mesh strainer is designed to keep stray coffee grounds out of the drinker’s mouth. The Suprlid is a multibeverage lid, as the integral strainer can also facilitate the drinking of loose-leaf and bubble tea.











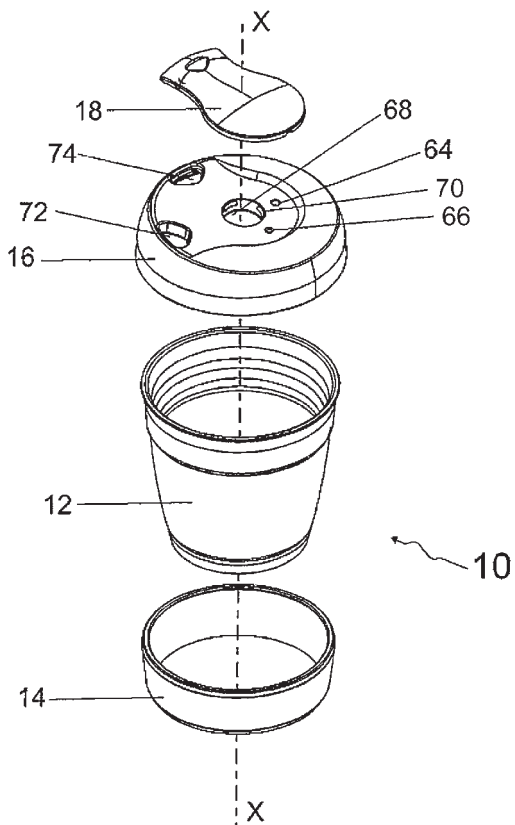
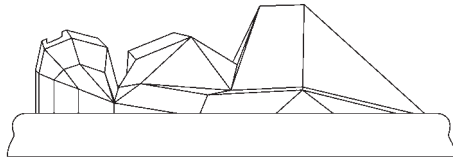
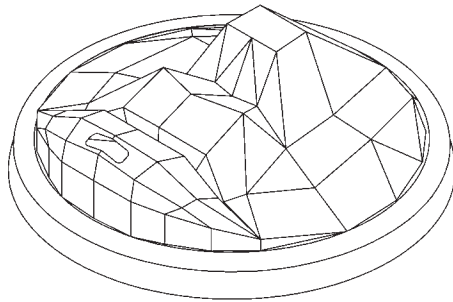


FIG. 2



South Korean designer Jang Wooseok has presented still another type of product engagement with the novelty Kiss lid. She now offers her lids in two distinct versions, and I place her drink delivery method squarely within the pucker or even “pucker up” category. Jang’s lid has generated an enormous amount of attention, and I predict that other customized lids will soon be on offer. These lids enhance the coffee-drinking experience by introducing a sense of play, by personalizing the sensation, and by making the formerly invisible visible. Lipstick-wearing coffee drinkers are said to appreciate the evidence of their “engagement” with these lids.











Precise, intelligent, even amusing objects, coffee lids populate the everyday experience of many people yet call no attention to themselves unless the viewer is already primed to look. These inexpensive, disposable items might be considered trash, but they are worthy of notice, curiosity, even admiration and display. Curator Paola Antonelli selected a Solo Traveler coffee lid for her 2004 MoMA show, *Humble Masterpieces*, alongside a soccer ball, a spark plug, and a sugar cube. The 120-item show also included branded items like a Zippo lighter, a Ziploc plastic bag, a Slinky, and a Swiss Army knife. Since the 1940s the design community has regularly restated its appreciation for ordinary and well-designed objects. Bauhaus alumna Hilde Reiss initiated and curated the Everyday Art Gallery at the Walker Art Center beginning in 1946; MoMA curator Edgar Kaufmann Jr. developed and promoted that museum's *Good Design* shows in the 1950s; at about the same time, Ernesto Rogers implored architects to bring their design skills to both the spoon and the city (*dal cucchiaio alla città*); and industrial designer Dieter Rams codified his "ten principles" of good design in the 1970s. In each instance we see that design is neither high nor low, but rather it is a way of looking at the world. Coffee lids are modest modern marvels hiding in plain sight.

APPENDIX

PHYLOGENY AND  
ITS DISCONTENTS

Louise Harpman

The US patent registry is at once a marvelous repository of inspiration and innovation and also a very public record of dashed hopes. Some coffee lid patents have been issued to designers who are employed by national food-service corporations, and others have been granted to independent agents who later sell (or “assign”) their patents to large companies. Some designers advance their work to a certain point and then curtail their efforts at the time of patent application publication. Others go the whole distance but, even after receiving a patent, never find a manufacturer. Success in achieving “letters patent” doesn’t predict triumph in the marketplace, and in the silent record that is the patent registry, designers document their exuberance and enthusiasm but also their delusion and disappointment.

While scouring the relevant online databases and registries to match the lids in this collection with their patents, we discovered a tantalizing treasure trove—drawings and descriptions for weird and wonderful coffee lids that we've never seen. Do these lids exist? Might they represent new families? Are they additions to the branches of our current phylogenetic tree? Or could they be, quite possibly, origins of entirely new species?

The lids in this section can be clustered together in several different ways but do not yet form their own categories. In some cases, designers demonstrate an interest in efficiency by capturing the coffee's rising steam to warm morning pastries. This enhancement to the coffee-drinking experience is facilitated by specially perforated lids that keep hot coffee within the cup, while providing elevated holders for a baked item. In one design, the lid-plus-tray claims to hold ring-shaped or circular treats, such as doughnuts, away from the coffee so that the steam can "heat, flavor and moisten the pastry." These lids promote a shared drinking and eating experience, quite possibly inspired by the Dutch *stroopwafel*. Charles T. Goulding patented his Pastry Supporting Cup Cover in 1996, while Vincenzo S. Cerasani patented his Pastry Cradle and Cradle/Lid Combination in 2013.

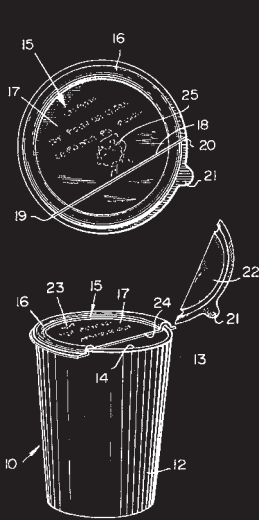
Some designers claim that their new lids are important effort-saving inventions that lessen the heavy lifting of adding condiments like cream and sugar to a cup of coffee. Some condiment-friendly lids, such as Claudia J. Hanson's from 1996, include filled blisters in the lids that can be punched through to release the additives. Another lid, patented in 1999 by Robert Scott Mendenhall and Greg Richard Andrews, offers coffee drinkers a large port in the deck of the lid for the addition of condiments, plus an integral stirring stick. In this case, the drinker

need not remove the coffee lid to add cream or sugar or to swirl the elements together.

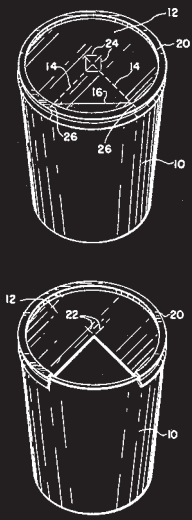
Still other lids offer a mix-and-match experience, providing drinkers with lids that house an additional liquid to allow the combination of two or more separate beverages. Harlan Stokes's 2007 patent application shows a wide range of designs for beverage covers with distinct "sip holes" and both internal and external "flavor chambers." In the case of coffee lids, Stokes documents a stratified assembly with a defined, delimited space just under the top deck of the coffee lid that can be filled with another liquid of the drinker's choice. Stokes offers that his design allows drinkers to mix the contents of the main and subsidiary chambers in their mouth, resulting in better flavor. Stokes also claims that drinkers can direct their tongue to cover one or more of the sip holes, to regulate the amount of each beverage released in a single sip.

Some designers promote the improved ergonomics of their invention, addressing the well-established pet peeve of not enough nose space—that is, the unpleasant feeling of one's nose pressing up against the top plane of a plastic lid while drinking. Stanley Ruff was aware of this problem very early in the design decathlon and as early as 1976 stated that his lid "allows a person to partially insert the tip of his nose into the container, despite the non-removal of the lid, whereby the container can be handled during drinking in the same manner that it would be if the lid were not present."

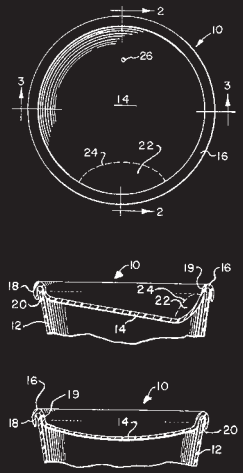
Three patents are cited very frequently, even though we have no evidence that these designs were ever manufactured. William J. H. Law patented a Beverage Container Having a Frangible Closure in 1973, James J. Serritella first patented his Non-Spillable Cup Lid in 1974, and Howard R.



William J. H. Law  
US 3,777,968 (1973)



James J. Serritella  
US 3,800,999 (1974)



Howard R. Freemyer  
US 3,868,043 (1975)

Freemyer followed soon after with his No-Spill Hot Cup Lid in 1975. In each of these designs, we see potential seeds and stems of future branches of the phylogenetic tree. Law's design, whose "frangible closure" yields an aperture that is described geometrically as a "minor segment," does not seem to have inspired quite as many followers as the others; his lemon wedge-shaped drinking port didn't catch on. Serritella designed the first purpose-built "guitar pick" drink-through aperture, yet he reports that his lid was never put into production, despite his efforts to sell it to a vendor. Serritella recounts that after showing his patented design to a large convenience store chain, the company used other designers to develop their own lids based on his design, giving him neither credit nor royalties. The cost of pursuing a patent-infringement claim, he said, was prohibitive. Freemyer offers a moon-shaped frangible aperture, and he cites both Law and Serritella in his patent application, as well as Delbert E. Phinney with his 1953 cup and lid combination.

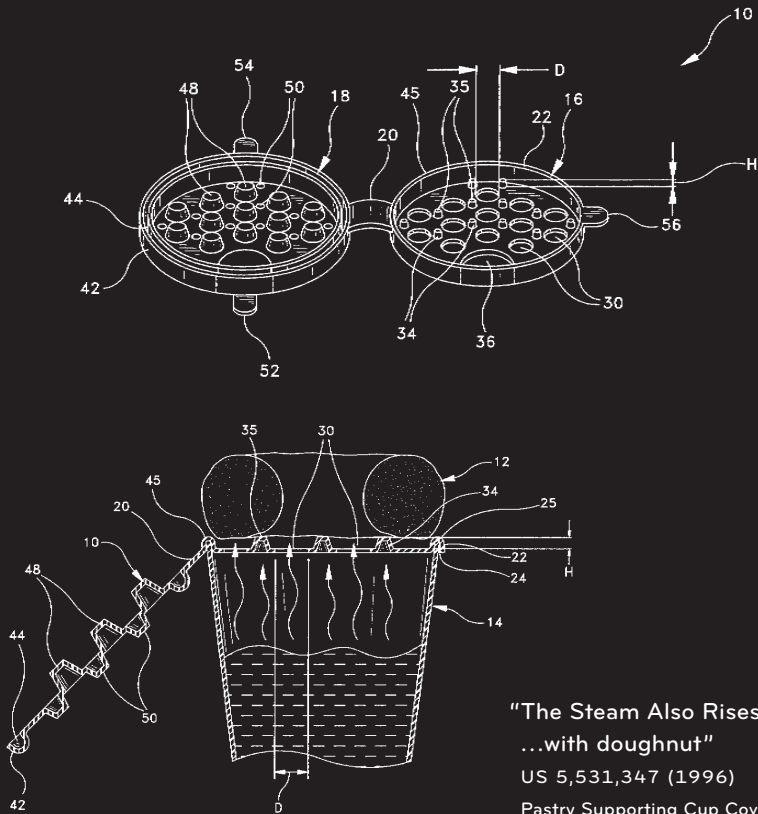
United States patent documents follow a fairly standard general format. The cover page always identifies the name of inventor, patent number, date of patent, filing date, application number, classes and fields of the invention, references cited, names of examiners and attorneys, one technical drawing, and an abstract. In successive pages, the invention is shown through evocative technical drawings that usually include top, bottom, side, three-quarter, and section views. The multipage documents also include often-lengthy written descriptions, which give context to the background of the design, as well as summaries, descriptions of the drawings, and preferred embodiments of the invention. While most of this writing is straightforward and, some might say, dull, it is worth special mention that one lid designer, Stanley Ruff, whose 1976 patent



for Drink-Through Slosh-Inhibiting Closure Lids for Potable Open-Top Containers provides the reader with eloquence and humor as well as a compelling design. Ruff describes his invention as

A closure lid for capping the open top of a container. The container is of a type adapted to receive a potable liquid, usually one which is dispensed within a relatively close distance of the point at which it will be imbibed. Such containers with the closure lids emplaced thereon are used for 'carry-out' services, as from a luncheonette, or for 'carry-about' services, as from an on-the-premises beverage source, such as a coffee brewer...

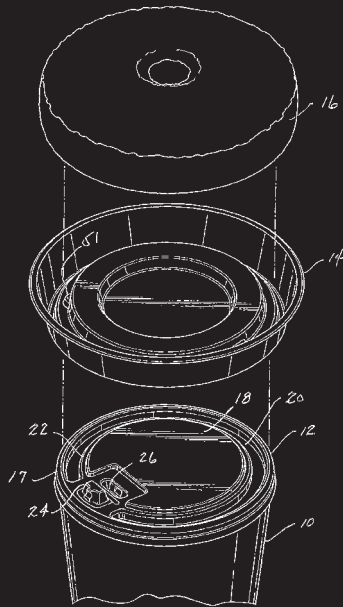
In Ruff's description, we see that the "to go" language was not used by everyone, and that another pair of descriptors was vying for dominance. Ruff claims that his invention improves previously designed lids in seven unique ways, including slosh reduction, nose accommodation, and enhanced "oral and olfactory [*sic*] satisfaction." He hopes for widespread adoption of his new design, as evidenced by his final finger-wagging claim: "It is another object of the invention to provide a lid...the use of which is apparent simply upon inspection of the lid so that it is not necessary to provide or disseminate instructions as to its operations by even the most obtuse members of the public."



"The Steam Also Rises  
...with doughnut"

US 5,531,347 (1996)

Pastry Supporting Cup Cover,  
designed by Charles T. Goulding



**"The Steam Still Rises  
...with doughnut"**

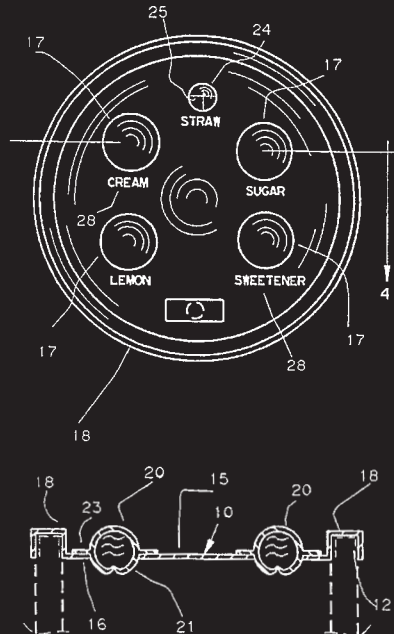
US 8,544,671 (2013)

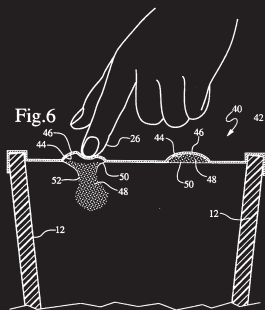
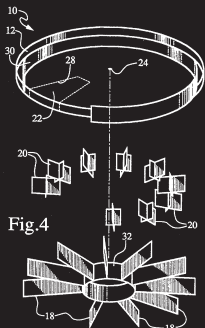
Pastry Cradle and Cradle/  
Lid Combination,  
designed by Vincenzo S. Cerasani

**"Blister Pack Additives"**

US 5,529,179 (1996)

Dispensing Lid for Beverage Container,  
designed by Claudia J. Hanson

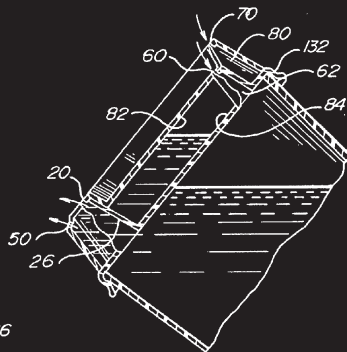
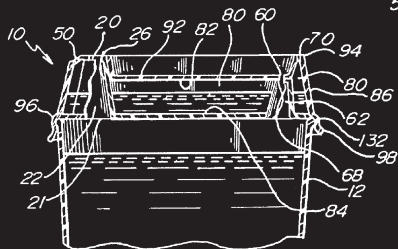




**"Condiment Clock"**  
 US 5,431,276 (1995)  
 Multifunctional Lid,  
 designed by Tony Lialin

**"Secret Passages"**

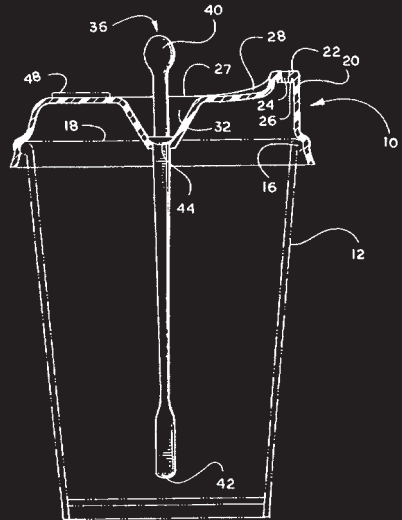
US PATENT APPLICATION  
 20070075081A1 (2007)  
 Reusable Container with  
 Flavor Chamber in Lid,  
 designed by Harlan Stokes



### "Labor-Saving Devices"

US 5,894,952 (1999)

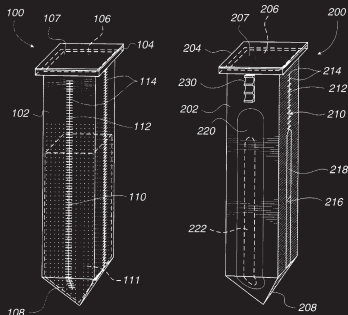
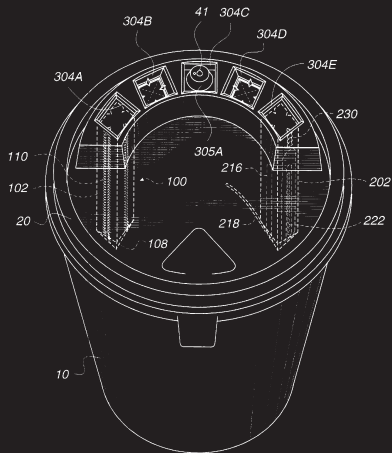
Spill-Resistant Cup Lid  
with Condiment Funnel  
and Stirring Rod,  
designed by Robert Scott  
Mendenhall and  
Greg Richard Andrews



### "Condiment Capsule"

US PATENT APPLICATION  
20050092748A1 (2005)

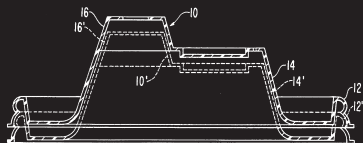
Disposable Cup Lid with Reclosable  
and Resealable Condiment Tab,  
designed by Terrance N. Durdon



**"Dial C for Condiments"**

US 5,934,493 (1999)

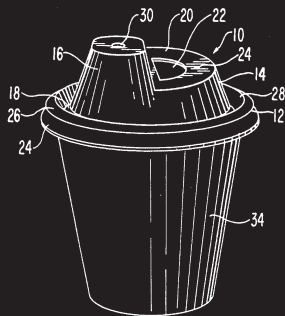
Lid for Beverage Container,  
designed by Ki Su Han

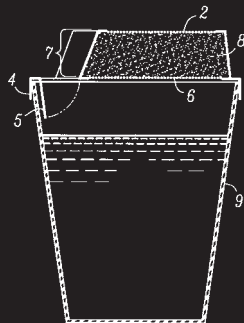
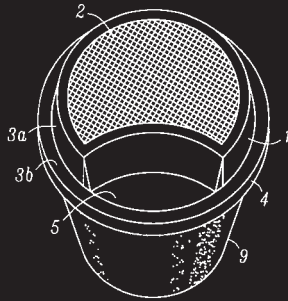


**"Space Mountain Morning Joe"**

US 5,253,781 (1993)

Disposable Drink-Through Cup Lid,  
designed by Hubert Van Melle and Terrance N. Durdon





"Pour-Over Plus"

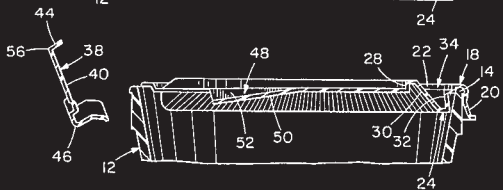
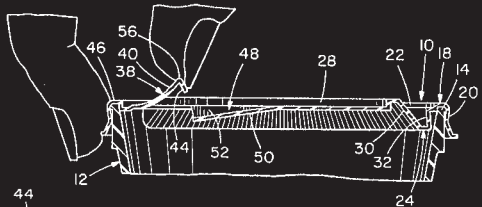
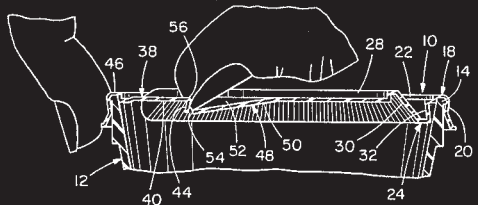
US 6,076,450 (2000)

Fresh Beverage Brew Cup Lid,  
designed by Joseph H. DiGiorgio Jr.

"Reverse Peel"

US 4,753,365 (1988)

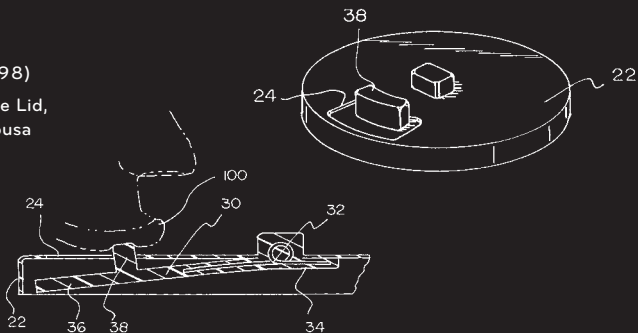
Lid with Removable Tab,  
designed by Eino E. Seppala



**"Spring Loaded"**

US 5,706,972 (1998)

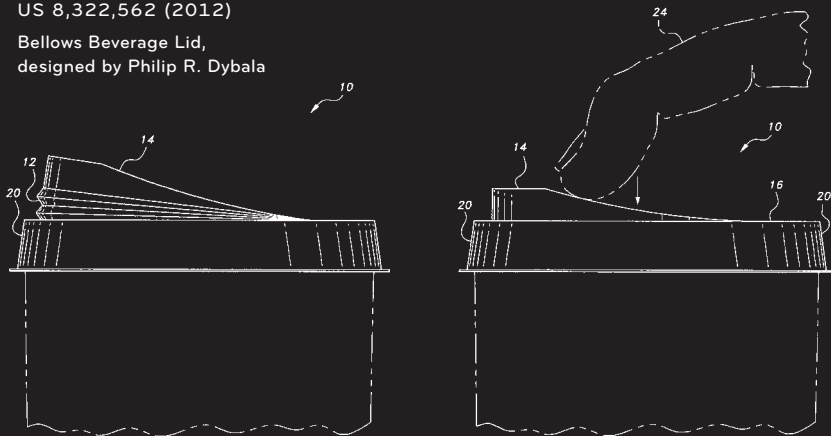
Self-Closing Beverage Lid,  
designed by Nuno Sousa



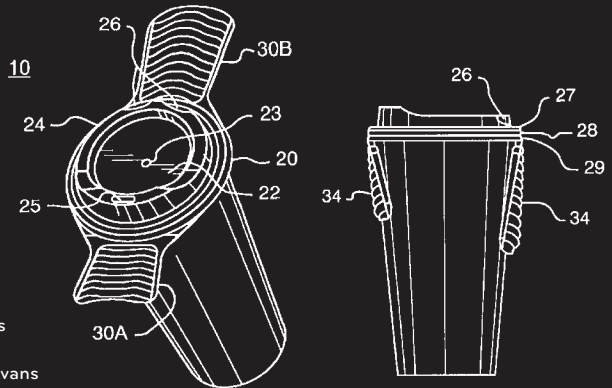
**"Not Saul Bellows"**

US 8,322,562 (2012)

Bellows Beverage Lid,  
designed by Philip R. Dybala



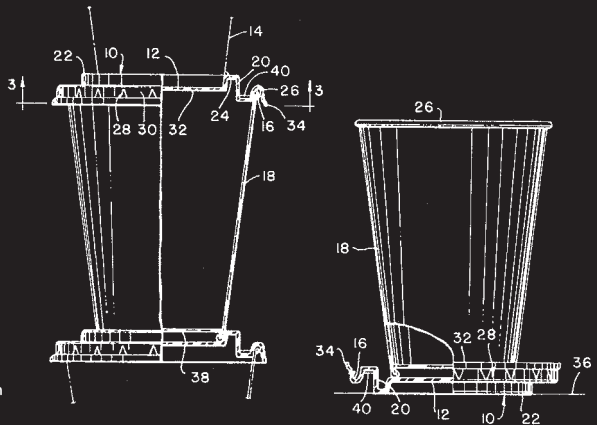




### "Winged Victory"

US 6,070,755 (2000)

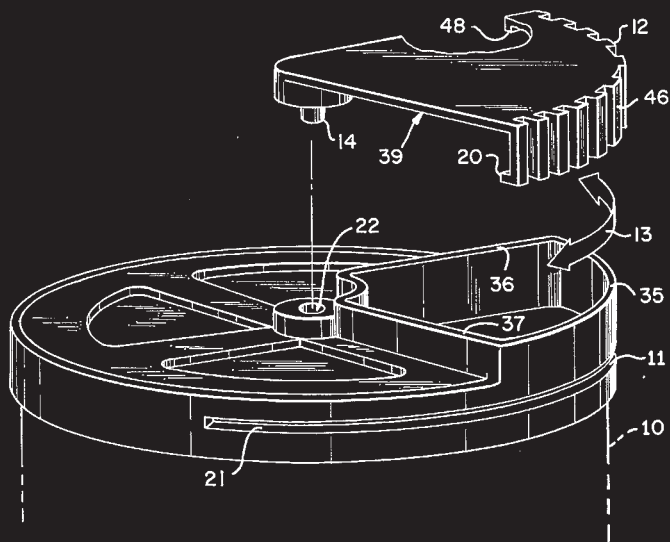
Lid with Folding Side Tabs  
for Hot Beverage Cup,  
designed by Michael G. Evans  
and John Kevin Bruce



### "The Stack Effect"

US 3,598,271 (1971)

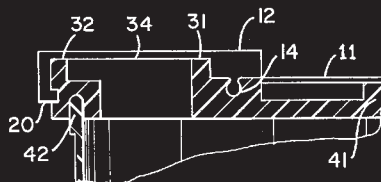
Combination Disposable  
Cup Lid and Coaster,  
designed by Holley Danforth



"Pie in the Sky?"

US 4,183,443 (1980)

Reusable Cup Cover,  
designed by Lawrence T. DeParales  
and Edward P. Billitzer



## ACKNOWLEDGMENTS

This book idea was born of serendipity—a chance meeting between Louise and Abby Bussel, an acquisitions editor at Princeton Architectural Press, on a clear April morning, when they were walking in opposite directions on Astor Place in New York City. After several meetings (over coffee, of course) and more than a few draft proposals, this book was a go. At that point, the coffee lids lived under Louise's bed in eleven acid-free boxes. They had never been accurately counted, were not arranged in categories, and certainly had never before been catalogued. We give our abiding thanks to Abby for her steady-as-she-goes stewardship of this quirky book. We offer our deep appreciation to our editor, Sara Stemen, who masterfully choreographed and refined the book's many moving parts, and our graphic designer, Ben English, who put it all together into one elegant package.

As co-owners of the collection and co-authors of this book, each of us has different people to thank on our respective teams. I (Louise) am grateful for the support and bemused indulgence of many people, especially my indefatigable undergraduate research assistant, Honor Bishop. Enthusiastic thanks go to Gallatin alumni Jacob Ford, a specialist in all things visual, and Jiachen Hu, who proved to be an invaluable liaison with Chinese vendors. I am particularly thankful to New York University's Gallatin School of Individualized Study, Dean Susanne Wofford, and Associate Dean Millery Polyné, for providing research funding. Collectors, curators, enthusiasts, and on-call dream team players included Sina Najafi, Nina Katchadourian, Leah Dickerman, Alex Kalman, Pagan Kennedy, Cory Bernat, Jean-Christophe Castelli, Lisa Silver, and Em Watson—to all of you, I offer my sincere appreciation. Closer to home, I give heartfelt thanks to my teenage son, Ivan, who never complained about my going

down the rabbit hole with the research and writing for this book. And finally, special thanks go to my husband, Jonathan Stone, himself an accomplished writer, editor, and collector, who has never drunk—and will never drink—coffee through a plastic lid.

And I (Scott) am grateful for the support of Mary Stuckert, Jakeb Novak, Brett Wolfe, Travis Power, Marianne Nepsund, and Dawn White at Specht Architects. I can always rely on them to dive into suddenly requested research, photography, graphics, and writing tasks that inevitably have to be completed right away. I also want to give my gratitude to Carolyn Rowles, who was incredibly supportive and kept me operating and comfortable during some marathon work sessions. I'd like to give special thanks to my co-author, Louise Harpman, for initiating this project and doing a great deal of the work, and finally I'd also like to thank my son, Ivan, who, in addition to being an excellent camera wrangler and photographer, has always inspired me with his unending enthusiasm for my often unusual enthusiasms.

Though we have the largest collection of coffee lids in the world, we weren't able to publish all of them here since some were acquired after we went to press, and patent registries show many more drink-through lids than we have. We are happy to field queries from designers and manufacturers and look forward to adding new items to the collection. There is always more space under our respective beds.

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## INDEX OF PATENT DRAWINGS

In developing this book, the authors made great efforts to find the patent drawings that appear to match each lid in the collection. We had considerable but not complete success in this intense search and are hopeful that the lid designers and assignees whose patent drawings aren't included will contact us so we can include their images in future editions of the book. Every lid comes with a story, and we are extraordinarily grateful to the designers who agreed to be interviewed for this book, including Timothy R. Sprunger, James J. Serritella, Samuel Lincoln Brannock, and Patrick T. Boyle.

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- 93 Ibid.
- 96 Ibid.
- 100 Fleming, Douglas H. Beverage Container Lid that Provides Natural Drinking Experience. US Patent 8950623 B2, filed March 12, 2013, and issued February 10, 2015.
- 101 Ibid.
- 104 Clements, Jack D. Lid for Drinking Cup. US Patent 4589569 A, filed August 22, 1984, and issued May 20, 1986.
- 128 Freek, Mike, and Raya Berkovich. Drink-thru Cup Lid. US Patent 5624053 A, filed June 6, 1995, and issued April 29, 1997.
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- 150 Brannock, Samuel Lincoln. Lid for Beverage Container. US Patent 8881938 B2, filed August 8, 2013, and issued November 11, 2014.
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