



AN ENTHUSIAST'S GUIDE TO THE
ARTISAN DISTILLING OF POTENT POTABLES

THE ART OF

DISTILLING
WHISKEY

AND OTHER SPIRITS

EDITED BY
BILL OWENS AND
ALAN DIKTY

Q
U
A
R
R
Y

WHISKEY

AND OTHER SPIRITS

AN ENTHUSIAST'S GUIDE
TO THE ARTISAN DISTILLING
OF POTENT POTABLES

EDITED BY BILL OWENS
AND ALAN DIKTY

FOREWORD BY FRITZ MAYTAG

Q U A R R Y
B O O K S
BEVERLY MASSACHUSETTS

DEDICATION

In fond memory of our friend Michael Jackson, who is, we have no doubt, now enjoying his well-deserved angel's share of the world's barrels of maturing whiskey



CONTENTS

[FOREWORD BY FRITZ MAYTAG](#)

[INTRODUCTION BY BILL OWENS](#)

[CHAPTER ONE](#)

[A BRIEF HISTORY OF DISTILLING](#)

[CHAPTER TWO](#)

[THE DISTILLING PROCESS](#)

[CHAPTER THREE](#)

[WHISKEY](#)



[CHAPTER FOUR](#)

[VODKA](#)

[CHAPTER FIVE](#)

[GIN](#)

[CHAPTER SIX](#)

[BRANDY AND EAU DE VIE](#)



[CHAPTER SEVEN](#)

[RUM, TEQUILA, LIQUERS, AND MORE](#)

[CHAPTER EIGHT](#)

[A GALLERY OF ARTISAN DISTILLERS](#)



[CHAPTER NINE](#)

[DISTILLING RESOURCES](#)

[THE DISTILLER'S LIBRARY](#)

[THE DISTILLER'S GLOSSARY](#)

[DIRECTORY OF DISTILLERIES](#)

[INDEX](#)

[ABOUT THE CONTRIBUTORS](#)

[ACKNOWLEDGMENTS](#)

[ABOUT THE AUTHORS](#)



FOREWORD

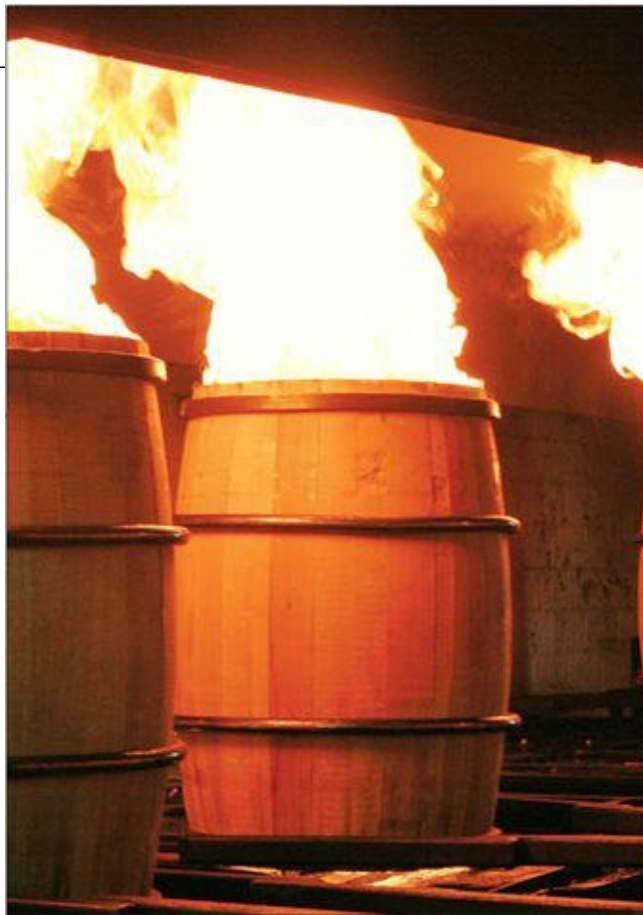
THE SECOND Whiskey Rebellion is happening in the United States, and it is already spreading around the world. In this marvelous book, Bill Owens, Alan Dikty, and their contributors—like intrepid war correspondents—take you to the front lines. You will find here an up-to-the-minute report on the excitement, creativity, and brash enthusiasm of the United States' craft distillers.



*Detail of the fermenting process of making bourbon, **Woodford Reserve Distillery.***

I have known Bill Owens since his early involvement in the U.S.'s microbrewing renaissance: ~~He was one of the movement's most fervent innovators. His own achievements are many, and his~~ enthusiasm for the whole wild explosion of brewing creativity is evidenced in his obvious enjoyment of the successes of his brewing colleagues.

The craft-brewing renaissance, of course, began in the 1960s. By the early '90s, it was inevitable that it would evolve into a craft-distilling renaissance. And so Bill and his cohorts are at it again, now celebrating a small-distillery revolution and the variety and creativity that is springing up everywhere. Yes, we now have "craft" whiskey distillers, experimenting with all facets of grain distilling. And, as with the brewing revolution, the consumer reaps the rewards. We are entering a golden age for the spirits lover, and *The Art of Distilling Whiskey and Other Spirits: An Enthusiast's Guide to the Artisanal Distilling of Potent Potables* is an indispensable guidebook to its beginnings.



*Charring oak barrels at **Bluegrass Cooperage**.*

Where did the craft-distilling phenomenon originate? You could say that it came down from the mountains, where ~~pot-distilled whiskeys made by hand—in secret folds—have never entirely~~ disappeared. Or you could say that it came up from the vineyards and orchards, where for many years there has been a tiny craft-distilling segment of superb, hand-crafted fruit brandies and eaux-de-vie. Just know that a second Whiskey Rebellion is upon us and that it is happening right now in a little building near you. And if you have picked up this book already knowing about the great food awakening and hoping for a guide to distilling, you have found it!

What particularly fascinates me about the distillation of alcohol is the enduring mystery surrounding its origins. Distillation itself is a physical art with a long—and colorful—history. And the distilling of all sorts of materials for myriad purposes is an ancient process. But when did the production of distilled spirits as a beverage begin? You are welcome to your opinion, and good luck finding anyone to agree with you! No matter what you think, I encourage you to savor the eternal enigma that is embodied in a distilled spirit. It is a form of magic to take fruit or grain, ferment it, put it in a pot, heat it and make it disappear entirely, and then watch it reappear, drop by drop, as a clear, volatile, almost ethereal liquid. And it is a dangerous liquid—do not kid yourself. It can catch fire, can explode, and abusing it can ruin lives. It is powerful, mysterious stuff, surely one reason that captures the imagination of the producers and consumers swirling and swilling around the current awakening.

So drink deep of Bill and Alan's guide, get on the road with them, go exploring and learning, and enjoy being an early participant in the movement. And take my word for it, as a distiller of whiskey since the second Whiskey Rebellion's first shot: "Heads we win, tails we win!"

Fritz Maytag
Anchor Distillery
San Francisco
April 2010

INTRODUCTION



AS A YOUNG MAN in the 1970s, I had long hair, a Volkswagen Beetle, a hip wife, and a career as a newspaper photographer. I also published four photography monographs, including the classic *SUBURBIA* (still in print), and I received a Guggenheim Fellowship in photography and three National Endowment for the Arts grants. My dream was to work for *LIFE* magazine or *National Geographic*, and I ended up stringing along for the Associated Press and covered the Hell's Angels beating people with pool cues at Altamont. While all this was happening, I was homebrewing in the garage.

By the 1980s, when I reached middle age, I had a flattop, sold the VW and cameras, and lost my wonderful wife. In 1982, I opened the first brewpub in the United States: Buffalo Bill's Brewery in Hayward, California. The beer was good. My pumpkin ale is still being brewed by many breweries. My public image was "colorful," and the news media loved me. I started believing my own press clips. I opened two more brew-pubs and launched a public stock offering to fund the building of a large-scale production brewery. It all seemed like a good idea at the time. It was, after all, "Morning in America," Reagan was in the White House, and the operative phrase for the times was "Greed is good."

I wanted success, money. I had three brewpubs. I grossed a million dollars that year, but I had to pay sixty employees and ended up with no profit. Things don't always work out as you dream. The stock offering never got off the ground, and one by one, the brewpubs were sold off, with Buffalo Bill's being the last to go. But I'll always have Alimony Ale ("The bitterest beer in America!").

By the 1990s, I had gray hair and a new wife, and I was publishing two magazines: *American Brewer* and *BEER: The Magazine*. Once again my timing was good, and the *American Brewer* rode the first great wave of craft brewing. Things were looking great, but financially, the two magazines turned out to be not such a great idea. I soon stopped publishing *BEER* and sold *American Brewer*.

Soon after, the AARP mailings started showing up, and I opened an antique store. That venture lasted six months. Then my agent sold some *SUBURBIA* photographs to Elton John, giving me enough money for a (used) Lexus and the cash for a three-month trip across America, so I ran away from

home. On this trip I decided to visit some craft distilleries. I was intrigued, and the creative juice started to flow again. When I returned to California, I founded the American Distilling Institute (ADI). In 2003, I held the first ADI distilling conference at St. George/Hangar One Distillery, and some eighty people showed up.

In 2007, I decided to make another trip across America. Again, the trip was funded by selling photographs to museums, an assortment of art galleries, and friends in the United States and Europe. This second trip (21,000 miles) took four months, and from fifty-three DVDs of images, we selected a hundred or so for this book. By 2009, the ADI database contained 1,246 names, of which 205 are members, and of those, 165 are craft distillers. The future for the industry is bright. More and more people want to learn the art of craft distilling. They want to learn how to run small businesses, selling their handcrafted products to the public. My recent "how-to" book, *Craft Whiskey Distilling* has sold 300 copies in three months.

The craft distilling industry is really about lifestyle. People take great pride in producing their products. This book is a look at craft distillers and the rest of the whiskey, rum, vodka, and gin industry.

I still have a foot in both camps, photography and distillation. But if I had to choose, it'd be distilling, because it's a way of life.

Special thanks to Alan Dikty, the editor of this book and a personal friend. Alan has been with me as a friend and writer for some thirty years. Alan knows spirits. A big thank-you also to Andrew Faulkner, photographer and photo editor for this book.

Bill Owe
Hayward, California
March 20

AUTHOR'S NOTE ON SPELLING

For reasons that have yet to be adequately explained, American and Irish distillers spell the word whiskey with an e while their Scotch, Canadian, Japanese, and New Zealand peers spell whisky without it.

CHAPTER ONE

A BRIEF HISTORY OF DISTILLING

SINCE the earliest known use of distillation about 5,000 years ago, practice of the art has grown and spread around the world in several waves, the speed and extent of each being dictated by geography, trade routes, and cultural and religious influences. Each successive wave gave rise to significant technical advances in distillation, making it less expensive, more efficient, and more controllable.



Very Fine Whiskey bottle, circa the 1920s: This vintage bottle was acquired at a flea market, then filled with Old Forrester.

Possibly the earliest written record of distillation is in the *Epic of Gilgamesh*, which describes a form of essential oil distillation practiced in Babylon as far back as 3000 BCE. Herbs were placed in a large heated cauldron of boiling water, and the cauldron's opening was covered with a sheepskin, fleece side down. Periodically the sheepskin was changed, and the condensate soaking the fleece was wrung out into a small jar. Essential oils floated to the surface of the water collected in the jar and were skimmed off. Medieval texts and woodcuts show the same principle being used to concentrate alcoholic vapors from boiling wine. (Incidentally, this is similar in principle to a method that the Phoenicians used for consuming cannabis.)

DISTILLING MIGRATES EAST AND WEST

By 500 BCE, alcohol distillation was an established industry in the ancient Indian area known as Taxila (in modern northwest Pakistan), where archeologists discovered a perfectly preserved terracotta distillation system. In this process, steam rising from a pot of boiling water passed through a bed of fermented grains, picking up alcohol and flavors from the grains. The vapors then struck the bottom of a second pot filled with cold water, where they condensed and dripped into a collection tube.

From Taxila, knowledge spread to the East and the West, and by 350 BCE, knowledge of the distilling process appeared in the writing of Aristotle in Greece and Sinedrius in Libya. The first arrival of distillation technology in China is misty, but by 25 CE, bronze stills of similar design were being produced and used there.

By the end of the first millennium CE, the practice of distillation had spread throughout northern Africa and the Middle East. The process had advanced significantly over this thousand-year period and the material being distilled was now boiled directly in a large sealed pot, which had a long tube leading from its apex to a small collection jar. When the Moors invaded Spain, they brought the technology with them, and soon the genie (or spirit) was out of the bottle. The technology spread from Spain to Italy in 1100 CE, and was recorded in Ireland by 1200, Germany by 1250, and France by 1300. England, Scotland, Poland, Russia, and Sweden joined the club by 1400.

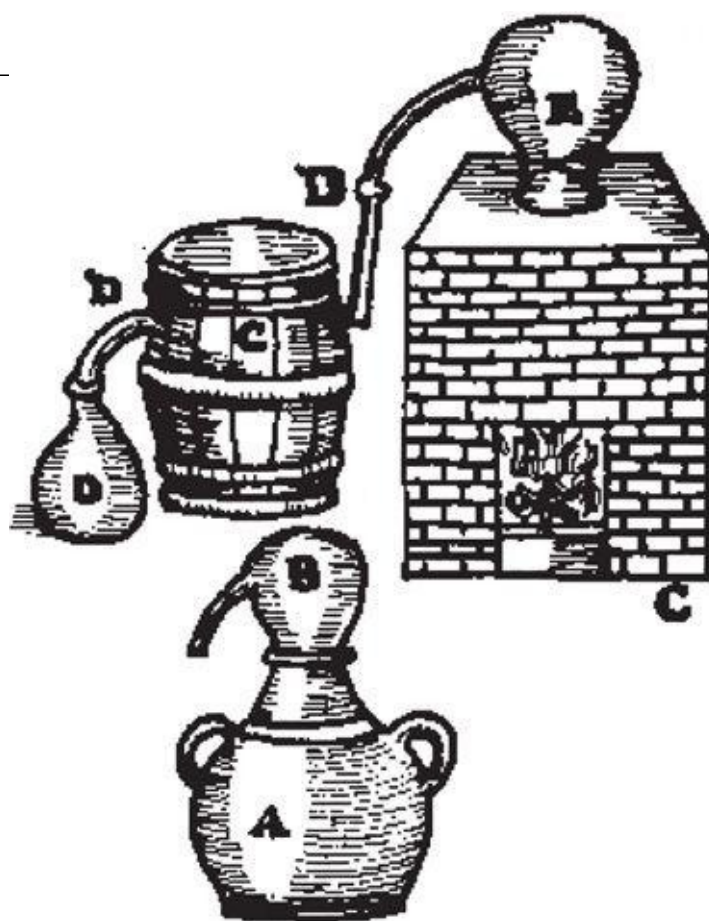
DISTILLING TECHNOLOGY EVOLVES

European exploration and conquest spread rapidly around the world, carrying the technology of distillation with it. The first stills in the Americas appeared not long after the conquistadores, and the Portuguese brought the technology to Japan by 1500.

This technology was largely controlled by alchemists and monasteries, who continuously experimented and improved on the equipment. By the mid-1600s, several texts had been published on the subject of distillation, a sample of which included the woodcuts on this spread, from *The Art of Distillation* by Jonathan French (1651). As this information spread beyond clerical and scientific circles, wealthy individuals began to establish still houses on their estates.

As knowledge blossomed throughout the Renaissance, distillation continued to develop rapidly. Distillation was removed from the exclusive province of scientists, monks, and professionals and became a common household art. Recipe books abounded.





These woodcuts from *The Art of Distillation* by Jonathan French (1651) show a small part of the wide variety of forms distilling equipment had taken by the seventeenth century. Two key improvements are shown: multiple distillations in one set (one still feeding into the next) top of page, and an improved vapor condenser (a coil of tubing known as a “worm” in a barrel of cold water), below and opposite page.

~~—“There is more refreshment and stimulation in a nap, even of the briefest, than in all the alcohol ever distilled.”~~

—**Ovid** (ancient Roman classical poet and notorious wet blanket at bacchanals, 43–17 BC)

By the 1700s, the complexity and sophistication of commercial-scale distilling equipment advanced rapidly. Advances in the understanding of how distillation actually worked led to new still designs that could make better quality spirits more easily and faster than in the past. Distilling became more accessible to the masses, and the monopoly held by the church and the elite classes was threatened. These centers of power soon enacted restrictions, at first to protect that monopoly, and later purely for revenue.

GEORGE WASHINGTON AND GERRYMANDERING

It is well known that George Washington was a distiller. What is less well known is that the law he crafted set the distinction between the heavily taxed small distillers and the lightly taxed large distillers, the line being drawn just below the size of his distillery. Politics worked in much the same way then as it does today.

sample content of The Art of Distilling Whiskey and Other Spirits: An Enthusiast's Guide to the Artisan Distilling of Potent Potables

- [click Winter Chill \(Scobie Malone, Book 12\) \(UK Edition\)](#)
- [read *A Prayer for Owen Meany: A Novel*](#)
- [click Three Fates here](#)
- [Genetics: Analysis and Principles \(4th Edition\) for free](#)

- <http://www.khoi.dk/?books/The-Handbook-of-Historical-Sociolinguistics.pdf>
- <http://www.gateaerospaceforum.com/?library/Java--The-Complete-Reference--8th-Edition-.pdf>
- <http://www.rap-wallpapers.com/?library/LogoLounge-9--2-000-International-Identities-by-Leading-Designers.pdf>
- <http://unpluggedtv.com/lib/Programming-PHP--3rd-Edition-.pdf>