



# The advancement of wine accessories

Alexander Spencer

## Introduction

In the United States, the consumption of wine continues to increase. According to the Wine Institute, a public policy advocacy association based in California, the average American consumed 2.94 gallons of wine in 2016, amounting to a total of 949 million gallons over that year, compared with 449 million gallons in 1993 [1]. In the United Kingdom, polling conducted by the Wine and Spirit Trade Association (WSTA) showed that the popularity of wine had risen to such an extent, that it now constitutes more than 60% of the country's total alcohol consumption, despite the overall decrease in the amount of alcohol consumed [2]. As wine becomes the preferred alcoholic beverage in many western countries, the door has now been opened to a new field of innovation.

This case study evaluates the progression and innovation of wine accessories. In addition to the various appliances and tools that have been patented within the viticulture sector that have ameliorated the consumer's experience with wine, this study analyses the trends within the industry and the advancements made.

## The inventors, their inventions, key citations and the relationship with other classifications

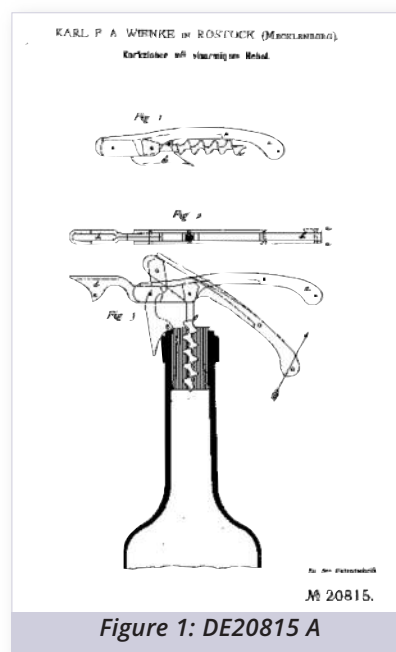
In 1795, English clergyman, Reverend Samuel Henshall patented the corkscrew [a], the tool that revolutionised the containment and transportation of wine, in addition to other beverages. Since then, multiple appliances have been patented that have sought to improve upon this original device.

For example, der Korkezieher mit einarmigen Hebel [b], which translates as "the one-armed lever corkscrew," was patented by German inventor Karl F. A. Wienke in 1882 (see Figure 1). Consequently, a multitude of other inventors later developed their own ideas from this patent, by either altering the original device or adding their own variations. An example of this would be André Marcel Dejoux, who in 1980 patented the 'Wine Waiter's Corkscrew' [c], a tool with an elongated handle and two extraction levers pivoted to one end of the handle, each lever with a notch which rests on the bottle neck to help extract the cork. This influenced Léonard Sannajust in 2002 to develop what is known today as the 'Waiter's Friend Corkscrew' [d], an instrument used by

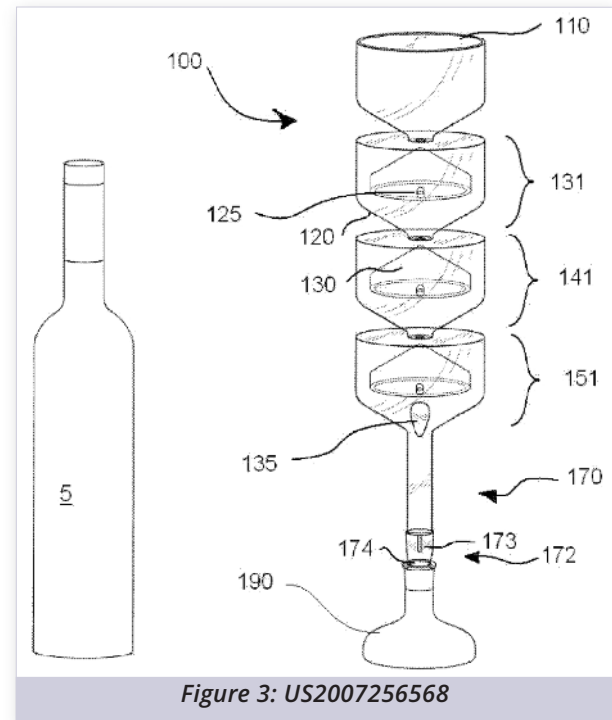
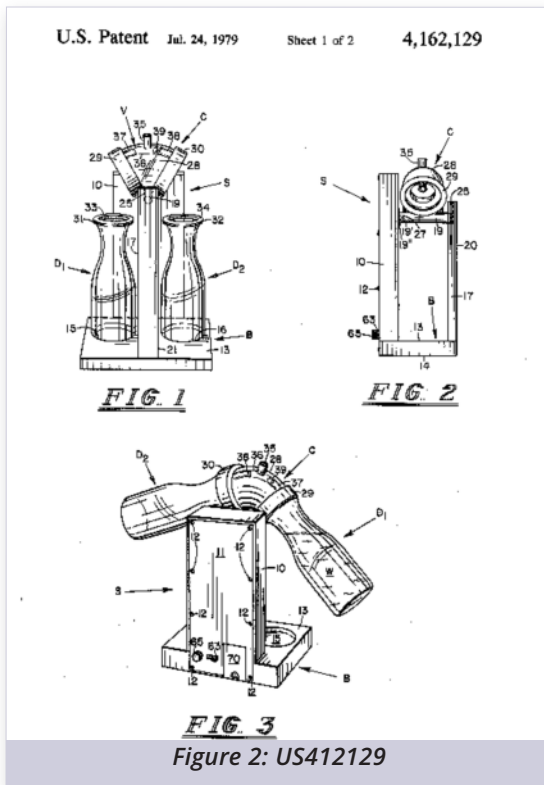
sommeliers and other hospitality workers to further facilitate the process of opening a bottle of wine. The latter cited both of the previous patents in his application, thus

exhibiting the progression of the corkscrew whilst simultaneously paying homage to the previous inventors; without whom, his own invention would not exist.

In addition to corkscrews, there have been countless inventions that have changed the way in which we experience wine. In more recent years, items such as wine aerators have become widely accessible and several advancements have been made within the field of wine preservation.



As the public's interest in wine continues to grow, so does their eagerness to learn more about the product leading to some innovative breakthroughs. For example, oenologists have stressed the importance of decanting wine so as to maximise the flavours. Traditionally, this was achieved by swirling the wine or opening the bottle and allowing the wine to stand for a period of time before pouring, known as the Audouze method.



Numerous funnel systems have been invented and patented but one of the earliest and most ingenious examples was that of American inventor Glen W. Bartholomew Jr., who patented his wine aerator in the late 1970s [e].

Unlike Dejoux and Sannujust, the two inventors listed in the previous corkscrew example who enhanced Wienke's idea, Bartholomew Jr. took ideas from various inventions from different areas and classifications, to create something distinct. That is to say, the abstract and claims of Bartholomew Jr.'s aerator (See Figure 2) share little in common with those of the inventions that he cited in his patent application.

For instance, one of the citations listed was William G. Indrunas' 1964 'Bottle Coupling Device' [f], an object used to drain ketchup from one bottle into another. Another was the domestic appliance developed by Delco Light Co. in 1928 [g], which contained information regarding the appliance's oscillating member and electric motor, both

of which inspired Bartholomew Jr.'s invention. Despite their usefulness, neither of these patents are related to the field of wine. Equally, Bartholomew Jr.'s wine aerator has inspired many of today's inventors. Such as Mario Cifaldi, who patented his 'Automatic Wine Stirrer' [h] in 2018, as a more productive and efficient way of aerating wine. Or the 'Wine Decanting Device' [i] developed by Thomas Scott Hassur in 2007 (see Figure 3), a device with an internal funnel structure, that once wine is poured into, allows the liquid to stream through and spread laterally over a convex shape, where it is then collected.

Furthermore, Bartholomew's wine aerator has inspired inventors from other fields, such as Seth Cysewski's 'Method and Apparatus for Capturing Mixing Bar' [j], a scientific tool designed to retrieve metallic or magnetic bars from containers. Such utilisation of prior art exacerbates the importance of intellectual property and the significance of patents, not just to protect the inventor but also for the progression and advancement of technology.

## Trends within the industry and the most innovative countries and companies

In more recent years, one of the most well-known and cited patents in the field of wine accessories has been the 'Wine Extraction and Preservation Device and Method' [k] designed by Gregory Lambrecht, chairman of Coravin Ltd., a company that was established in 2011 in Massachusetts, U.S., which specialises in the manufacturing of products for the wine industry. What differentiates the Coravin wine preservation tool from most other instruments is its ability to extract wine from a bottle, without removing the cork (see Figure 4).

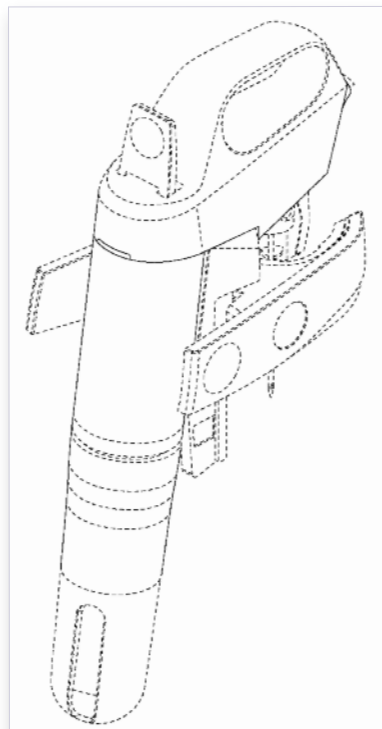


Figure 4: USD689353

The device injects a needle through the cork and into the wine. The trigger on the device pressurises the wine and once released, the wine will begin to pour. This allows for a specific quantity of wine to be consumed without exposing the rest of the bottle to air, preventing oxidation.

However original this invention may sound, the preservation tool patented by Coravin Ltd. was greatly inspired by American inventor Charles Robert Lane's ground-breaking 'Dispenser for Vintage Wines' [l], designed in the 1970s. The abstracts of these

two inventions are indistinguishable, as both claim to extract wine from the bottle without removing the cork.

It is interesting to note that in both cases, the patent assignees are from the U.S. The statistics indicate that the U.S. is ahead of the competition when it comes to the production of wine accessories, closely followed by China. However, it is important to note that most Chinese patent applications within this discipline are utility models and are domestic only. Figure 5 (pictured below) illustrates the key jurisdictions of patents filed under the International Patent Classifications (IPCs) of

corkscrews, stoppers and pourers, the Japanese F-term classification of devices for dispensing beverages, as well as the Cooperative Patent Classifications (CPCs) of beverage preservation inventions and corkscrews with supporting means for assisting the pulling action of a wine-waiter/sommelier. Although these graphs are specific to the classification groups—which may not take all wine appliances into consideration—it does give a good indication as to where these wine accessories are being invented and which companies are excelling in this field. Figure 6 (pictured below) shows



Figure 5



Figure 6

that WEN Yonglin and Coravin Ltd. are leading the way in the advancement of wine accessories, with a higher level of productivity compared to their competitors.

More recently, Coravin Ltd. patented a 'Beverage Extractor for Sparkling Beverages' [m] (see Figure 7). Unlike the 'Wine Extraction and Preservation Device' (see Figure 4 on previous page) which worked only with wines that were still, this instrument can be used to dispense sparkling wine from the bottle without removing the cork. Due to the carbonation of sparkling wines, this product functions in a very different way to other wine preservation devices.

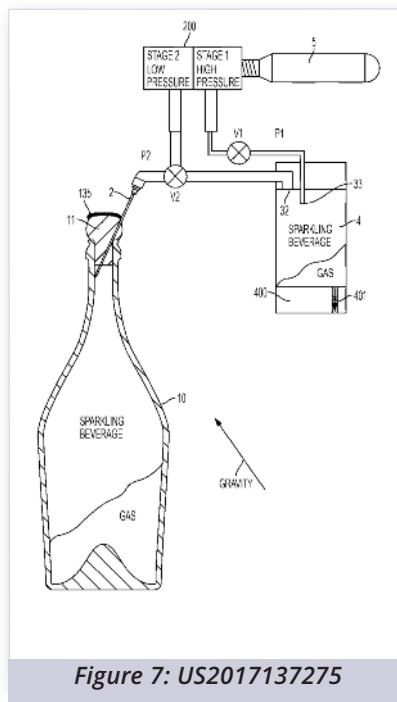


Figure 7: US2017137275

Since the turn of the century, the innovation coming from the industry of wine accessories and appliances has been phenomenal. Due to the public's ever-growing fascination with viticulture and oenology, it is extremely likely that we will see some exciting and creative inventions in the near future.

PatBase, the online patent database, makes it easy to review any technology area – from viticulture to pharmaceuticals. With 125 million patent documents to search from, innovative tools

available to efficiently navigate the sea of data and a fully integrated analysis platform, it's no surprise that PatBase has attracted over 80,000 users since its launch in 2003. Sign up for a free two-week trial today, call us on +44 (0)20 8404 0651, or email us at [info@minesoft.com](mailto:info@minesoft.com).

## The future

Figure 8 (pictured below) shows the progression of wine accessories between 1995 and 2016. By reviewing the graph data relating to the number of patent families from the classifications under which wine accessories mostly fit, it is clear to see that this number has risen considerably over this 21-year period. Despite the dip between 2009 and 2013, the number of patent families in 2016 was triple that of 1995.

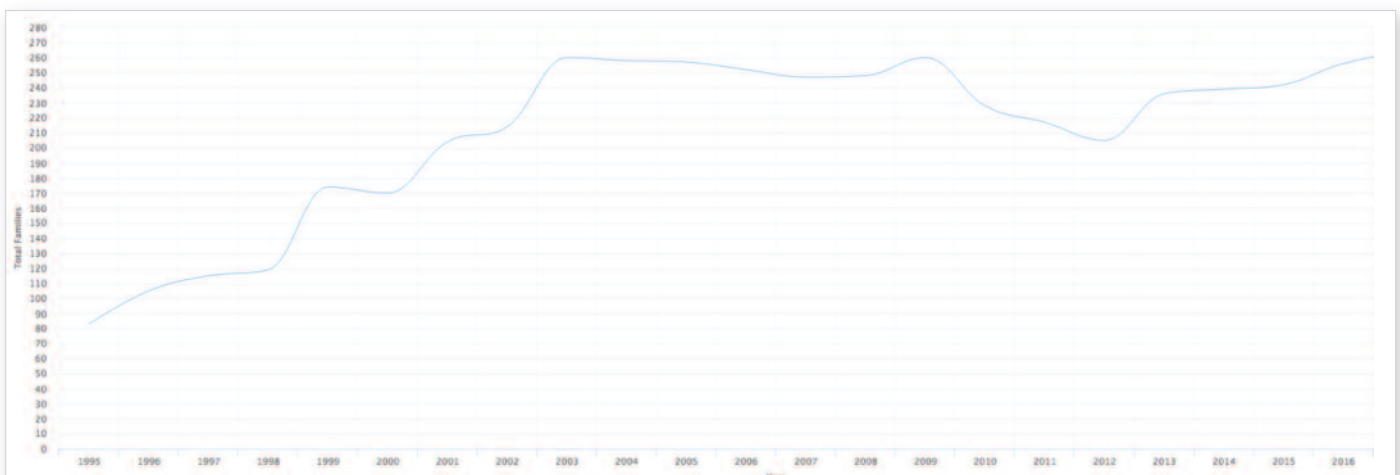


Figure 8: CPC=(B67B7/0423) OR (FT=WINE OR FT=CORK\* AND (CPC=(B67D1/0004) OR JCT=(3E082/BB\*) OR IC=(B65D39/00) OR IC=(B67B7/02) OR IC=(B67B7/04) OR IC=(B67B7/06)))

## References

- [1] <https://www.wineinstitute.org/resources/statistics/article86>  
[2] <https://www.wsta.co.uk/press/731-uk-becomes-a-nation-of-wine-drinkers-as-wine-replaces-beer-as-our-drink-of-choice>

## Publication numbers

- [a] GB2061/1795  
[b] DE20815  
[c] FR2482940  
[d] EP1251098  
[e] US4162129  
[f] US3156272  
[g] US1681404  
[h] US10160940  
[i] US2007256568  
[j] US2015314253 [k] US2005178801  
[l] US3883043  
[m] US2017137275

## Images

Figure 1:

<http://www.patbase.com/mosget.asp?ID=26124763&FileSave=DE20815.PDF>

Figure 2:

<http://www.patbase.com/mosget.asp?ID=7486162&FileSave=US4162129A.PDF>

Figure 3: <http://www.patbase.com/mosget.asp?ID=40797663&FileSave=US2007256568A.PDF>

Figure 4:

<http://www.patbase.com/mosget.asp?ID=54707601&FileSave=USD689353S.PDF>

Figure 5 and Figure 6:

<https://www.patbase.com/analyticsViewer/public/?dashboard=dea75219824d3aaac51b2b3544068083>

Figure 7: <http://images.patbase.net/phpmosaic/getone.php?pn=US2017137275&kd=AA&pg=1>

Figure 8:

<https://www.patbase.com/analyticsViewer/public/?chart=4af542339044599b1ca2c09bb79d35cf>