

TECH 780/880
Take-Home Quiz 2: Patents
Spring 2019

This take-home is due on **Tuesday, April 16, 2019 at 6:00 pm**. Please email your responses to roger.ford@law.unh.edu by that time.

Please format your responses similarly to this document: **single-spaced, with 1.5-inch margins, and extra space between paragraphs**. Use 12-point Cambria, Century, Constantia, Book Antiqua, or another high-quality serif body font; do not use Times New Roman, which is a terrible font. (Or if you want to use LaTeX and Computer Modern, that's fine with me.) Number your pages and submit your answers as an attached PDF file—not a Word file—with the file name “[your last name here] quiz 2.pdf.” Use the subject line “IP Law quiz 2” in your email. *I did not deduct points on quiz 1 for failing to follow the instructions in this paragraph, but I will on this quiz.*

You may consult **any existing material you wish** while working on this quiz. You may not, however, discuss it with anyone else—classmate, friend, random lawyer on the internet, anyone—until after everyone has completed it. Do not spend more than **three hours** on this; it shouldn't take anywhere near that long. Do not write more than 1000 words total across all three answers. No need to include a copy of the questions with your answers. List your word count at the end of the document.

Please type (do not copy and paste!) the following at the top of your exam: *I affirm that I have not discussed this quiz with anyone during its administration and that I have complied with the word and time limits.* (You can omit these words from your word count.)

If any of the facts or questions is unclear, make reasonable assumptions and inferences, state them explicitly, and explain how your answer depends on them.

Good luck!

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Patent number 9,000,000 (“the ’000 patent”) describes and claims a “windshield washer conditioner” for use in cars. (This is a real patent, though I made up the facts given in the questions.) The abstract of the patent reads:

A system and method of collecting and conditioning rainwater and other moisture, such as dew, from a windshield of a vehicle and utilizing the collected fluid to replenish the fluids in the windshield washer reservoir. A collection funnel is positioned on a vehicle in order to collect rainwater and other moisture. Rainwater and other fluids from the collection funnel are directed to a conditioning cartridge where the water is de-ionized and windshield washer fluid is added. The cartridges are designed to be single replaceable units. The mixed fluid from the mixing cartridge is directed to the pre-existing windshield washer reservoir.

The specification includes the following language:

FIELD OF THE INVENTION

The present invention relates generally to an apparatus and method of replenishing and conditioning the fluid within a windshield washing system. In particular, to an apparatus which can recover rainwater, dew and recapture dispensed fluids from the windshield of a vehicle to replenish and condition the fluid within a windshield washing system.

BACKGROUND OF THE INVENTION

Windshield cleaning systems are old and well known in the art. Most of them employ a reservoir containing a fluid, such as water. The water can include an additive which will prevent the water from freezing in the colder climates. This additive is commonly known as a deicer. The deicer can also remove ice that has formed on the windshield of a vehicle. Other additives to the fluid reservoir include substances which enhance the cleaning properties of the water/fluid in the reservoir, such as all season windshield cleaner, all season windshield cleaner and deicer, rain repellent with or without all season cleaner or all season windshield cleaner and deicer.

In the winter months, when slush and other substances from the roads splash up onto the windshield of vehicles, the operator of the vehicle utilizes the windshield washer system repeatedly to clean the windshield to provide a clear view for driving. This high use of the windshield washer system can and normally does result in all of the fluid in the windshield

washer reservoir being used up rapidly. If the vehicle operator is not vigilant in maintaining the washer reservoir full of fluid, the operator may be without the ability to clean the windshield when the need arises. Thus there is a need to provide a system and method of readily replenishing the fluid in a windshield washer reservoir without the vehicle operator constantly monitoring the fluid in the windshield washer reservoir.

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SUMMARY OF THE INVENTION

A system and method of collecting rainwater and other moisture, such as dew, from a windshield of a vehicle and conditioning the collected fluid to replenish the windshield washer reservoir. One or more collection funnels are located at various locations on a vehicle. Rainwater and other fluids from these funnels are directed to a fluid conditioning cartridge. The fluid conditioning cartridge includes quick connect fittings to allow the cartridge to be a single replaceable unit.

Accordingly, it is an objective of the present invention to provide a system that collects fluids and utilizes these fluids to replenish the fluids in a windshield washer reservoir of a vehicle.

It is a further objective of the present invention to collect rain or dew on windshields to condition and replenish the fluids in a windshield washer reservoir of a vehicle.

It is yet another objective of the present invention to collect rain or dew on various parts of a vehicle to replenish the fluids in a windshield washer reservoir of a vehicle.

It is a still further objective of the present invention to provide a disposable fluid conditioning cartridge to condition the fluids in a windshield washer reservoir of a vehicle.

It is still yet a further objective of the present invention to collect rain, dew, or melting snow/ice on windshield wipers and to collect rain, dew, or melting snow/ice on various portions of a vehicle to replenish the fluids in a windshield washer reservoir of a vehicle.

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The patent application was filed in 2013, claiming priority to an application filed on March 13, 2012 (which means the patent is governed by pre-AIA law). The inventor was Matthew Carroll and the patent is assigned to Wiperfill Holdings LLC. The patent issued on April 7, 2015, with ten claims.

Question 1. For each of these references, explain if it is a relevant prior-art reference for purposes of 35 U.S.C. § 102. In other words, explain if it falls into a relevant category of prior art and if the timing makes it prior art; do not consider if the reference discloses the invention.

- The windshield-wiper system included in the Citroën DS 4, a compact car manufactured and sold in Europe since late 2010. Citroën is a French carmaker; its cars have not been certified for sale or legal operation in the United States.
- A repair manual for the DS 4, printed in French, German, Polish, Spanish, and Italian and sent, for free, to Citroën dealership service departments throughout Europe starting in January 2011.
- A DS 4 car bought by General Motors engineers and shipped to their offices in Michigan in April 2011 for disassembly, research, and testing.

Question 2. I haven't given you the claims from the '000 patent because they are, frankly, far longer and more complicated than they should be, but suffice it to say that the patent claims various combinations of simple mechanical devices that were well known in the prior art: a fluid reservoir, funnels, tubing, water filters, disposable filter cartridges, and so forth.

Does this mean that the claims would have been obvious under *KSR*, or is there an argument that this patent's claims are less obvious than the ones at issue in that case? Explain.

Question 3. Wiperfill Holdings LLC sues Tesla, Inc. for including a similar system in the Tesla Model S, a high-end electric car sold in the United States. Tesla responds that some of the claims are invalid for failure to claim patentable subject matter pursuant to 35 U.S.C. § 101, as interpreted in cases like *Alice Corp. v. CLS Bank*. Tesla claims that the patent claims trivial applications of the abstract idea of a self-replenishing windshield-washer system. Is this a persuasive argument? Explain.

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