

**Q1.**

***Subject Matter***

Any new or useful process, machine, manufacture, composition of matter, or new or useful improvement thereof is patentable. However, abstract ideas, natural phenomena are unpatentable unless something else is added. Then came *Alice and Mayo* which said you can patent abstract ideas if there's an inventive step or unconventional activity. First you ask whether the claims involve patent ineligible concept? If so, you then ask whether there an inventive concept sufficient to transform the claimed abstract idea into patent eligible application? See *Alice and Mayo*. Here, Pat is patenting a human-made device that does not involve a law of nature, physical phenomena, or abstract idea. However, Knock Off's R Us (KO) may argue that this this is an abstract idea or law of nature in that Pat is seeking to patent the abstract idea of avoiding infection of a virus, but Pat has added an inventive step under the *Alice and Mayo* test by creating a physical device, and thus, a challenge based on SM is very unlikely to succeed.

***Utility***

Utility requires the inventor to show that at the time of invention, the invention had practical, beneficial, and operable utility. Operable means that the invention must work for its intended purpose, which the PTO assumes unless the invention is inherently unbelievable to a PHOSITA. Under *Lowell*, an invention doesn't have to be the best to be patentable. For beneficial utility, an invention can't be socially harmful or have a deleterious purpose. See *Juicy Whip*. For practical utility, an invention has to have well-defined particular public benefit (specific utility) and a significant and presently available public benefit (substantial). See *In re Fisher and In re Brenner*. Here, it is believable that someone could create a social distancing

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device that would help maintain distance between people so operable utility is met. The invention has beneficial utility because it is actually socially beneficial and seeks to help the public. There is practical utility because it has a specific utility of helping people keep distance between one another and substantial utility because it keeps distance between people in order to avoid infectious diseases.

### ***Adequate Disclosure***

The specification has to contain a written description of the invention and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable PHOSITA to make and use the invention.

#### ***A. Enablement***

Enablement is determined at the time of filing and it means that the applicant has to explain to a PHOSITA how to make and use the invention without engaging in undue experimentation. *See Incandescent Lamp*. To determine whether undue experimentation is required, you look at: (1) quantity of experimentation necessary; (2) amount of direction or guidance presented; (3) presence or absence of working examples; (4) nature of the invention; (5) state of the prior art; (6) relative skill of those in the art; (7) predictability or unpredictability of the art; (8) breadth of the claims. *See In re Wands*. Here, there is an argument that there is undue experimentation in Pat's patent claims because the PHOSITA would have to experiment to see what type of cylindrical structure would adequately serve the purpose of the device. Second, there might be undue experimentation because there are no measurements on what size the cylindrical device might be and the width of the cylindrical device. However, if the PHOSITA is a medical device company or pharmaceutical (for example a Johnson & Johnson), then the PHOSITA might be able to

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figure out without much experimentation the appropriate size needed to be able to distance the wearer from infectious bystanders because the PHOSITA would know how far a virus or disease is spreadable, thus being able to figure out the size needed to avoid spreading.

Lastly, Pat did not provide measurements for how long the straps on the device had to be, but a PHOSITA would be able to figure that out easily by knowing the average size of a person. However, Pat may be able to defeat the argument against enablement because there are working examples of his product because he wore a prototype publicly and was shown on a TV story wearing it and there are also pictures included in the specification, thus by looking at the prototype the PHOSITA would be able to determine the size of the structure. The second claim incorporates the device in claim 1 and is thus just as broad because it still doesn't provide measurements for the device and it even broadens the area of where the device can be worn. The same analysis applied above to claim 1 applies to claim 2 but Pat might have an even bigger issue with this claim because there are no working examples of the device being used anywhere on the wearer's body and this would cause undue experimentation for a PHOSITA to figure out where the device is workable.

### ***B. Written Description***

Written description displays to a PHOSITA that the patentee possessed the invention at the time of filing. *Gentry Gallery*. The level of detailed required varies depending on the nature and scope of the claims and complexity and predictability of the relevant technology. *See Ariad*. The issue arises when either (1) the inventor amends their claims to add distinctions and elements not described in the original application, or (2) when the inventor claims too broadly (*Gentry Gallery*).

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Here, claim 1 was amended to add the language “wherein said hoop or other cylindrical structure is sufficiently sized to distance the wearer from infectious bystanders” and a second claim was added that said that the device could be work anywhere on the wearer’s body. For claim 1, it would be believable for a PHOSITA to believe that Pat possessed the cylindrical structure sufficiently sized to prevent spread of infections because in his specification, Pat explicitly said that the apparatus was made to maintain a distance large enough to prevent infectious disease such as coronavirus (which everyone knows spreads 6 feet) so it was clear that Pat possessed a device sufficiently large at the time of filing to prevent the spread of infections and the language of the specification supports this.

Claim 2, however, faces a bigger problem because nowhere in Pat’s specification does it say that the device can be worn anywhere in the body, and in fact, the specification explicitly says that the device is to be worn in the neck or shoulder area. Thus, there is a strong argument that Pat didn’t possess the invention at the time of filing and the language in the specification is not broad enough to support a finding that he did have possession. Although a claim is not limited to its preferred embodiment (Gentry Gallery), here, the original specification never hinted at the possibility of the apparatus being worn anywhere other than on the neck or shoulder, similar to Gentry Gallery where the console couldn’t be anywhere but on the middle of the sofa.

### ***C. Definiteness***

A claim must inform with reasonable certainty those skilled in the art about the scope of the invention and it is evaluated from the point of view of the PHOSITA at the time of filing (it is the metes and bounds of the patent). *Nautilus*.

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KO has a strong argument for indefiniteness because Pat's claims are broad and encompass not only hoops but other cylindrical structures that are sized in a manner to distance people from infectious people. However, Pat does not include any measurements on how big or wide the cylinder has to be, how long the straps have to be or any other measurements that would show a PHOSITA the limitations of the claims. However, Pat has a strong counterargument that a PHOSITA (if it's a medical equipment manufacturer) would know the average distance a disease travels and that way the PHOSITA knows how big the device has to be. In his specification Pat explicitly states that the device has to be big enough to maintain a distance sufficient to enable people to steer clear of infectious people and the PHOSITA would know that coronavirus spreads within 6 feet (they would also know the average spread of other diseases and for purposes of this problem I am assuming those don't vary largely from the 6 feet of the coronavirus). If the PHOSITA is just a normal manufacturer rather than one with medical knowledge, then Pat's claims are likely indefinite because there are no measurements or limitations in his claims.

### *Novelty*

There are 3 steps to a novelty analysis. First you have to determine what qualifies as prior art. Then you look to see whether it can be excluded under 102(b). Lastly, you look at whether a single reference anticipates the invention.

#### *1. Prior Art*

In order for something to be prior art it has to have a date prior to the critical date of the patent (for AIA purposes the date of filing). Here, Pat's critical date is 4/7/2021 because that's when he filed for a patent. The potential prior art references here are: (a) the photo of the pool noodle guy; (b) the hula hoop; (c) Pat's use of the prototype; (d)

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news story with the invention; (e) the distancing dress; (f) the mega hoop distancer; and (g) barrel man.

- a. The photo of the pool noodle guy was posted on 3/20/2020 which is before Pat's critical date and the picture showed that the device was being publicly used, it might be a printed publication because it was online and available to the public, and even if it wasn't, it would still fall under the "otherwise available to the public" category. Thus, this is prior art.
- b. The hula hoop is prior art because it has been in use since the 1950's which is before Pat's critical date. The hula hoop has been publicly used, on sale, and possibly described in printed publications (I'm sure there are some stories on hula hoops), and also otherwise available to the public.
- c. Pat's prototype was finished on 4/1/2020 but was not shown until 4/7/2020. By 4/7/2020, the device was being publicly used because he was wearing it and attracting reporters. There is no evidence that Pat was doing this as an experiment, thus, this is prior art.
- d. TV Station New Story happened on 4/9/2020 which is before Pat's critical date. This is possibly a printed publication because if it came with a word description or story and it was publicly available. Even if this isn't a printed publication, it falls under the otherwise available to the public category and thus is prior art.
- e. The FHC patent application. (I'm not sure what the difference between a PCT application is vs. claiming priority is). The Chinese application was filed in 4/20/2020 but did not publish until 18 months later which is after Pat's critical date of 4/7/2021 so the Chinese application is not prior art under the patented or

printed publication categories because it is after Pat's critical date. The US application was not filed until 4/8/2021 which is after Pat's critical date so this isn't prior art as a patent or printed publication (wont publish until 18 months later). Additionally, it is unclear when sales of the distancing dress happened (even if they didn't take off, a mere offer is enough), but if they were before Pat's critical date then its prior art, if no sales before Pat's critical date then no prior art. However, under 102(a)(2), a patent application that is filed before an invention's critical date is prior art as of its filing date if it eventually publishes. Here, FHC filed a foreign application on 4/8/2020. It was written in Chinese, but that does not matter under the AIA. They timely filed a US application on 4/8/2021 claiming the Chinese filing date as their effective filing date. The US application later published. Therefore, FHC's application is prior art as of their earliest effective filing date, 4/8/2020, before Pat's critical date.

- f. The mega hoop distancer was released (I'm assuming this means sold) on 5/1/2020 which is before Pat's critical date so this is prior art under the on sale category and otherwise available to the public category. Even if it was regionally used, it was available to the public and likely on sale to whoever wanted to buy it.
- g. Barrel man was in public use or otherwise available to the public since the 1970s and thus is prior art.

## 2. *102(b) Exclusions*

A disclosure is NOT prior art if it is within less than 1 year and it is made by inventor (or person who obtained the subject matter from the inventor), or if inventor publicly disclosed first. Here, Pat can exclude his public use of the prototype because it was within a year and

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he was the one that disclosed it. The mega hoop was based off of Pat's invention and it is within the one-year grace period so it can be excluded under 102(b). Additionally, the news story can be excluded because it was attributable (tv station got the disclosure directly from Pat) to Pat's disclosure and it was within a year of Pat's critical date (critical date is 4/7/2021 and news article happened on 4/9/2020). Similarly, Pat might be able to exclude FHC's 102(a)(2) prior art because Pat will argue that he publicly disclosed his invention on 4/7/2020 when he wore it in public which was earlier than FHC's global effective filing date of 4/8/2020 (but Pat will need to prove that FHC got the subject matter from Pat's disclosure). Barrel man can't be excluded because it was more than a year before Pat's critical date and it wasn't done by Pat or based off of Pat's disclosure. The Hula hoop, photo of noodle guy, and Barrel man all remain as prior art that can't be excluded because they happened more than a year before Pat's critical date.

### 3. *Anticipation*

Once the prior art is known, you have to determine whether the invention is novel in light of the prior art or if the prior art anticipates it. For prior art to anticipate, one single reference must contain all of the elements of the claim. *Robertson*. (Mega hoop, Pat's use and Tv stations story are not being analyzed because they have been excluded.) I am analyzing the FHC in case it isn't excluded under 102(b)(2) which I analyzed earlier and stated that it is most likely excluded.

- a. Hula Hoop- doesn't anticipate because it even though it is a cylindrical or hop shape, it does not include straps or support members like Pat's invention. Thus, it doesn't contain all elements of Pat's invention.



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- b. Photo of noodle guy- is not cylindrical and doesn't include support members (straps). Thus, it doesn't contain all elements of Pat's invention.
- c. FHC 102(a)(2) prior art includes a hoop or cylindrical shape and the hoop was within a dress. It likely doesn't anticipate because it doesn't have a support member that goes around the neck or shoulder (although arguable a dress does the same function; DOE doesn't come into play in an anticipation analysis).
- d. Barrel Man likely anticipates both claim 1 and 2. The elements of claim 1 are: hoop or cylindrical structure; support members attached to hoop or cylindrical structure to wear around neck or shoulder. Barrel man includes a barrel which is a cylindrical shape and it is attached by support members (straps) used around the shoulder. Thus claim 1 is likely anticipated. For Claim 2 is broader because it can be worn anywhere on the wearer's body. It might not be anticipated because barrel man could only be worn on shoulders or neck area.

### ***Obviousness***

Obviousness asks whether PHOSITA would select the patented elements to combine and the differences between the claimed invention and the prior art are such that an invention as a whole would have been obvious before the effective filing date of the application. To determine obviousness, one must go through the 5 Graham Factors.

1. Determine scope and content of the prior art

The prior art reference has to be in analogous art which means it is in the same field of endeavor or reasonably pertinent to the problem to be solved . *In re Clay*.

- a. Hula Hoop- not analogous because it's a toy and not meant for social distancing.

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- b. Photo of noodle guy- analogous because it is meant to solve the same problem of social distancing in order to avoid infection.
    - c. FHC 102(a)(2) prior art- analogous art because it is meant for social distancing although Pat will argue it is not analogous because it is in the field of clothing while Pat is more of a device worn over clothes. Court is likely to find it is analogous because it seeks to solve the problem of physical distancing.
    - d. Barrel man- not analogous because seems to be for entertainment purposes and has nothing to do with social distancing.
2. Ascertain the difference between the prior art and the claims at issue
  - a. Hula Hoop- has no straps or support members attached to the cylindrical or hoop shape.
  - b. Photo of noodle guy- not cylindrical and no support member
  - c. FHC 102(a)(2) prior art doesn't have a support member that wraps around the shoulder or neck.
  - d. Barrel man- seems to be cylindrical and have support members. Only difference between Barrel man and Pat's invention is that Barrel Man's cylinder is not sufficiently sized to keep away people with infectious diseases. Additionally, for claim 2, Barrel man is only to be worn around the shoulders and Pat's claim 2 can be work anywhere on the body.
3. Find the level of ordinary skill

The PHOSITA is likely a medical device company like Johnson & Johnson, but there is a strong argument that it could just be a common manufacturer.
4. Determine obviousness of the subject matter

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A combo of familiar elements in a known method is likely to be obvious when it yields predictable results. *KSR*. Obviousness requires a reasonable expectation of success. *In re Kubin*. The only art that is probably analogous is the noodle guy and the FHC 102(a)(2) prior art (if the FHC isn't excluded under 102(b)(2) which I analyzed earlier and stated that it is most likely excluded). A court might find that Pat's invention is obvious because the only difference is that Pat's hoop isn't incorporated into clothing and instead involves a strap worn over clothing. A court may find that a dress is basically a device that goes over the neck and shoulders and thus using a strap that goes over clothing was obvious. However, if the FHC was excluded then Pat's invention is likely not obvious.

### 5. Consider secondary factors

Secondary factors include commercial success, long felt but unresolved need, and failure of others. Pat will argue that he solved a long felt but unresolved need (the deaths caused by coronavirus and infectious diseases). There is no facts that show he did though.

## ***Q2. Infringement***

Whoever makes, uses, offers to sell, sells, or imports patent inventions infringes on the patent. For a product to infringe it must include every element set forth in the claim. The first step is to construe the claims. *Yeomans*. Claim language is given its ordinary meaning to one skilled in the art, in the context of the patent, and intrinsic evidence is considered first. *Phillips*. If it is still ambiguous, then extrinsic evidence may be consulted, like dictionaries, experts, and inventors. *Phillips*.

***Claim 1.*** Pat will claim the Mega Hoop infringes because it has all of the elements of Pat's device; it is a physical distancing device, it has a cylindrical structure, one or more support members, and it has a support wrap around part that can be worn on the waist and even on the

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neck or shoulders. Pat will argue that his language in the claim of “support member” doesn’t exclude a wraparound structure as opposed to just meaning a strap or rope. If Pat is successful in showing that support member includes wrap around structures, then the device would likely infringe. Additionally, even though the device is made to be worn around the waist, it can be worn on the neck or shoulders, so it infringes Pat’s Claim 1. Mega Hoop will argue that in his specification and drawing Pat limited the support member to straps or ropes that are attached to the hoop and go straight up to the neck or shoulder. Mega Hoop will say its device doesn’t infringe because the hoop is attached through strings to a wraparound structure that is not supported by Pat’s claims and the support member language in Pat’s claim doesn’t cover this wrap around structure.

**Claim 2.** Pat’s second claim incorporates the device in claim 1 which has already been analyzed for infringement above. Claim 2 is broader in that it says it can be worn anywhere in the body and thus the mega hoop would infringe because it is made to be worn on the waist.

### ***Q.3 DOE***

Under the doctrine of equivalents (DOE), infringement happens when the accused product performs substantially the same function in substantially the same way with substantially the same result. *Graver Tank*. If an amendment narrows a claim, a defendant may argue that the prosecution history estoppel means that their device cannot be found to infringe under equivalence. *Festo*.

Here, the amendment to the claim had nothing to do with the support member and it just narrowed to better describe the size of the cylinder. Thus, estoppel does not bar Pat from arguing infringement under the DOE. There is a strong argument for DOE because the infringing device has the same function of distancing people from infectious people, it is accomplished through the

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use of a cylindrical or hoop device, it is attached to support members, and the only difference is that the support member in the infringing device wraps around the person instead of being worn around the neck and shoulder area. As mentioned in the facts, the infringing device can be wrapped around the neck and shoulder area, and thus the minor change of the wrapping structure isn't enough to find that the device does not infringe under the DOE.

***Pre AIA***

Under the 1952 Act, the critical date is usually the invention date and that is when conception is (diligently) reduced to practice by creating a prototype or by filing a patent application.

**102(a).** An invention is not novel if, before the invention date, it was (1) publicly known or publicly used by others in this country, or (2) patented or described in a printed publication in the US or abroad. Pat's invention date is 4/1/2020. He conceived of the idea on 3/20/2020 and reduced it to practice on 4/1/2020 because that's when he had a prototype made. Thus, prior art would have to be evaluated if it was available prior to 4/1/2020. The hula hoop, noodle guy, barrel man, and prototype of the distancing dress all happened prior to 4/1/2020. The Hula Hoop, barrel man, and Noodle guy are still prior art under the 1952 act, but the distancing dress isn't because even though there was a prototype prior to Pat's critical date, there is no mention of it being available to the public or described in a printed publication until after Pat's invention date.

**102(e).** An earlier invention will disqualify the applicant if before the applicant's invention date (1) it was described in a pending US patent application and (2) the pending application was ultimately published or granted. Here, this is favorable to Pat because he filed one day before FHC (4/7/2021 vs. 4/8/2021). FHC can't take advantage of the Chinese filing

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date because it was written in Chinese and the 1952 Act only allows backdating if the application properly designated the US and it was in English.

**102(g).** The first to conceive and reduce to practice typically gets the patent unless the first to conceive yet last to reduce to practice can show diligence or that the first to reduce to practice abandoned, suppressed, or concealed the invention. *Peeler*. Here, even though Pat was likely the first to conceive, Pat was the last to reduce to practice because his prototype was finished on 4/1/2020 while FHC's was reduced to practice via a prototype on 3/25/2020. Pat can argue he had unbroken diligence from his conception (3/20/2020) through his RTP (4/1/2020) because the facts do not state otherwise which would give him priority.

**102(b).** Statutory bars invalidate a patent if either (1) the invention was patented or described in a printed publication in the US or abroad more than one year before the patent application or (2) the invention was in public use or on sale in the US more than one year before the US patent application. Here, Pat placed the invention into public use on 4/7/2020 and he filed for a patent application on 4/7/2021 which is within the 1-year statutory period, so he's not barred. Mega Hoop was not placed into public use until 5/1/2020 so it falls within the 1-year grace period. FHC's application was not public until 18 months after 4/8/2020 which doesn't bar Pat.