

ANSWER TO QUESTION 1: PATENTABLE SUBJECT MATTER

Rolling Measurement Company's (RMC) best argument for lack of patentable subject matter in Pat's invention is that it is simply an unpatentable mathematical relationship tied to conventional structure. *See, e.g., Gottschalk v. Benson*. The mathematical relationship is the linear displacement resulting with the revolution of a circular object. Specifically, if the circumference of a circular object, C, is given by

$$C = 2\pi r,$$

where r is the radius of the circular object, then the linear displacement, L, resulting after rotating the object by one revolution, is equal to C. The measuring device conventionally supplies the circular object and a display with the corresponding linear displacement. *See, e.g., Mayo v. Prometheus*. RMC's best application of this argument is to claim 2 because it is much broader than claim 1, although the argument is not likely to be successful in invalidating either one.

Pat will counter that the mathematical relationship is being applied in an unconventional manner – in a measuring tape device. Specifically, his/her claim includes measurement indicia within a housing and that removal of the measurement indicia spurs rotation of the roller. Pat will argue that these represent unconventional features, which put the relationship to specialized use and does not wholly preempt it.

ANSWER TO QUESTION 2: THE ‘123 PATENT’S VALIDITY

I. Utility

The ‘123 patent is not likely to face any significant challenges to its utility because the digital tape measuring device operates as it intended with no fantastic elements, is not morally unsound, and provides a particular and immediate benefits. 35 U.S.C. 101 requires that an invention be useful before a patent is granted on it. To be useful, the invention must satisfy the three judge-made requirements of *moral, operable, and practical* utility. Moral utility requires that the invention not be injurious to the well-being and sound moral of society. Here, nothing suggests that the measuring device is morally repugnant. Operable utility simply requires that the invention work as claimed. Pat’s claim of a display component that performs rotational to linear data conversion could be an issue. A display, as a PHOSITA would understand it, does not perform data conversion (more discussion of this issue under enablement section that follows). Therefore, a claim to a display component that performs data conversion (rotational to linear) could potentially be inoperable. Practical utility means that the invention have particular (specific) and immediate (substantial) benefits. Here, the invention’s benefits of extra-sensitive measurement, a frozen display for marking, and peace of mind comparison of the physical and electric measurements easily constitute particular and immediate advantages.

II. Enablement

The ‘123 patent’s enablement issues lie in the following claim elements:

- “measurement indicia within the housing” in claim 2, and
- “a display component operable...to convert...”.

Pursuant to 35 U.S.C. 112, 1st paragraph, the specification must enable one skilled in the art to make and use the invention. For enablement to make, the scope of the claim must be commensurate with the disclosure of the specification plus features that could be determined through levels of experimentation that would not be considered undue. For enablement to use, this issues only arises after a finding of a lack of utility, which is potentially the case.

As to the *measurement indicia*, Pat seeks protection for all measurement indicia, yet the specification only discloses a rigid tape blade, rope, cloth, or the like. Pat will likely argue that this is not a problem because an artisan of ordinary skill could apply other measurement indicia to the invention without suffering through undue experimentation given the mechanical nature of the device and the measurement indicia. Consider, however, that RMC developed measurement indicia in their temporary line that required significant research and expense, but this indicia is arguably not “within the housing” as Pat claims or maybe it is. As to the *display component*, displays normally do not perform functions like mathematical data conversion. Based on a PHOSITA’s ordinary understanding of a display, he/she would not likely understand how to convert data using conventional LCD displays. This could potentially be a serious issue for the ‘123 patent. Pat will likely counter that “display component” should be constructed to include circuitry that performs data conversion or that converted data simply means displayed data, although this will likely not be successful because the claim suggests that the display component receive rotational measurement data and output linear measurement data. The actual conversion must take place somewhere in the display by that reasoning.

III. Written Description

The enablement concerns above apply equally to the written description analysis. A claim is adequately described when the disclosure reasonably conveys to one of ordinary skill in the art that the inventor possessed the claim subject matter. If the specification has not taught an artisan of ordinary skill how to make a claimed feature, it follows that the inventor probably did not possess it. Specifically, as applied to the measurement indicia, RMC could be in the awkward position of arguing that their temporary line (measurement indicia) is within their housing to show that the Pat’s specification does not enable it and, thus, that Pat could not have possessed it. Also, if not enabled and lacking operable utility, a display component that performs data conversion could not have been in Pat’s possession. The other claim features appear to have been in Pat’s possession at the time of invention.

IV. Definiteness

Pat's claims presents two definiteness issues:

- "*substantially* equally spaced" in claim 1, and
- "*means for* providing a measurement of the rotation..." in claims 1 and 2.

The word "substantially" raises a concern that the claim language, read in light of the specification, and the prosecution history fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. However, this language is not so indefinite when read in the context of measurement tape. One of ordinary skill examining the claims and the specification would be on notice that the equal spacing represents conventional measurement units.

As to the means for providing, the means plus function language of this claim element ties it to the specification's structure and equivalents. *35 USC 112, 6th paragraph*. Here, it appears that the structure is the sensor(s). Therefore, the language is definite. Also, the means for providing does not appear to represent algorithmic steps, and thus, the specific algorithm need not be present to confer definiteness to the claim element. Although Pat sought to develop an algorithm for combining the readings from the three sensors, the claim language only requires "a" sensor not three, so Pat's lack of an algorithm would not lead to invalidation.

V. Novelty

A. Pat's invention date

Pat appeared to conceive of the idea for he invention on 12/1/00. From this date until the satisfactory completion of a working prototype (ARtP) on 2/1/01, he appeared to be diligent; nothing here suggests that he wasn't. Although he did give a working prototype to his friend before 2/1/01, he did not believe it to be working for its intended purpose, and thus, was likely not a reduction to practice. Even if it was reduced, however, his invention date would still be 12/1/00.

B. Pat's critical date

Because he filed his patent application on 1/1/02, his critical date is 1/1/01; anything qualifying as prior art before then bars Pat's application.

C. Status as prior art: RMC's rolling device

i. 102(a)

RMC's rolling device was marketed in television ads on or potentially before 1/1/00. If this information was broadcast nationwide, an argument can be made that it was publicly known, and thus, is prior art under 102(a). Also, the device appeared in brochures during this time, which could potentially be printed publications if sufficiently accessible. Before 12/1/00, however, the rolling device did not appear to be in use or patented.

ii. 102(b)

Because RMC's rolling device was marketed on or before 1/1/00, it could qualify as a printed publication (brochures). However, simply marketing the device as was done with the television ads and the glossy brochure would not trigger the on-sale bar. *Gemmy v. Chrisha*. Additionally, although Pat was able to buy a rolling machine on 4/1/01, this is irrelevant because these "sales" did not occur before Pat's critical date.

iii. 102(e), 102(g)(2)

102(e) is not applicable because RMC did not appear to file for patent on the rolling machine. As to 102(g)(2), RMC appeared to conceive before Pat did with the ads and brochures, but its date of actual reduction to practice is unclear - maybe 4/1/01, but it is unclear if they ever did reduce the rolling device to practice. If it did reduce on 4/1/01, it seems like a while to have been diligent when an amateur inventor, in Pat, reduced a similar device to practice in two months from conception.

iv. All elements

Even if the rolling machine qualifies as prior art under the sections above, it does not feature all of the elements claimed in either claim 1 or claim 2 of Pat's invention. Specifically, the rolling device does not include the measurement indicia/tape.

D. Status as prior art: conventional tape measure

As of its date, it is undisputed prior art – as 102(b) if admitted in specification. However, it does not teach the display, means for providing , or the roller of Pat's claims.

E. Status as prior art: first prototype to helpful friend

i. 102(a), (e), (g)

N/A. Pat cannot anticipate himself under the novelty provisions.

ii. 102(b)

Under *Egbert*, the first transfer of the prototype to Pat's helpful friend is a prima facie public use. However, it is not clear exactly when it happened. We know Pat transferred it sometime between 12/1/00 and 2/1/01. If it occurred before 1/1/01, it is prima facie prior art. However, Pat will argue that the transfer was for experimental use as he hoped to test for accuracy. Under the *Lough* factors, however, it is not clear that the use was experimental – no feedback, no secrecy agreements.

iii. All elements

Obviously present.

F. Status as prior art: RMC's marking device

i. 102(a), (b), and (e) date

None of RMC's actions with respect to the marking device reasonably present issues under these sections.

ii. 102(g)(2)

RMC conceived of the device on 11/1/00, before Pat. Thus, it faces two issues to constitute prior art as of that date: first, was RMC diligent between 11/1/00 and 7/1/01, when it finished a working prototype (ARtP), and second, did it abandon, conceal, or suppress the invention between 7/1/01 and 2/1/02, when it finally brought the device to market? The answer to these questions is mostly likely yes. RMC needed great research and expense to develop the product, which should excuse the delay between conception and ARtP. Next, it incurred manufacturing issues, which would not likely undo the otherwise reasonable efforts to bring the device to market.

iii. All elements

All elements are present. See Question 3 for more analysis.

VI. Obviousness

A. Claim 1

i. Scope and content of art and the differences between it and the invention

Each of the references is within the same field of endeavor as they are all directed to measuring devices. RMC's rolling device includes the housing, roller, means for providing a measurement, the display, but not the wound tape or that the tape causes the roller to rotate. The conventional tape measure includes the housing and wound tape, and nothing else, and RMC's

marking device includes the housing, roller, means for providing, but not wound tape, although is does teach a temporary line.

ii. Level of ordinary skill

As Pat, an amateur contractor, was able to invent a device to those similar in the art, the level of ordinary skill is likely that of an amateur contractor.

iii. Obviousness

If Pat's invention is obvious, it is likely obvious over a combination of the marking device and conventional tape measure as a PHOSITA would view the substitution of the wound tape for the temporary line as a predictable variation to the rolling device. Pat will likely argue, however, linking the roller to the pulled tape goes beyond the ordinary creativity of a PHOSITA, but it can be argued that there is an electrical link between the temporary line and the roller. Also, from a teaching, suggestion, motivation standpoint, all of the features would be present after the combination. However, Pat will likely argue that adding back the disadvantageous manual wound tape teaches away from the advances that the temporary line presents. And because a PHOSITA would not look to digressive modifications, the combination represents impermissible hindsight.

The obviousness in this case is not easy. RMC has invented a superior product but combining it with a conventional tape measure appears to run afoul of some bedrock obviousness principles (teaching away, hindsight).

Claim 2

As mentioned above, claim 2 is likely anticipated by RMC's rolling device.

ANSWER TO QUESTION 3: INFRINGEMENT OF THE '123 PATENT

I. Claim 1

A. Literal infringement: all elements

A digital display tape measure [*digital display present in a tape measure device*] comprising:

a housing [*clearly present in RMC's marking device*];

a tape wound on a reel within the housing, said tape including a series of substantially equally spaced and equally dimensioned marks along a common line [*not*

present in the RMC's marking device as the temporary line cannot be understood by a PHOSITA to be wound tape – also, no reel];

a roller rotatable on a shaft positioned within the housing, the roller positioned such that when the tape is extracted or retracted from the housing, the tape causes the roller to rotate [*roller is present in RMC's device but extraction/retraction is not*];

means for providing a measurement of the rotation of said roller [*inherent in the marking device as something needs to sense the roller's rotations, which is likely the same as a sensor and its equivalents as this element requires under 112, 6th*];

a display component operable to i) receive the measurement from said means for providing a measurement and ii) convert the rotational measurement to a linear measurement digital readout [*the marking device's display inherently receives the measurement and displays it using the screen.*].

B. Equivalents

The only claim elements not present in the marking device are the wound tape and extraction/retraction features. However, Pat will likely argue that the temporary line is an equivalent to these elements. The claim does not appear to have been amended, so a straightforward function, way, result test is appropriate. Here, Pat likely will not succeed because after the temporary line disappears, it presumably would not cause the roller ball to retract. Thus, it cannot be said that the two function in the same way.

II. Claim 2

A. Literal infringement: all elements

A digital display measuring device [*present as above*] comprising:

a housing [*present as above*];

a measurement indicia within the housing [*likely present as the structure that embodies the temporary line*];

a roller rotatable on a shaft positioned within the housing [*present as above*], said roller positioned such that it rotates in correspondence with removal of said measurement indicia from said housing [*likely present*];

means for providing a measurement of the rotation of said roller [*present as above*];

a display component operable to i) receive the measurement from said means for providing a measurement and ii) convert the rotational measurement to a linear measurement digital readout [*present as above*].

The elements at issue for claim 2 are the measurement indicia within the housing and the rotation in correspondence with the removal of the indicia. Based on claim differentiation, the measurement indicia is not limited to wound tape (see claim 1). Therefore, considering the temporary line as an infringing element appears to be sound, although RMC could argue that Pat's preferred embodiment requires the measurement indicia to be a rigid tape blade. Also, based on a PHOSITA's understanding of the language, the substance that creates the line is definitely present within the marking device. Also, as the roller is rotated, the temporary line leaves the housing and is positioned on the measured product. Thus, based on this analysis, RMC's marking device appears to literally infringe claim 2 subject to defense suggested above.

B. Equivalents

See claim 1 above.

C. Reverse Doctrine of Equivalents

Because the marking device overcomes the curved surface issues associated with Pat's device, RMC could likely present a reasonable RDoE argument. Because it is so seldom used, however, it is difficult to tell whether it would be successful.

ANSWER TO QUESTION 4: VALIDITY UNDER AIA

If after the AIA, the validity of the '123 patent changes only in regard to novelty and obviousness. As to novelty, no references become prior art that weren't already, and the only ones that includes all the elements is the transferred prototype and RMC's marking device. However, RMC's marking device is no longer prior art because it does not appear that RMC made any disclosures of the invention before 1/1/2002, so the possibility of 102(g)(2) invalidation disappears. With obviousness, the PHOSITA need only look to the filing date when determining obviousness of the invention over the prior art. As to the prior art itself, RMC's "sales" (if they are indeed sales) of the rolling device would constitute prior art because they occurred before 1/1/2002, but they do not add any potentially disqualifying disclosure. RMC's

marking device would not qualify as prior art. The analysis does not change for the prototype transfer, and the conventional tape measure remains the prior art as of its date, which is still before Pat's filing date. Thus, because the scope of the prior art no longer includes RMC's marking device, this makes it almost certain that Pat's invention is not obvious over the remaining prior art.