IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: SAKATANI et al

Serial No. : 07/831,704

Filed : February 5, 1992

For : FULLY-AUTOMATIC SPRAYING SYSTEM...

Art U

Exami

Washi

Atty.'s Docket: SAKATANI - 1

Date: September 3, 1993

THE COMMISSIONER OF PATENTS AND TRADEMARKS

Washington, D.C. 20231

Sir:

Transmitted herewith is an [ ] Amendment [XX] **BRIEF ON APPEAL** in the above-identified application.

[ ] Small entity status of this application under 37 CFR 1.9 and 1.27 has been established by a verified statement previously submitted.

[ ] A verified statement to establish small entity status under 37 CFR 1.9 and 1.27 is enclosed.

[XX] A Brief on Appeal fee is required $ 270.00.

The fee has been calculated as shown below:

	(Col. 1) CLAIMS REMAINING AFTER AMENDMENT		(Col. 2) HIGHEST NO. PREVIOUSLY PAID FOR	(Col. 3) PRESENT EXTRA	SMALL ENTITY RATE	SMALL ENTITY ADDITIONAL FEE	OR	OTHER THAN A SMALL ENTITY RATE	OTHER THAN A SMALL ENTITY ADDITIONAL FEE
TOTAL	1	MINUS	* * 20	=	x 11	$		x 22	$
INDEP.	1	MINUS	* * * 3	=	x 37	$		x 74	$
FIRST PRESENTATION OF MULTIPLE DEP. CLAIM					+115	$		+ 230	$
					TOTAL ADDITIONAL FEE	$	OR	TOTAL	

* If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, write "20" in this space.

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, write "3" in this space.

The "Highest Number Previously Paid For" (total or independent) is the highest number found from the equivalent box in Col. 1 of a prior amendment of the number of claims originally filed.

[XX] Conditional Petition for Extension of Time

If any extension of time for a response is required applicant requests that this be considered a petition therefor.

[ ] It is hereby petitioned for an extension of time in accordance with 37 CFR 1.136(a). The appropriate fee required by 37 CFR 1.17 is calculated as shown below:

Small Entity	Other Than Small Entity
Response Filed Within	Response Filed Within
[ ] First - $ 55.00	[ ] First - $ 110.00
[ ] Second - $180.00	[ ] Second - $ 360.00
[ ] Third - $420.00	[ ] Third - $ 840.00
[ ] Fourth - $660.00	[ ] Fourth - $1320.00
Month After Time Period Set	Month After Time Period Set

[ ] Please charge my Deposit Account No. 02-4035 in the amount of $_____. A duplicate copy of this sheet is attached.

[XX] A check in the amount of $ 270.00 is attached (Check No. 03702).

[XX] The Commissioner is hereby authorized and requested to charge any additional fees which may be required in connection with this application or credit any overpayment to Deposit Account No. 02-4035. This authorization and request is not limited to payment of all fees associated with this communication, including any Extension of Time fee, not covered by check or specific authorization, but is also intended to include all fees for the presentation of extra claims under 37 CFR Section 1.16 and all patent processing fees under 37 CFR Section 1.17 throughout the prosecution of the case. This blanket authorization does not include patent issue fees under 37 CFR Section 1.18.

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Does the prior art provide any motive, incentive, purpose or reason for the combinations proposed by the Examiner?

Would any logical or reasonable combination of the prior art as depicted by Figure 4 in view of Moisan result in the claimed construction?

GROUPING OF THE CLAIMS

The rejection under 35 U.S.C. § 103 is directed to claim 1 which is the single claim in the application and therefore stands and falls alone.

ARGUMENT

35 U.S.C. § 103

The rejection under 35 U.S.C. § 103 of claim 1 as being unpatentable over the prior art as depicted by Figure 4 in view of Moisan is clearly incorrect.

DISCUSSION OF THE PRIOR ART RELIED ON

Prior Art Figure 4 of the Application

Fully-automatic spraying systems have been employed which use spray cars or so-called robot spray cars automatically moving back and forth in furrows between ridges to sprinkle water or chemicals when, for example, vegetables are cultivated in green-houses.

Figure 4 of the application shows such a prior art fully-automatic spraying system wherein numeral 1 denotes a spray container fixed outside a greenhouse 2; numeral 3, a pump for drawing up a spraying liquid from the container 1; and numeral 4, a pair of rails laid in a head land 6 so as to extend perpendicularly to ridges 5. Numeral 7 denotes at truck reciprocating on the rails 4, and numeral 8 denotes a motor-driven spray car mounted on the truck 7 so that the car 8 can be loaded on or unloaded from the truck 7. The spray car 8 uses front wheels 28 as driving wheels to move back and forth along furrows 9 between the ridges 5. Reference character 10A denotes a hose for feeding the spraying liquid from the container 1 to the pump 3; 10B, a hose for returning excessive spraying liquid from the pump 3 to the container 1; and 11, a high-pressure hose for feeding the spraying liquid under pressure to a spray device 8A of the spray car 8. Reference character 12a denotes a wire for hanging the high-pressure hose 11 in many loops from hooks 12B. The wire 12A is stretched parallel to the rails 4 so as to move back and forth. The high-pressure hose 11 is extended into the spray car 8 and is wound around a reel 8' inside the spray car 8 and is connected to the spray device 8A. The high-pressure hose 11 is wound onto or from the reel inside the spray car 8 as the spray car 8 moves back and forth in the furrows 9 between the ridges 5.

Even when the spray car 8 is loaded onto the truck 7, the front wheels 28 continue to rotate, thus rotating a mesh

Figure 4 of the application shows such a prior art fully-automatic spraying system wherein numeral 1 denotes a spray container fixed outside a greenhouse 2; numeral 3, a pump for drawing up a spraying liquid from the container 1; and numeral 4, a pair of rails laid in a head land 6 so as to extend perpendicularly to ridges 5. Numeral 7 denotes at truck reciprocating on the rails 4, and numeral 8 denotes a motor-driven spray car mounted on the truck 7 so that the car 8 can be loaded on or unloaded from the truck 7. The spray car 8 uses front wheels 28 as driving wheels to move back and forth along furrows 9 between the ridges 5. Reference character 10A denotes a hose for feeding the spraying liquid from the container 1 to the pump 3; 10B, a hose for returning excessive spraying liquid from the pump 3 to the container 1; and 11, a high-pressure hose for feeding the spraying liquid under pressure to a spray device 8A of the spray car 8. Reference character 12a denotes a wire for hanging the high-pressure hose 11 in many loops from hooks 12B. The wire 12A is stretched parallel to the rails 4 so as to move back and forth. The high-pressure hose 11 is extended into the spray car 8 and is wound around a reel 8' inside the spray car 8 and is connected to the spray device 8A. The high-pressure hose 11 is wound onto or from the reel inside the spray car 8 as the spray car 8 moves back and forth in the furrows 9 between the ridges 5.

Even when the spray car 8 is loaded onto the truck 7, the front wheels 28 continue to rotate, thus rotating a mesh

roller 13. The rotative driving force of the mesh roller 13 causes the truck 7, on which the spray car 8 is mounted, to move on the rails 4.

Figure 4 does not disclose a second reel 20 on which the hose can be wound when car body 8 is mounted on truck 7 as claimed by Applicant.

Moisan

Moisan shows a mobile irrigator having a hose support reel 8 mounted within the spray car body or framework 4 of the irrigator. Wheels 5 of the irrigator are driven by a motor 15 through a first mechanical drive during the watering operation. A second mechanical drive also driven by motor 15 is connected to reel 8 to rewind pipe 3 around reel 8 when the watering operation is over. The selection of the driving of the wheels 5 for traveling or the driving of reel 8 for winding of pipe 3 around reel 8 is controlled by a lever 29. It is clear from the above and the Moisan disclosure that both the first and second mechanical drives are always positively engaged to motor 15 and the wheels and reel they are intended to drive.

Spray car body 8 and reel 8' therein shown in Fig. 4 of the acknowledged prior art are viewed as being equivalent to the Moisan teaching.

APPLICANT SUBMITS THAT CLAIM 1 IS PATENTABLE OVER THE COMBINATION OF PRIOR ART CITED BY THE EXAMINER

The acknowledged prior art of Figure 4 does disclose a fully-automatic spraying system. However, this systems does not teach, nor suggest a

> ...second reel being rotatably mounted on truck 7 and drivingly connected to a driving wheel axle of the truck and driven by motor-driven spray car 8 when motor-driven spray car 8 is mounted on truck 7 and not driven when motor driven spray car body 8 is unloaded from truck 7

as set out in claim 1. The acknowledged prior art of Figure 4 offers no suggestion of a second reel or as to how the axle of truck 7 may be used to drive a second reel if such reel were mounted on the truck.

Further applicants submit that Moisan does not solve the deficiencies of the acknowledged prior art, but in fact discloses the same teachings as in Figure 4 of the application, i.e. that is a first reel mounted within a motor-driven spray car body. Accordingly, Applicant submits that Moisan provides no further teaching beyond that of Figure 4 of the acknowledged prior art. Indeed, the reel of Moisan and of the acknowledged prior art are both at all times positively engaged to the motor and mechanical drives which result in their rotation. In comparison, the second reel of the claimed invention is not similarly arranged and can only be driven when the car body 8 is loaded on truck 7. This is not taught by Figure 4 or Moisan.

Moisan discloses the use of a self-propelling watering apparatus which includes an engine 15 which is designed to drive wheels 5 for moving the apparatus when watering is not preformed and for rewinding up a pipe 3 about a drum 8 when the watering operation is complete. As disclosed in column four, lines 36 - 39, Moisan teaches the use of a "transmission" which is designed to drive the drum 8 and make the pipe 3 wind up about the drum when the stage of watering is complete. It is further noted

that Moisan does not use the engine to unwind the watering pipe 3. The engine does however, rewind the watering pipe 3 around reel 8' through a differential device, see column 7, lines 31 - 34 and 59 - 64. Thus, Moisan teaches only the use of a reel to hold a watering pipe which is unwound by the movement of the watering apparatus, and is rewound through the use of a mechanism driven by an engine 15, located within the motor-driven spray car body 4.

Moisan does not teach that a second reel can be mounted on a truck and thereafter be driven by the wheels of the carbody when loaded onto the truck.

Thus, Moisan does not teach or suggest a

> ...second reel being rotatably mounted on said truck and drivingly connected to a driving wheel axle of said truck which is driven by said motor-driven spray car when said motor-driven spray car is mounted onto said truck and not driven when said motor driven spray car body is unloaded from said truck.

Assuming for argument sake that Moisan does suggest that reel 8 could be engaged to truck 7 of the acknowledged prior art, the Examiner has not provided any teaching or suggestion as to how the reel on the truck would be driven. As a matter of fact the placement of the reel from Moisan, including the elements to drive it, onto the truck of the acknowledged prior art would result in both the acknowledged prior art and the Moisan patent being destroyed for their intended purpose. Applicant submits that this is accurate because Moisan teaches that the reel is at all times positively engaged through its mechanical drive means to the car body motor

15. If the reel of Moisan is placed onto truck 7 of the acknowledged prior art, the Examiner has not indicated nor do references cited teach or suggest how the second reel will be driven when the motor driven spray car body is either loaded or unloaded from the truck. If the drive means of Moisan is transplanted along with the reel and thereafter drives the reel as indicated in the reference, the combination suggested by the Examiner could not function as claimed by Applicant. Furthermore, if the drive means of Moisan is not transplanted with the reel there is no teaching cited whatever as to how the reel will be driven.

Therefore even if one were motivated to modify the teachings of the acknowledged prior art in view of Moisan by placing a reel on the truck, the combination of such references would not teach applicants' claimed invention. Without such teachings, applicants submit that the claimed invention is not obvious in view of the cited prior art, singularly or in any possible combination, and is in fact allowable over the prior art of record, and should be allowed.

The law is clear that in order to establish a proper prima facie case of obviousness based on a combination of references, the prior art must contain some reason, purpose, motivation, incentive or teaching of the proposed combination. One of the leading case in this regard is Ex parte Clapp, 227 USPQ 972, where the Honorable Board stated:

> Presuming arguendo that the references show the elements or concepts urged by the examiner, the examiner has presented no line of reasoning, and we know of none, as to why the artisan viewing only the collective

> teachings of the references would have found it obvious to selectively pick and choose various elements and/or concepts from the several references relied on to arrive at the claimed invention. In the instant application, the examiner has done little more than cite references to show that one or more elements or subcombinations thereof, when each is viewed in a vacuum, is known. The claimed invention, however, is clearly directed to a combination.

The same is true in the present case. Appellant here also has presented claims to a new combination of elements.

> To support the conclusion that the claimed combination is directed to obvious subject matter either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references...Based on the record before us, we are convinced that the artisan would not have found it obvious to selectively pick and choose elements or concepts from the various references so as to arrive at the claimed invention without using the claims as a guide. It is to be noted that simplicity and hindsight are not proper criteria for resolving the issue of obviousness. Note In re Horne, 203 USPQ 969,971 (CCPA 1979). Accordingly, we will not sustain any of the rejections.

It is respectfully submitted that the Examiner has not established a prima facie case of obviousness based on the cited prior art references. Not only does the cited prior art not teach the claimed structural combination, it provides no motive, incentive, purpose or reason for the combination. In short, Moisan does not, as the Examiner suggests, teach placing a second reel on a truck separated from a car body having a first reel wherein, the second reel is rotatable when the car body is

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loaded on the truck. Even if placing the second reel on the truck could be construed from Moisan, Moisan does not teach driving the second reel by loading the car body on the truck.

CONCLUSION

It is therefore respectfully submitted that the Examiner has erroneously rejected claim 1 as being unpatentable over the prior art cited.

Wherefore the Examiner's rejection should be reversed which result Appellant respectfully solicits.

Respectfully submitted,

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APPENDIX

1. A fully-automatic spraying system, comprising:

a motor-driven spray car body having therein a first reel and a first spray-feeding hose wound thereon;

said first spray-feeding hose being wound onto or from said first reel inside said spray car body;

a truck on which said motor-driven spray car body is mounted so that said motor-driven spray car body can be mounted onto and unloaded from said truck; and

a second reel having a second spray-feeding hose wound thereon, said first spray-feeding hose fluidly connected to said second spray-feeding hose, said second reel being rotatably mounted on said truck and drivingly connected to a driving wheel axle of said truck and driven by said motor-driven spray car when said motor-driven spray car is mounted onto said truck and not driven when said motor-driven body is unloaded from said truck;

wherein said first reel permits extension of said first spray-feeding hose between said spray car body and said truck and said second reel permits extension of said second spray feeding hose between said truck and a pump.

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said first spray-feeding hose being wound onto or from said first reel inside said spray car body;

a truck on which said motor-driven spray car body is mounted so that said motor-driven spray car body can be mounted onto and unloaded from said truck; and

a second reel having a second spray-feeding hose wound thereon, said first spray-feeding hose fluidly connected to said second spray-feeding hose, said second reel being rotatably mounted on said truck and drivingly connected to a driving wheel axle of said truck and driven by said motor-driven spray car when said motor-driven spray car is mounted onto said truck and not driven when said motor-driven body is unloaded from said truck;

wherein said first reel permits extension of said first spray-feeding hose between said spray car body and said truck and said second reel permits extension of said second spray feeding hose between said truck and a pump.

Applicant submits that the invention is new and unobvious and not disclosed by the cited art. Accordingly, Applicant respectfully solicits the Examiner's early review and issuance of this application.

Respectfully submitted,

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