
(2020) 08 IPAB CK 0013

In the Intellectual Property Appellate Board

Case No : OA/35/2020/PT/DEL

Topy Kogyo Kabushiki Kaisha

APPELLANT

Vs

Assistant Controller Of Patents & Designs

RESPONDENT

Date of Decision : 21-08-2020

Acts Referred:

Patents Act, 1970 — Section 2(1), 2(1)(ja), 11A

Citation : (2020) 08 IPAB CK 0013

Hon'ble Judges : Manmohan Singh, J;Dr. Onkar Nath Singh, Technical Membe

Bench : Division Bench

Final Decision : Allowed

Judgement

1. The present appeal has been filed against the Order of respondent dated 22.01.2020 rejecting the Grant of Patent on Indian Patent Application No.

6590/DELNP/2012 dated 25.07.2012.

2. The brief facts of the case are as under:-

2.1 The present patent application titled ""METHOD OF MANUFACTURING A WHEELRIM FOR A VEHICLE"" was filed on July 25, 2012 and

allotted the application no. 6590/DELNP/2012.

2.2. The present patent application is derived from PCT Application No. PCT/JP2011/053201 dated February 16, 2011. The priority of said PCT

application is derived from Japanese Application No. JP2010-031955 dated February 17, 2010.

2.3. A request for examination for the said application was filed on July 25, 2012. The application was published under the provisions of Section 11(A)

of the Patents Act, 1970 as amended in 2005 (hereinafter referred as 'Act') on October 23, 2015.

2.4. This application was examined and First Examination Report (FER) was issued on January 24, 2018.

2.5. In response to the objections raised in the said FER the Appellant's Agent submitted the response via their letter dated July 19, 2018.

2.6. Thereafter, a hearing was scheduled for November 07, 2019, in the matter and following objections were communicated vide a hearing notice

dated October 04, 2019 and hearing submissions were filed within 15 days from the date of hearing.

3. The present application was rejected by the Order of respondent dated January 22, 2020. The Respondent in the order states that considering

documents D1: JP2000288669A (Annexure-A7); D2: JPS 6142430A (Annexure-A8); D3:US 3438111A (Annexure-A9,); D4: US 6505492B

(Annexure-A10); D5: US 5845400A (Annexure-A11; D6: US 4050135A (Annexure-A12) and D7: US 5531024A (Annexure-A13) in combination,

present application for patent lacks of in inventive step. The Respondent further states that features of claims currently on record are not inventive

over aforesaid cited documents and are not allowable u/s. 2(1) (ja) of the Act.

4. Case of the appellant

4-I The present invention, according to claims and specification, relates to a method of manufacturing a wheel rim for a vehicle from a tubular

material, wherein the rim has a non constant thickness. The claim 1 currently on record is reproduced below:

Claim 1

A method of manufacturing a wheel rim (10B) for a vehicle comprising:

Forming a flange portion (9) by bending an axial end portion of one tubular material (4) made from steel in a direction crossing an axial direction of the

tubular material (4), thereby forming in the tubular material (4) a bent portion (8) and the flange portion (9) on a tip side of the bent portion (8),

Ironing the tubular material (4) to a tubular member (10A) having a non-constant thickness using an ironing apparatus (20) which has a punch (26), a

die (22) having a convex and concave surface (24) opposing the punch (26) and a pressing member (23), and

Roll-forming the tubular member (10A) having a non-constant thickness to a vehicle wheel rim configuration after the ironing,

Wherein the ironing comprises:

Setting the tubular material (4) on the die (22) at the flange portion (9) of the tubular material (4);

Then moving the pressing member (23) relative to the die (22) thereby squeezing the flange portion (9) of the tubular material (4) between the pressing member (23) and the die (22); and

Then, while the flange portion (9) of the tubular material (4) is squeezed between them pressing member (23) and the die (22), moving the punch (26)

relative to the die (22) thereby ironing at least a portion of the tubular material (4) except the flange portion (9) of the tubular material (4) to

manufacture the tubular member (10A) having a non constant thickness,

Wherein at the roll-forming, at least a portion of the flange portion (9) of the tubular material (4) is formed to one of rim flange portions (10a, 10b) of

the wheel rim (10B) for a vehicle, and wherein the steps of forming the flange portion (9), ironing the tubular material (4), and roll-forming the tubular

member (10A) are conducted in the order of forming the flange portion (9), ironing the tubular material (4), and roll-forming the tubular member

(10A).

The step-1 of method includes forming a tubular material by bending an axial end portion of said tubular material to form a flange portion.

Step-1: Forming a flange portion (9) and bent portions (8, 9a) in the tubular member (4).

In the step-2, the tubular member (4) is ironed by using an ironing apparatus to form a tubular member having a non-constant thickness. The ironing of

the tubular member is performed by setting the tubular member (4) on a die (22) at the flange portion (9) of the tubular member. The pressing member

(23) of the ironing apparatus moves relative to the die and thus squeeze the flange portion of the tubular member between the pressing member (23)

and the die (22). The die (22) has a convex and concave surface (24) opposing the punch (26) and a pressing member (23).

Further, the punch of the ironing apparatus moves relative to the die to iron the tubular member and manufacture the tubular member having a non-

constant thickness. The die

Step-2: Decreasing the thickness of tubular material to give it a non-constant thickness.

Subsequently in step-3, roll-forming is performed on the tubular member ironed

in the ironing apparatus. Finally, after performing the roll forming process, wherein the tubular member (10A) is rolled between two rollers produced.

Step-3: Producing final rim by roll forming the ironed tubular member (10A) between two rollers (31, 32).

It is submitted on behalf of the appellant that during the hearing and in the written hearing submissions filed by us, an ironing apparatus (20) which has

a punch (26), a die (22) having a convex and concave surface (24) opposing the punch (26) and a pressing member (23); wherein the steps of forming

the flange portion (9), ironing the tubular material (4), and roll-forming the tubular member (10A) are conducted in the order of forming the flange

portion (9), ironing the tubular material (4), and roll-forming the tubular member (10A) as claimed in claim 1 of the present invention is neither

disclosed nor taught by any of the cited documents D1-D7, either alone or in combination.

4.1. Cited document D1 (Annexure-A7) discloses an apparatus having a rotatable mandrel, a roller and a stripper. D1 teaches reducing the thickness

of the cylindrical element ring through a trimming step and the rim roll forming step. D1 does not even whisper about an ironing step or an ironing

apparatus as claimed in claim 1 of impugned invention. Thus, the teachings of D1 cannot motivate a person skilled in the art to include an ironing step

in the process of manufacturing and in turn the person skilled in the art cannot achieve the technical effects of the impugned invention beginning at

cited document D1.

4.2. Cited document D2 (Annexure-A8) discloses that The pipe D is inserted into the fixed die 9 and the collar part (d) at one end thereof is pressed

atop the die 9 and a press plate 10 is lowered from above the same to grasp and hold the part (d) of the pipe D between said plate and the top surface

of the side 9. A mandrel 11 is then lowered and is press-fitted into the inside circumference of the pipe stock D and the pipe stock D is successively

ironed by the mandrel 11 from the inside circumferential side thereof.

4-II It is alleged by the appellant as under:-

The die of cited document D2 (Annexure-A8) has a planar surface profile on contrary to surface of die of the impugned invention. Further, the punch

of impugned invention is completely different in appearance as well as operation

in comparison to the mandrel of D2 (see drawing comparison below).

Thus, D2 fails to disclose an ironing apparatus (20) which has a punch (26), a die (22) having a convex and concave surface (24) as claimed in claim 1

of the present invention.

Moreover, cited document D2 (Annexure-A8) does not teach an order of forming the flange portion (9), ironing the tubular material (4), and roll-

forming the tubular member (10A), as claimed in claim 1 of impugned invention.

Cited document D3 (Annexure-A9) relates to a method of making a tapered truck rim of the above from a starting blank of uniform thickness. D3

discloses that an ironing action begins due to the spacing between surface 90 and surface 72 being less than the thickness of portion 42 of the blank.

However, cited document D3 (Annexure-A9) fails to disclose an ironing apparatus (20) which has a punch (26), a die (22) having a convex and

concave surface (24) as claimed in 1 of the present invention. The difference between the ironing process of D3 and the impugned invention is clear

to a person skilled in the art, as can also be seen in the below figures. Therefore, the technical effects/advantages of the impugned invention cannot be

sought through the teachings of the cited document D3.

Ironing as shown in reference D3 Ironing apparatus of impugned Invention

The disclosure of cited document D4 (Annexure-A10) is fundamentally contradicted from the impugned invention. D4 relates to an apparatus and a

method of using the apparatus to deep draw a blank into a manufactured article. It does not even remotely relate to manufacturing of wheel rim from

a tubular member. It appears that the Respondent has cited the document merely on the basis that it comprises a word rim. However, D4 talks about

a rim portion and not a vehicle rim.

Cited document D5 (Annexure-A11) discloses a method for manufacturing a one end flange-less wheel rim. The method includes the steps of:

providing a sheet of rim material having a width substantially corresponding to the developed width of a one end flange-less wheel rim to be made,

curving the sheet to form a cylinder, flaring one end of the cylinder, roll-forming the flared cylinder to the desired rim configuration using roll-forming

machines. 30. Cited document D5 (Annexure-A11) does not even whisper about an ironing step or an ironing apparatus as claimed in claim 1 of

impugned invention. Thus, the teachings of D5 cannot motivate a person skilled in the art to include an ironing step in the process of manufacturing

and in turn the person skilled in the art cannot achieve the technical effects of the impugned invention beginning at cited document D5.

Cited document D6 (Annexure-A12) discloses a system for forming flat base truck rims from flat strips of steel rolled into the form of smooth

cylinders and welded together along the abutting axial edges. However, similar to D5, D6 also fails to even remotely disclose the inventive features of

the impugned invention such as a die (22) having a convex and concave surface (24) opposing the punch (26) and a pressing member (23); wherein the

steps of forming the flange portion (9), ironing the tubular material (4), and roll-forming the tubular member (10A) are conducted in the order of

forming the flange portion (9), ironing the tubular material (4), and roll-forming the tubular member (10A).

Cited document D7 (Annexure-A13) relates to a full face fabricated sheet metal wheel having a rim with dual bead seats and inboard flange and a

disc welded to the outboard edge of the rim and providing an outboard tire bead retaining flange with a curl rolled to finish profile without machining.

Cited document D7(Annexure-A13) discloses that any residual ""waviness"" circumferentially of flange 218 tends to be ironed or bent out by permanent

metal deformation as surface 424 closes and slides or rolls there along during movement of roll 410 radically towards work piece 38. D7 further

discloses that ""this squeezing or ironing action of the flange rolls 410 and 300 produces almost a two-to-one thickness reduction (from pre-cursor 32

starting thickness) in the area between the surfaces 432 and 434 of flange curl 202 and proceeding axially in outboard direction towards the free end

face 436 of curl 202"".

Thus, it is clear to a person skilled in the art that the 'ironing' discussed in D7 is the ironing action of the flange rolls and that D7 does not teach or

disclose an ironing apparatus as claimed in present invention. In D7, mere squeezing of metal work piece through rolls has been termed as ironing.

According to the present invention as explained above, it is clear to a person skilled in the art that steps of forming the flange portion, ironing the

tubular member and roll-forming the tubular member are conducted in the order of forming the flange portion, ironing the tubular material and roll-

forming the tubular member, in order to manufacture the wheel rim. However, all the cited documents D1 to D7, either alone or in combination, do not even remotely hint towards following aforesaid order of manufacturing process steps.

In view of above, a person skilled in the art cannot achieve the technical effects of the impugned invention through any combination of cited documents D1 to D7.

5. It appears that the respondent in the FER, Hearing Notice and Impugned Refusal order stated that Claim(s) of the impugned invention lack(s)

inventive step, being obvious in view of teaching(s) of cited document(s) D1 to D7. Mr. Pravin Anand and Ms. Archana Shanker, Advocates

appeared on behalf of appellant submitted that the respondent has failed to substantiate his findings in the impugned order with reasoning. The

respondent has simply reproduced abstract/claim 1 of each of the cited documents D1 to D7 and concluded that in view of documents D1 to D7, the

respondent is of the opinion that the claims on record are not allowed.

6. It is evident from the record produced before us that the respondent has merely copy pasted same the abstracts or claim 1 of cited documents D1

to D7 in each both the Hearing Notice and the Impugned order. This shows that the Respondent has not applied his mind in understanding the

different aspect of present invention during the prosecution stage.

7. The IPAB in ""ENERCON LTD. VS. ALOYS WOBLEN, ORA/08/2009/PT/CH,"" IN PARA 43 has clearly stated that the mere existence in the

prior arts, of each of the elements in the invention, will not ipso facto mean obviousness. For after all most inventions are built with prior known puzzle-

pieces. There must be a coherent thread leading from the prior arts to the invention, the tracing of the thread must be an act which follows obviously.

We must apply this reasoning to test if indeed it is obvious, or if it seems to us to be obvious to the person skilled in the art because of what we know

now, if it is the latter, it is hindsight deduction and is not acceptable, but if it is the former, then the patent must go.

8. This IPAB in ""SUGEN INC. VS. CONTROLLER, ORA/08/2009/PT/CH,"" IN PARA 23, has held that since we are sending the matter back to the

Controller on the ground that Cui 2 was not furnished, it is necessary that an Opposition Board is constituted again preferably with members other than

the same members who constituted the earlier Board. However the Controller who hears the matter now shall be a Controller other than the one who had heard it earlier, to ensure fairness. So the entire matter is open and all the grounds shall be heard and decided by the Controller, who will look at the matter afresh.

9. Section 2(1)(ja) of the Indian Patents Act defines ""inventive step"" as a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art.

10. The advantages and/or technical effects achieved by aforementioned manufacturing method of the wheel rim of the impugned invention as disclosed in the present application no. 6590/DELNP/2012 (Annexure A2, page 46-104) are as follows:

- a. Equipment cost is low;
- b. Improved productivity;
- c. Improved appearance quality;
- d. High dimensional accuracy of the wheel rim.

It is the submission of the counsel that it is clear that the impugned invention meets the criteria of section 2(1)(ja) being technically advance and having economic significance over the prior art.

11. Kimberly A. Moore, Associate Professor of Law, George Mason University School of Law, states in second edition of ""Patent Litigation and Strategy"" that most invention are a combination of old elements. This does not make them obvious. The more references that need to be combined to prove obviousness, the less likely that the invention is obvious.

12. It is submitted on behalf of appellant that the respondent has considered the impugned invention and cited references D1 to D7 in sheer hindsight.

13. The application for impugned invention is granted in all major jurisdictions namely US, Japan, Korea and China, Form-3 dated July 19, 2018 is already placed on record.

14. It appears from the impugned order that the respondent has merely made the comparison between D-1 to D-7 in the impugned order in selective ways, but the respondent has failed to explain how the impugned invention as a whole can be held obvious by a person skilled in the art in view of

cited documents D1 to D7. The respondent has not even been able to show in the impugned order that cited documents D1 to D7 teach all the

features of the impugned invention as claims in currently pending claims. It is not enough to refuse the invention on obviousness grounds to merely

identify each element of the invention in the prior art.

15. In the light of above, we are of the view that the matter must be sent back to the Controller for reconsideration of issues raised by the appellant.

The matter shall be heard by a Controller, other than the one who issued the Impugned Refusal Order.

16. The Impugned Order is set-aside.

17. No costs.