

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MAMORU TAKASAKI and YOSHIHIRO SATO

Appeal No. 1999-2148
Application No. 08/864,947

ON BRIEF

Before CALVERT, STAAB, and NASE, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 2, 4 and 5. Claim 7 has been allowed. Claim 6 has been withdrawn from consideration under 37 CFR § 1.142(b) as being drawn to a nonelected invention. Claims 1 and 3 have been canceled.

We REVERSE.

BACKGROUND

The appellants' invention relates to a method of manufacturing a rubber body of a bag shape to be used as a weir main body which is subsequently placed on a river-bed in a widthwise direction of the river and rises by being filled with a fluid to form a weir. A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The prior art of record relied upon by the examiner in rejecting the appealed claims is:

Galloway 1962	3,053,724	Sep. 11,
Nagahama et al. 1994 (Nagahama)	5,305,565	Apr. 26,

In addition, the examiner also relied upon the appellants' admission of prior art (specification, page 1, fourth paragraph; Figure 8) relating to a rubber weir main body (Admitted Prior Art).

Claims 2, 4 and 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Admitted Prior Art in view of Galloway and Nagahama.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (Paper No. 34, mailed December 21, 1998) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper No. 33, filed December 3, 1998) and reply brief (Paper No. 35, filed February 22, 1999) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 2, 4 and 5 under 35 U.S.C. § 103. Our reasoning for this determination follows.

Most if not all inventions arise from a combination of old elements. See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See id. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See id. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). In addition, the teaching, motivation or suggestion may be implicit from

the prior art as a whole, rather than expressly stated in the references. See WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein).

Claim 5, the sole independent claim on appeal, reads as follows:

A method of manufacturing a rubber body of a bag shape to be used as weir main body which is subsequently placed on a river-bed in a widthwise direction of the river and rises by being filled with a fluid to form a weir, comprising the steps of:

preparing at least two rubber weir main body segments which form portions of said rubber weir main body extending in said widthwise direction of said river;

forming a material removed portion with steps at edges extending in said widthwise direction of each of said rubber weir main body segments;

contacting said rubber weir main body segments with each other at said edges;

laminating unvulcanized rubber sheets containing reinforcing canvass on said material removed portions between both said rubber weir main body segments contacted with each other; and

vulcanizing said unvulcanized rubber sheets by contact with a hot plate for integral bonding with said rubber weir main body segments to form a weir main body having a substantially uniform cross-sectional shape in said widthwise direction.

The Admitted Prior Art (see the appellants' Figure 8) teaches a rubber weir main body which is manufactured by (1) forming a material removed portion with stepped portions at edges of main body segments 01 previously vulcanized and molded; (2) fitting a previously vulcanized and molded matching rubber sheet 02 containing a reinforcing material into the stepped removed portions of the adjoining segments 01; (3) providing unvulcanized rubber 03 between the vulcanized segments 01 and the vulcanized sheet 02; and (4) vulcanizing segments 01 to the sheet 02.

Galloway's invention relates to heavy duty flexible hose known in the trade as "discharge hose" which is used extensively for loading and unloading tanker vessels, refueling oil-fired ships and for overland and under water oil lines, and is particularly directed to a novel splice for such hose whereby sections of the hose may be joined together end

to end into a unitary line of any desired length without the use of metallic coupling members.

To prepare the ends of Galloway's hose sections S, S' for splicing the sections are first, squared off so that the ends 1, 1' of their inner tubes or linings 2, 2' when brought together in matching relation will abut in a plane transverse to the hose axis. Then the cover and the several fabric layers in each section are progressively cut away at successively less distances from this plane to expose the underlying layer. This results in a stepped formation as shown in Figure 1. The ends 1, 1' of the inner liners 2, 2' are coated with a suitable uncured rubber cement, which should be dried at least to tackiness before the ends are brought together. Two layers 12, 13 of rubber impregnated 3/8" nylon tape are wrapped tightly about the center of the joint to substantially fill in the space between steps 3, 3' and adhered to liners 2, 2' and to each other by a suitable cement (see Figure 2). Next a layer 14 of rubber impregnated tire cord fabric tape cut on a bias of about 54° is laid about tape layer 13 between steps 4, 4' so that the nylon warp yarns form

about 54/ angles to the mandrel axis and the tape edges just abut said steps (see Figure 3). After the rubber impregnated fabric is applied, it and the remaining exposed cut-away surfaces of the sections are coated with rubber cement which is allowed to dry; a sheet of bias-cut impregnated cord fabric 15 similar to the fabric of tape 14 and having its warp yarns extending at a like angle to the mandrel axis (see Figure 4) is now disposed about the entire surface exposed between steps 8, 8' and for a short distance along steps 9, 9' toward the ends of covers, 10, 10' with its warp yarns extending at bias angularity opposite that of warp yarns of layer 14 and cement is then applied to its outer face for reception of subsequent layers, each of the latter in turn being likewise outwardly coated with cement prior to receiving a succeeding overlying layer.

Galloway's sheet 15 thus covers all the steps formed at the ends of the cut-away fabric layers but through its close adherence to the subjacent material its outer surface exhibits a series of generally corresponding steps (Figure 4) and the longitudinal spaces between them are filled in as follows:

First, an impregnated bias-cut fabric layer 16 preferably with its warp extending angularly with respect to the warp in sheet 15 and of a width just to fill remaining spaces between steps 5, 5' is applied (Figure 5) and in like manner succeeding layers of bias-cut fabric 17, 18, 19 are supplied to fill the spaces between steps 6, 6' (Figure 6); 7, 7' (Figure 8) and 8, 8' (Figure 8) respectively. Finally, outer layers of bias-cut fabric 20, 21 (Figure 9), the outer one spanning the space between steps 9, 9' formed by the covers, followed by a slightly longer rubber covering sheet 22 (Figure 10) are disposed about the entire assembly and successively cemented in place to supplement the previous layers and enable a smooth outer surface to be formed.

After Galloway's splice has been formed up and prepared for curing by application of tape T (Figure 11) for maintaining pressure against it and blanket A (Figure 12) for minimizing escape of vulcanizing heat, dry steam preferably at about 80 p.s.i.g. is introduced through duct 26 to mandrel chamber 25 and circulated therethrough to exhaust duct 28 for a suitable curing period. Upon completion of the vulcanizing

the steam is shut off and the temporary wrappings (i.e., tape T and blanket A) removed from the splice.

Nagahama's invention relates to a floor mat, particularly used for dusting of shoe bottoms by being laid in an entrance or an inlet of housings and shops. As shown in Figure 6, pile carpet 1 is vulcanized to an unvulcanized rubber sheet 2 by hot plates 5a and 5b through embossing fibrous sheets 6a and 6b.

The appellants argue that the applied prior art does not suggest the claimed subject matter. We agree. In that regard, after reviewing the teachings of the applied prior art it is our conclusion that there is no motivation, suggestion or teaching therein for a person having ordinary skill in the art at the time the invention was made to have modified the Admitted Prior Art by

the splicing technique taught by Galloway. In our view, the only suggestion for modifying the Admitted Prior Art in the manner proposed by the examiner (answer, pp. 3-4) to arrive at

the claimed subject matter stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C.

§ 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It follows that we cannot sustain the examiner's rejection of claims 2, 4 and 5.

CONCLUSION

To summarize, the decision of the examiner to reject claims 2, 4 and 5 under 35 U.S.C. § 103 is reversed.

REVERSED

IAN A. CALVERT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LAWRENCE J. STAAB)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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