

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL R. CORRUNKER,
DRAGAN BOGOVICAN,
LAVERNE R. NEWMAN,
PAVEL BUCU and
PAUL R. CHANDLER

Appeal No. 98-1261¹
Application No. 08/435,869

ON BRIEF

Before McCANDLISH, *Senior Administrative Patent Judge*, ABRAMS and NASE,
Administrative Patent Judges

ABRAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the decision of the examiner finally rejecting claims 17-27. At that point,

¹ Application for patent filed May 4, 1995. According to appellants, this application is a continuation-in-part of Application No. 08/390,034, filed February 17, 1995, now abandoned.

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claims 2, 11, 15 and 28 had been canceled, and claims 1, 3-10, 12-14 and 16 allowed. However, the examiner has indicated in the Answer that claim 22 contains allowable subject matter, and therefore claims 17-21 and 23-27 remain before us on appeal.

The appellants' invention is directed to a multiple brush steering wheel commutator. The claims on appeal have been reproduced in an appendix to the Brief.²

THE REFERENCES

The references relied upon by the examiner to support the final rejection are:

Mabuchi	4,705,978	Nov. 10, 1987
Philips (German '318) ³ (German Patent)	1293318	Apr. 24, 1969
Kuhn et al. (French '421) ³ (French Patent)	2568421	Jan. 31, 1986
Igier (French '008) ³ (French Patent)	1,414,008	Sept. 6, 1965

THE REJECTIONS

Claims 21, 23, 26 and 27 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the appellants

² However, claim 21 fails to reflect changes made by amendments D and E.

³ Copies of a PTO translation of each of these references is enclosed.

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regard as the invention.

Claims 17-21 and 23-27 stand rejected under 35 U.S.C. § 103 as being unpatentable over French '008 in view of either German '318 or Mabuchi, taken further with French '421.

The rejections are explained in Paper No. 15 (the final rejection).

The viewpoints of the appellants with regard to the positions taken by the examiner are set forth in the Brief and the Reply Brief.

OPINION

The Rejection Under 35 U.S.C. § 112, Second Paragraph

Notwithstanding the entry of amendments after the final rejection, errors remain uncorrected in claims 21, 23 and 26. In lines 3 and 4 of claim 21, "said wire brushes" has no antecedent basis. The same is true of "said wire brush" in line 2 of claim 23. Also, on page 2 of Paper No. 15 the examiner raised a question about the meaning of the phrases "sets of contact members" and "integral metal fingers in claim 26." This has not been responded to by the appellants.

In view of the above, we shall sustain the Section 112, rejection of claims 21, 23, 26 and 27.

The Rejection Under 35 U.S.C. § 103

This rejection actually involves two combinations of references, considered in the alternative.

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The first is French '008, German '312 and French '421, and the second is French

'008, Mabuchi and French '312. We have evaluated this rejection on the basis of the following guidelines provided by our reviewing court: The examiner bears the initial burden of presenting a *prima facie* case of obviousness (*see In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993)), which is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art (*see In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). This is not to say, however, that the claimed invention must expressly be suggested in any one or all of the references. Rather, the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art (*see Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1025, 226 USPQ 881, 886-87 (Fed. Cir. 1985)), considering that a conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference (*see In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)), with skill being presumed on the part of the artisan, rather than the lack thereof (*see In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985)). Insofar as the references themselves are concerned, we are bound to consider the disclosure of each for what it fairly teaches one of ordinary skill in the art, including not only the specific teachings, but also the inferences

which one of ordinary skill in

the art would reasonably have been expected to draw therefrom (*see In re Boe*, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966) and *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968)).

Claim 17 is directed to a vehicle electrical communication system that is installed in a steering wheel and includes electrical components mounted to rotate with the steering wheel. The system comprises a first plate that rotates with the wheel and a second plate that is fixed with regard to the wheel, with electrical communication extending from the electrical components in the wheel to the first plate. The appellants do not contest the examiner's finding that French '421 teaches this system, in the broad sense (Brief, page 5). Claim 17 further requires that one of the plates be provided with a plurality of contact rings extending circumferentially around the axis of the wheel and that the other plate be provided with sets of electrical contact members having a single tab contacted to each such set. It is the examiner's view, with which we agree, that this structure is shown by French '008. The applicants do not contest this conclusion (Brief, page 5).

The final requirement of claim 17 is that each of the sets includes a plurality of electrical contact members with at least one set being in contact with each of the contact rings. While French '008

shows two sets of contact members contacting each of the rings (7a and 8a, Figure 2), each contact member comprises a single contact element (12 and 13, Figures 5 and 6), rather than the required plurality of contact elements. Notwithstanding the arguments of the appellants, we find ourselves in agreement with the examiner that it would have been obvious, however, to modify the contact elements of French '008 by making the single element into a plurality of parallel spaced elements, in view of the teachings of German '318, which is the first of the two alternate references set out by the examiner on this point.

The German reference states, in a discussion of the prior art, that it was known to utilize a brush with “parallel, flexible elements, acting independently from each other” and “formed by means of segments of a metal plate” for an electrical connector utilized with a small electrical machine (translation, pages 1 and 2). Its objectives are to improve upon these known brushes by providing a brush that maintains the contact resistance between the brushes and the collector “as constant as possible . . . with minimal contact pressure” so that “friction loss is reduced to a minimum,” while it also “satisfies the demand for limited spatial requirement” (translation, page 3). The invention is disclosed as a resilient brush (6) comprising a pair of spring portions (7 and 8) extending from a single plate element (10), which brushes are in electrical contact with the rotating contact. The brushes are spaced from the central axis of the rotating contact, and make electrical communication with the machine along annular tracks as the machine rotates.

It is our view that one of ordinary skill would have been motivated to modify the sets of electrical contact members disclosed in French '008 by replacing each of the single tongue contact members with a plurality of parallel, spaced contact members in view of the teachings of

German '318. Suggestion is found in the advantages of such an arrangement that are explicitly touted in the German reference for improving performance, that is, constant resistance and minimal contact pressure.

The combined teachings of French '008, German '318 and French '421 establish a *prima facie* case of obviousness with regard to the subject matter of independent claim 17. We therefore will sustain the rejection of claim 17 and claims 18 and 24-27, which depend therefrom and with regard to which no argument has been provided with regard to their separate patentability. *See In re Nielson*, 816 F.2d 1567, 1570, 2 USPQ2d 1525, 1526 (Fed. Cir. 1987).

Claim 19 adds to claim 17 the requirement that the plural contact members be "aligned in side-by-side relationship in a generally radially outward direction." The single contact members in French '008 are oriented in a generally radially outward direction, as are the plural ones in German '318. Thus, this feature is clearly taught by the prior art, and a *prima facie* case of obviousness is established with regard to claim 19. The rejection of this claim on the basis of French '008, German '318 and

French '421 is sustained. The separate patentability of dependent claim 20 having not been argued, this rejection against it also is sustained.

Claim 21 depends from claim 20, and adds the requirement that a first set of brushes (contacts) extends counterclockwise and a second set extends clockwise. This arrangement is

shown in French '008. From our perspective, modifying this reference by the teachings of German '312 would not have altered that feature, and therefore this rejection of claim 21 should be sustained.

As was the case with claim 21, it is our view that the contacts disclosed in French '008 teach the feature recited in claim 23, in that end portions 12 and 13 (Figure 6) are so oriented. This rejection of claim 23 is sustained.

The alternate rejection of the claim advanced by the examiner relies upon Mabuchi for teaching the plurality of electrical contact members required by claim 17, rather than German '312. The teachings of French '008 and French '421 are discussed above. Like German '318, Mabuchi is directed to brushes for rotating electric motors, and includes in its stated objectives ensuring stable contact between the brushes and the rotating contact member, and lessening wear on the components (column 2, lines 29-43). This reference also acknowledges the existence in the prior art of multiple sets of contacts (Figures 7A-8B). As was the case above, it is our view that one of ordinary skill in the art

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would have found it obvious to modify French '008 by forming the contact element into a plurality of spaced, parallel members, suggestion being found in the explicit improvement in electrical contact and the reduction in wear that are the advantages of the Mabuchi invention. We therefore are of the opinion that the combined teachings of French

'008, Mabuchi and French '421 establish a *prima facie* case of obviousness with regard to the subject matter of claim 17, and we will sustain the rejection of claim 17 and of claims 18 and 24-27.

The rejection of claims 19, 20, 21 and 23 as being unpatentable over French '008, Mabuchi and French '312 is sustained on the basis of the same rationale as was set forth above with regard to the other combination of references.

We have carefully considered all of the arguments advanced by the appellants with regard to the Section 103 rejections. However, they have not persuaded us that the examiner's rejections should not stand. Some of the arguments presented by the appellants, such as those directed to space sensitivity, fail from the outset because they are predicated upon limitations that are not present in the claims. *See In re Self*, 671 F.2d 1344, 1348, 213 USPQ 1, 5 (CCPA 1982). Our position with regard to the arguments challenging the existence of suggestion to combine the references should be apparent from the foregoing explanations of our findings and conclusions.

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SUMMARY

The rejection of claims 21, 23, 26 and 27 under 35 U.S.C. § 112, second paragraph, is sustained.

The rejection of claims 17-21 and 23-27 under 35 U.S.C. § 103 as being unpatentable over French '008 in view of either German '318 or Mabuchi, taken further with French '421 is sustained.

A rejection of each of the claims on appeal having been sustained, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)

AFFIRMED

HARRISON E. McCANDLISH)
Senior Administrative Patent Judge)
)
) BOARD OF PATENT

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)	APPEALS AND
NEAL E. ABRAMS)	INTERFERENCES
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