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. 40

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DANIEL BOZONNET

Appeal No. 2002-2033
Application No. 08/894,063

ON BRIEF

Before ABRAMS, FRANKFORT, and BAHR, Administrative Patent Judges.

ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 34-42, 47-53 and 57-61, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellant's invention relates to a torque transfer component that has splines and recesses for providing greater torque capacity, and which also is compatible with a standard (ISO 1174) square male drive. An understanding of the invention can be derived from a reading of exemplary claim 34, which has been reproduced below.

The prior art references of record relied upon by the examiner are:

Stolarczyk	4,361,412	Nov. 30, 1982
Moetteli	5,347,892	Sep. 20, 1994
Gill	5,364,212	Nov. 15, 1994
Mikic et al. (Mikic)	5,408,905	Apr. 25, 1995
Goss et al. (Goss) (UK Patent Application)	2260587A	Apr. 21, 1993
Spagnoli[1] (French Patent Application)	1,562,074	Apr. 4, 1969

The following rejections stand under 35 U.S.C. § 103(a):

(1) Claims 34, 36, 38-41, 47 and 51 on the basis of Stolarczyk and Spagnoli.

(2) Claims 48-50, 52 and 57-61 on the basis of Stolarczyk, Spagnoli and Goss.

(3) Claims 35, 42 and 53 on the basis of Stolarczyk, Spagnoli and Moetteli.

(4) Claim 37 on the basis of Stolarczyk, Spagnoli and Gill.

(5) Claims 48 and 50 on the basis of Stolarczyk, Spagnoli and Mikic.

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[1]Our understanding of this foreign language document has been obtained from a PTO trnaslation, a copy of which is attached.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the Answer (Paper No. 31) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 30) and Reply Brief (Paper No. 36) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The appellant’s invention comprises a torque transfer component capable of receiving torque applied by a standard square drive as well as torque applied by a drive having a plurality of radially oriented surfaces. The invention is described in claim 34 in the following manner:

> 34. A torque transfer component comprising a female driving portion having a useful height and a transverse cross-sectional profile, the profile comprising:
>
> four inner wall segments disposed on a square which corresponds to a square drive having a dimension selected from the group consisting of 6.35mm, 9.53mm, 12.70mm, 15.88mm, 19.05mm, 25.40mm, 38.10mm, and 63.50mm.
>
> four splines projecting radially outward from respective corner regions of said square, each of said splines being respectively delimited by two lateral edges and an outer edge;

> rounded portions which join respective said lateral edges to said inner wall segments; and
>
> wherein said profile is constant over the entire useful height of the female driving portion such that said lateral edges of said splines comprise driving surfaces in co-operation with substantially conjugated spline surfaces of a correspondingly shaped male torque transfer component when the male transfer component is inserted into said profile, and such that said inner wall segments comprise driving surfaces in co-operation with a square drive when the square drive is inserted into said profile.

The examiner has rejected claim 34 under 35 U.S.C. § 103(a) as being obvious in view of the combined teachings of Stolarczyk and Spagnoli. In arriving at this conclusion, the examiner has found all of the subject matter recited in claim 34 to be disclosed by Stolarczyk except for the number of splines and inner wall segments, and the orientation of the inner wall segments and the splines such that the device is capable of receiving a drive that cooperates with the lateral edges of the radial splines as well as a square drive that cooperates with the inner wall segments. However, the examiner has taken the position that it would have been obvious to one of ordinary skill in the art to modify the Stolarczyk torque transfer device in such a manner as to meet the terms of claim 34 in view of the teachings of Spagnoli, considering further that the selection of the specified sizes would have “involved a mere change in the size of a component,” which “will not alone constitute invention” (Answer, pages 3 and 4). The appellant argues that no suggestion exists for modifying the device disclosed in the primary reference in such a manner as to meet the terms of the claim.

The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See, for example, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a prima facie case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988). Applying this guidance of our reviewing court leads us to conclude that the rejection should not stand. Our reasons follow.

Stolarczyk discloses a torque transfer device having a male element comprising six inner wall segments evenly disposed about a center axis and six splines projecting outwardly between adjacent pairs of wall segments, and a corresponding female element.[2] The principal objective of the Stolarczyk invention is to provide an improved torque transfer arrangement for headed fasteners and torque tools. With reference to

[2]Although the Stolarcyzk Abstract states that there is an embodiment having only four sides, it is not described in the specification or shown in the drawings. The examiner has not made reference to this statement, but has formulated the rejection on the basis that the reference does not disclose or teach the number of elements recited in claim 34.

Figure 11, torque is transmitted between the sides of the six engaged splines and surfaces of the recesses. There is no teaching in Stolarczyk of the system also being able to accommodate a second drive having a different configuration, much less a square drive having dimensions from the group specified in the claim. Nor, from our perspective, is it apparent that a square drive could be utilized in place of the disclosed six-segment drive.

Thus, Stolarczyk fails to disclose (1) four inner wall segments disposed on a square which corresponds to a square drive having the claimed dimensions, (2) four splines projecting radially outward from the respective corners of the square, and (3) the profile over the entire useful height of the female component being such that the lateral edges of the splines comprise driving surfaces that cooperate with conjugated surfaces of a male component and the inner wall segments of the square comprise driving surfaces that cooperate with a square drive component.

Spagnoli is directed to an improved screw and screwdriver. The objective of the invention is to allow the screw to be held by the screwdriver “in any position in space” (translation, page 3), and in order to accomplish this goal the screwdriver is provided with four radial ribs that “flare out obliquely” in order to increase the contact area between the screwdriver and cooperating slots in the recess of the head of the screw (translation, page 6). This provides a friction fit between the recess in the screw and the ribs of the screwdriver. There is no teaching in Spagnoli of utilizing a driver having

any configuration other than that disclosed, and we note that the surfaces of the ribs defining the slots in the screw head taper toward the center of the recess (Figure 1; translation, page 6), which would preclude insertion of a non-tapered driver of square cross-section into the recess.

The mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See, In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). We fail to perceive any teaching, suggestion or incentive in either Stolarczyk or Spagnoli which would have led one of ordinary skill in the art to modify the Stolarczyk system in the manner proposed by the examiner. In this regard, neither reference teaches a system in which the female component can interact with two different male components, and in the absence of such it is our view that motivation is lacking for altering Stolarczyk from a six spline system to one having four splines, much less altering it to meet the dimensional limitations recited in the claim, which correspond to ISO standard 1174 drivers (see specification, pages 1 and 2), and to so relate the splines and the corners of the four inner wall segments that define the square in such a manner as to allow both drivers to be used. In addition, the proposed modification of Stolarczyk would necessitate a substantially total reconstruction which, from our perspective, would operate as a disincentive to the artisan to so do.

It is our conclusion that the combined teachings of Stolarczyk and Spagnoli fail to establish a prima face case of obviousness with regard to the subject matter recited in claim 34. We therefore will not sustain the rejection of independent claim 34 or of dependent claims 36 and 38-41.

Independent claim 47 is directed to a tool comprising the torque transfer components recited in claim 34, including the limitations contained therein. It also stands rejected as being unpatentable over Stolarczyk and Spagnoli. We will not sustain the rejection of claim 47 and claim 51, which depends from claim 47, for the reasons expressed above with regard to claim 34.

Claims 48-50, 52 and 57-61 have been rejected on the basis of Stolarczyk and Spagnoli, taken further in view of Goss, which was cited for teaching the limitations regarding the profiles recited in these claims. Be that as it may, Goss does not overcome the deficiencies in the combination of Stolarczyk and Spagnoli. Claims 48-50 and 52 depend from claim 47, and the rejection of these claims similarly will not be sustained. Independent claim 57 contains the same limitations as claims 34 and 47, and we also will not sustain its rejection for the reasons expressed above with regard to those claims. The rejection of dependent claims 58 and 59 falls with that of claim 57, from which they depend. The rejection of independent claim 60 and dependent claim 61 is not sustained for the same reasons as claim 34.

The addition of Moetteli to Stolarczyk and Spagnoli with regard to dependent claims 35, 42 and 53, Gill with regard to dependent claim 37, and Mikic with regard to dependent claims 48 and 50,[3] fails to overcome the aforementioned problems with the independent claims from which they depend, as explained with regard to claim 34. These rejections are not sustained.

CONCLUSION

None of the rejections are sustained.

The decision of the examiner is reversed.

NEAL E. ABRAMS Administrative Patent Judge	)
CHARLES E. FRANKFORT Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)

[3]This was a second rejection of claims 48 and 50.

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