

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 39

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WOLFGANG FUSSNEGGER
and HARALD BRINKSCHROEDER

Appeal No. 1999-0193
Application 08/552,174

HEARD: March 21, 2001

Before COHEN, ABRAMS, and MCQUADE, Administrative Patent Judges.

MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Wolfgang Fussnegger et al. appeal from the final rejection of claims 1 through 10, all of the claims pending in the application.

THE INVENTION

The invention relates to a welded joint between a sheet-steel component and a light sheet metal component, and to a

method of producing same. Representative claims 1 and 7 read as follows:

1. A welded joint between a sheet-steel component and a light sheet metal component, the two components being welded together with at least one steel clip part having a hat-like shape defined by a central portion having a bottom region which projects to the sheet-steel component through an opening arranged in the light sheet metal component, a flange configured with a free rim resting on a free flat side of the light sheet metal component and portions between the central portion and the flange raised relative to the central portion and the free rim such that opposite sides of the light sheet metal component directly contact the free rim and the sheet-steel component and a gap is defined directly underneath an area of the raised portions which face the light sheet metal component such that an outer edge of the free rim is prestressed directly against the light sheet metal component in a state when the bottom region has been joined to the sheet steel component with the gap remaining, and an adhesive arranged in the gap to adhesively bond the sheet steel component and the light sheet metal component together.

7. A method for welding a sheet-steel component to a light sheet metal component by a weld produced by electric resistance welding, comprising the steps of providing the light sheet metal component with an opening in a region of the overlap with the sheet-steel component, inserting into the opening a hat-shaped clip part having a central portion with a bottom portion configured toward the sheet-steel component through the opening arranged in the light sheet metal component, a flange forming a free rim portion facing the light sheet metal part and offset portions between the free rim and the central portion to define a gap between the offset portions and the light sheet metal part such that the clip part overlaps an exposed flat side of the light sheet metal component, welding the bottom portion of the clip part to the sheet-steel component by electric resistance welding, thereby prestressing an outer edge of the free rim portion directly against the light sheet metal part and compensating play due to the offset portions which define the gap between the clip

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part and the light sheet metal component after the free rim portion is prestressed against the light sheet metal part, which gap includes the space between the free rim portion and the light sheet-metal part, by an adhesive introduced into said gap such that the sheet steel component and the light sheet metal component are adhesively bonded together.

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

Poupitch	2,620,539	Dec. 9,
1952		
Wilfert et al. (Wilfert)	2,819,925	Jan. 14,
1958		
Noggle	4,791,765	Dec. 20,
1988		

THE REJECTION

Claims 1 through 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilfert in view of Noggle and Poupitch.

Attention is directed to the appellants' brief (Paper No. 29) and to the examiner's answer (Paper No. 30) for the

respective positions of the appellants and the examiner with regard to the merits of this rejection.¹

DISCUSSION

Wilfert, the examiner's primary reference, discloses a light sheet metal panel 1 joined to sheet metal structural parts 2, 4, 5 and 6 by steel cup-like members 8 inserted into holes in the panel 1 and welded to the structural parts 2, 4, 5 and 6 (see Figures 2 and 3). The light sheet metal panel 1, the sheet metal structural parts 2, 4, 5 and 6, and the steel cup-like members 8 generally correspond, respectively, to the light sheet metal component, the sheet-steel component, and the hat-shaped clip part recited in claims 1 and 7. As conceded by the examiner (see page 4 in the answer), however, Wilfert does not respond to the limitations in these claims pertaining to the raised/offset portions of the clip part, the gap between the raised/offset portions and the light sheet metal component, and the adhesive in the gap.

¹ In the final rejection (Paper No. 27), claims 1 through 10 also stood rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilfert in view of U.S. Patent No. 3,512,224 to Newton. Upon reconsideration (see page 3 in the answer), the examiner has withdrawn this rejection.

Noggle (see Figures 1 and 2) discloses a synthetic body panel 10 joined to a metal body panel 40 by cup-like metal attachment plates 30 inserted into apertures 20 in the panel 10 and welded to the panel 40. The overall joint structure is similar to that disclosed by Wilfert; however, the Noggle construction also includes an adhesive 50 bonding the metal attachment plates 30 to the panel 10. According to Noggle (see, for example, column 10, line 43 et seq.), the adhesive enhances the strength of the joint.

Arguably, the examiner's conclusion (see the paragraph bridging pages 4 and 5 in the answer) that it would have been obvious in view of Noggle to provide adhesive between Wilfert's sheet metal panel 1 and cup-like members 8 to enhance the strength of the joint is well founded. Nonetheless, the Wilfert joint as so modified would still lack the clip part raised/offset portions recited in claims 1 and 7. Moreover, due to the addition of the adhesive, the Wilfert joint apparently would no longer meet the limitations in these claims requiring the free rim (or free rim portion) of the clip part to be directly against the light sheet metal component.

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The examiner's contention (see page 5 in the answer) that Wilfert and Noggle would have suggested keeping the free rim of Wilfert's clip part (cup-like members 8) directly against the light sheet metal component (sheet metal panel 1) notwithstanding the addition of the adhesive rests on hindsight reasoning having no factual support in the fair teachings of these two references. Poupitch, the examiner's third reference, does not cure this deficiency or the one embodied by the lack of raised/offset portions on Wilfert's clip part.

Poupitch discloses a fastener unit 10 comprising a headed stud 12 and a washer 14 for joining a pair of sheets 22 and 24 (see Figures 1, 2 and 5). The washer 14 includes an annular, outwardly flared body portion 34 having an outer margin or rim for bearing against sheet 22 and a plurality of inner, axially inclined prongs 36 for receiving the head of the stud.

Assuming for the sake of argument that Poupitch is analogous art (the appellants urge that it is not), there is simply nothing therein which justifies the examiner's conclusion (see page 6 in the answer) that it would have been obvious to apply Poupitch's washer configuration to Wilfert's

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clip part (cup-like members 8) so as to arrive at the subject matter recited in appealed claims 1 and 7. In short, given the disparities in structure and function, Wilfert's clip part and Poupitch's washer have little, if any, practical relevance to one another.

Hence, the combined teachings of Wilfert, Noggle and Poupitch do not warrant the examiner's conclusion that the differences between the subject matter recited in claims 1 and 7 and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. Therefore, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 1 and 7, or of dependent claims 2 through 6 and 8 through 10, as being unpatentable over Wilfert in view of Noggle and Poupitch.

The decision of the examiner to reject claims 1 through 10 is reversed.

REVERSED

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IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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JOHN P. MCQUADE)	
Administrative Patent Judge)	

JPM/kis

EVENSON, MCKEOWN, EDWARDS
& LENAHAN
1200 G STREET, N.W.
SUITE 700
WASHINGTON, DC 20005

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