

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JORG ZWIRNER

Appeal 2006-3125
Application 10/398,045
Technology Center 3600

Decided: April 16, 2007

Before TERRY J. OWENS, JENNIFER D. BAHR, and STUART S. LEVY,
Administrative Patent Judges.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant appeals from a rejection of claims 1-11, which are all of the pending claims.

THE INVENTION

The Appellant claims a tube connection system. Claim 1 is illustrative:

1. A tube connection system which includes:

a first connection (20) with a first connection element (40) which is to be contacted by a first tube (70), and a second connection (30) with a second connection element (60) which is to be contacted by a second tube (80), characterized in that the outer diameter of the first connection element (40) is smaller than that of the second connection element (60), where the first connection element is contacted by the first tube the inner diameter of the first tube (70) is slightly smaller than the outer diameter of the first connection element (40) and where the second connection element is contacted by the second tube the inner diameter of the second tube (80) is slightly smaller than the outer diameter of the second connection element (60).

THE REFERENCE

Field US 6,382,678 B1 May 7, 2002

THE REJECTION

Claims 1-11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Field.

OPINION

We reverse the aforementioned rejection and remand the application to the Examiner.

Field discloses “a unitary coupling assembly for use with refrigerant lines” (col. 1, ll. 9-10). The coupling assembly includes 1) a metal unitary female body (12) having at least two cylindrical passageways (14, 16), one end of each being covered by a frangible metal diaphragm (26) and the other end having a refrigerant line (32, 34) extending into it, and 2) metal mating male coupling halves (52, 54), each having a leading end (56) covered by a frangible metal diaphragm (62) and a trailing end (58) having a refrigerant line (66, 68) extending into it (col. 2, ll. 44-47; col. 3, ll. 1-3, 21-23, 53-58). The female body contains, between the diaphragm and the refrigerant line, a metal cutting device (28) having a sharp edge (30) facing the diaphragms (col. 2, ll. 59-61). The refrigerant lines are precharged with refrigerant which the diaphragms prevent from escaping (col. 3, ll. 56-58). The female body and male coupling portions are moved toward each other to obtain a metal-to-metal seal therebetween by screwing a bolt (90) into a threaded opening (42) (col. 4, ll. 1-3, 26-28; fig. 2). As the female body and male coupling portions move toward each other during that coupling process the sharp edges of the metal cutting devices rupture the diaphragms and thereby allow flow of refrigerant through the refrigerant lines (col. 4, ll. 8-21; fig. 3).

The Examiner argues that Field’s metal cutting devices correspond to the Appellant’s first and second connection elements, and that the combinations of Field’s male coupling halves and their diaphragms

correspond to the Appellant's first and second tubes (Answer 3, 9). The Examiner argues that when the diaphragms are intact the tubes have zero diameter, and that as the metal cutting devices rupture the diaphragms, the tube (i.e., diaphragm) diameters change from zero to a value which, at some point in the rupturing process, is slightly smaller than the metal cutting device outer diameters (Answer 9). At that point, the Examiner argues, Field's device anticipates the Appellant's claimed invention. *See id.*

The Examiner's argument is not well taken because, first, covering an end of Field's male coupling halves with a diaphragm does not reduce the diameters of the male coupling halves to zero. The male coupling halves still have the same diameters. Second, the Examiner has not established that at any point Field's ruptured metal diaphragms fit around the metal cutting devices in any manner that reasonably can be considered to correspond to the fit of a tube having a slightly smaller diameter than the outer diameter of its corresponding connection. It appears more likely that the metal diaphragm ruptures into an irregular shape.

The Examiner, therefore, has not established a *prima facie* case of anticipation of the Appellant's claimed invention.

REMAND

The Examiner and the Appellant have interpreted the Appellant's claims as including the first and second tubes. However, those tubes are not positively recited in the claims. Claim 1, for example, recites that the connecting elements are "to be contacted" by the tubes. The actual contact is not required. Claim 1 also recites that "where the first connection element is contacted by the first tube" and "where the second connection element is contacted by the second tube" the inner diameters of the tubes are slightly smaller than the outer diameters of the connection elements. The contact, however, is not positively recited. The claim appears to require only that where the connection elements are to be contacted by tubes, the connection elements and tubes will have the recited relative diameters. Similar comments apply to the other claims.

We remand the application for the Examiner and the Appellant to address on the record whether the claimed invention requires the referenced tubes. If not, the Examiner should determine whether the prior art discloses, or would have fairly suggested, to one of ordinary skill in the art, a tube connection system having the recited first and second connection elements.

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DECISION

The rejection of claims 1-11 under 35 U.S.C. § 102(e) over Field is reversed. The application is remanded to the Examiner.

REVERSED and REMANDED

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
595 MINER ROAD
CLEVELAND OH 44143