

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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DENNIS E. SMAGAC

Appeal No. 1999-0615
Application No. 08/786,974

HEARD: October 26, 2000

Before CALVERT, FRANKFORT, and JENNIFER D. BAHR,
Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 10 and 12 through 16. Claim 11, the only other claim in the application, stands withdrawn from

Appeal No. 1999-0615
Application No. 08/786,974

further consideration under 37 CFR § 1.142(b) as being directed to a non-elected species.

Appellant's invention is directed to a backpack mounted fire suppressant foam generation apparatus and to a method of using such an apparatus for generating fire suppressant foam. As seen in Figure 8 of the application drawings, the backpack unit is designed to be carried on the back of a single firefighting individual and to be used in wildland/urban locations which do not have access to an adequate supply of the traditional fire suppressant material, i.e., water. Independent claims 1 and 12 are representative of the subject matter on appeal and a copy of those claims, as reproduced from the Appendix to appellant's brief, is attached to this decision.

The prior art references relied upon by the examiner in rejecting the appealed claims are:

Farison	3,337,195	Aug. 22,
1967		
Stults	3,592,269	Jul. 13,

Appeal No. 1999-0615
Application No. 08/786,974

1971

Good, Jr. (Good) 3,802,511 Apr. 9,

1974

Teske et al. (Teske) 5,255,747 Oct. 26,

1993

Claims 1 through 5, 10, 12 through 14 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Good in view of Farison and Stults.

Claims 6 through 9 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Good in view of Farison and Stults as applied to claims 1, 12 and 14 above, and further in view of Teske.

Rather than attempt to reiterate the examiner's full commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding the rejections, we make reference to the examiner's answer (Paper No. 16, mailed October 2, 1998) for the reasoning in support of the rejections, and to appellant's substitute brief (Paper No. 15, filed August 10, 1998) for the

Appeal No. 1999-0615
Application No. 08/786,974

arguments thereagainst.

OPINION

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

Like appellant, we note that Good discloses (e.g., in Figs. 1, 2, 16 and 17) a portable fire extinguisher in the form of what the patentee describes as "a water tank adapted to be worn on the back of a fireman, a hand-held gun that includes a discharge nozzle and which is connected to the water tank by a flexible hose, and a gas pressure-operated pump located between the water tank and the nozzle of the hand-held gun, for pumping water from the backpack tank and discharging it at high pressure through the nozzle" (col. 2, lines 10-18). In column 2, lines 43-45, it is further noted

Appeal No. 1999-0615
Application No. 08/786,974

that a single bottle of compressed gas, which is normally air, will be sufficient to pump several tanks of water, "or some other fire extinguishing liquid." The gas pressure-operated pumps of the various embodiments in Good are described (col. 2, lines 49-54) as having the common feature of being able to "produce a high pressure stream of water or other extinguishing liquid from the nozzle of the hand-held gun, without requiring the fireman to exert himself and become fatigued" (emphasis added). As recognized by the examiner (answer, page 4), nothing in the Good patent discloses or suggests an apparatus and method for generating fire suppressant foam and consequently this patent lacks most of the recited components necessary for generating such a fire suppressant foam.

Farison addresses a foam generating apparatus, e.g., for foams used in industrial cleaning applications (col. 2, lines 21-22), which apparatus is specifically designed to be used with an open drum (4) of foamable liquid. The apparatus includes a source of compressed gas (not shown) capable of supplying, via supply conduit (1), compressed gas (such as air

Appeal No. 1999-0615
Application No. 08/786,974

or nitrogen) at a pressure of from about 25 to 200 pounds per square inch or more. In addition, the apparatus includes a compressed gas operated piston pump (5) for producing a flow of the foamable liquid from the drum (4) to a mixing T (10) where the foamable liquid is mixed with the compressed gas from conduit (9) to generate a foam. From the mixing T (10), the foam is passed via conduit (17) to an expansion chamber (11) and subsequently to discharge conduit (12) which carries the foam to a nozzle (14) for application at the point of use.

Stults discloses a high-expansion foam generating fire extinguishing system for a fixed installation such as a warehouse or storage building (10). In this instance, the system includes a container (22) of nitrogen gas under pressure that is used to force a concentrate mix solution of foamable liquid through line (40) to a manifold (44) associated with a plurality of nozzles (60) which emit conical streams (68) of concentrate mix solution against a foam generating screen (56) to thereby create copious amounts of foam (70). The examiner specifically points to the disclosure in Stults at column 1, lines 15-18, relating to the statement

Appeal No. 1999-0615
Application No. 08/786,974

that "[t]he prior art discloses some high-expansion foam fire fighting systems, both portable and fixed installations."

In contrast to the examiner's position (answer, pages 4-5) that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to modify the invention of Good "to generate fire suppressant foam" and to provide the backpack system of Good with each of appellant's recited components necessary for generating such a fire suppressant foam, we note that none of the prior art applied by the examiner teaches or suggests a fire suppressant foam generating apparatus which is of a size so as to be mountable on the backpack of Good. Each of the patents relied upon by the examiner that relates to a foam generating system discloses large arrangements, e.g., for a fixed storage building (Stults) or for drawing a foamable liquid from an open storage drum (Farison). Thus, while we might, in the abstract, agree with the examiner that it would have been obvious to one of ordinary skill in the fire fighting art to use a foam fire suppressant material instead of the liquid (e.g., water) in the tank of Good, we see no basis in the

Appeal No. 1999-0615
Application No. 08/786,974

applied references for concluding that it would have been obvious to one of ordinary skill in the art to modify the backpack apparatus of Good so as to include an entire fire suppressant foam generating system miniaturized and consolidated to fit a backpack like that seen in Good.

As for the examiner's reliance on the comment in Stults column 1, lines 15-18, relating to a prior art "portable" high-expansion foam fire fighting system, we note that the term "portable" as used in Stults most likely indicates that the system is truck mounted and thus is portable in the sense that the truck can be moved to the location of a fire when needed. There is clearly nothing in the Stults patent or any other reference of record in this application to suggest that a high-expansion fire suppressant foam generating system sized and consolidated to fit on a backpack was suggested or known in the prior art before appellant's invention thereof. In this regard, we also point to the patent to Teske relied upon by the examiner in the § 103 rejection of claims 6 through 9 and 15 on appeal, noting that the Teske patent discloses a fire suppressant foam generating system that is "portable"

Appeal No. 1999-0615
Application No. 08/786,974

because it is apparently sized to be mounted on a fire truck and driven from the transmission thereof (col. 2, lines 64-67).

Absent knowledge of appellant's invention, we see nothing in Good, Farison and Stults which would have suggested their combination in the manner urged by the examiner so as to result in a backpack mounted fire suppressant foam generating system. In our opinion, the examiner has used impermissible hindsight derived from appellant's own teachings to reconstruct the backpack liquid fire extinguisher of Good so as to result in a fire suppressant foam generating system miniaturized and consolidated to fit a backpack as required in the claims before us on appeal.

Since we have determined that the teachings and suggestions found in Good, Farison and Stults would not have made the subject matter as a whole of claims 1 through 5, 10, 12 through 14 and 16 on appeal obvious to one of ordinary skill in the art at the time of appellant's invention, we must refuse to sustain the examiner's rejection of those claims

Appeal No. 1999-0615
Application No. 08/786,974

under 35 U.S.C. § 103.

As a further commentary on the examiner's rejection of claims 1 through 5, 10, 12 through 14 and 16 under 35 U.S.C. § 103, we note that it appears that the examiner has not properly construed the "means for expanding the fire suppressant foam" of independent claim 1 or the step of "expanding the fire suppressant foam" as set forth in method claim 12, in accordance with 35 U.S.C. § 112, sixth paragraph. Appellant has consistently argued with regard to these limitations that the prior art relied upon by the examiner fails to disclose any mechanism for mechanically agitating the fire suppressant foam to expand the fire suppressant foam, i.e., appellant has argued that the corresponding structure and acts described in the specification distinguish the claimed "means for expanding" in claim 1 and step of "expanding" in claim 12 from the applied prior art references. The examiner instead of providing a proper analysis under 35 U.S.C. § 112, sixth paragraph, has merely asserted that appellant has presented arguments that are "directed toward features not claimed as argued" (answer,

Appeal No. 1999-0615
Application No. 08/786,974

page 10) and pointed to the expansion chamber (11) of Farison as being readable on the claimed terminology. However, since there is no indication in Farison that the expansion chamber (11) therein includes any agitating structure like that seen in Figures 2 through 7 of the application and described on pages 11 through 13 of appellant's specification, or is in any way capable of providing agitation of the foam to mechanically expand the foam subsequent to its formation, it is clear to us that the expansion chamber of Farison is not the same as or the equivalent of the apparatus for expanding the foam disclosed in appellant's specification and thus is not readable under

35 U.S.C. § 112, sixth paragraph, as the "means for expanding" in appellant's claim 1 or as responding to the step of "expanding" in appellant's claim 12. Accordingly, for this additional reason we find that the examiner's rejection of independent claims 1 and 12 based on the teachings of Good, Farison and Stults, and the claims which depend therefrom, is not sustainable.

As for the examiner's rejection of claims 6 through 9 and

Appeal No. 1999-0615
Application No. 08/786,974

15 under 35 U.S.C. § 103 as being unpatentable over Good in view of Farison and Stults as applied to claims 1, 12 and 14 above and further in view of Teske, we have reviewed the Teske patent and find nothing therein which provides for that which we have indicated above to be lacking in the examiner's main combination of Good, Farison and Stults. Thus, the examiner's rejection of

claims 6 through 9 and 15 under 35 U.S.C. § 103 also will not be sustained.¹

¹As for the Horner patent relied upon by the examiner on page 12 of the answer, we note that this patent has not been set forth in the statement of the § 103 rejection before us on appeal and therefore forms no part of the issues presently before us for review. As pointed out by the Court in In re Hoch, 428 F.2d 1341, 1342, 166 USPQ 406, 407 (CCPA 1970), where a reference is relied upon to support a rejection, whether or not in a minor capacity, there would appear to be no excuse for not positively including the reference in the statement of the rejection.

Appeal No. 1999-0615
Application No. 08/786,974

In light of the foregoing, the decision of the examiner
rejecting claims 1 through 10 and 12 through 16 under 35
U.S.C.
§ 103 is reversed.

REVERSED

IAN A. CALVERT)
Administrative Patent Judge)
)
) BOARD OF PATENT
CHARLES E. FRANKFORT)
Administrative Patent Judge) APPEALS AND
)
) INTERFERENCES
)
JENNIFER D. BAHR)
Administrative Patent Judge)

CEF:lmb
JAMES M. GRAZIANO
DUFT GRAZIANO & FOREST
1790-30TH STREET SUITE 140
BOULDER, CO 80301-1018

Appeal No. 1999-0615
Application No. 08/786,974

CLAIM 1

Apparatus for generating fire suppressant foam comprising:

a backpack;

a source of fire suppressant foam fluid mounted on said backpack;

Appeal No. 1999-0615
Application No. 08/786,974

a source of pressurized gas mounted on said backpack;

means for producing a flow of said fire suppressant foam fluid from said source of said fire suppressant foam fluid;

means for injecting a flow of said pressurized gas into said flow of said fire suppressant foam fluid to create the fire suppressant foam;

means for expanding the fire suppressant foam; and

means for delivering the fire suppressant foam.

CLAIM 12

A method for generating fire suppressant foam using apparatus comprising a backpack, a source of fire suppressant foam fluid mounted on said backpack, and a source of pressurized gas mounted on said backpack, said method comprising the steps of:

producing a flow of said fire suppressant foam fluid from said source of said fire suppressant foam fluid;

injecting a flow of said pressurized gas into said flow of said fire suppressant foam fluid to create the fire suppressant foam;

expanding the fire suppressant foam; and

delivering the fire suppressant foam via a delivery system.