COMMISSIONER'S DECISION

AGGREGATION: Fire Extinguishing Apparatus

Claims were refused for failing to define a patentable combination. Three of the amended claims are directed to an aggregation.

Final Action: Affirmed.

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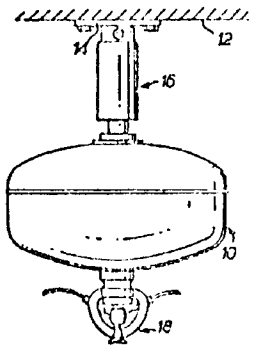
This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated June 23, 1976, on application 146,808 (Class 137-4.1). The application was filed on July 11, 1972, in the name of Alister L. McCulloch, and is entitled "Fire Extinguishing Systems."

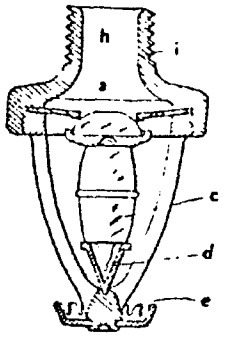
This application relates to automatic fire extinguishing apparatus. It consists of a container for holding a supply of extinguishant, a fire sensing means mounted on the container and signal means on the container to produce an electrical output signal when the extinguishant is activated. Figure 1 shown below is illustrative of the invention.



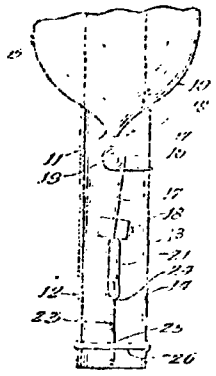
In the Final Action the examiner refused claims 1 to 12 and 15 to 17 for being directed to an aggregation of elements and for failing to define patentable subject matter in view of the following references:

Canadian Patent	326,499	Oct. 4, 1932	Taylor
United States Patents	2,470,371	May 17, 1949	Roessner
	2,417,082	March 11, 1947	Mapes et al

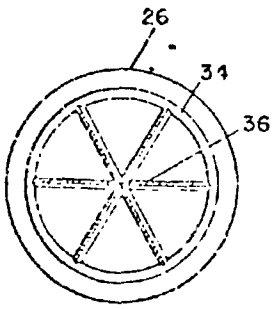
The Taylor patent relates to an automatic fire extinguishing sprinkler arrangement in which the sensing element is a frangible vessel containing a heat sensitive liquid. Figure 1 of Taylor is shown below.



The Roessner patent is for a fire extinguisher capable of either manual or automatic operation. A shatterable chemical carrying grenade serves as the extinguisher and the grenade breaking mechanism consists of a spring mounted hammer. Actuation of the hammer is automatic when a feasible link releases the hammer or the grenade can be exploded manually by impact such as throwing it into the fire area. Figure 1 is representative of this arrangement.



Mapes relates to apparatus for discharging fluids under pressure for fire extinguishing purposes. An explosive charge is used as the actuating means to shatter the closure disc to enable a high discharge rate from the container. Electric circuitry may be used to automatically actuate the explosive charge or it may be manually operable. Figure 2 shown below illustrates the Mapes arrangement.



In the Final Action the examiner detailed the points relating to the aggregation as well as applying the citations on the issue of obviousness. He states (in part):

> Regarding applicant's argument in lines 10 to 17 on page 2 of the disclosure, that it is not correct to reject claims 1, 9 and 10 in view of the teaching of the Roessner, Mapes et al or Taylor patents, since the said patents do not show a fire extinguisher with an electrical signalling means responsive to the discharge of extinguishant from the said extinguisher, applicant is advised that such signalling devices are old and well known in the art, and the inclusion of such on a device is not considered to be of patentable significance. An example of such signalling device may be seen in Canadian patents 20,669 to Worthington, and 17,063 to Neracher; also the said claims are objected to because they are in themselves directed to an aggregation of elements which elements do not cooperate to produce a unitary result; such is amply discussed above; hence the said claims are rejected.
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> Regarding applicant's argument that since claims 13 and 14 were not rejected, and are therefore deemed allowable, then the above rejected claims should also be considered to be allowable, since claims 13 and 14 are directed to a system which utilizes the apparatus claimed by the rejected claims; such argument has been considered however it is not acceptable.
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> Claims 13 and 14 are directed to a fire extinguishing system where the various apparatus combine their functions to perform a unitary result. For example, when a fire activates one extinguisher, this extinguisher by means of a signal actuates the remaining inter-connected extinguishers, by means of the explosive charges, in order to extinguish the fire. - Such cooperation of the various elements comprising any one element as claimed in the refused claims do not cooperate such that the combined action of all the said elements combine to produce a unitary result; rather each of the explosive charge or the temperature sensor can release the extinguishant independently of the other - for example the explosive charge can be manually detonated.
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> ...
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> Claims 13 and 14, as presented, are deemed to be allowable.
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> ...

> In view of the teaching of the cited patents and as discussed above, claim 15 is rejected as obvious to one in the art, in view of the cited patents, and also that it fails to define a patentable improvement thereover.

In the response to the Final Action the applicant amended some claims and stated (in part):

> This amendment amends the claims so that the independent claims now in the case (claims 1, 8, 9, 10, 11 and 12) correspond to previous claims 11, 12, 13, 14 and 16. The examiner has indicated that previous claims 13 and 14 are allowable. As far as previous claim 2 is concerned, it is understood that the examiner is prepared to allow this claim if put forward in independent form - which it now is (as new claim 1). Previous claims 3 to 8 now appear as dependent on the new claim 1 and it is believed from the examiner's remarks that these claims will also now be allowable.

The examiner has indicated that amended claim 1 is acceptable as are dependent claims 2 to 7, and we agree. In addition new claims 10 and 11 are former claims 13 and 14 which were acceptable prior to the Final Action. Our consideration will be directed to amended claims 8, 9 and 12. The issue to be decided is solely whether these claims are directed to a patentable combination as opposed to an aggregation. The examiner maintains that these claims have not been properly amended to overcome the objection on that ground in the Final Action. Claim 8 reads as follows:

> A fire extinguisher having a body including an extinguishant container with a normally closed extinguishant discharge opening, a rupturable bulb containing thermally expansive fluid, means supporting the bulb adjacent to the said opening, means supported by the bulb for holding the opening closed until the bulb is ruptured by thermal expansion of the said fluid in response to incipient fire conditions in the neighborhood of the extinguisher whereupon the bulb ruptured, and opens the discharge opening, electrically detonatable explosive-actuated means, means mounting the explosive-actuated means adjacent the bulb so as to rupture the bulb when the explosive-actuated means is electrically detonated, and electrical signalling means mounted on the body and responsive to discharge of the extinguishant to produce an electrical output signal.

Citations in the Final Action show that the component elements of the rejected claims are known. The Taylor patent uses a frangible vessel as the sensing element for the extinguisher. Rossner shows an extinguisher grenade breaking

arrangement utilizing a spring loaded hammer breaking mechanism. Mapes discloses the use of an explosive cartridge adopted to be fired manually or electrically to release the extinguisher medium. Use of electrical signalling means responsive to discharge of extinguishant from the extinguisher is well known as evidenced from two patents dated in the 1880's which were mentioned in the Final Action.

The examiner points out that the rejected claims are "directed to an aggregation of elements which do not cooperate to produce a unitary result; rather each of the said elements operates independently to produce the same result, and the same result that is, the discharge of the fire extinguisher as produced by either of the elements independent of the other, hence no cooperative steps are present such that the sum of the said steps produces a unitary result."

It is trite law that the essential qualification for a patentable combination is that the elements of which the combination is comprised are combined in an inventive manner so as to produce a result to which all the elements of the combination contribute their part. The result produced by the combination, however, must be a common or unitary result, in the sense that all the elements of the combination are brought together in working inter-relationship to each other such that each element contributes its own particular share to the production of that result, (see Lester v Commissioner of Patents (1946) Ex. C.R. 603). In that decision O'Conner J. quoted Lord Tomlin in British Celanese Ltd. v. Courtaulds Ltd., (193) 52 R.P.C. p.171, as follows:

> It is accepted as sound law that a mere placing side by side of old integers so that each performs its own proper function independently of any of the others is not a patentable combination, but that where the old integers when placed together have some working inter-relation producing a new or improved result then there is patentable subject-matter in the idea of the working inter-relation brought about by the collocation of the integers [emphasis added].

Claim 8 contains the following elements:

(1) a rupturable bulb containing thermally expensive fluid,

(2) means supported by the bulb,

(3) means supported by the bulb for holding the opening closed,

(4) electrically detonatable explosive-actuated means mounted adjacent the bulb, and

(5) electrical signalling means responsive to the discharge of the extinguishant

All the elements are shown in the prior art. The element listed under 1 is capable of actuating the extinguisher when the fluid expands in response to heat. Similarly the element listed under 4 can fracture the bulb when the explosive-actuating means is energized. Either element operates independently and does not alter the operation of the other element. In our view these elements are not combined to produce a unitary result but are merely placed side by side so that each performs its own function independently of the other and there is no inter-relationship producing a new or an improved result (see Br. Celanese Ltd. v Courtaulds Ltd, supra). In our opinion claim 8 should be refused for failing to define a patentable combination.

Claim 9 is similar to 8 except that "electrical detonatable explosive actuating means" is defined as "control means mounted on the body and associated with the discharge opening and operative in response to an electrical input signal to open the discharge opening if the latter is closed." This description of the detonating means is merely covered in different terminology from claim 8 and fails to define a patentable combination.

Similarly claim 12 contains "a remotely controlled explosive device mounted on the supporting structure and operable to break the bulb independently of the ambient temperature adjacent to the head" which does not define a patentable combination.

In summary, we agree that claims 1 to 7, 10 and 11 are in allowable form. On the other hand we are satisfied that amended claims 8, 9 and 12 should be refused for failing to produce a unitary result from the inter-relationship of the individual elements. They do not overcome the objection in the Final Action and we recommend that these claims be refused.

J.F. Hughes
Acting Chairman
Patent Appeal Board, Canada

Having studied the prosecution of this application and considered the recommendation of the Patent Appeal Board, I refuse to accept amended claims 8, 9 and 12. The applicant has six months within which to delete these claims by an appropriate amendment, or to appeal this decision under the provision of Section 44 of the Patent Act.

J.H.A. Gariepy
Commissioner of Patents

Dated at Hull, Quebec

this 26th. day of May, 1977

Agent for Applicant

Rogers, Bereskin & Parr
P.O. Box 313
Commerce Court Postal Station
Toronto, Ontario
M5L 1G1