

THE FIRE-EXTINGUISHER CASE.
 GRAHAM, ADM'R, ETC., AND ANOTHER V.
 JOHNSTON AND ANOTHER.

Circuit Court, D. Maryland.

July 26, 1884.

PATENTS FOR INVENTIONS—GRAHAM FIRE-
 EXTINGUISHER—SPECIAL ACT OF CONGRESS
 OF JUNE 14, 1878, GRANTING PATENT TO
 HEIRS—CONSTITUTIONALITY—EFFECT
 OF—PATENT SUSTAINED.

The act of congress approved June 14, 1878, relieving the heirs of William A. Graham from all disabilities preventing them from renewing or reviving an application filed by Graham in 1837 for a patent for a novel method of extinguishing fires, *held* to be a constitutional exercise of the power of congress; and *held*, that the patent No. 205,942, granted July 9, 1878, to Graham's administrator, was properly issued in pursuance of the authority given by that act of congress. *Held*, that the intention of congress was to allow the original application of Graham to be revived, and that this intention is sufficiently expressed in the act, and that the novelty of the invention for which the patent was granted is to be tested as of the date of original application filed in 1837. *Held* that, at the date of his application, Graham was the first discoverer that carbonic acid gas and water, when condensed in a sufficiently strong vessel, would propel itself by its own elasticity in a sufficient stream to a sufficient distance to be a useful agent for extinguishing fires, and that he described both a portable and a fixed apparatus by which his method could be applied with beneficial results. *Held*, that the claim in the patent granted to his administrator for this method or process of extinguishing fires is valid. *Held*, that the defenses set up against the patent—that it was granted for several distinct inventions, that the specifications are deceptive and misleading, and that it covers a different claim from that set forth in the application—are not valid objections.

In Equity.

Rufus W. Applegarth and *L. L. Bond*, for complainant.

I. F. Williams, Abraham Sharp, and R. K. Evens,
for respondents.

MORRIS, J. This is a suit in equity for alleged infringement of patent No. 205,942, granted July 9, 1878, to Archibald Graham, administrator of William A. Graham, deceased, for a new method and an improved apparatus for extinguishing fires.

The claims are as follows:

“I do not claim to have discovered a new element in nature, nor do I claim to have discovered the abstract principle that carbonic acid gas will not keep up combustion. What I claim as new, and desire to secure by letters patent, is (1) the method or process of extinguishing fires by means of a properly directed stream of mingled carbonic acid gas and water projected by the pressure or expansive force of the mingled mass from which the stream is derived; (2) the combination of a strong vessel for containing the mixture of carbonic acid gas and water under pressure, with a stop-cock, flexible hose-tube, and a nozzle, substantially as and for the purpose specified; (3) the combination of fixed pipes or tubes, arranged by or through a building, with a stationary or fixed fountain or tank, for forcing mingled carbonic acid gas and water, by its own elasticity, through such pipes, substantially as specified; (4) an improved method of extinguishing fires, consisting—*First*, in condensing carbonic acid gas by artificial pressure or in generation; *second*, controlling it by a suitable vessel; and, finally, in directing its flow to the desired place, substantially as specified.”

The original application of William A. Graham, of Lexington, Virginia, was filed in the patent-office, November 23, 1837, over 40 years ⁴¹ prior to the grant of the patent. In his application and specifications, Graham claimed that he had discovered that carbonic acid gas compressed in water in the proportion of ten or more volumes of gas to one of water, in portable

fountains or fixed reservoirs, could be usefully applied to extinguishing fires, and that he had devised suitable apparatus by which a stream of gaseous water, by the elastic force of the gas, would be projected a distance of 40 feet, so as to quickly, cheaply, and effectually subdue the fire. He fully described what he claimed as his invention, and accompanied his specifications with diagrams and descriptions of his apparatus. The commissioner of patents refused to grant him a patent, upon the ground that the specifications were not found to contain any practicable device for carrying the alleged discovery into operation, and because it did not appear that it admitted of being carried into operation. Graham made many unsuccessful efforts to convince the commissioner that his plan was useful and practicable, but want of means and ill-health prevented his exhibiting in Washington the apparatus with which he expected to demonstrate its efficiency, and he died in 1857 without obtaining a patent. In 1869 a patent was granted by the United States to Carlier & Vignon, of Paris, France, (No. 88,844, April 13, 1869; reissued, No. 4,994, July 16, 1872,) for "an improvement in the art of extinguishing fires, by throwing upon the fire or conflagration a properly directed stream of mingled carbonic acid gas and water by means of the pressure or expansive force exerted by the mass of mingled gas and water from which the stream is derived." Carlier & Vignon had previously obtained patents in France and England, but the date of their invention was not shown to have been earlier than 1861. The portable apparatus described by them was substantially identical in principle and operation with the apparatus described by Graham. Suit having been brought on their reissued patent in the circuit court for the Eastern district of Pennsylvania, it was tried in April, 1874, before Circuit Judge McKENNA. To show want of novelty in the patent, the respondent in that suit put in evidence the identical apparatus constructed and

used by Graham, and Judge McKENNA, in a carefully considered decision, held that it was clearly proved that Graham, as early as 1852 or 1853, had made a public trial of this very apparatus in Lexington, Virginia. He held that it was proved that Graham was, as he claimed to be, the first inventor “of an original method of extinguishing fires by the combined agency of carbonic acid gas and water, and that he perfected and adopted his invention by embodying it in the form of mechanical appliances, capable of operative and successful use.” *Northwestern Fire-extinguisher Co. v. Phila. Fire-extinguisher Co.* 1 Ban. & A. 177. After the decision of this case the administrator of Graham, in 1876, filed in the patent-office another application for a patent for Graham’s invention, but was refused upon the ground that in consequence of the long delay the invention had gone into public use.⁴² These facts being brought to the attention of congress, an act was passed, approved June 14, 1878, for the relief of Graham’s heirs. By that act the heirs of Graham were relieved from all disabilities preventing them from renewing or reviving an application by his administrator for a patent for a novel method of extinguishing fires. The administrator was authorized to renew the application, conforming it to present rules, and the commissioner of patents was authorized to issue letters patent for the *invention* or *inventions* set forth in the application, to have the same force and effect from its date as though no delay had occurred; provided, that all persons having machines, containing the inventions, in use should have the right to continue to use them without being liable for any infringement. Under the authority given by this act the patent on which this suit is based was issued, founded upon the original application of Graham, filed November 23, 1837.

It is contended by the respondents that this patent is void because congress had no constitutional power

to pass the act; that as, by the general acts of congress on the subject of patents in force during the time between the filing of the original application and the passing of the special act, the applications of Graham and his administrator were declared abandoned, and all right to prosecute them was denied, it resulted that the public had acquired the right to use the inventions, and that right could not be taken away without the law being repugnant to the declaration of the constitution that no person shall be deprived of his property without due process of law. The theory of the encouragement given to inventors is that by disclosing under the regulations of law their discoveries they benefit the public, and the constitutional power of congress for securing to them the exclusive right to their inventions has only one restriction, viz., that it shall be for limited times. With regard to the terms upon which the exclusive right shall be granted, the time when the application for the original grant or for any renewal or extension of it shall be made, it has been frequently held that the regulations in these matters are merely self-imposed restrictions on the constitutional power of congress, which it can at its pleasure disregard in any particular case. Walker, Pat. § 255.

Special acts for the relief of particular inventors have often been passed by congress. *Evans v. Eaton*, 3 Wheat. 454. In the case of *Ayawam Co. v. Jordan*, 7 Wall. 583, the supreme court sustained a patent which had been extended in pursuance of a special act of congress, passed more than 20 years after the original patent had expired, and the invention had been free to the public. The act of congress in that case was quite similar to the one under consideration in that it authorized the commissioner to entertain the application for extension as though it had been made within the time prescribed by the general law. In *Blanchard v. Sprague*, 2 Story, 170, Mr. Justice Story,

speaking of the right of congress to grant a patent to an ⁴³ inventor whose invention had, at the time of the passage of the act, gone into public use, says that the question is set at rest by *Evans v. Eaton*, and that he had never doubted the constitutional authority of congress to make such a grant.

The right which the public has acquired to use the thing invented, by reason of the applicant for a patent failing to do something prescribed by congress, and the necessity for which congress might, by previous legislation, have dispensed with, has never been held to be a vested right. The cases of *Evans v. Eaton, supra*; *Evans v. Jordan*, 9 Cranch, 199; *Bloomer v. Stolley*, 5 McLean, 161; *Jordan v. Dobson*, 2 Abb. (D. S.) 408, hardly leave this question debatable.

It is further contended by the respondents, in opposition to the validity of the complainant's patent, that as by its terms the act of congress relieved the heirs of the inventor from all disabilities, preventing them from renewing or reviving *an application by the administrator* for a patent, provided the alleged invention should be found to have been new and useful *at the time of filing such application*, that "the time of filing such application" means the filing of the application by the administrator, and, consequently, if the invention was not new at that date, the commissioner was not authorized to grant the patent. It would be a singular miscarriage of the obvious intention of congress if this was the necessary interpretation of the language used in the act. It was always conceded that at the date of the application made by the administrator, viz., February 19, 1876, the invention was not new. The strongest argument in favor of the relief given by congress was the fact that the patent granted to Carlier & Vignon in 1869 had been in 1876 declared Void for want of novelty, because Graham's invention, which he had described in 1837, had been proved to have been successfully

used as early as 1853. The purpose of the act is remedial and beneficial, and is to be so construed, if possible. I think the fair construction of it is that the heirs of the inventor are relieved from all disabilities which would prevent the administrator from renewing or reviving an application for a patent for a novel method of extinguishing fires. The administrator is authorized to renew said application, and the commissioner is authorized to grant letters patent for the invention or inventions contained in such application, if the alleged inventions should be found to have been new and useful at the time of filing such application. It is, I think, clearly intended and sufficiently expressed that the application which was to be revived or renewed was the application of the original inventor. Taking, then, the date of the filing of the original application and specifications, November 23, 1837, as the point of time to which is to be referred the question of novelty, there has been no testimony at all adduced tending to disprove novelty at that time, except the description of the Manby machine in the *Mechanic's Magazine*, London, 1824, pp. 28-31, and the English patent to Bakewell, issued March 8, 1832.⁴⁴ The contrivance described by Capt. Manby was intended for extinguishing fires. It was a small, portable air-tight vessel for holding water, (or water to which might be added some substance, such as pearlash, to increase its efficiency as an extinguishing fluid,) and into which atmospheric air had been pumped under sufficient pressure to cause the water to spurt out in a stream to the fire when the stop-cock was opened. The portable cylindrical vessel is quite similar in design to the portable strong vessel of Graham, but had no flexible hose tube and nozzle, and was apparently intended to be taken quite close to the fire. But we look in vain for any suggestion of the use of carbonic acid gas in connection with Capt. Manby's plan or apparatus. The English patent

of March 8, 1832, to Bake-well is for an apparatus for making soda-water and other aerated waters. The substance of the invention was a device by which the gas could be conveniently generated in the fountain itself, and to assist in that operation the fountain was suspended between two upright standards, vibrating freely on two pivots, so as to pour the acid, contained in a vessel inclosed in the fountain, gradually upon the chalk or other substance from which the gas was to be generated. It is not only nowhere suggested that it could be used for extinguishing a fire, but the machine was so constructed as to prevent such a use. These are the only anticipating devices suggested which antedate the original application of Graham, and they do not seem to me to require further consideration.

The patent is further assailed by the respondents upon the ground (1) that the patent as granted is for several separate and distinct inventions, and therefore void; (2) that the specifications are deceptive and misleading, and therefore the patent is void; (3) that the patent covers an invention different from that set forth in the application.

As to the first point, the claims for which the patent was granted are four. The first and fourth are for the method of extinguishing fires by a properly directed stream of mingled carbonic acid gas and water escaping from pressure, and projected by its own expansive force; the second claim is for a portable apparatus by which the method or process could be usefully applied; and the third is for a stationary apparatus for the same purpose. If these are all proper subjects of claim, and are all inventions found in the application of Graham, then the language of the act of congress which authorizes the commissioner to issue a patent for whatever invention of inventions, where found in the application, is sufficient to justify his action. This was held sufficient in *Evans v. Eaton*, 3 Wheat. 506. It was decided by the supreme court in *Hogg*

v. *Emerson*, 6 How. 483, that two or more patents may be united if they relate to a like subject, or are in their nature or operations connected together. Walk. § 180. The nature of the several claims of this patent is such that the granting of them in one patent, it seems to me, might be justified by this rule. But I incline to think that the substance of Graham's invention is ⁴⁵ contained in the first claim, or in the first and fourth claims together, if there is any difference between them. He claims in his application that he is the first discoverer that carbonic acid gas condensed in water can be made, by the use of a suitable apparatus, a useful self-propelling agent for putting out fires. He then describes the construction and operation of a machine by which the gas may be generated, and also describes "one among the various modes by which it may be applied." After describing the apparatus used by him, he says: "Besides the portable apparatus, there are other ways or methods by which my invention or discovery may be carried into useful operation." The inventor was entitled to the exclusive use of the method or process discovered by him, and was bound only to describe some particular mode or apparatus by which the process could be applied with some beneficial result. *Tilghman v. Proctor*, 102 U. S. 729. I am inclined to doubt the validity of the second and third claims, if they are to be construed as patents for any particular form of apparatus or combinations of mechanical elements. There was nothing new in the portable apparatus intended to be covered by the second claim, (unless, perhaps, the flexible hose-tube) except as applied to the use of carbonic acid gas and water; and the same may be said of the third claim. But if the first claim is valid, the fate of the second and third claims is not material,—certainly not in this case.

The second point of the objection used by respondents, that the specification and claims are

deceptive and misleading, is sought to be supported by testimony that in actual use of the apparatus so little of the carbonic acid gas reaches the fire that its effect as an extinguisher is not appreciable; that the only use of the gas is the elastic force which it exerts in the fountain, to eject the water with sufficient force to make it reach the fire; that it is the water alone which acts as the extinguisher. So that it is urged that the pretension in the specification that the gas was an important agent in smothering the fire is false and misleading. The witnesses who testified on this point made experiments by catching the stream in open beakers at some distance from the fountain, and they differed very greatly as to the quantity of gas which was then found to remain commingled with the water. Some claimed that a large quantity of gas remained, and others none at all. These tests were not very satisfactory. The weight of the evidence is, however, very conclusive that a stream from a fountain charged with carbonic acid gas and water in the manner described by Graham is an efficient agent for the purpose of extinguishing small fires; that the apparatus can be kept at hand for use in a sudden emergency, and can be operated without delay and before the fire has acquired headway. It is true, as claimed by him, that carbonic acid gas combines in a remarkable degree with water, so that by moderate pressure the water can be made to receive six to twelve times its volume of the gas; that the fountains can be kept charged or made to generate the gas when 46 needed; that the gas has great elasticity; that it is heavier than air, and when combined with water has a specific gravity well adapted to pass in a stream through the air; that if any of the gas does by any means reach the flame or fire it will not support combustion, but has a direct operation in extinguishing the flame and checking the combustion. All these merits claimed by him have been tested in actual use

for many years, and the utility of the invention has created a large demand for the apparatus. With the utility thus established, I can see nothing fatal to the patent in the fact, if fact it be, that the inventor may perhaps have overrated the importance of some of the elements of his method and underrated others.

With regard to the third point, that the patent is for a different invention from that described in the original application, after careful consideration I fail to see the force of the objection.

My conclusion is that Graham was, as is claimed for him, the pioneer in the art of using mingled carbonic acid gas and water to extinguish fires, and was the first to discover that when condensed in a sufficiently strong vessel it would propel itself by its own elasticity to a sufficient distance and in a sufficient stream to be a useful agent for that purpose, and that he described both a portable and fixed apparatus by which the result could be accomplished.

I hold the first and fourth claims of the patent to be valid, and in my judgment it is immaterial in this case whether my doubts as to the validity of the other claims are well founded or not.

There is no difficulty as to the infringement. The defendants can hardly be said to directly deny it in their answers. The defendant Johnston practically admits the making of six portable and six stationary machines, and says he desisted after being warned that they were infringements. The circulars and advertisements of the other defendant, in connection with the oral testimony, sufficiently show the infringement by it, and that the machines complained of contained the exact method of Graham, applied in substantially the same apparatus described by him.

The complainants are entitled to a decree in their favor, and to a reference for an accounting. See, also, *Fire-extinguisher Manuf'g Co. v. Graham*, 16 FED. REP. 543.

This volume of American Law was transcribed for use
on the Internet

through a contribution from [Maura L. Rees](#). 