The defendant's switches are made under letters patent No. 436,122, granted September 9, 1890, to Howard H. Crowell. They are snap switches it is true, and they cannot be turned backward, but in other respects they are much nearer several structures found in the prior art than to the Perkins switch. They are mounted on a large stationary china base, three inches in diameter, and are intended to be screwed on a wall or other support. They cannot be used in a lamp socket. Neither of the defendant's switches has a ratchet wheel and No. 2 has no insulating teeth or any equivalent therefor. Neither has "a pawl or detent" unless a very broad construction is given to these words. Both belong to a different type of switch from the patented switch.

The court cannot avoid the conclusion that it would be doing injustice to the defendant and others to give the Perkins patent a construction so broad as to suppress improvements like those embodied in the Crowell switches.

The bill is dismissed.

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LAMPREY BOILER FURNACE, MOUTH PROTECTOR CO. v. ECONOMY FEED WATER HEATER CO.

(Circuit Court, D. New Hampshire. June 25, 1894.)

No. 256.

1. PATENTS-NOVELTY - STRUCTURE FOR CIRCULATION OF WATER ABOUT FUR-

In the Lamprey and Bugbee patent, No. 421,588, for an improvement on their patent No. 388,367, for a structure to prevent by circulation of water the burning out of furnace mouths, the improvement covered by claims 1 and 2, consisting of the combination, with the appliance for circulation of water set forth in the earlier patent, of a steam dome connecting therewith, and pipes affording communication with the boiler, which averts the difficulty arising from the steam generated by allowing the steam to collect in the dome and pass from it into the boiler, involves patentable novelty, and was not anticipated by the Sloane patent of May 16, 1882, although that patent involved the same principle and accomplished the same results, nor by other devices previously known.

2. SAME-INFRINGEMENT.

As the structure for the circulation of water described in the patent may be a hollow shell or other contrivance as well as pipes, an M-shaped shell structure for the channels of circulation, combined with the steam dome device, although called a "steam drum," is an infringement.

8. SAME-DELAY IN PAYMENT OF PATENT-OFFICE FEE.

A patent regular on its face is not subject to collateral attack because the patent-office fee was not paid within the time prescribed by Rev. St. U. S. § 4897.

This was a suit by the Lamprey Boiler Furnace Mouth Protector Company against the Economy Feed Water Heater Company for infringement of a patent.

Stephen S. Jewett and Newell & Jennings, for complainant. H. W. Boardman and F. C. Somos, for defendant.

ALDRICH, District Judge. The complainant claims protection for a structure designed for use in connection with various kinds

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of furnaces which must be highly heated. The structure is of iron. and may be so placed as to sustain the mouth of the furnace; but the main purpose is to arrange about the highly-heated parts a successful circulation of water, in order that the troublesome burning out of the furnace mouth may be averted. For a considerable number of years various devices employing water for such purpose have been in operation, but, generally speaking, with unsatisfactory results. In 1888, B. B. Lamprey and A. C. Bugbee procured letters patent (numbered 388,367), in which they claimed an invention consisting of the combination with a furnace and its mouth, a series of pipes extending along the opposite sides and over the top of the mouth of the furnace, with inlet pipes for the supply of water, and outlet pipes for the escape of the heated water and steam, and all so arranged and connected as to brace or support the brickwork. around the mouth thereof. It is claimed that experience with this device disclosed defects of a serious character, so serious as to render the appliance of little or no value. It would seem that the failure resulted from the fact that there was no provision for steam generating in the lining or pipes as the water was passing therethrough, and, as a consequence, the steam rising to the highest point in the pipes became superheated, and forced the water back into the boiler, thus leaving the pipes, and furnace mouth as well, exposed to the highly heated and dangerous conditions which the structure was intended to avert. In February, 1890, Lamprey and Bugbee procured a patent, based upon what was claimed to be an improvement on their earlier patent, and which relieved the difficulty to which I have referred. This alleged improvement and invention, which the complainant owns, and on which it now relies, is covered by the first and second claims in letters patent numbered 421,588, dated February 18, 1890, and consists of an appliance to the furnace mouth linings, constructed and arranged for the circulation of water, substantially as set forth in their earlier patent, combined with a steam dome connecting with the lining, a pipe affording means of communication between the steam dome and boiler, and another pipe affording communication between the boiler and lining; but the material and important device is the steam dome. which is designed to be located at a high point, and where the vertical and horizontal pipes unite, and above the line of the pipes through which the water circulates. In other words, it is a space above the header or manifold (the contrivance used in the ordinary steam radiator), into which the steam generated in the pipes may collect, and from which it may pass, together with superheated water, into the boiler. My conclusion is that this device is new, and an improvement upon any device known prior to the patent It is proper, however, that I should state that I have not in suit. been free from doubt as to the proposition urged by the defendant, that the Sloane patent of May 16, 1882, which provides for a drum in connection with its pipes, contemplates a device involving the same principle and accomplishing the same results as the one involved in the patent on which the complainant relies. But, after more careful examination. I have come to the view that the complainant's improvement was not anticipated by the Sloane patent. and that the steam-dome device, as combined with the structure contemplated by the earlier patent of Lamprey and Bugbee, involves patentable novelty, and is of practical utility. The evidence satisfies me that in the old structure, under certain conditions, the circulation of water was retarded by steam generated at the highlyheated points, and that the water was sometimes forced from the pipes, leaving them exposed, thus rendering the appliance worse than useless in respect to the purpose for which it was designed. It would see that the steam dome or space above the ordinary water line in the pipes, and above the manifold or header, averts the danger, and relieves the difficulty described, and that a combination results therefrom which accomplishes the purpose intended,-that of protecting the furnace mouth by an uninterrupted and continuous flow of water. For these reasons I must sustain the patent.

I should perhaps state my view as to certain positions taken by the defense upon the record and argument. One position is that there is no invention or novelty in the patent under consideration, and a large number of prior patents were introduced, which it is claimed involve all the ideas embraced in the patent in suit; and to sustain this view one McDanniell was called as a witness. who, after testifying as to the state of the art, details a conversation with Lamprey, one of the patentees, during a journey from Bristol in November, 1888, in which the same idea was discussed, not as anything new or novel, but as a known device, which might be applied to the original Lamprey and Bugbee patent. same witness also says that he subsequently made a rough draft, and submitted it to Lamprey and Bugbee in the presence of one Covell, illustrating the known device, and the manner in which it could be applied to the old Lamprey and Bugbee structure. Lamprey, Bugbee, and Covell all deny that any such conversation took place, thus putting in issue a question which it is always uncomfortable to decide. But, in view of the situation, aided somewhat by the fact that McDanniell subsequently applied for a patent providing for a structure for the protection of furnace mouths with drums at the top or ends of the water legs and over its middle leg, into which steam formed in the channels of the heater might rise, and thence pass through pipes connecting such drums with the steam space of the boiler, I must find that McDanniell did not understand such device was old in 1888, and that the defendant's position as to the conversation is not sustained.

The defense further contended that the patent in suit was invalid for the reason that the patent-office fee was not paid within the time provided by section 4897 of the Revised Statutes. It is not understood that this objection is open to the defense in a proceeding of this character, and I therefore dispose of this point on the ground that patents regular on their face are not the subject of collateral attack.

Defendant also contended that it was entitled to protection for the structure which they had manufactured and put in operation

under the McDanniell patent of April 11, 1893; that their structure is an improvement upon anything previously in use, and that it involves patentable novelty. The defendant's manner of putting the water in circulation is different in this respect: The channels of circulation are created by an M-shaped shell structure, but the principle is the same, and the structure involves the steam-dome idea, which is the essential feature of the later patent to Lamprey and Bugbee: and, inasmuch as the Lamprey and Bugbee patent provides for and describes a structure, which may be "a hollow shell or other contrivance" as well as pipes, the defendant's M-shaped shell structure, combined with the steam-dome idea, must be treated as a violation of the rights of the complainant. The result reached is that the device or appliance employed for the collection and expansion of steam, and located at a point higher than the pipes or channels through which the water circulates, and whether called a "drum" or a "steam dome," is an infringement of the complainant's rights under its patent of February 18, 1890.

Decree for complainant for injunction in accordance with these views, and for an accounting according to the prayer of the bill.

> KNIT GOODS PATENTS CO. v. SHUMAN et al. (Circuit Court, D. Massachusetts. July 20, 1894.)

> > No. 3,157.

1. PATENTS-INFRINGEMENT-SHIRTS WITH FALSE OR SUPPLEMENTARY FRONTS A patent for an improvement in shirts, all the claims of which apply only to shirts which have a double or supplementary front, is not in-fringed by a shirt having a false front forming part of the shirt, giving the appearance, without the reality, of a double or supplementary front.

2. SAME.

The Barker patent, No. 253,256, for a shirt having a double or supplementary front, even if it covers a patentable invention, is not infringed by a device giving the appearance, merely, of such double front.

This was a suit by the Knit Goods Patents Company against A. Shuman and others for infringement of a patent.

Hey & Wilkinson, for complainant. James A. Skilton, for defendants

CARPENTER, District Judge. This is a bill in equity to enjoin an alleged infringement of letters patent No. 253,256, issued February 7, 1882, to Joseph G. Barker, for a Shirt. The specification and drawings show what seems to me the nearest approach to this invention which can be found in the art to which it relates. The patentee most clearly describes his invention as follows:

My invention is designed more especially for application to woolen shirts' -such as are worn by bicyclers and other sportsmen-and is an improvement upon the shirt now in very general use among such men, and which is made to open in the center of its front, and is provided upon each side of said opening with a series of eyelet holes, through which a lacing cord of brightcolored silk is run, and tied in a bowknot at the throat, said shirt also being

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