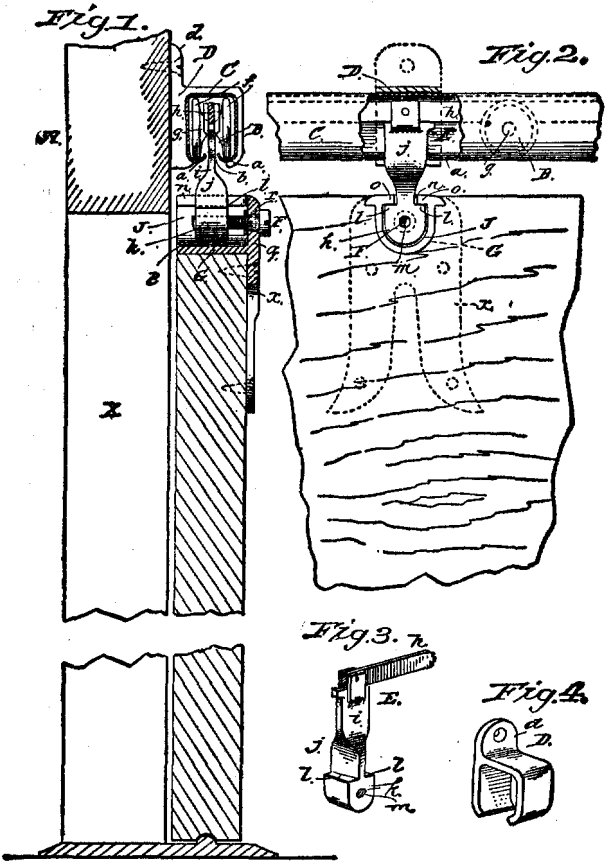
diately decreased in thickness, to permit of its free passage in the opening between the troughways of the trolley track, and provided at its extremity with an enlargement whereby shoulders are formed, and said enlargement is transversely and horizontally bored and screw-threaded.



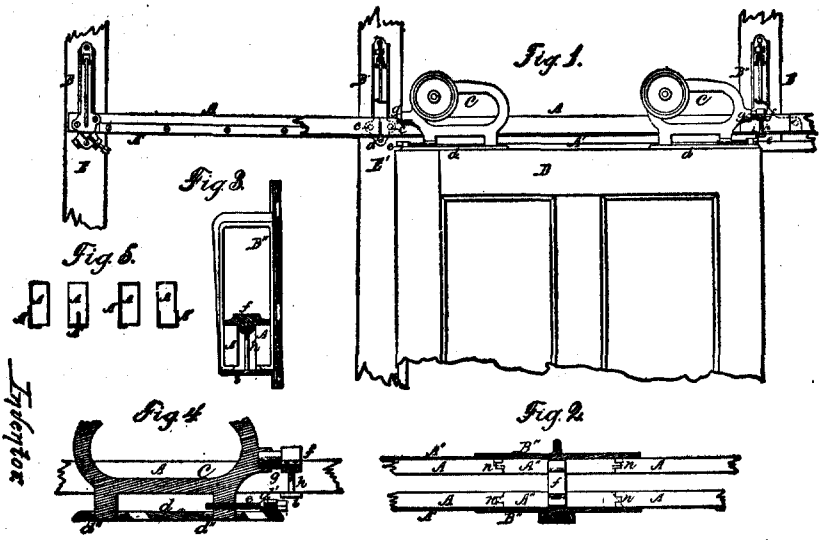
"The door at its upper side is provided with apertures therein, each having a contracted opening at its top, formed by overlying edges, and also open at one end, but closed at the other end by a wall. The head of each post suspended from the trolley track fits into the correspondingly formed apertures, being entered thereinto at the end thereof, and a screw passes loosely through a hole in the said end wall and with a screw engagement into the transverse tapped hole in the post enlargement. It being understood that the hanger posts are practically incapable of any lateral movement, it will be plain that, on turning the said screw (which is to be maintained against endwise movement), the said door will be moved laterally either towards or from the partition, according as said screw is turned to the right or to the left."

The claim in question is for:

"(1) In combination, the trolley track, roller carriers supported thereon, and a hanger supported from said roller carriers, comprising suspension posts hav-

ing terminal enlargements, and the door formed or equipped at its upper portion with transversely extending apertures and contracted openings leading therefrom to the top of the door, and in which apertures said post enlargements are entered for engagement, and an operating screw applied for securing a movement of said door laterally with relation to said suspension posts, substantially as set forth."

These things had been subjects of many patents before, including several granted to Sumner, leaving but narrow room for improvements, which have been shown in defense; and of these No. 369,451, dated September 6, 1887, and granted to William O. Kasson, is relied upon as an anticipation. The drawings of this patent show a track with roller carriages, slotted plates, d, at the top corners of the door, with U-shaped lugs, d', at their outer ends, hangers or suspension posts or "limbs," reaching from the carriages through the slots in these plates, and screws, e, working through the lugs and engaging the limbs. The specification sets forth, after descriptions of various other parts:



"Provision has also been made for the horizontal adjustment of the carriage on the door, so that it may be carefully gauged with respect to the stop, or adjusted for any other purpose. The limbs of the carriage terminate in suitable dove-tail, or T-shaped, lugs, which engage with the corresponding groove in the plate, d, extending longitudinally from the wider apertures therein, through which the lugs freely pass. A screw, e, connects with the outer limb, and is journaled in a U-shaped lug, d', on the upper side of the plate. To connect the parts the screw is turned up close to the shoulder, when the lugs slip through the holes in the plate, and the shank of the screw into its seat. The screw is then turned until the carriage is in the proper position."

Here are all of the parts of the combination of the claim relied upon of the patent in suit, working together in the same way, for the same purpose of adjusting a door hanging on rollers to its place in

covering the doorway. They differ somewhat in form, but the patents are not for designs, but for combinations of working parts. They suspend the doors in the same manner; one adjusts the door endwise, and the other sidewise; but the screw, driven in the same way, works in the same parts to accomplish a similar movement to effect the adjustment. The changes in form and direction appear to belong to the work of a mechanic rather than to the genius of an inventor. Wright v. Yuengling, 155 U. S. 47, 15 Sup. Ct. 1. Upon these views this alleged anticipation seems to be so made out as to defeat the claim relied upon. Bill dismissed.

FEATHERSTONE et al. v. DE LA VERGNE REFRIGERATING MACH. CO.

(Circuit Court of Appeals, Seventh Circuit. May 19, 1897.)

PATENTS—NOVELTY AND INVENTION—INFRINGEMENT—GAS-LIQUEFYING PUMPS.

The Boyle patent, No. 175,020, for an improvement in gas-liquefying pumps, *held* valid, and infringed as to claim 1, which is to be construed as covering a combination in which the main feature is a removable valve cage whereby, in case of accident, a change may be quickly made, so as not to permit an injurious rise of temperature. 67 Fed. 937, affirmed.

Appeal from the Circuit Court of the United States for the Northern Division of the Northern District of Illinois.

On November 24, 1877, James Boyle filed in the patent office his application for a patent on an improvement in gas-liquefying pumps. Three days later Mr. Boyle died. Afterwards, and on substituted claims, the patent was issued as 175,020, on the procurement of Boyle's personal representatives, and the title apparently vested in one Thomas L. Rankin as assignee. See the opinion of the supreme court of the United States. 147 U. S. 209, 13 Sup. Ct. 283. Later, and by subsequent assignments, appellee corporation became the owner of the said patent. On January 7, 1892, appellee, as complainant, exhibited its bill of complaint against John Featherstone, George Featherstone, Arthur J. Featherstone, Jacob W. Skinkle, Clarence A. Knight, and Otto C. Butz. The bill asserted the validity of the patent aforesaid, ownership of the same by complainant corporation, infringement by defendants, and that complainant was entitled to an accounting. The prayer was for an injunction and an accounting. At some time during the progress of the cause the bill was dismissed as to defendants Knight and Butz. On the 21st day of January, 1895, and at the December term, 1894, after a final hearing on the merits in the circuit court a decree was there entered in the words following: "This cause came on to be heard at this term, and was argued by counsel, and thereupon, upon consideration thereof, it is ordered, adjudged, and decreed, and the court doth hereby order, adjudge, and decree, as follows: That letters patent of the United States, No. 175,020, issued to James Boyle, his heirs or assigns, March 21, 1876, for an improvement in gas-liquefying pumps, being the letters patent set forth in the bill of complaint herein, are in all respects good and valid in law, and the title thereto vested in the complainant, as alleged in said bill. That John Featherstone, George Featherstone, and Arthur J. Featherstone, the defendants herein, have infringed upon said letters patent No. 175,020, and upon the exclusive rights of the complainant thereunder, by manufacturing and selling compressors or gas-liquefying pumps for refrigerating and ice-making machines constructed in accordance with said letters patent, and embodying the invention or improvement described and claimed therein, as alleged in said bill. That complainant recover of said defendants the

profits, gains, savings, and advantages which said defendants have received or made, or which have arisen or accrued to them from their infringement of said letters patent and use of said patented invention, as aforesaid, and also the damages which the complainant has sustained thereby. That this cause be referred to Henry W. Bishop, Esq., one of the masters of this court, to take proofs, and to ascertain and take and state and report to the court an account of the number of compressors or gas-liquefying pumps for refrigerating or ice-making machines which said defendants have manufactured or sold and constructed in accordance with said letters patent No. 175,020, and embodying the invention or improvement described and claimed therein, and of the gains, profits, savings, and advantages which said defendants have received, or which have arisen or accrued to them from said infringement of said letters patent, as aforesaid, and also of the damages which the complainant has sustained thereby. That on such accounting the complainant have the right to cause an examination of the defendants ore tenus or otherwise, and also the production of books, vouchers, and documents of said defendants, and that said defendants attend for such purpose before said master from time to time, as said master shall direct. That the bill of complaint herein be dismissed, without costs, as to the defendant Jacob W. Skinkle." Afterwards, and on August 22, 1895, and at the July term, 1895, there was filed in said cause a stipulation which, barring the title of the cause and the signatures of counsel, was in words following: "Whereas, it appears that John Featherstone, George Featherstone, and Arthur J. Featherstone, as individuals, and prior to the incorporation of 'John Featherstone's Sons,' made five (5) machines of the kind found by the court in the above-named cause to infringe upon letters patent No. 175,020, and upon the rights of the complainant under the same; and whereas, it being deemed advisable that an appeal be speedily taken to the United States circuit court of appeals for the Seventh circuit: It is hereby stipulated, for the purpose of permitting such an appeal to be taken, that a decree for a nominal sum may be entered as and for the damages and profits prayed for in complainant's bill of complaint. It is further stipulated and agreed that, in the event that the findings of the United States circuit court are affirmed on appeal, a re-reference of this cause to a master may be had for the purpose stated in the interlocutory decree entered herein, and that the decree for nominal damages herein provided for shall not be taken or considered as a bar to the recovery of actual damages or profits proved before the master if a re-reference is hereafter had. It is further stipulated and agreed that the nominal sum here agreed upon shall not, in any event, or in relation to any machine or machines, be taken as the royalty, profit, or damage to be recovered, and shall not affect or limit the recovery to be had hereafter as against any or all machines for which an accounting may be desired or had. This stipulation is made solely for the purpose of enabling a prompt appeal to be taken in this case, and not for the purpose of limiting or embarrassing any other proceeding based on said letters patent No. 175,020." Afterwards, and on the same day, there was made in said cause the following entry: "This cause having been heretofore heard upon the bill, answer, replication, and proofs, and an interlocutory decree having heretofore been entered whereby it was ordered, adjudged, and decreed that letters patent No. 175,020 was a good and valid patent, that the title thereto was in the complainant, that the defendants, John Featherstone, George Featherstone, and Arthur J. Featherstone, had infringed upon said letters patent, and upon the exclusive rights of the complainant thereunder, and referring the cause to Henry W. Bishop, Esq., one of the masters of this court, to take account of the damages and profits and to report his findings, with the testimony by him taken, to the court; and the court now being advised that the parties have, for the sole purpose of permitting an appeal to be taken to the United States circuit court of appeals for the Seventh circuit, agreed that the profits and damages prayed for in said bill may be found to be nominal: It is therefore ordered, adjudged, and decreed that the complainants do have and recover of and from the said defendants, John Featherstone, George Featherstone, and Arthur J. Featherstone, the sum and amount of six cents as and for nominal profits and damages, but without prejudice to other suits or proceedings for the recovery of actual profits and damages; and it is further ordered, adjudged,

and decreed that the provisions of the interlocutory decree heretofore entered herein relating to the validity of the letters patent sued upon, the title thereto, the infringement of the said letters patent by the said defendants, John Featherstone, George Featherstone, and Arthur J. Featherstone, and the payment of costs of suit, are hereby confirmed, and made a part of this decree, and that so much of said interlocutory decree as directed the said master to take and state an accounting herein is hereby vacated and annulled." From an entry made afterwards and on the same day it appears that an appeal was allowed the three Featherstones "from the final decree heretofore entered in said cause in favor of complainant and against" them. Later, and on August 22, 1895, the three Featherstones as principals and one Thomas Burgess as security filed their appeal bond reciting as the matter appealed from that decree "in and by which the court found that there was due said complainant the sum of six cents, with costs." Following are the assignments of error: "(1) That the court erred in finding and holding that the complainant's letters patent No. 175,020 was a valid patent. (2) That the court erred in finding and holding that complainant's said letters patent was not and is not anticipated by the prior art shown and exhibited. (3) That the court erred in holding that both of the claims of complainant's said letters patent were good and valid claims in law. (4) That the court erred in finding and holding that the defendants infringed complainant's said letters patent. (5) That the court erred in finding and holding that the defendants infringed either or both of the claims of said letters patent when properly construed and limited. (6) That the findings and holdings of said circuit court are contrary to the evidence. (7) That the findings, holdings, and decree of said circuit court are contrary to law and equity."

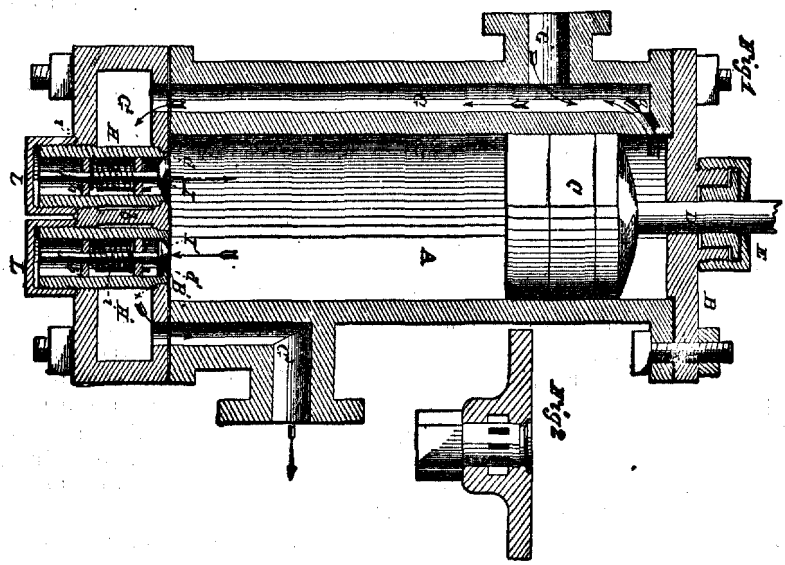
L. L. Bond, for appellants.

H. A. Banning and Edmund Wetmore, for appellee.

Before BROWN, Circuit Justice, and JENKINS and SHOWALTER, Circuit Judges.

SHOWALTER, Circuit Judge (after the foregoing recital). For reasons quite fully set forth in Standard Elevator Co. v. Crane Elevator Co., 22 C. C. A. 549, 76 Fed. 767, my individual opinion is that the decree of January 21, 1895, was the "final decision" so far as concerns the ownership, validity, and infringement of the patent. On this view that part of the decree of August 22, 1895, which declares the former decree as touching the points of ownership, validity, and infringement to be "confirmed," is without legal effect, and no one of the assignments of error could be even inquired into. But assuming the former decree to have been in the respects mentioned interlocutory, it is the opinion of the court that there is no substantial error in the record. The patent in controversy concerns a force pump to be used in artificial refrigeration. Anhydrous ammonia in the gaseous state is by the downward movement of a solid piston head first compressed in the cylinder which constitutes the body of the pump, and then expelled through the outlet valve into pipes and chambers, whereby it is first condensed into the liquid form, then conducted into the refrigerating room, where it expands again into the gaseous state, taking up in so doing the heat from surrounding objects, thence conducted back again to the inlet valve of the pump, and drawn once more into the cylinder by the upward movement of the aforementioned piston head, to be again compressed by the return movement and sent again on the round described. The piston head is moved up and down by steam or some external force. The

operation of such a pump produces, maintains, and controls the state of temperature necessary for the preservation of the property in the refrigerating room, or for manufacturing operations there carried on. Boyle's patent shows two diagrams as below:



The specification of the patent contains the following statement:

"The nature of my invention consists in the construction and arrangement of a pump used in ice machines for liquefying the gas, as will be hereinafter more fully set forth. Figure 1 is a longitudinal section of my invention. Fig. 2 shows one of the valves therein. A represents a pump cylinder, provided with heads, B, and B', bolted thereon in the usual manner. C is the piston or plunger, provided with the piston rod, D, which passes through the head, B, and through a stuffing box, E, thereon. G is a tube or chamber running the entire length on the outside of the cylinder, and provided with the air inlet, G'. This air tube communicates with the interior of the cylinder, A, close to the head, B, through a passage, a; and at the other end it communicates with one end of an air tube, G^2, running across the head, B', on the outer side. This air tube, G^2, is divided centrally by a cross partition, b, and the other end of said tube communicates with the air outlet, G^3. The various air tubes or chambers are preferably cast with a cylinder and head, as shown in the drawing, but may be arranged in any other suitable manner. Through the air tube or chamber, G^2, on each side of the partition, b, is screwed a cage, the upper end of which extends up into an aperture in the cylinder head, B', and at the joint are suitable shoulders, x, x, so that when the cage is properly screwed up the joint will be perfectly airtight. On the upper end of the cage, H, is formed a seat, d, for the inlet valve, I, which has a stem or rod, J, extending downward through guides, h, h, within said cage, and the valve held down to its seat by a spiral spring, i, surrounding the stem between the guides. On the upper end of the cage, H', is formed a seat, d', for the outlet valve, I'. The valve stem, J', guides, h', and spring, i', are the same as in the first cage, except that the spring is arranged to hold the valve up to its seat. The lower ends of the cages, H, H', are closed by means of screw-caps, L, forming tight joints with the chamber, G^2. The operation of the pump is readily understood without further explanation."

The original claims were two, worded as follows:

"(1) A single-acting pump for liquefying gas for ice machines, in which the gas to be compressed has a free passage into the pump over the piston head as well as through the inlet valve under the piston head, where it is compressed, thus doing away with the necessity of having a valve in the piston head as set forth. (2) In a pump for liquefying gas for ice machines, I claim the removable cages, H, H', with the valve seats, valves, and guides, substantially as and for."

Each of these claims was rejected on references, and the following were substituted:

"(1) In combination with the cylinder, A, and its heads, B, B', the solid piston head, C, the tube, G, extending the entire length of the cylinder, the air tubes, G', G^2, air inlet, a, cages, H, H', having valves, I, I', and the outlet, G^3, all constructed substantially as and for the purposes herein set forth. (2) In combination with the cylinder, A, and air tube, G^2, the removable cages, H, H', provided with spring valves and exterior screw threads, and exterior screw caps, L, L, all substantially as and for the purposes herein set forth."

The first claim is for a combination, one factor in which is the "cages, H, H', having valves, I, I', * * * constructed substantially as and for the purposes herein set forth." The specification and Fig. 1 of the drawings show two cages, each containing a valve, with its stem and guides, and a spring to press such valve back into its seat after the inflow of gas in the one case or the outflow in the other, whereby the appropriate valve has been pushed from its seat, has ceased. The head, B', of the cylinder, which is one of the factors of the combination, is so constructed as to leave therein the spaces on either side of the partition, b, to be occupied by the valve cages. The word "cage" implies a structure complete in itself, and containing the valve with its incidental mechanism. This structure, as described in the specification and as shown in Fig. 1, is removable as an entirety from the head, B'. It is contended that the first claim must be understood as though the cages were integral with the head, B', and not removable. This in view of the words, "removable cages, H, H'," in the second claim, and Fig. 2 of drawings. The patentee says, speaking of his drawings: "Figure 1 is a longitudinal section of my invention. Figure 2 shows one of the valves therein." The structure of the cage and its joints of connection with the head, B', is fully shown in Fig. 1. Fig. 2 was intended to show the inlet valve, and the mode of access whereby the gas is admitted to the under side of the same. Lines indicating the contour of the cage were not essential to the purposes of that figure. There is nothing in the specification to signify any possible construction of the valve inclosure other than a removable cage containing the valves. It is obvious, moreover, when the art to which the invention was to be applied is considered, that removable valve cages were deemed the important and characteristic feature of the invention.

The product of the combination of claim 1 is a state of temperature with reference not only to degree of cold, but to continuity under conditions where loss of property might result from any unduly protracted rise in temperature or stoppage of the pump. The removal of one cage in case of wear or accident and the substitution