

BISHOP *ET AL.* V. ROMAINE.

*Circuit Court, E. D. New York.*

July 12, 1886.

PATENTS FOR INVENTIONS—CONSTRUCTION OF CLAIM—SOLDERING MACHINES.

Claim 1 of letters patent No. 109,577, granted to William B. Bishop, November 29, 1870, for an Improvement in machines for soldering can-caps, which describes “The ring or cup shaped soldering tool, G, for soldering the caps upon cans, substantially as herein shown and, described,” must be limited to a machine arranged to work in the manner described in view of the prior English patents to Carson, Forbes, and Hebert for hand soldering tools, with the part corresponding to G “ring or cup-shaped.”

In Equity.

Bill by Ellen L. Bishop, as administratrix, and Charles E. Dexter, as administrator, of William B. Bishop, deceased, against John Romaine, to restrain infringement of patent.

*Ernest C. Webb*, for plaintiffs.

*David A. Burr*, for defendant.

BLATCHFORD, J. This suit is brought for the infringement of letters patent No. 169,577, granted to William B. Bishop November 29, 1870, for an improvement in machines for soldering can-caps. The specification and drawings are as follows:

“To all whom it may concern: Be it known that I, William B. Bishop, of Brooklyn, in the county of Kings and state of New York, have invented a new and useful improvement in machines for soldering can-caps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which figure 1 is a side view of my improved machine, partly in section, to show the construction, Figure 2 is a horizontal section of the same, taken through the line, x, x Fig. 1. Similar letters of reference indicate corresponding parts, My invention has for its object to furnish a simple, convenient, and effective machine for soldering caps upon sheet-metal cans; and it consists in the construction and combination of various parts of the machine, as hereinafter more fully described. A is the lower platform of the machine, which is securely attached to and supported by legs, B, of such a length as to raise the machine to a convenient height. C is the upper platform, which is connected to the platform, A, and supported by the rods which have screw-threads cut upon one or both ends to receive nuts, which are screwed upon the said rods, one above and one below each platform, as shown in Fig. 1. This construction enables the two platforms to be adjusted at a greater or less distance apart, according to the height of the cans to be soldered. E is the furnace, in which the fire is formed to heat the soldering tool, and which is provided with a detachable cover, and with openings to admit the air to support combustion, and for the escape of the smoke and other products of combustion F is the heater, which is a bar of cast-iron or other suitable material, placed vertically in the center of the furnace, E, with its lower end resting upon the center of the platform, C. The heater, is connected with the soldering iron, G, by a screw, which passes through a hole in the center of the platform, C, and which is formed upon either the heater, F, or soldering tool G, and screws into the other of said parts, so that the soldering tool, G, may be kept hot by heat conducted to it from the heater, F. The soldering tool, may be made of copper, wrought-iron, cast-iron, or other suitable material; and its face is concaved, to receive the cap to be soldered, and to give a ring-shape to its edge that comes in contact with the solder around the edge of the cap. The cap is held in place upon the can; while being soldered by the rod, H, which passes down through the heater, F, and soldering tool, G, so that its lower

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end rests upon the paid cap. The upper end of the rode H, is weighted, to enable it to hold the cap securely in place while being soldered. I is the table, upon which the can is set to be operated Upon, where it is secured in place by the bar J, which is curved to receive the can between its arms, where it is held by the elasticity of the said arms; the ends of said arms being curved out-Ward slightly to allow the can to be conveniently forced into place between them. The middle part of the elastic or spring bar, J, is attached to the upper end of the support, K, the lower end of which is secured to the table, I,

near one edge, by a screw, which passes through a slot in the lower end of the said support, K, and screws into the said table, I, as shown in Figs. 1 and 2, so that the position of the said bar, J, may be adjusted according to the size of the can. The table, I, is made circular in form, and is securely attached to the upper end of the vertical shaft, L, which passes down through and revolves in the lower platform, A, and in a support, M, attached to said platform, A, in such a way that the said shaft may have a vertical movement through its bearings. The lower end of the shaft, L, rests and revolves in a step pivoted to the end of the lever, N, which is pivoted to a support attached to the platform, A, and to the outer end of which is pivoted the upper end of the connecting rod, O, the lower end of which is pivoted to the treadle, P, the inner end of which is pivoted to the floor, or to suitable support, and the outer end of which projects into such a position that it may be conveniently reached and operated by the operator with his foot to raise the canto the soldering tool. To the shaft, L, is attached a bevel-gear wheel, Q, the teeth of which mesh into the teeth of the bevel-gear wheel, E, attached to the shaft, S, which revolves in bearings attached to the platform, A, and to the end of which is attached a crank, T, by means of which the vertical shaft, L, is revolved; the wheel, Q, being connected with the shaft, L, in such a way as to carry the said shaft, L, with it in its revolution, while allowing the shaft to have a free vertical movement. If desired, several sets of tables and soldering tools may be connected with the same crank-shaft, so that a number of can-caps, may be soldered at the same operation. Having thus described my invention, I claim as new, and desire to secure by letters patent: (1) The ring or cup shaped soldering tool, G, for soldering" the caps upon cans, substantially as herein shown and described. (2) The revolving table, I, having also a vertical movement, in combination with the ring or cup shaped soldering tool, G, substantially as herein shown and described, and for the purpose set forth. (3) The combination of the adjustable elastic holder, J, K, with the revolving table, I, substantially as herein shown and described, and for the purpose set forth; (4) An improved machine for soldering can-caps, formed by the combination of the platform, A, feet, B, adjustable platform, C, adjusting and supporting rods, D, furnace, E, heater, F, ring or cup shaped soldering tool, G, weighted holding rod, H, table, I, adjustable holder, J, K, shaft, L, lever, K, treadle, P, gear-wheels, Q and R, shaft, S, and crank, T, with each other, substantially as shown and described, and for the purpose set forth."

It is not contended that any claim but the first has been infringed. An examination of the specification shows that Bishop did not understand that he had invented, or sought to claim, anything but a machine, or parts of a machine, to be operated in it with the mode of operation set forth. He says that his invention has for its object to furnish "a machine," and that "it consists in the construction and combination of various parts of the machine as hereinafter more fully described." A furnace, in which to make a fire, surrounds a longitudinal vertical hollow metallic heater, F, which is heated by the fire, and communicates

its heat, by conduction, to the soldering iron or tool, G, which is also of metal, and has a concave face, into which the cap, to be soldered fits. The cap is held in place while being soldered by a rod, H, which passes down through the heater, F, and the soldering tool, G, and rests at its lower end on the cap, its upper end being weighted. The soldering tool is stationary, and does not rotate or revolve. But the can is set on a table below, which is arranged to lift it for the operation, and then lower it again, the table being circular, and set on the upper end of a

vertical shaft, which revolves horizontally, and carries the can around in contact, at its top, with the lower end of the tool.

There is no suggestion, in the specification of the use of the soldering tool, G, as an independent movable hand tool, to be used apart from the machine, and apart from a revolving can. Moreover, the "ring or cup shaped soldering tool, G," as defined by the terms of the specification and claims is confined to the part lettered G, and does not include the heater, F, or the rod, H, or any of the other parts specified in the fourth claim. The first claim, therefore, in claiming "the ring or cup shaped soldering tool, G, for soldering the caps upon cans, substantially as herein shown and described," claims only the cup-shaped or concave part, which is at the lower end of the heater F, and wholly below the platform, C, and claims it only as a tool in the machine of the special form defined, and fixed with reference to a revolving can. The defendant has no machine. His entire apparatus is a hand tool, the part of which corresponding to the metallic heater, F, is of wood, and the apparatus is moved and rotated by the hand to do the soldering. Although the part of the apparatus which corresponds to the part G, of Bishop, is concave, and its edge has a ring shape, yet hand soldering tools with the part corresponding to G, "ring or cup shaped," existed, in the prior English patents to Carson and Forbes and Hebert. Hence the part, G, claimed in the first claim, must be limited to that part arranged to work in the machine in the manner described in the specification, and the claim is not infringed by the defendant. The bill is dismissed, with costs.