

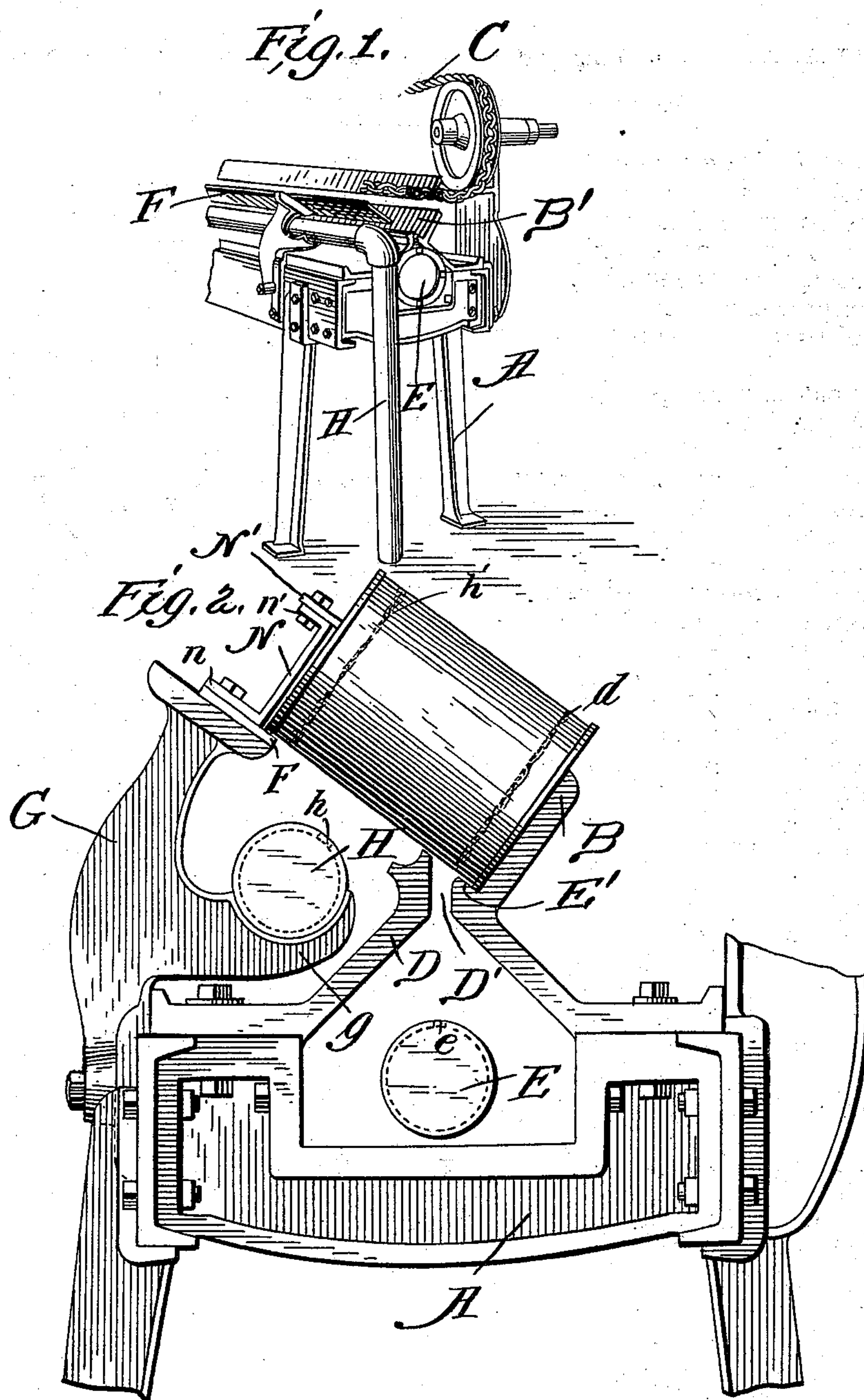
No. 695,518.

Patented Mar. 18, 1902.

G. WILCOX.
CAN SOLDERING MACHINE.

(Application filed Oct. 16, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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CAN-SOLDERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 695,518, dated March 18, 1902.

Application filed October 16, 1900. Serial No. 33,315. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WILCOX, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Can-Soldering Machines, of which the following is a specification.

My invention is designed primarily for soldering the head-seams in cans previously prepared with a rib of solder removed from the edge thereof according to the process set forth in my application for Letters Patent of the United States filed March 9, 1900, Serial No. 7,955; and it is also an improvement upon the machine made the subject-matter of another application filed by me on the 7th day of June, 1900, Serial No. 19,358, to which reference may be made for the general structure. In said latter machine the cap at the lower end of the can, as well as the rib of solder, was directly exposed to the flame, the result being that the smoke from the flame at times choked up the seam before the fused solder could enter therein. In the present invention I provide a guard which shields the cap and mouth of the seam from flame and smoke. In said former machine also a block or jacket of heat-insulating material, as well as an air-gap, was interposed between the front or outer burner-guard and the track for the upper end of the can. Herein I retain the air-gap, and while not necessarily dispensing with said jacket I place an air-blast pipe in the space between the front burner-guard and the brackets supporting the upper track, so that the jets of air from the perforations in said pipe shall be directed upon the body of the can and insulate, in a calorific sense, the upper finished seam or rib of solder from the lower rib and from the burners.

In the drawings, Figure 1 is a perspective view of one end of my improved machine, omitting the head-guide for the sake of clearness. Fig. 2 is an enlarged end elevation thereof with the blast-pipe capped and the feed-chain and its accessories omitted.

A represents the frame of the machine, which does not or need not differ materially from that described in my former application,

Serial No. 19,358, and B is the rear burner-shield having head-rest B' for the lower end of the can to be soldered, which, it will be understood, is rolled along a laterally-inclined way by chain C or other suitable means. D is the front or outer burner-shield, which in said former application terminated in a track for the lower part of the can-body, but herein may either touch the can-body as a track therefor or merely so closely approximate thereto as to fulfil its function in cutting off the spread of flame up along the body.

The two converging guards approximate each other at the top to leave a narrow flame-slot D' immediately beneath the lower rib of solder *d* on the body of the can. Below this flame-slot, with its burners or gas-apertures *e* directed theretoward, is the burner-pipe E, arranged between the two burner-shields. In my former application the lower head-rim and seam to be soldered were also exposed to this flame-slot, and therefore to the gases and smoke arising from the flames. In the present invention I provide a guard-flange E' upon the rear burner-shield at its junction with the head-rest, which serves as a deflector or shield for the lower head-rim and seam from all the products of combustion, leaving the seam clean and free to receive the solder as the rim melts and creeps down the can and may also serve, as shown, as a lower track for the can instead of placing this track upon the top of the front burner-shield, as before. The upper track F is supported, as in said former case, by brackets G from the outer side of the machine, leaving a wide air-gap between it and the front burner-shield for heat-insulating purposes. In order to further diminish the possibility of fusing-heat reaching the upper finished seam or the rib of the unfinished seam at that end, an air-blast pipe H is located in the space between the brackets G and the front burner-shield, with its perforations *h* opening toward the air-gap between the upper track and said shield, so as to direct jets of air against the central body of the can intermediate between the upper seam or rib *h'* and the lower rib undergoing the fusing process. This blast-pipe may be supported upon cradle-arms *g* from the brackets G, as shown.

The head-guide for the upper end of the can has heretofore been located at the lower edge of said head. This I have found unreliable, and therefore I provide L-shaped brackets N adjustable in and out along the inclined top of brackets G by their feet *n*, and bearing on their tops a guide-bar N', adjustable well up against the upper head of the can by bolt *n'*, thereby not only obtaining a better guide but a double range of adjustment.

I claim—

1. In a can-soldering machine having a laterally-inclined way along which the cans are rolled, the combination of a head-rest for the lower end of the can, a guard protecting the head-rim and seam from the flame and smoke, a burner-shield D on the outer side of this guard, leaving a narrow flame-slot therebetween, burners beneath said flame-slot, and a track for the upper end of the can.

2. In a can-soldering machine, having a laterally-inclined way along which the cans are rolled, the combination of a head-rest for the lower end of the can, a guard protecting the head-rim and seam from the flame and smoke, a burner-shield D on the outer side of this guard leaving a narrow flame-slot therebetween, burners beneath said flame-slot, a

track for the upper end of the can leaving an air-gap between said track and burner-shield, and a blast-pipe between said track and burner-shield, adapted to direct jets of air upon the body of the can between the solder at the upper and lower ends.

3. In a can-soldering machine having a laterally-inclined way along which the cans are rolled, the combination of the rear and front burner-shields with a flame-slot between the head-rest for the lower end of the can, the flame-guard for the seam at said lower end, the burners beneath said flame-slot, the track for the upper end of the can spaced off from the front burner-guard, and the blast-pipe between said track and guard.

4. In a soldering-machine having a laterally-inclined way along which the cans are rolled, the combination with said way of brackets N adjustable in and out along the inclined top of the way, and a guide-bar for the upper ends of said cans adjustable upon the tops of said brackets.

GEORGE WILCOX.

Witnesses:

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