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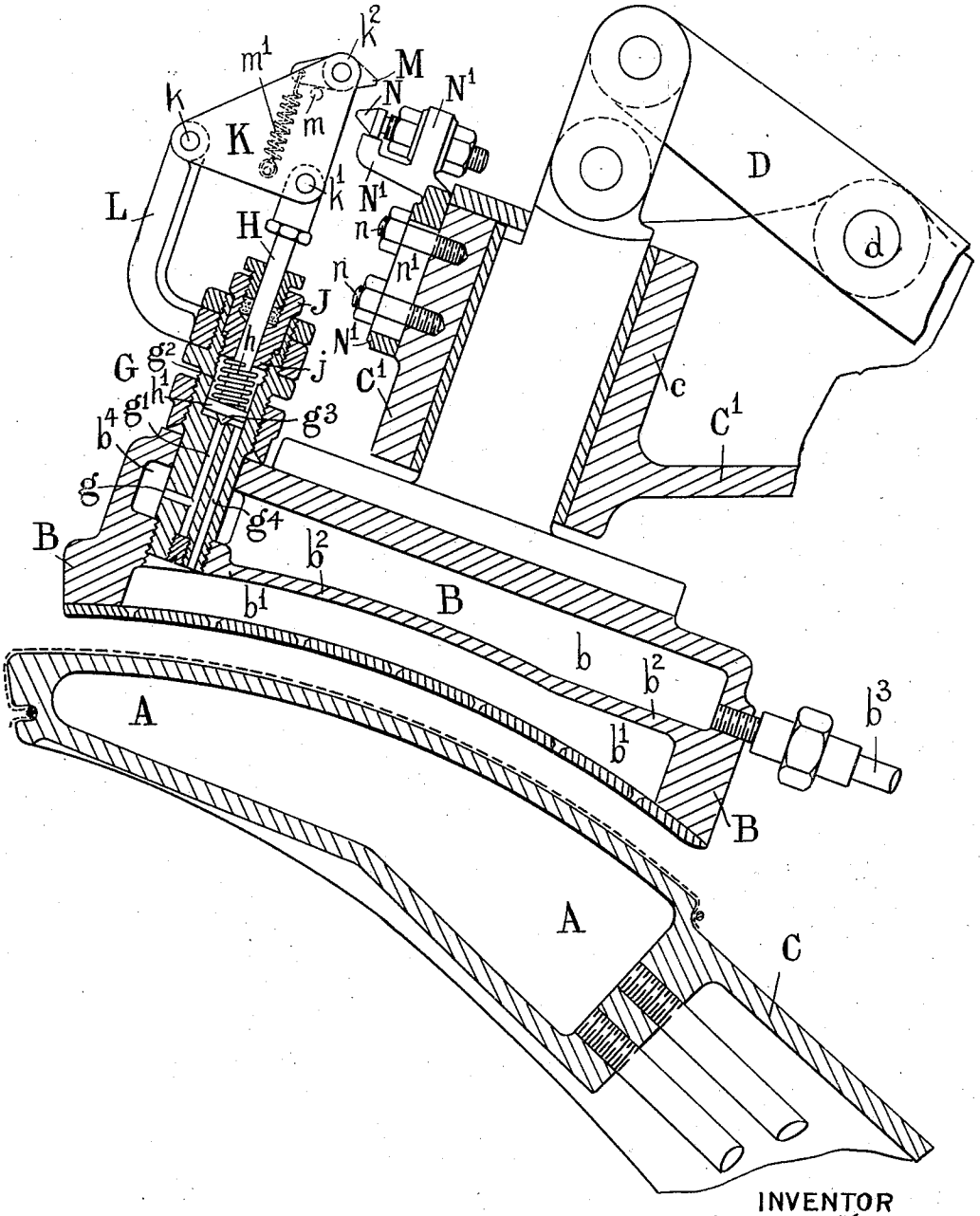

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UNITED STATES PATENT OFFICE

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APPARATUS FOR OPENING AND PRESSING SEAMS

Application filed June 23, 1931, Serial No. 546,247, and in Great Britain May 1, 1931.

This invention relates to apparatus for opening and pressing the seams of garments and is an improvement or modification of the apparatus described in the specification of my prior Patent No. 1,801,059.

In the prior specification No. 1,801,059 apparatus is described by which, while the seam is being opened and pressed, a jet or spray of steam is injected into the seam simultaneously with the application of the pressure applied thereto, such injection of steam continuing for the whole duration of the time in which the pressure is applied and the valve controlling the steam is only closed when the pressure is released.

It has now been found that with certain cloths on which seams are to be opened it is necessary or advisable that steam should be supplied prior to the actual contact of the pressing members and that when the two members are in pressing contact it is not necessary that steam should be injected continuously on to the seam.

According to the present invention the steam control valve is arranged to open for an adjustable period at the commencement of the stroke of the moving pressing iron or head and to close either before the two irons or heads come into pressing contact, or immediately they come into contact so that pressure between the two irons or heads can be maintained as long as is necessary without steam being injected on to the seam.

The invention will be described with reference to the accompanying drawing which shows a vertical section through the two pressing irons or heads of the machine.

The apparatus is constructed as described in specification No. 1,801,059 with two steam heated pressing irons or heads A and B. The lower iron A is preferably stationary and is rigidly affixed to a frame C whilst the upper iron B is mounted in a bearing c in the frame C^1 in which bearing it is free to slide approximately at right angles to the face of the iron A.

The moveable head or iron B is carried on the end of a rocking lever D pivoted on the stud d secured to the frame C^1 so that movement of the head B to and from the head A can be imparted through treadle and link mechanism as described and illustrated in specification No. 1,801,059.

The moveable iron or head B is hollow and constructed with two chambers b, b^1 divided by a partition b^2. Steam is supplied to the chamber b by the pipe b^3 and passes through the port or passage b^4 to the chamber b^1. The sole plate or underside of the chamber b^1 is perforated to permit steam to issue from the chamber b^1 and impinge upon the work carried by the stationary head or iron A.

The two irons or heads A and B described in the foregoing detailed description are similar to those described in the prior specification No. 1,801,059 and do not form part of the present invention which resides in the construction and control of the valve G controlling the passage or port b^4 so that steam may be supplied from the chamber b to the chamber b^1 prior to the contact of the two irons or heads A and B and cut off therefrom either before they come into contact or immediately on their coming into contact so that pressure between the two irons or heads can be maintained as long as necessary without steam being injected on to the seam.

The valve G is screwed into the movable iron or head B and is provided with a transverse passage g extending from the passage b^4 to an approximately vertical passage g^1 closed at the bottom end but opening at the top into the space g^2 in which the valve closure member g^3 works. A second approximately vertical passage g^4 is arranged parallel to the passage g^1 and opens at the top into the space g^2 and at the bottom into the chamber b^1. The end of the passage g^1 is normally closed by the closure member g^3 formed on or affixed to the end of a spindle H, the closure member g^3 being under the action of a spiral spring h surrounding the spindle H and acting between a collar h^1 formed on the spindle H near the end thereof and the inner face j of the gland or stuffing box J through which the spindle H slides. A lever K or equivalent device is pivotally mounted at one end k on a bracket L and at its centre k^1 is pivotally connected to the top of the valve spindle H. The other or free

end k^2 of the lever K which is more or less vertically above the top of the spindle H carries a pawl M pivoted thereon and held in its normal position against a stop or pin m by a spring m^1 affixed at one end to the lever K between the bracket L and the top of the valve spindle H.

A striker N arranged to be adjusted horizontally is mounted in a bracket N^1 affixed on the stationary frame C^1 of the machine in the path of the pawl M. The bracket N^1 is affixed to the frame C^1 by the screws n which pass through a slot n^1 so that the bracket can be adjusted in a direction parallel to the movement of the iron or head B.

In operation as the iron or head B moves towards the stationary iron or head A the pawl M comes into contact with the striker N and acting through the stop or pin m causes the lever K to rock upon its fulcrum k on its supporting bracket L. This movement of the lever K lifts the valve spindle H and with it the closure member g^3 from its seating on the top of the passage g^1 against the pressure of the spring h. As the iron or head B continues to move downwards the pawl M swings clear of the striker N and the spring h returns the valve to its seat thereby cutting off the supply of steam to the lower chamber b^1 of the iron or head H.

On the upward stroke of the iron or head B the pawl M on coming into contact with the striker N moves on its pivot away from the stop m and on passing the striker N the spring m^1 returns the pawl M to its normal position without causing any swinging movement of the lever K.

The timing of the opening and closing of the valve can be regulated by varying the position of the bracket N^1 carrying the striker N and the length of time the valve remains open can be adjusted by adjusting the horizontal position of the striker N relative to the pawl M. The nearer the striker N is to the pawl M the longer it will remain in contact therewith and the longer the valve will remain open.

What I claim as my invention and desire to protect by Letters Patent is:—

1. In apparatus of the type for pressing and opening the seams of garments, the combination with a stationary steam heated pressing head on which the work is laid, a substantially vertically movable steam heated pressing head with a perforated face, a portion dividing the movable head into two compartments, a valve spindle and a closure member thereon controlling the passage of steam from one compartment to the other of a lever pivotally mounted at one end on a horizontal axis on a bracket carried by the movable head and pivotally attached intermediate its ends to the top of the valve spindle, a pawl mounted on a horizontal axis carried by the other end of the lever and a striker carried by the frame of the machine adapted to be engaged by the pawl as the movable head moves towards the stationary head so that the lever is caused to move on its pivot and raise the valve spindle and cause the closure member to be lifted and steam allowed to pass from one compartment to the other and thence impinge on to the work before the two heads come into contact.

2. In apparatus of the type for pressing and opening the seams of garments, the combination with a stationary steam heated pressing head on which the work is laid, a substantially vertically movable steam heated pressing head with a perforated face, a portion dividing the movable head into two compartments, a valve spindle and a closure member thereon controlling the passage of steam from one compartment to the other; of a lever pivotally mounted at one end on a horizontal axis on a bracket carried by the movable head and pivotally attached intermediate its ends to the top of the valve spindle, a pawl mounted on a horizontal axis carried by the other end of the lever, a vertically adjustable bracket carried by the frame of the machine and a striker horizontally adjustably mounted in said bracket and adapted to be engaged by the pawl as the movable head moves towards the stationary head so that the lever is caused to move on its pivot and raise the valve spindle and cause the closure member to be lifted and steam allowed to pass from one compartment to the other and thence impinge on to the work before the two heads come into contact.

3. In apparatus of the type for pressing and opening the seams of garments, the combination with a stationary steam heated pressing head on which the work is laid, a substantially vertically movable steam heated pressing head with a perforated face, a portion dividing the movable head into two compartments, a valve spindle and a closure member thereon controlling the passage of steam from one compartment to the other; of a lever pivotally mounted at one end on a horizontal axis on a bracket carried by the movable head and pivotally attached intermediate its ends to the top of the valve spindle, a pawl mounted on a horizontal axis carried by the other end of the lever, a vertically adjustable bracket carried by the frame of the machine, a striker horizontally adjustably mounted in said bracket and adapted to be engaged by the pawl as the movable head moves towards the stationary head so that the lever is caused to move on its pivot and raise the valve spindle and cause the closure member to be lifted and steam allowed to pass from one compartment to the other and thence impinge on to the work before the two heads come into contact, a stop on the lever to limit the movement of the pawl and a spring acting on the

pawl to return the latter to its position against the stop after the pawl has been moved during the return movement of the moving head.

In testimony whereof I have hereunto set my hand this 3rd day of June, 1931.

HAROLD TANNER.