J. B. HADAWAY.

MACHINE FOR HEATING AND APPLYING ADHESIVES.

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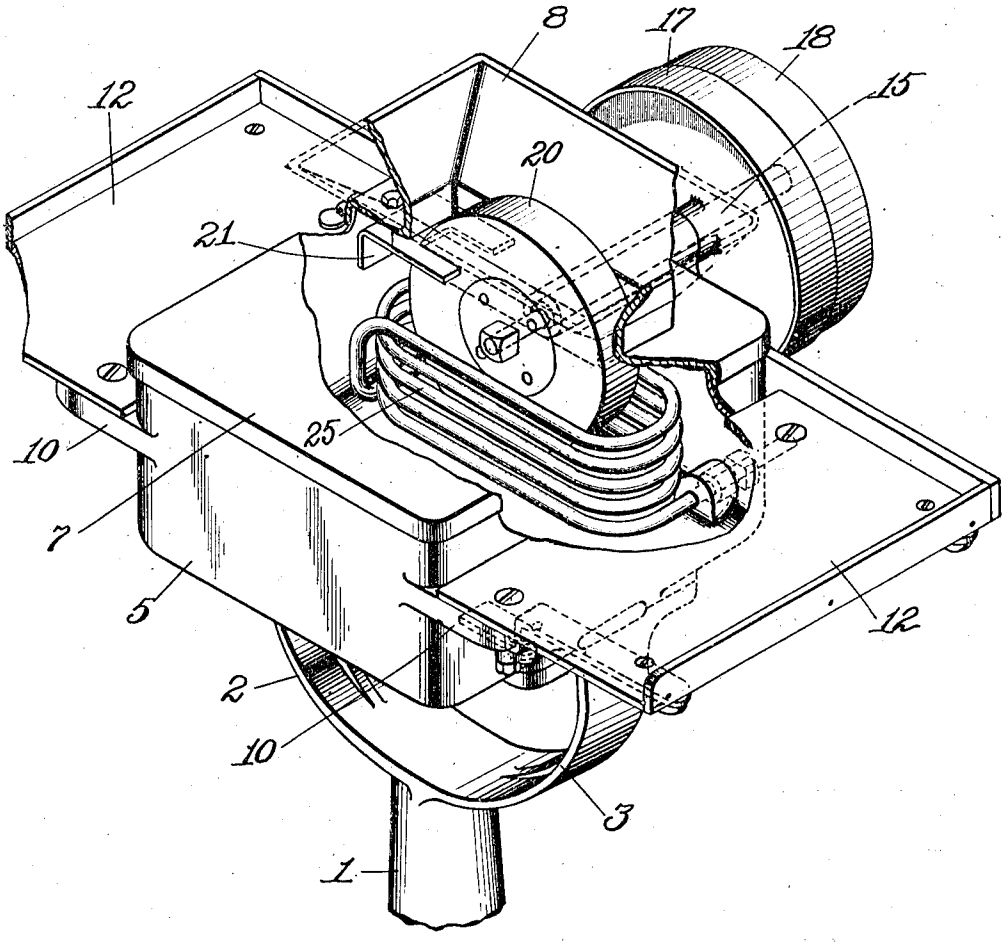
1,048,527. Patented Dec. 31, 1912.



WITNESSES.

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MACHINE FOR HEATING AND APPLYING ADHESIVES.

1,048,527. Specification of Letters Patent. Patented Dec. 31, 1912.

Application filed October 3, 1910. Serial No. 585,095.

To all whom it may concern:

Be it known that I, JOHN B. HADAWAY, a citizen of the United States, residing at Swampscott, in the county of Essex and State of Massachusetts, have invented certain Improvements in Machines for Heating and Applying Adhesives, of which the following description, in connection with the accompanying drawing, is a specification, like reference characters on the drawing indicating like parts.

This invention relates to machines for applying plastic or adhesive material to stock and more particularly to machines adapted to melt pitch or the like and to apply it, while in a molten state, to stock.

In the manufacture of boots and shoes it is customary to employ adhesives for various operations, which adhesives are supplied to shoe factories in a crude or semi-solid form and must be reduced to and maintained in a sufficiently mobile or molten condition to be advantageously applied to the work. In using an adhesive such as pitch, it is necessary to render it molten by means of heat and then to apply it to the work or stock quickly before it can cool and harden.

It is an object of this invention to provide a machine which will receive pitch or the like in a solid form, render it molten and apply it while molten to stock.

An important feature of the invention consists in the arrangement of the means to melt the adhesive and to protect the applying mechanism from contact with unmelted adhesive, so that only material of a proper consistency will be fed to the work by the applying device.

In the preferred embodiment of the invention, as herein shown, a machine is provided comprising a receptacle to receive solid pitch and means to render it molten by heat in combination with a rotating wheel partially immersed in the molten pitch and arranged to apply the pitch to stock held in contact with the upper part of the wheel. Preferably the heating means employed is a coil of steam pipe disposed around that part of the wheel which is immersed in the pitch and thereby preventing unmolten material from contacting with the applying wheel.

Other important features, combinations of parts and details of construction will be hereinafter more specifically described and claimed.

The drawing illustrates, in perspective, a preferred embodiment of the invention, a portion of the receptacle being shown as broken away to disclose the arrangement of the steam coil and applying wheel.

The machine comprises a frame or stand 1 to rest upon a floor and having arms 2 and 3 which support a metallic receptacle 5, adapted to receive pitch or the like in a solid form and to hold it while it is reduced to a molten state by heat. The receptacle is provided with a removable top or cover 7 having a suitable aperture through which the upper portion of an applying wheel 20 projects. A flaring guard 8 around the aperture is preferably formed integral with the cover 7, and is indicated partly by dotted lines in the drawing. On opposite sides of the receptacle 5 are provided shelves 12, 12 for convenience in holding work, said shelves being supported by brackets 10, 10 formed on the receptacle 5. In order to support the applying wheel 20 within the receptacle and to rotate it a journal bearing is provided in one side of the receptacle 5 for the shaft 15, which shaft carries fast and loose pulleys 17 and 18 near its end outside of the receptacle and the applying wheel 20 at its other end within the receptacle. Said journal bearing and shaft are preferably positioned near the top of the receptacle and will be usually above the normal level of the liquid adhesive contained in the receptacle during the operation of the machine. The location of the applying wheel 20 and the position of the aperture in the cover 7 are arranged to register so that the applying wheel projects above the cover as previously mentioned. A pipe coil 25 is provided to conduct steam into the receptacle in order to heat and melt the pitch and said coil is arranged to partially surround the feed wheel 20, thus serving to protect the feed wheel from contact with any unmolten material which may be put into the receptacle and furthermore insuring that such molten matter flowing to the feed wheel will be kept in the proper consistency to be advantageously applied. A stripper 21 is also provided which is preferably made adjustable, by any suitable means, toward and away from the applying wheel to contact with a portion of the periphery

of the wheel to regulate the amount of pitch fed up by it, as will be readily understood.

In operating the machine, the cover is first removed and blocks of crude pitch or the like are placed in the receptacle, being kept from contact with the applying wheel by the pipe coil 25. The cover 7 is then replaced in position and heat being applied through the pipe coil the pitch will be melted and flow over the bottom of the receptacle and into contact with the applying wheel 20. Power being applied to rotate the shaft 15 and wheel 20, the liquid pitch is fed up by the wheel above the cover where the operator can hold the work in contact with the top of the wheel until the desired amount of adhesive has been applied to it. The stripper 21 regulates the amount of pitch carried upward by the wheel and the guard 8 protects the operator and also catches any adhesive which might be thrown off by the wheel and returns it to the receptacle.

Among the advantages incident to the invention are that a durable machine of the class described can be economically constructed, and the arrangement of the pipe coil serves to divide the receptacle into two compartments so that no crude or unmolten material can reach the applying wheel and be fed upwardly by it and the removable cover over the entire receptacle enables all parts of the machine to be easily reached and readily cleaned.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A machine of the class described comprising a receptacle to contain an adhesive in solid form, heating means to reduce the adhesive to molten condition and mechanism to apply the molten adhesive to stock, said heating means being arranged to guard the applying mechanism from contact with unmolten adhesive.

2. A machine of the class described comprising a receptacle to contain adhesive, a steam-pipe coil to reduce the adhesive to molten condition and a wheel to apply the molten adhesive to stock, said coil being arranged to surround the applying wheel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN B. HADAWAY.

Witnesses:
CHESTER E. ROGERS,
JAMES R. HODDER.