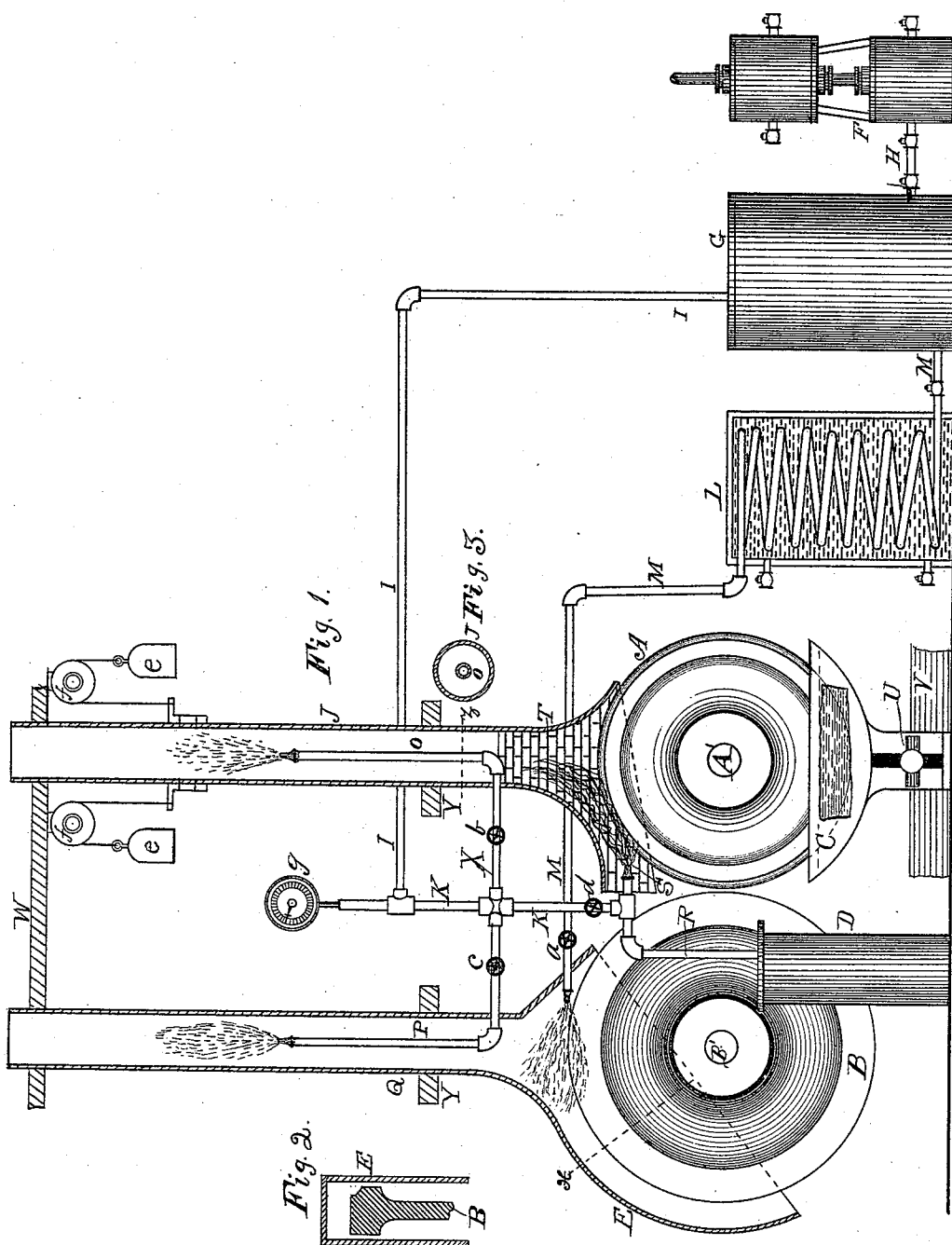


(No Model.)

B. J. ABBOTT.
MACHINE FOR DRESSING CAR WHEELS.

No. 443,928.

Patented Dec. 30, 1890.



Witnesses
Timothy Stebbins
Orrin Edmonds

Benjamin J. Abbott. Inventor.
By his Attorney E. L. Chapin.

UNITED STATES PATENT OFFICE.

BENJAMIN J. ABBOTT, OF CHICAGO, ILLINOIS.

MACHINE FOR DRESSING CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 443,928, dated December 30, 1890.

Application filed June 12, 1890. Serial No. 355,162. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN J. ABBOTT, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Machines for Dressing Metals, of which the following is a specification, reference being had to the annexed drawings, illustrating the invention, in which—

Figure 1 is a side elevation of a car-wheel and dressing-disk, the apparatus by which the car-wheel is heated before the application of the dressing-disk, and the apparatus for subjecting the car-wheel to cold water and the dressing-disk to cold air and forming an upward current for the escape of heat from the surfaces in contact; Fig. 2, a section of the housing of the disk on line *x*; Fig. 3, a horizontal section on line *y*.

This invention relates to means in machines where a smooth metal surface is made to dress another metal surface for heating the metal to be dressed before applying the dressing-disk and in means for keeping the surfaces in contact from having too high a temperature.

The special machine to which this improvement is more particularly adapted is the one for dressing car-wheels in which the dressing-disk runs at a high rate of speed and the car-wheel at a much lower rate. In such work it is found that little or no progress can be made in dressing the car-wheel till it becomes quite warm. Therefore, to save the cost of running the disk against the car-wheel to warm it, I provide means for heating it by a flame or other suitable means before the disk is applied to it. It is also found that both the car-wheel and disk become overheated before one wheel can be dressed. To remedy this I provide means for putting a blast of cold air onto the disk and cold water on the car-wheel. I also provide means for conducting off the heat in a great measure during the dressing process, as the whole is hereinafter fully described and shown.

A is a side elevation of an ordinary car-wheel to be dressed, the axle of which is shown at A' and is supposed to be rotated by the usual well-known means.

The dressing-disk in side elevation is shown

at B, and its shaft B' is supposed to be connected with pulleys and belts, whereby a proper velocity is imparted. Over the car-wheel is placed a heating-chamber T, which is lined with fire-brick or other material known to withstand fire. From this chamber a flue J leads up through the roof W of the inclosure in which the machine is set, and the lower portion of the flue extends through a guide Y, that it may be elevated to permit a car-wheel to be placed under the heating-chamber or removed therefrom. Cords, weights *e*, pulleys *f*, and balancing-weights hold the heating-chamber and its attached flue in any desired position to which they are moved. A cold-blast chamber E is made to project over the upper portion of the disk B, and it is provided with a flue *a*, which also projects through the roof W.

D R S is an oil-heater, which projects a flame *s* upon the car-wheel within the chamber T.

F represents an ordinary air force-pump, which by means of a pipe H puts air into a receiver G. A pipe M M M conducts the air through a cooler L and into the chamber E to cool the disk B. A pipe I I I communicates with the receiver G and a vertical pipe K, and the latter pipe communicates with a horizontal pipe X, which extends into both flues Q and J, and by means of extension-pipes O P upward currents are formed in said flues by the upward thrust of air. A pipe K communicates with the pipe X and pipe R, whereby a blast is given to the flame *s*. A vessel C, containing cold water, is placed below the wheel A for the water to cool the wheel.

The operation is as follows: To place the car-wheel in position, lower the vessel C by means of the set-screw U, which secures its standard to the foundation V, and raise the heating-chamber T. Then leave the vessel C down and lower the heating-chamber to the position shown and shut the cocks *a c*. Start the heater D R S and open cock *d*. When the wheel A is sufficiently heated, put the disk to work, and so soon as it and the wheel A become too hot put out the heater. Let the cold air in by pipe M M M and the air into pipes O P, whereby the heated air may es-

cape and the cold air have its effect on the disk. Also elevate the vessel C to bring cold water to the wheel A.

5 Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

- 10 1. In a machine for dressing metal, an improvement for heating the metal to be dressed, consisting of an adjustable heating-chamber and an upwardly-projecting flue as a part thereof, a suitable heating device projecting a flame into the compartment, and an air-blast to force the flame onto that portion of the wheel within the chamber, as specified.
- 15 2. In a machine for dressing metal, an improvement for cooling the disk, consisting of

a hood covering the upper portion of the same and the hood provided with a flue, in combination with an air-pump, an air-receiver, an air-cooling chamber, and pipes for 20 conducting the cold-air blast into that portion of the disk within the hood, as specified.

3. In combination with an air-pump, cooling-chamber, and pipes for putting a cold blast onto the disk, an adjustable vessel to 25 contain a cold fluid placed below the wheel to be dressed, substantially as specified.

BENJAMIN J. ABBOTT.

Witnesses:

G. L. CHAPIN,
W. M. BOOTH.