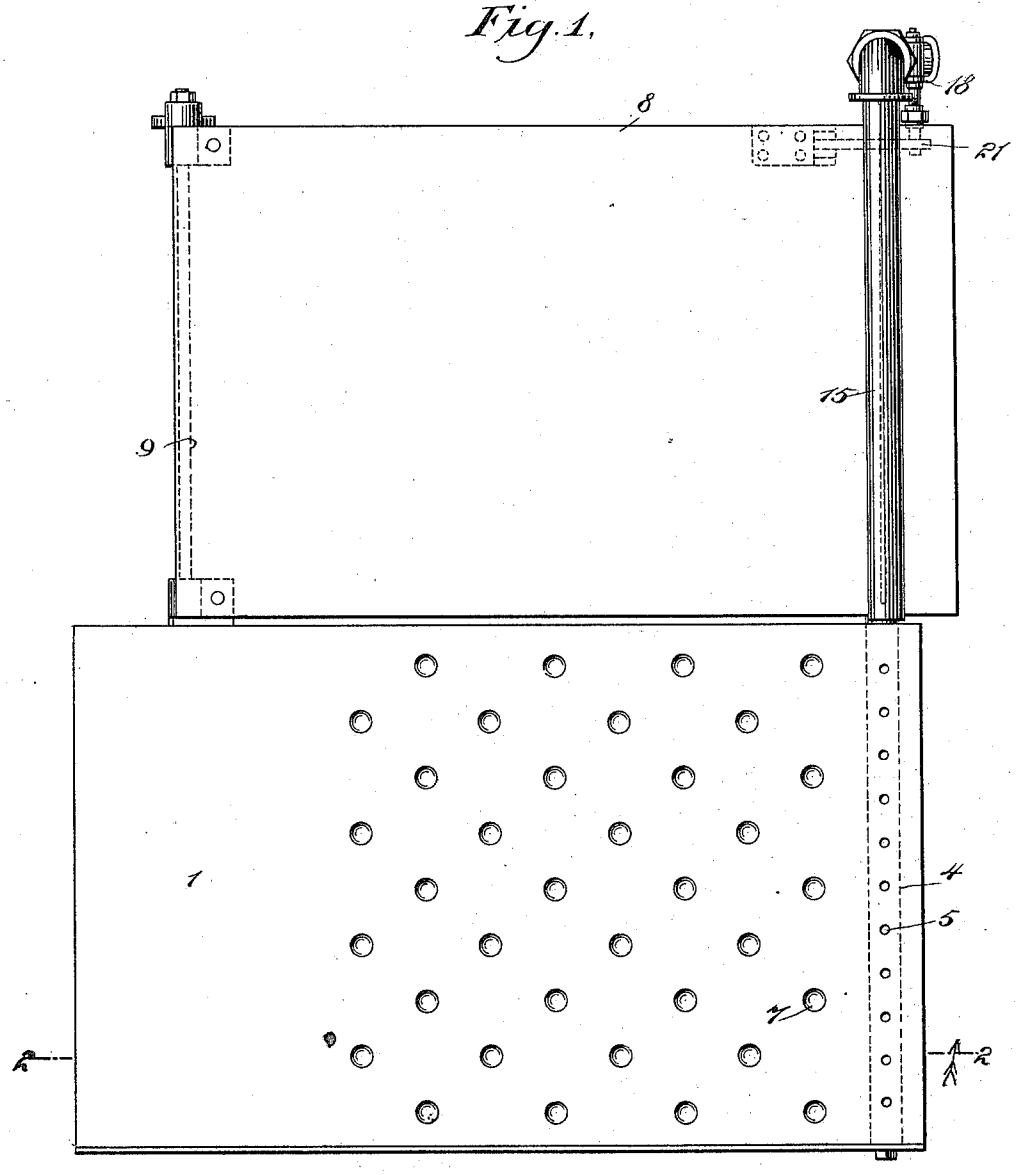
(No Model.) 2 Sheets—Sheet 1.

T. H. DESMOND.

PROCESS OF AND APPARATUS FOR REMOVING SCALE FROM METAL PLATES.

No. 585,513. Patented June 29 1897.

Fig. 1.



WITNESSES:

Edward Thorpe.

C. R. Ferguson

INVENTOR

T. H. Desmond.

BY

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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PROCESS OF AND APPARATUS FOR REMOVING SCALE FROM METAL PLATES.

No. 585,513. Patented June 29, 1897.

Fig. 2.

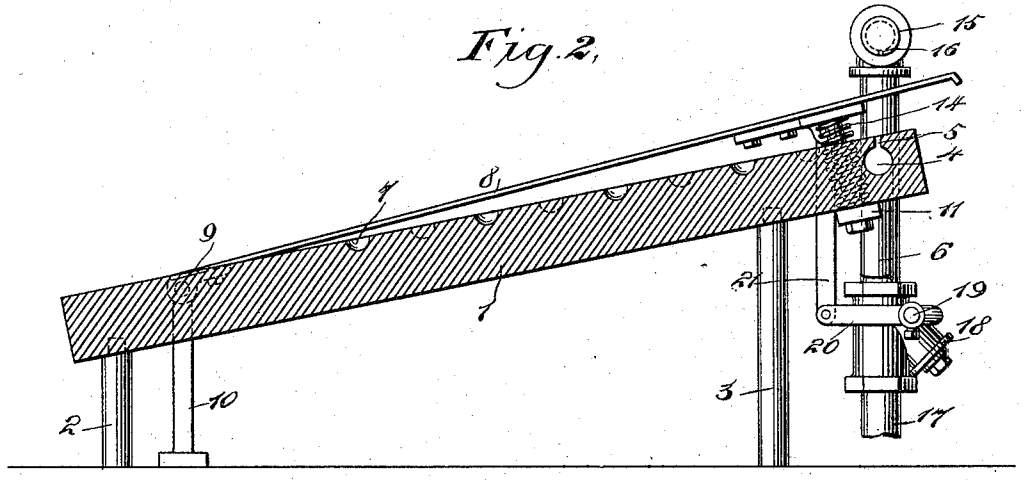
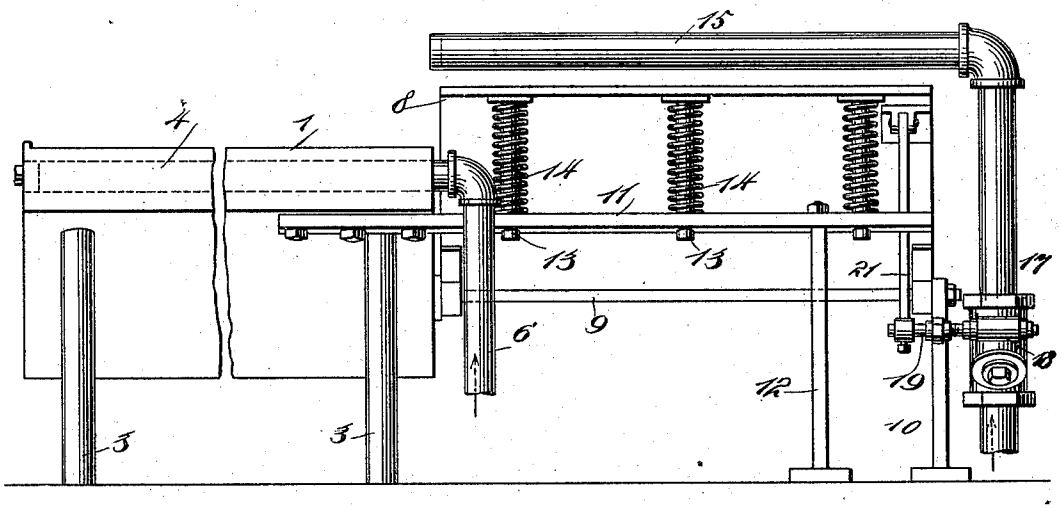


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS H. DESMOND, OF MIDDLETOWN, NEW YORK.

PROCESS OF AND APPARATUS FOR REMOVING SCALE FROM METAL PLATES.

SPECIFICATION forming part of Letters Patent No. 585,513, dated June 29, 1897.

Application filed February 27, 1897. Serial No. 625,302. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. DESMOND, of Middletown, in the county of Orange and State of New York, have invented a new and Improved Process of and Apparatus for Removing Scale from Metal Plates, of which the following is a full, clear, and exact description.

This invention relates to a process, and apparatus for carrying out the same, of removing scale from steel plates or sheets; and while I employ it particularly for operating upon plates for saw-blades it is obvious that it is not to be limited thereto.

I will describe my process and an apparatus for carrying out the same and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a top plan view of an apparatus by means of which my process may be carried out. Fig. 2 is a section on the line 2 2 of Fig. 1, and Fig. 3 is an elevation of the head end of the apparatus.

Referring to the drawings, 1 designates a fixed table suitably supported—such, for instance, as by legs 2 3. Arranged in the end of the table 1 and extending transversely thereof is a waterway 4, having perforations 5 opening through the top of the table. This waterway 4 has a connection 6, leading from any desired source of supply. The upper surface of the table 1 may be plain, corrugated, or have concavities or cups 7, the purpose of which will be hereinafter stated.

Arranged at the side of the table 1 is a swinging table 8, consisting, preferably, of a metal plate having at one end a hinge connection, its opposite end supported by weights or springs 14, which serve normally to hold the table 8 in an elevated position. Extending over one end of the table 8 is a steam-spraying pipe 15, having a slit or series of perforations 16 through its lower side. This spraying-pipe 15 communicates with a supply-pipe 17, controlled by a valve 18, suitably connected with the swinging table 8.

The operation of removing scale from a plate is as follows: The hot plate is held by tongs or any suitable instrument and agitated on the table 1. At this time water discharging through the perforations 5 will be constantly running over the table under the plate. The corrugations, concavities, or cups 7 will hold a sufficient amount of water to form a suction to prevent the plate from jumping too much with relation to the table. After treatment on the table 1, where the scale on the plate is loosened and partially removed, the plate is removed to the table 8. The weight of the plate will move the table down against the resistance of the weights or springs 14, and this movement will open the valve 18 to allow steam to enter and discharge through the slit or perforations 16 onto the plate, and this discharging steam will blow off the scale and entirely clean the plate. Then, of course, upon removing the plate from the table 8 it will return to its normal position and close the valve 18.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The process of removing scale from a metal plate, consisting in agitating the plate in flowing water while the plate is hot, and then subjecting the plate to the blowing action of steam, substantially as specified.

2. An apparatus for removing scale from metal plates, comprising a fixed table to receive the plate, means for flowing water over said plate, a table adjacent to the first-named table and adapted to receive the plate after treatment on the first table, and means for discharging steam on a plate on the second-named table, substantially as specified.

3. An apparatus for removing scale from metal plates, comprising a fixed table, a waterway extending transversely through the upper end of said fixed table and having outlets discharging onto the upper surface of the table, a swinging table adjacent to the fixed table, a steam-pipe extended over the upper end of said swinging table and discharging onto the same, and a valve for controlling the steam-pipe, substantially as specified.

4. An apparatus for removing scale from metal plates, comprising a fixed table, a waterway extending across one end thereof, and having outlets discharging upon the outer surface of the table, a swinging table arranged adjacent to the fixed table, a steam-discharge pipe extended over the upper por-

tion of the swinging table, a valve in the supply-pipe for said steam-discharge pipe, with suitable connections between the valve and swinging table, and weights or springs for moving said swinging table to its upper position, substantially as specified.

5. An apparatus for removing scale from metal plates, comprising a fixed table, a waterway extended across one end thereof and having outlets discharging upon the outer surface of the table, the said table being corrugated, plain or having concavities on its upper surface, a swinging table arranged adjacent to the fixed table, a steam-discharge pipe extended over the upper portion of the swinging table, a valve in the supply-pipe for said steam-discharge pipe, with suitable connections between said valve and swinging table, and weights or springs for moving said swinging table to its upper position, substantially as specified.

THOMAS H. DESMOND.

Witnesses:
F. B. HATHAWAY,
H. H. BLANCHARD.