

D. DEE.
GRATE BAR.

APPLICATION FILED AUG. 19, 1911.

1,017,653.

Patented Feb. 20, 1912.

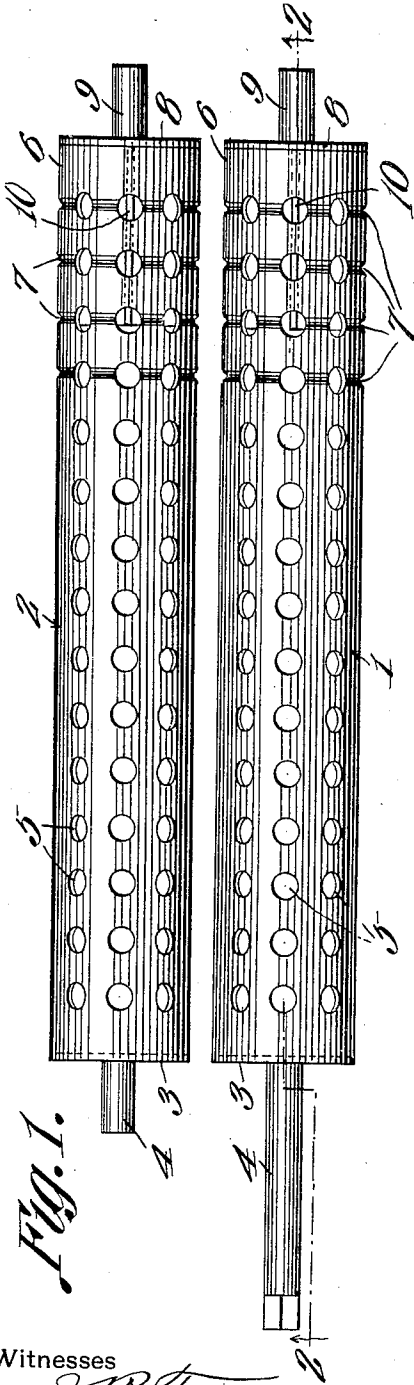


Fig. 1.

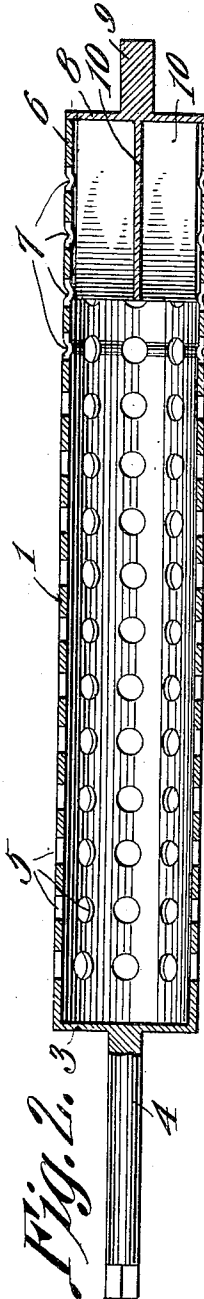


Fig. 2.

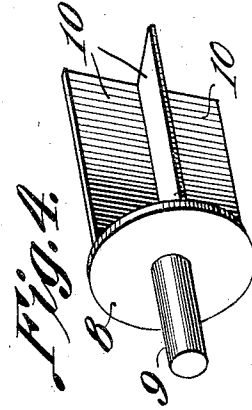


Fig. 4.

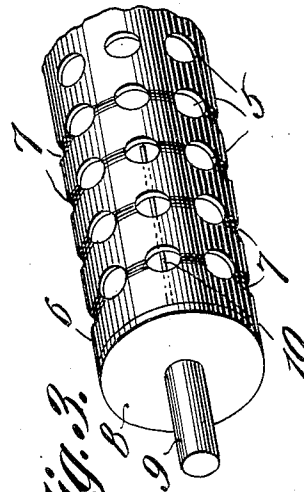


Fig. 3.

Witnesses

J. P. Tomlin
J. H. Wilson

Daniel Dee,

Inventor

by

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

DANIEL DEE, OF POCATELLO, IDAHO, ASSIGNOR OF ONE-HALF TO EGBERT C. STRATFORD, OF POCATELLO, IDAHO.

GRATE-BAR.

1,017,653.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed August 19, 1911. Serial No. 644,902.

To all whom it may concern:

Be it known that I, DANIEL DEE, a citizen of the United States, residing at Pocatello, in the county of Bannock and State of Idaho, have invented new and useful Grate-Bars, of which the following is a specification.

The present invention relates to improvements in grate bars, the primary object of the invention being the provision of a tubular grate bar disposed to be rotated in the grate frame, said bar being provided with a plurality of perforations through the body thereof whereby the air may be properly conducted to the fuel above the bars, said bars being further provided with a plurality of circumferentially disposed grooves at the open end of the bar, whereby said open end may be shortened by breaking upon such grooved lines to reduce the length of the bar to accommodate the bar to the desired size of grate frame, a removable cap being disposed within such open end and carrying a journal stud for properly journaling the bar at such end.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a top plan view of two of the tubular grate bars arranged in coöperative relation without the necessary support, it being contemplated that said bars are to be placed in pairs to provide the lower or fuel containing portion of a grate. Fig. 2 is a longitudinal sectional view taken on line 2—2 of Fig. 1. Fig. 3 is a perspective view of the end of the grate bar having the removable cap. Fig. 4 is a perspective view of such removable cap.

Referring to the drawings, the numerals 1 and 2 designate two tubular members which constitute two tubular and rotatably mounted grate bars which are adapted to be disposed in operable relation and assume the relative position as shown in Fig. 1. As each of the respective bars are constructed

similarly the description of one will suffice for both.

Each bar is provided with the sealed end 3 having formed integrally and concentrically thereof, the journaling stud or pin 4, while throughout the length of the said bar and within the shell or wall thereof are the perforations 5 which provide a means, notwithstanding the position of the respective bars, whereby the proper passage of the air supply may pass through the bars and affect the fuel supported thereby.

The open end 6 of the respective bars is provided with a plurality of exteriorly and circumferentially disposed breaking grooves 7 whereby the open end of the respective bars may be broken with a cold chisel on such circumferential lines to reduce the length of the bars to accommodate the same to various length grate frames.

Removably mounted over the respective open ends of the bars is a cap or disk 8 having formed concentrically therewith upon one side thereof a pin or stud 9 which coacts with the pin or stud 4 to properly support the grate bar upon its axial center line. In order that the respective disks or caps 8 may be properly secured to seal the open end of its respective grate bar, the four wings 10 are formed integrally with said disk or cap 8 upon the opposite side to the journaling stud or pin 9, and the same is adapted to fit within the open ends of the grate bar as clearly shown in Fig. 2 and provide a reinforced connection at such end and prevent any undue weight upon the bar from sagging the connection between the cap or disk 8 and the open end of the bar.

From the foregoing description taken in connection with the drawings, it is evident that by producing a grate bar as herein set forth, that the same is made in a stock length with the proper breaking grooves such as 7 therein, so that the cap 8 may be removed and the open end broken upon the desired line to accommodate the said tubular grate bar to the desired size grate frame.

What is claimed is:

A grate bar, having a hollow cylindrical body sealed at one end and provided with perforations through the wall thereof throughout its length and a series of circumferential breaking grooves near its open end, a journaling stud at the closed end, a remov-

able cap having a plurality of wings projecting from one side of the cap and insertible within the open end of the body remaining after a portion of the body is
5 broken off, to removably secure the cap to the body, and a journaling stud upon the opposite side of the cap, both of said studs forming a journal for the bar.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 10

DANIEL DEE.

Witnesses:

H. K. HIGSON,
CYRUS JENSEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
