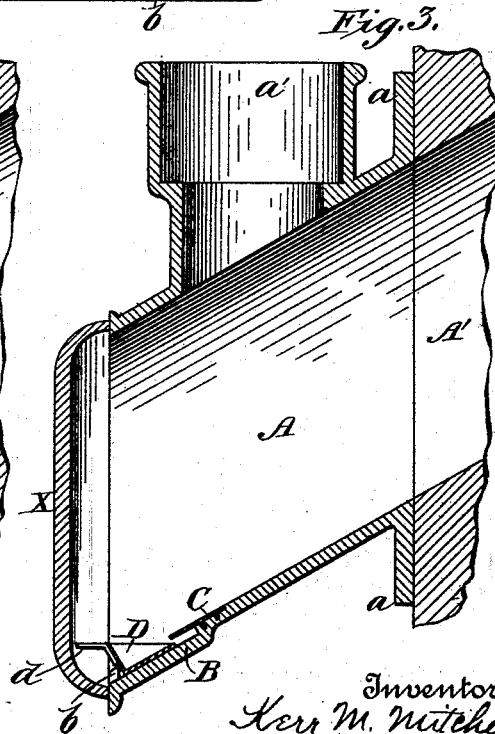
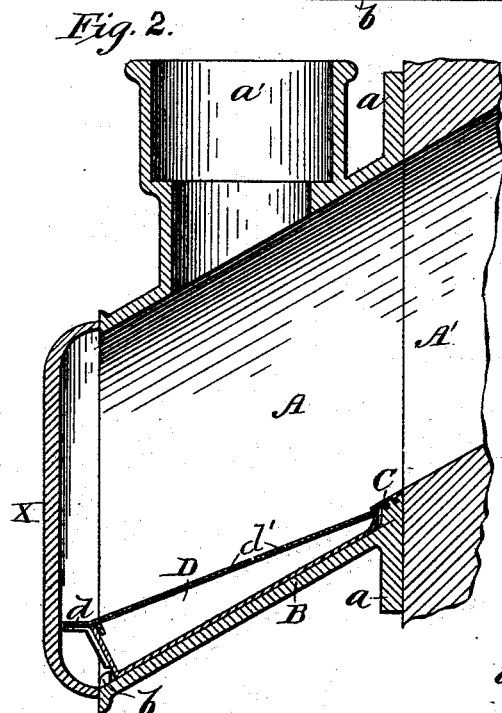
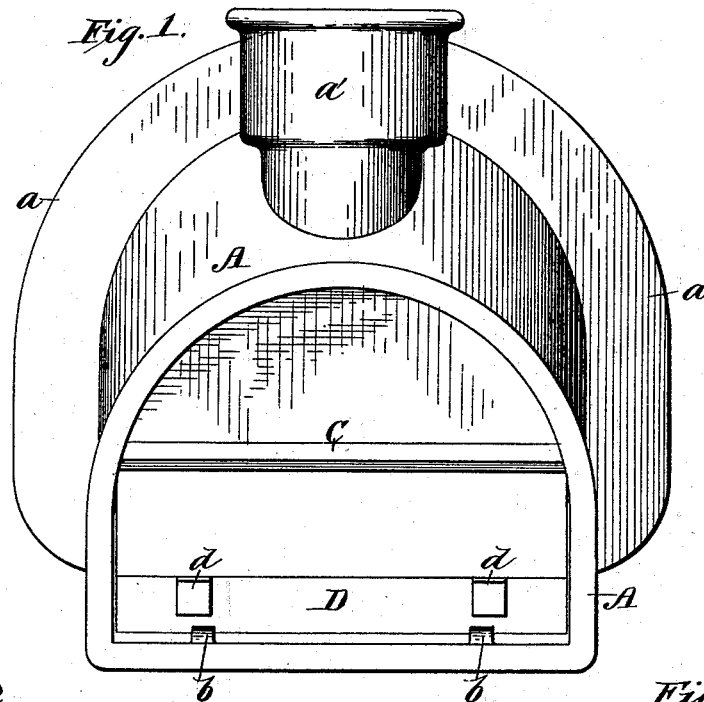


(No Model.)

K. M. MITCHELL.
INCLINED RETORT.

No. 524,857.

Patented Aug. 21, 1894.



Witnesses
J. C. Lawrence.
M. R. M. Grayson.

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UNITED STATES PATENT OFFICE.

KERR M. MITCHELL, OF ST. JOSEPH, MISSOURI.

INCLINED RETORT.

SPECIFICATION forming part of Letters Patent No. 524,857, dated August 21, 1894.

Application filed November 28, 1891. Serial No. 413,393. (No model.)

To all whom it may concern:

Be it known that I, KERR M. MITCHELL, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Inclined Retorts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to inclined retorts or retorts set in an inclined position in suitable benches; and more particularly to improvements in the mouth pieces of such retorts.

The object of the invention is to provide for catching and holding the tar which runs down from the coal and drips from the stand pipe. Heretofore this tar which accumulated in the mouth piece of the retort has given much trouble by running down on the floor in front of the bench where it was not only wasted, but created a nuisance on account of hot coke falling down into it, producing a great deal of smoke and heat and also injuring the coke for commercial or household uses. By means of my improved construction and the use of a pan applied to and within the mouth piece of inclined retorts, I overcome these difficulties and conveniently catch and retain the tar in a removable receptacle in which it is readily removed from the retort and saved.

I will now describe the details of my improvements in inclined retorts in connection with the accompanying drawings, in which—

Figure 1 represents a front view of a retort mouth piece with the lid removed. Fig. 2 represents a vertical section thereof and a part of the retort. Fig. 3 represents a similar vertical section with modifications in the construction.

The retorts, A', are set in an inclined position in benches in the usual manner and the mouth pieces, A, are secured thereto by means of their flanges, a. The mouth pieces are provided with the usual stand pipe sockets, a'. The bottom of the mouth piece, A, is provided with an offset or depression, B, below the level of the floor of the retort for receiving the tar pan, D, and at the front end this

depression, B, is provided with upwardly projecting lugs, b, for holding the pan, D, in place. These lugs, however, do not interfere with the free passage of the coke when the retort is drawn, at which time the pan may be removed.

At the upper end of the offset or depression, B, I provide a plate, C, secured to the bottom of the mouth piece or retort and projecting at its lower edge over the depression, B, and over the top edge of the tar pan, D.

The tar pan, D, is preferably made tapering; that is, with a front wall of suitable height and with side walls inclined or tapering to the rear end nearly to the bottom of the pan, as shown in the drawings, and the front wall is provided with handles, d, by means of which it may be grasped while inserting or removing it from the mouth piece. The inclined plate, C, serves for directing the tar which runs down the bottom of the retort into pan, D. Since pan, D, is located directly below the stand pipe, the tar which drips therefrom will fall into it and thus be prevented from leaking through the joint between the lid X and mouth piece and thus running down over the lids of retorts below and on to the floor in front of the bench. The mouth piece is provided with the usual lid, X, which, in practice, is secured in the well known manner.

When it is desired to draw the charge of coke from the retort, the tar pan, D, may be first removed and the tar poured into a suitable receptacle, or if it is desired that the tar pan, D, remain in the mouth piece, it may be covered with a movable plate, d', or a grating and the coke raked over it. The pan, D, need not be removed every time the retort is drawn, but only so often as necessary to empty the contained tar. The plate, d', is made to fit tightly over pan, D, so as to completely cover and protect the contained tar. The coke is thus kept free from the sticky tar, so that it is better adapted for commercial and domestic use. Moreover the great nuisance created by the ignition of the tar and the dense smoke therefrom in front of the bench is removed. Since the smoke and heat from burning tar are obviated by my improvements, the workman can much more quickly and easily draw the coke from the re-

torts and wheel it away from the fronts of the benches. The tar is also saved in a good condition.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In direct combination with a mouth piece of an inclined retort, a removable inclined tar pan placed within and on the bottom thereof and below the stand pipe substantially as described.

2. The mouthpiece of an inclined retort provided at its bottom with upwardly projecting lugs, combined with a removable tar pan placed on the bottom and supported by such lugs.

3. In combination with a mouth piece of an inclined retort, a tar pan placed on its inclined bottom, and an inclined plate C, arranged with its lower edge overlapping the top of the pan at its rear, substantially as described.

4. The mouth piece of an inclined retort having an offset or depression in its bottom,

and having upwardly projecting lugs, in combination with a tar pan set in such depression and supported by said lugs substantially as described.

5. The mouth piece of an inclined retort, provided with an offset or depression and having an inclined plate projecting over a portion of such depression and over the rear end of the pan cover, in combination with a tar pan set in the depression and means for holding it in place, substantially as described.

6. In combination with the mouth piece of an inclined retort, a tar pan placed on the bottom thereof, a plate *d'* covering such pan, and an inclined plate C constructed and applied with its lower edge overlapping the top of the pan at its rear, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

KERR M. MITCHELL.

Witnesses:

JOHN H. FITZGERALD,
WM. J. ROBERTSON.