No. 775,266. PATENTED NOV. 15, 1904.

A. J. DOSS.

IMPLEMENT FOR DISCHARGING COKE OVENS.

APPLICATION FILED AUG. 5, 1904.

NO MODEL.

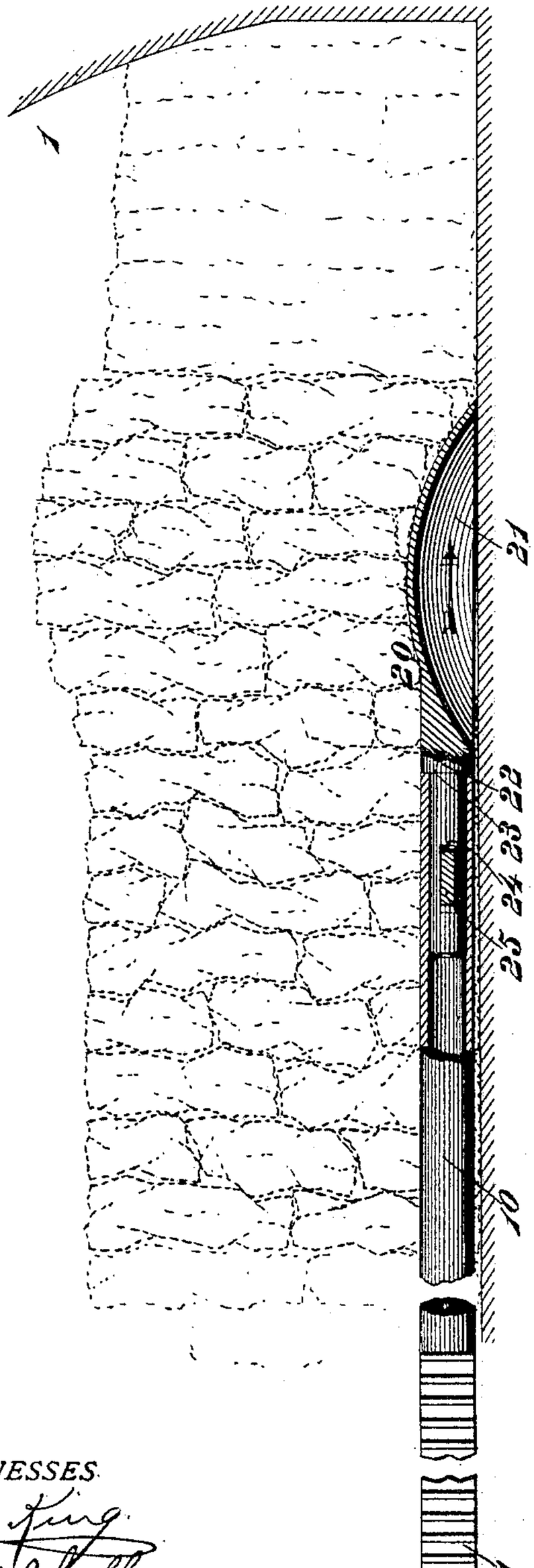

Fig. 1.

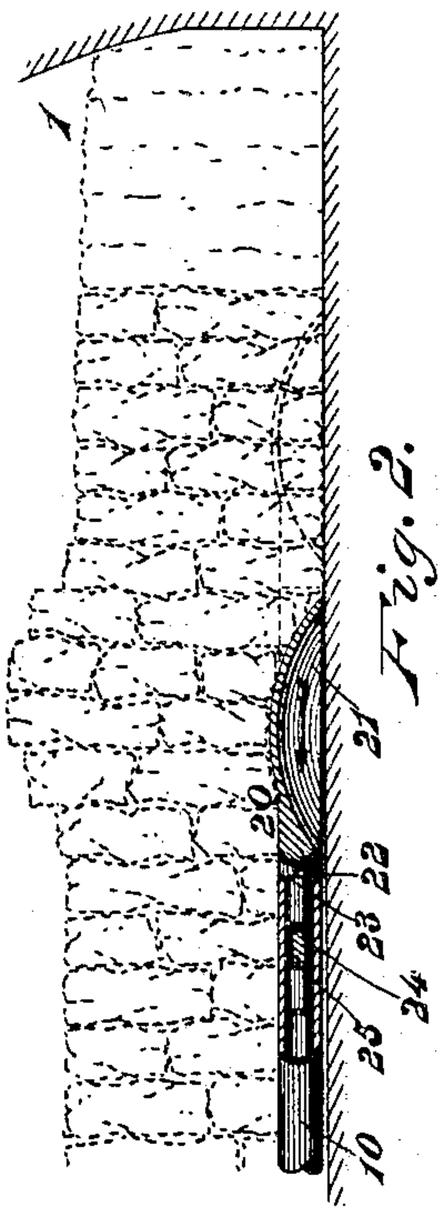

Fig. 2.

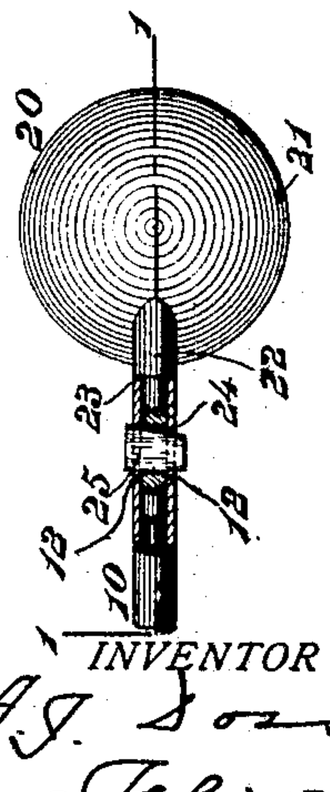

Fig. 3.

WITNESSES.

Harry King.

L. M. McCall.

INVENTOR

A. J. Doss

By F. B. Jones

Attorney.

No. 775,266. Patented November 15, 1904.

UNITED STATES PATENT OFFICE.

ANDREW JACKSON DOSS, OF SWITCHBACK, WEST VIRGINIA, ASSIGNOR TO JAMES ELLWOOD JONES, OF SWITCHBACK, WEST VIRGINIA.

IMPLEMENT FOR DISCHARGING COKE-OVENS.

SPECIFICATION forming part of Letters Patent No. 775,266, dated November 15, 1904.

Original application filed March 17, 1904, Serial No. 198,562. Divided and this application filed August 5, 1904. Serial No. 219,665. (No model.)

To all whom it may concern:

Be it known that I, ANDREW JACKSON DOSS, a citizen of the United States of America, and a resident of Switchback, in the county of McDowell, in the State of West Virginia, have invented certain new and useful Improvements in Implements for Discharging Coke-Ovens, of which the following is a specification.

In the burning of coal the coke is produced in a caked mass having a vertical stratification, and it is desirable to avoid as much as possible breakage of the sticks and blocks extracted from the coke-oven.

The object of this invention is to provide an implement adapted for use in coke-drawing machines for loosening the coke within the oven preparatory to the withdrawal thereof from the oven.

Figure 1 of the accompanying drawings represents a longitudinal vertical section of this coke-loosener on its inward thrust into the coke-oven. Fig. 2 represents a similar section thereof on its outward thrust from the coke-oven. Fig. 3 represents a plan, also on a smaller scale, of this implement, parts being broken out in all the figures.

The same reference-numbers indicate corresponding parts in all the figures.

The improvement illustrated in the accompanying drawings as an example of one embodiment of this invention comprises a bar 10, constituting a handle, and a coke-loosener 20, preferably detachable therefrom. The bar 10 may be constructed hollow and provided with slots 12 near one end. This bar is preferably mounted on a coke-drawing machine and adapted for carrying a detachable coke-puller to be used after the loosener in withdrawing the loosened coke—for example, in the machine shown in United States Patent No. 731,913, in which case it is provided with rack-teeth 11, or in the machine shown in the original application, Serial No. 198,562, filed March 17, 1904, from which this case is divided.

The coke-loosener proper comprises a body 21, the upper surface of which is inclined or wedge-like in both its front and rear portions, being preferably rounded and in the form of a segment of a sphere. The incline of the top in both directions causes the loosener to have a wedge-like lifting action on the instroke to lift and loosen the coke under which it passes from the caked mass in the oven and enables it to pass under the loosened coke on the outstroke without breakage or material disturbance thereof, leaving said coke in condition for withdrawal by the subsequent operation of the coke-puller. A shank 22 extends from the body 21 on a plane substantially parallel with the bottom thereof. This shank is provided with a shoulder 23 and with a slot 24. The reduced portion of the shank forms a tang adapted to fit within the outer end of the bar 10, and a key 25 extends through the slots 12 of the bar and through the slot 24 in the shank of the loosener and serves as a locking device for holding the latter in connection with the bar 10. This bar 10 will generally be operated from a coke-drawing machine; but it may be operated by manual labor.

In the use of this implement in discharging a coke-oven the coke-loosener is applied to the handle 10 and fastened thereto. Then it is thrust through the oven-door by means of machine or by hand power and slides along the bottom of the oven under the caked coke within the oven, where it has a wedge-like action, lifting a strip of coke equal to the width of the coke-loosener and breaking it from the mass of coke on either side thereof, as shown in Fig. 1. The inward thrust continues until the coke-loosener enters the oven to a point near the back wall thereof, sliding under the loosened coke, and then it is withdrawn, as indicated in Fig. 2, leaving a strip thereof prepared for the action of the coke-puller. Then the coke-loosener is thrust in again to the right or left of its first path, and so on until the contents of the oven are loosened throughout. Then the coke-loosener is detached from the handle 10, and a coke-puller of any desired construction is applied thereon and used in pulling the coke from the oven.

I claim as my invention—

1. An implement for use in discharging

coke-ovens comprising a coke-loosener having a body wedge-like in two directions and adapted to slide under the coke on its inward and outward strokes.

2. An implement for use in the discharge of a coke-oven comprising a coke-loosener having a doubly-inclined upper face adapted to slide under the coke on the inward and outward strokes and provided with a shank adapted for detachably engaging a handle.

3. An implement for use in the discharge of a coke-oven comprising a handle, a coke-loosener having a rounded upper face adapting it to slide under the coke along the bottom of the oven in its inward and outward strokes, a tangential shank attached to said loosener, and means for locking said loosener to an operative handle.

4. An implement for use in the discharge of a coke-oven comprising a coke-loosener having a horizontal lower face adapted to slide along the bottom of the oven, and a rounded upper face adapted to slide under the coke in its inward and outward strokes, and a handle extending substantially parallel with said body.

ANDREW JACKSON DOSS.

Witnesses:
J. WALTER GRAYBEAL,
T. T. SMITH.