J. P. T. DAVIS.

BAILER.

APPLICATION FILED JUNE 14, 1920.

1,396,262.

Patented Nov. 8, 1921.

FIG. 1.

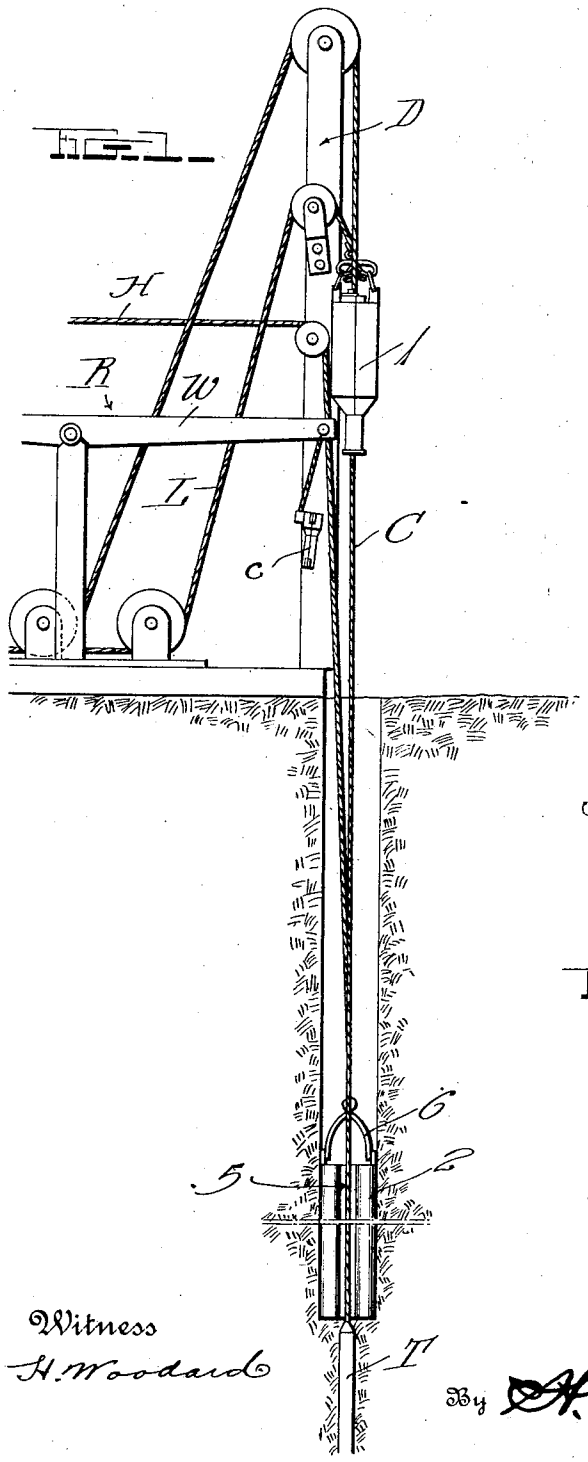


FIG. 2.

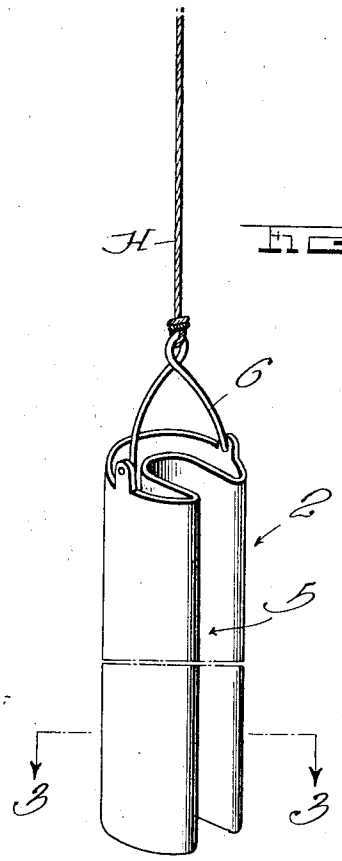


FIG. 3.



Witness

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UNITED STATES PATENT OFFICE.

JOHN P. T. DAVIS, OF ELK CITY, KANSAS.

BAILER.

1,396,262. Specification of Letters Patent. Patented Nov. 8, 1921.

Original application filed September 15, 1919, Serial No. 323,803. Divided and this application filed June 14, 1920. Serial No. 388,970.

To all whom it may concern:

Be it known that I, JOHN P. T. DAVIS, a citizen of the United States, residing at Elk City, in the county of Montgomery and State of Kansas, has invented certain new and useful Improvements in Bailers; and I do 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 broadly to devices for recovering drill bits from wells which have caved in, and it has more particular reference to a bailer for use in connection with such devices, one of the latter of which is shown and described in my co-pending application for bit recovering means, Serial No. 323,803, filed September 15, 1919, the present application being a division of that case.

The object of this invention is to provide a simple and effective bailer for detachable connection to a hoisting cable, the bailer being provided with a channel in one side for reception of the usual bit carrying cable when the device is lowered to effective position, which construction obviates the necessity of cutting the cable before the bailer is used, as is ordinarily done.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a view illustrating the manner of using my improved bailer for the purpose of removing earth, rock, etc., pulverized by the device with which my bailer is used.

Fig. 2 is a perspective view of a bailer constructed in accordance with this invention.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

In the drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the letter R indicates a portion of a well drilling rig which includes a derrick frame D, cable C depending from said frame and carrying a drill bit T, a walking beam W and a suitable clamping device *c* carried by the walking beam for the attachment to the sand line L when it is desired to operate the earth crushing bit during the operation of recovering a drill tool.

In addition to the foregoing, I have also shown a member 1 which serves to pulverize the earth which is caved in about the tool. This member is clearly shown and described in the aforesaid co-pending application, of which this case is a division.

My improved bailer comprises a substantially cylindrical hollow body 2, provided in its bottom with inlet openings 3 which are closed by suitable flap valves 4 which open upwardly to allow the water and material carried thereby to enter the interior of the body, but close the openings when the bailer is being raised. In one side, this body is provided with a longitudinally extending channel 5, for reception of the drill carrying cable C when the bailer is lowered to effective position. A handle 6 is connected to the upper end of the body, and serves to permit a hoisting cable H to be attached thereto for the purpose of lowering and raising the receptacle. The channel 5 may be formed in any suitable way, it being preferably formed by making the body 2 U-shaped in transverse cross section.

The operation of the device is as follows:

Assuming that the well has caved in around the drilling tool T on the end of the cable C, it will be seen that it would be a rather hard proposition to recover the tool without cutting the cable and employing special recovering tools for the purpose. With my device, these circumstances are overcome, and the bit 1 which is slidable on the cable C is lowered by the cable L down into the well and is reciprocated vertically by means of the walking beam so as to pulverize the caved in earth. In so doing the water or oil in the bottom of the well will elevate some of the pulverized material and retain it in suspended position. When the earth is loosened sufficiently by means of the bit, the latter is removed. Then, my bailer is brought into operation, that is it is lowered into the well by the hoisting cable H. As it is lowered, the water and material carried thereby will automatically open the valves 4 and pass into the receptacle until the same becomes filled. The hoisting cable is then moved in a direction to raise the receptacle, and the valves will be automatically closed. By removing the water and dirt

in this manner, it will be seen that the drill tool T may be readily and easily recovered when enough of the caved in material has been removed. Due to the fact that the bailer is provided with a channel in one side, it will be seen that it will be guided down into the well, and the necessity of cutting the tool carrying cable is thus obviated.

A careful consideration of the foregoing description taken in connection with the accompanying drawings will enable persons skilled in the art to which this invention appertains, to obtain a clear understanding of the same, therefore, further description is deemed unnecessary.

Since probably the best results may be obtained from the construction disclosed, it may well be followed, but within the scope of the invention claimed, minor changes may well be made.

I claim:

1. A bailer of the class described comprising a vertically elongated hollow container having a vertical channel in one of its sides to receive the tool carrying cable as the bailer is lowered into the well, the upper end of said container having cable attaching means and the lower end thereof being provided with a valved inlet.

2. A bailer for use in connection with a well tool recovering apparatus comprising an elongated substantially cylindrical body, U-shaped in transverse cross section, thus providing an inwardly extending channel to receive the tool carrying cable when the device is lowered into the well, a valved inlet in the bottom of said body, and attaching means for a hoisting cable at the top of said body.

In testimony whereof I have hereunto set my hand.

JOHN P. T. DAVIS.

Witnesses:

VERNA BROWN,

PEARL LUGEANBEAL.