No. 659,237. Patented Oct. 9, 1900.

A. J. KETELSEN.

MINER'S SEPARATING PAN.

(Application filed May 18, 1900.)

(No Model.)

Fig. 1.

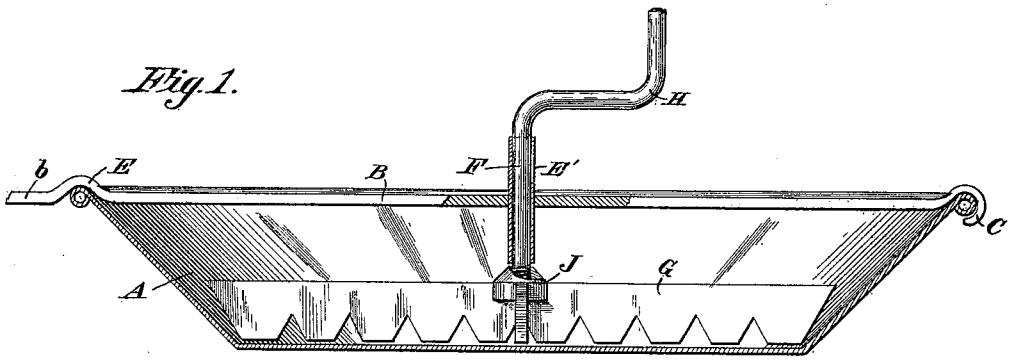
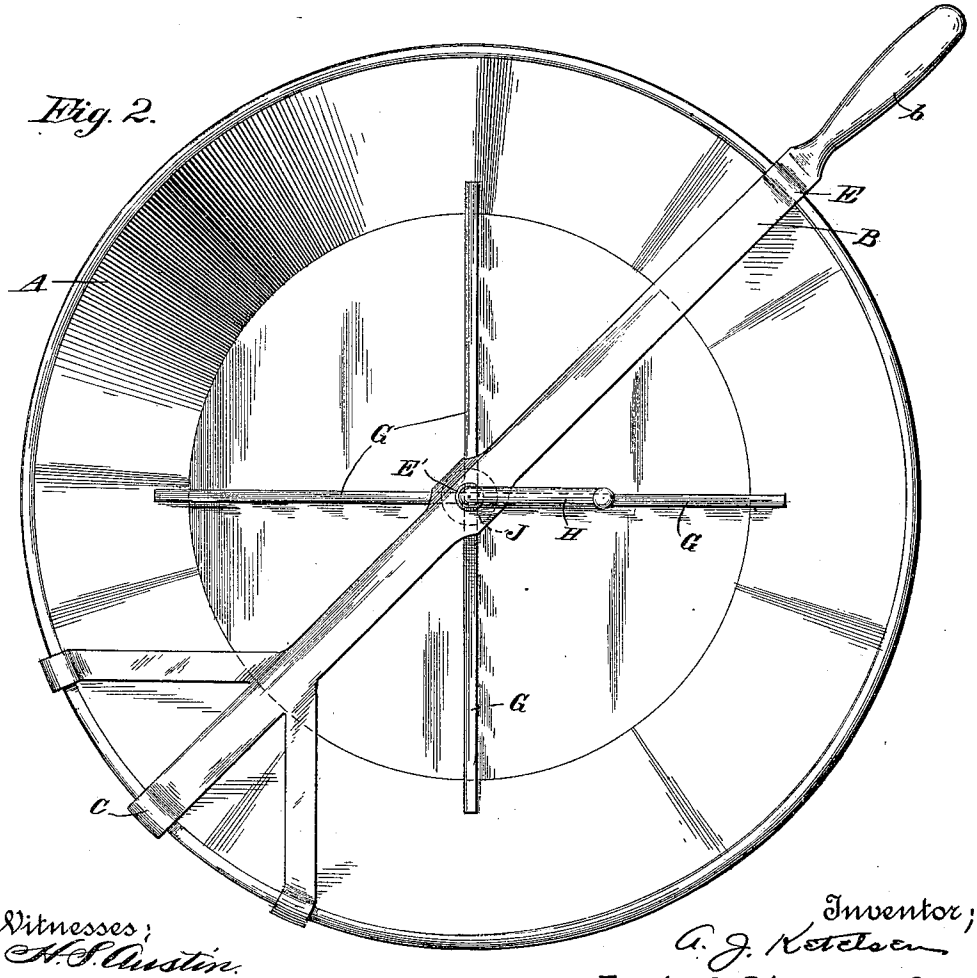


Fig. 2.



Witnesses;
H. S. Austin.
Jesse Williams

Inventor;
A. J. Ketelsen
By Mills & Stevens & Co
Attorneys.

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

UNITED STATES PATENT OFFICE.

ANDERS J. KETELSEN, OF CHICAGO, ILLINOIS.

MINER'S SEPARATING-PAN.

SPECIFICATION forming part of Letters Patent No. 659,237, dated October 9, 1900.

Application filed May 18, 1900. Serial No. 17,182. (No model.)

To all whom it may concern:

Be it known that I, ANDERS J. KETELSEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Miners' Separating-Pans; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a simple and novel attachment adapted to be applied to and used in connection with a miner's separating-pan to separate the iron or other ore from any gold that might be contained therein after the earthy matter and gravel have been washed therefrom by the usual process.

The invention has for its primary object the provision of a magnetic separator attachment adapted to be supported from the top of a pan and project down into the body portion thereof into approximately a central position therein and in means for rotating or agitating the separator for extracting the iron or other mineral ore from the gold.

In the accompanying drawings an embodiment of the invention is illustrated, and in hereinafter referring to the same like letters of reference will designate corresponding parts in both views.

Figure 1 is a vertical sectional view of a pan with the invention applied thereto, and Fig. 2 is a plan view of the same.

Referring more specifically to the drawings, A denotes a suitable pan as ordinarily employed by miners for washing or separating the earthy matter and gravel from the ore. Adapted to rest upon the edges of this pan is a brace or supporting bar B, provided at one end with hooks C, adapted to engage over the beaded edge of the pan, and an offset portion E at its opposite end is adapted to rest upon the edge of the pan. This rod also has an extended portion *b*, which constitutes a handle for elevating the separator when it is desired to detach the same from the pan, and it may also be found desirable in steadying the separator while the same is being operated. Passing through the central portion of this supporting-bar and rigidly attached thereto is a tube E'. This tube is elongated and constitutes a bearing for the shaft F, which supports and rotates the magnetic steel separator-blades G. The upper end of the rod F is provided with a suitable crank H or other rotating means. The crank and shaft may be of any suitable material, steel being found preferable, owing to its strength; but in order to prevent the accumulation of material around its lower bearing the tubular bearing is preferably formed of brass or other non-magnetic material, and the magnetic steel blades are secured to the lower end of the operating-shaft through the medium of a brass block or joint J, internally screw-threaded for attachment to the operating-rod, as will be clearly seen in Fig. 1. The magnetic steel blades may be of any configuration found desirable for the use to which the separator is put; but in the present instance I have found that blades serrated or cut out on their lower edges, as shown, offer an extended magnetic surface upon a relatively-small blade. Any number of these blades may be employed; but for simplicity in illustration only two are shown in the drawings.

It will thus be seen by a very simple attachment I have provided an efficient separator for use by what are commonly known as "prospectors." The attachment may readily be applied and detached from any of the ordinary miners' pans, and when once applied and agitated the magnetic arms will attract the small iron particles of ore or other metal which may be contained therein, and thereby thoroughly separate the same from the gold particles, it being understood that the earthy matters and gravel having been previously washed therefrom.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In combination with a suitable separator-receptacle, a detatchable separator adapted to be supported from the top of the receptacle, comprising a supporting-bar having hook portions adapted to engage the edges of the receptacle, a tubular bearing on said supporting-bar, magnetic separator-blades rotatably mounted in said tubular bearing

and means for operating the blades, substantially as described.

2. In combination with a pan or like receptacle, a detachable separator adapted to be supported upon the pan and projected thereinto comprising a brace-bar having a hooked end adapted to engage one edge of the pan and an offset portion adapted to engage the opposite end of the pan, an extended portion constituting the handle of the offset end of the rod, magnetic separator-blades supported centrally of said bar and adapted to project into the pan and means for agitating the blades, substantially as described.

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

ANDERS J. KETELSEN.

Witnesses:

GEORGE E. TEW,

WM. J. ROBINSON.