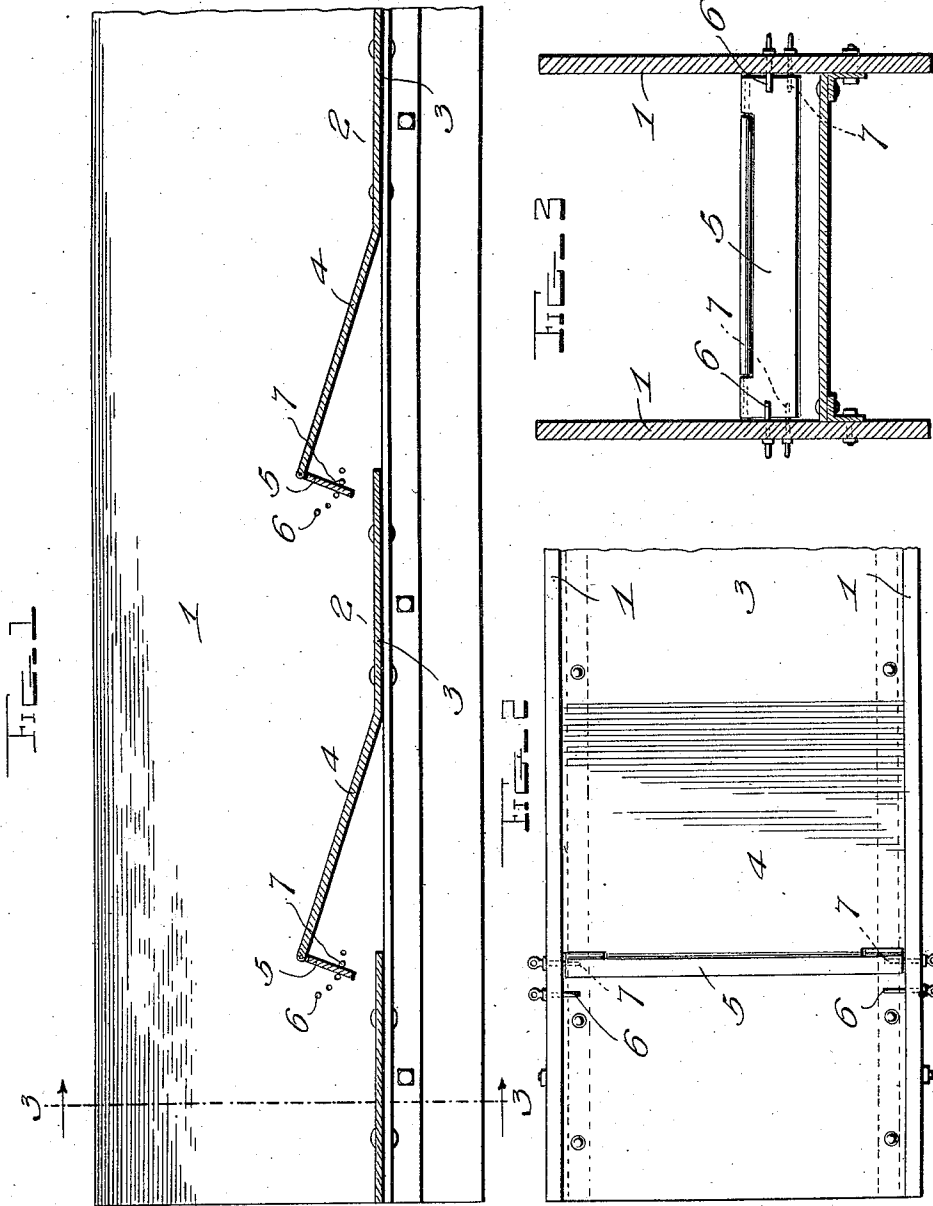


F. H. EMERY.
SHAKER PICKER.
APPLICATION FILED FEB. 26, 1913.

1,066,094.

Patented July 1, 1913.

2 SHEETS-SHEET 1.



WITNESSES:

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Frederick H. Emery

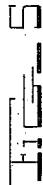
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UNITED STATES PATENT OFFICE.

FREDERICK H. EMERY, OF SCRANTON, PENNSYLVANIA.

SHAKER-PICKER.

1,066,094.

Specification of Letters Patent.

Patented July 1, 1913.

Application filed February 26, 1913. Serial No. 750,858.

To all whom it may concern:

Be it known that I, FREDERICK H. EMERY, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Shaker-Pickers, of which the following is a specification.

This invention relates to shaker pickers and is an improvement over my prior device shown and described in Letters Patent 1,013,648, issued January 2, 1912.

The object of the present invention is to provide a shaker picker comprising a trunk in which is located a series of fixed bottom sections of peculiar configuration. These sections overlap each other slightly at their adjacent edges, and depending from the elevated edge of each section is a flat gate adapted to operate over the portion of the adjacent section. These gates are free to swing toward the delivery edges of the sections, but means is provided for limiting the swinging movement of the gates toward the receiving ends of the sections.

A further object of the invention is to provide means for adjusting all of the gates simultaneously so that the said gates may swing along desired arcs with relation to the receiving edge portions of the adjacent fixed sections. Such an adjusting means may be applied to the gates if the receiving portions of the sections are in alinement or if the said receiving portions are in stepped relation along the trunk.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described, and then particularly pointed out in the claims and in the drawings illustrative of the preferred embodiment of the invention. Figure 1 is a longitudinal sectional view of a portion of the shaker picker. Fig. 2 is a top plan view of the same. Fig. 3 is a transverse sectional view of the same cut on the line 3—3 of Fig. 1. Fig. 4 is a longitudinal sectional view of a portion of a modified form of the picker shaker showing means for adjusting all of the gates simultaneously. Fig. 5 is a similar view showing the bottom sections in stepped relation with means for swinging all of the gates simultaneously.

Corresponding and like parts are referred to in the following description and indicated

in all the views of the accompanying drawing by the same reference characters.

The shaker picker comprises a trunk 1, which is preferably rectangular in form and which is mounted for reciprocation in any suitable manner. Bottom sections 2 are fixed in the trunk 1 and these sections extend approximately the entire length of the trunk. The delivery end of one bottom section overlaps slightly the receiving edge of the next adjacent bottom section and as these bottom sections are all alike a description of one will answer. Each bottom section consists of edge portions 3 and 4 which are disposed at angles with relation to each other. The edge portions 3 of each of the bottom sections 2 are in alinement with each other along the length of the trunk 1. Gates 5 are hingedly connected with the delivery edges of the portions 4 of the bottom sections 2 and hang down toward the receiving edges of the next adjacent sections 2. Pins 6 are attached to the sides of the trunk 1 and limit the swinging movement of the gates 5 toward the delivery edges of the bottom sections 2, and pins 7 are adjustably secured to the sides of the trunk 1 behind the gates 5 and limit the swinging movement of the said gates toward the receiving edges of the sections 2.

In practice the pins 7 are so positioned that the gates 5 cannot assume positions at right angles with relation to the portions 3 of the sections 2, but are slightly inclined toward the delivery edges of those sections over which they are located.

The material (mixed coal, slate) is permitted to move over the sections 2 and is facilitated in its movement by the reciprocation of the trunk 1. As the mixed material passes over the delivery edges of the portions 4 the coal which is comparatively round or globular is pushed forward along the next section 2 while the flat slate may work back under the gate 5 and thus the separation of the slate from the coal is effected. By providing means for holding the gates 5 at different angles with relation to the portions 3 of the sections 2 the picker may be adapted for separating slate from different sizes of coal as for instance, pea coal, nut, egg, etc.

In the form of the invention as illustrated in Fig. 4 of the drawing the general arrangement of the parts is preserved as that

shown in Figs. 1, 2 and 3. However, in this form of the invention means is provided for adjusting all of the gates 5 simultaneously so that they may swing in certain relative prescribed arcs. This means consists of a rod 8 which extends along the side of the trunk 1 which is provided with stops 9 and 10, which receive between them the gates 5. These stops limit the swinging movement of the gates. The stops 9 are against the under sides of the gates and the stops 10 are beyond the outer sides thereof. There is sufficient room between the stops 9 and 10 to permit the gates 5 to swing as the trunk 1 reciprocates. However, the stops 9 hold the gates 5 initially at desired angles with relation to the receiving portions of the sections 2. When the rod 8 is moved longitudinally the angle of inclination of the gates 5 with relation to the receiving portions of the sections 2 is varied. The stops 10 may be adjusted along the rod 8 and secured (by any suitable means) in order that there may be sufficient space between these stops 9 and 10 to permit the gates 5 to swing.

In the form of the invention as shown in Fig. 5 the sections 2 are in stepped relation to each other and in this form of the invention the gates 5 are provided with the rod 8 and stops 9 and 10 for adjusting and limiting the movement thereof.

Having described the invention what is claimed, is:—

1. A picker comprising a trunk, bottom sections carried by the trunk and having angularly disposed edge portions, said sections overlapping each other, and flat gates pivotally mounted at the delivery edges of the sections.

2. A picker comprising a trunk, sections fixed to the trunk and overlapping each other, said sections having angularly disposed edge portions, and gates pivotally mounted at the delivery edges of the sections.

3. A picker comprising a trunk, sections carried by the trunk and having angularly disposed edge portions, the receiving edge portions of the sections being in alinement and lying under the delivery edge portions of the next adjacent sections, and gates pivotally mounted at the delivery edge portions of the sections and adapted to swing over the receiving edge portions of the adjacent sections.

4. A picker comprising a trunk, sections

carried by the trunk and having angularly disposed edge portions, said sections overlapping each other, flat gates pivotally mounted at the delivery edges of the sections and adjustable means for varying the angle of inclination of the gates with relation to the receiving edge portions of the sections.

5. A picker comprising a trunk, sections fixed to the trunk and having angularly disposed edge portions, said sections overlapping each other at their adjacent edges, the sections having delivery edges spaced from the receiving edges of the adjacent sections, flat gates pivotally mounted at the delivery edges of the sections and hanging toward the receiving edges of the adjacent sections and adjustable means for holding the gates at desired angles with relation to the receiving edge portions of the sections.

6. A picker comprising a trunk, bottom sections carried by the trunk and overlapping each other, and flat gates pivotally mounted at the delivery edges of the sections to swing in arcs below the upper surfaces thereof.

7. A picker comprising a trunk, bottom sections carried by the trunk and having angularly disposed edge portions, said sections overlapping each other, flat gates pivotally mounted at the delivery edges of the sections and means for simultaneously adjusting the inclinations and arcs of swinging of the series of gates.

8. A picker comprising a trunk, bottom sections carried by the trunk, flat gates pivotally mounted at the delivery edges of the sections, a rod extending transversely across the gates and stops carried by the rod and located at the opposite sides of the gates, said rod being longitudinally adjustable, and the stops being spaced to permit swinging of the gates.

9. A picker comprising a trunk, bottom sections carried by the trunk, flat gates pivotally mounted at the delivery edges of said sections, a rod extending transversely across the gates, stops carried by the rod and located at the opposite sides of the gates and means for adjusting and securing the stops located beyond the outer sides of the gates.

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

FREDERICK H. EMERY.

Witnesses:

FRANCES KEROES,
EMILY F. CAMP.