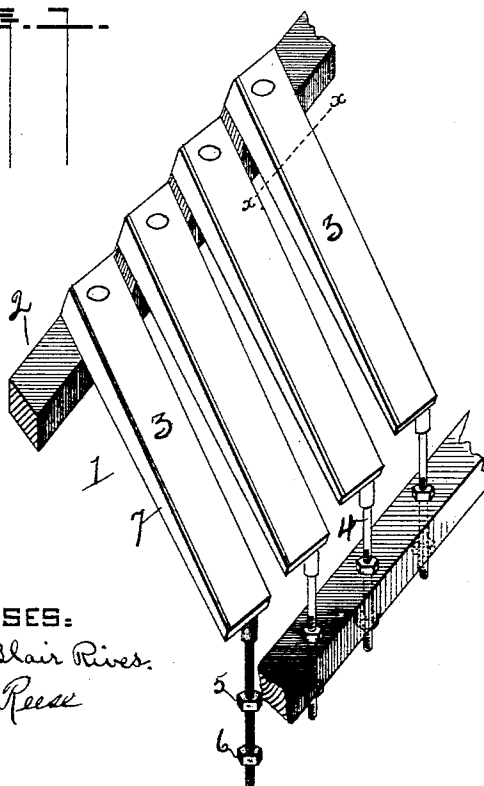
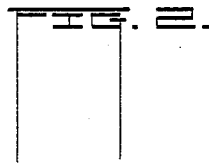
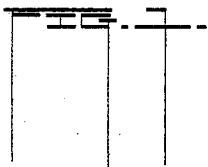
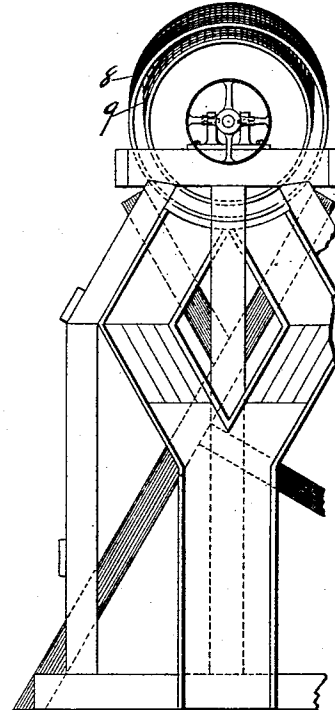
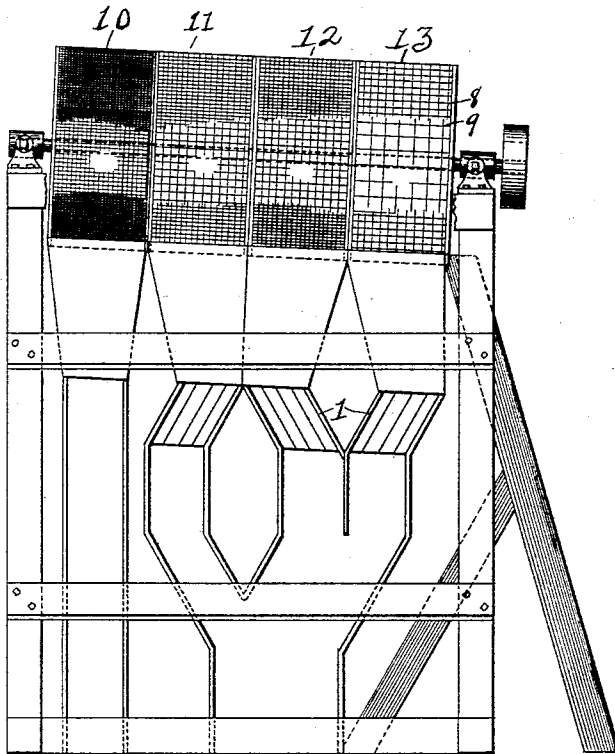


(No Model.)

J. FERN.
SLATE PICKER.

No. 535,894.

Patented Mar. 19, 1895.



WITNESSES:
Frank Blair Rice.
C. L. Reese

John Fern,
INVENTOR,
by Overt & Appleman
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN FERN, OF SCRANTON, PENNSYLVANIA.

SLATE-PICKER.

SPECIFICATION forming part of Letters Patent No. 535,894, dated March 19, 1895.

Application filed July 25, 1894. Serial No. 518,541. (No model.)

To all whom it may concern:

Be it known that I, JOHN FERN, a citizen of the United States of America, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Slate-Pickers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in slate pickers, of which the following is a clear, full and exact description, the object of the invention being to produce a picker that shall have bars, arranged in a diagonal series meshed to taper from top to bottom; a further object being to make said meshes adjustable to increase or diminish the pitch, or to increase or diminish the size of the mesh.

Furthermore, the object of the invention is to produce a coal picker by the use of which, the work of separating the slate from the coal is automatically effected, and the necessity of hand-labor, obviated, thus economizing in time and reducing the cost of producing coal from which the slate has been removed.

Finally the invention consists in producing a slate picker that shall possess strength and durability and be at the same time simple, efficient and comparatively inexpensive.

With these and other objects in view the invention consists in various novel details of construction, arrangement and combination of parts to be hereinafter more fully described and specifically claimed.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like characters of reference indicate corresponding parts in the several views, in which—

Figure 1, is a rear view of a chute with my improved picker in place and showing the screens arranged in relation thereto. Fig. 2, is an end view of the same, and Fig. 3, is a perspective view in detail of my picker. Fig. 4 is a section of one of the bars with the flange in place, taken on the line $x-x$ of Fig. 3.

In the drawings, 1 denotes my improved slate picker consisting of a stepped top support 2, having bars 3 secured thereon and extending diagonally across the chute, the op-

posite ends of the bars resting on bolts or screws. The bolts 4 shown in Fig. 3, are provided with nuts 5 6 above and below the bottom supporting bar thus allowing for an adjustment of pitch as well as regulating the size of the mesh. The bolts are placed at the lower and outer side, close to the edge for the purpose of increasing the distance between flanges and supports so as to give more clearance for the slate to escape and prevent clogging. The bars are further provided with tapering flanges 7, attached to the sides thereof wide at the top and ending in a point at the end of the said bar. Thus it will be seen that the size of the space is increased toward the end and as the coal and slate pass over the bars, the slate will be precipitated through the tapering spaces, while the clean coal will follow down the valleys between the bars, it being understood that the bars are inclined toward the flange of the next succeeding bar.

In combination with my picker as illustrated and above described I have an improved system for sizing the coal before it reaches the picker, not for commercial purposes but for the purpose of sizing the coal to suit the meshes of the respective pickers after which three or more sizes may be reunited composing the standard commercial size. This system consists in arranging a screen above the chute the meshes of which are arranged in varying predetermined sizes, to correspond to the size of the coal to be cleaned as will be seen by reference to Figs. 1 and 2 where I have shown cylindrical inner and outer screens 8 and 9 slantingly arranged in bearings with screens having a small mesh at the highest point as at 10, and increasing in size as sections 11, 12 and 13 show as the lower end is reached. The screen 10, is meshed for pea coal as that is not picked the chute being illustrated as not in connection with a picker, but screens 11, 12 and 13 are shown as communicating with the pickers 1, which as will be seen are arranged diagonally across the chute.

The inner and outer screens vary in relation to each other, the inner screen of each section being of a larger mesh than the other of the same section. This means increases the capacity and efficiency of the screens since the fine coal passes directly through the

inner meshes and gives place for the large to pass down to be screened through a mesh corresponding to its size.

The object and advantages of the invention will be apparent from the foregoing description. It will be noted that changes may be made in size and other details of construction without departing materially from the general idea involved.

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

A slate picker consisting of a stepped top supporting beam, bars secured thereon, tapering flanges on the edges of the bars, sockets 15 at the lower ends of the bars adjustable bolts fitting in the sockets, and a bar supporting said bolts as and for the purpose specified.

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

JOHN FERN.

Witnesses:

A. A. VOSBURG,
CHAS. E. OLVER.