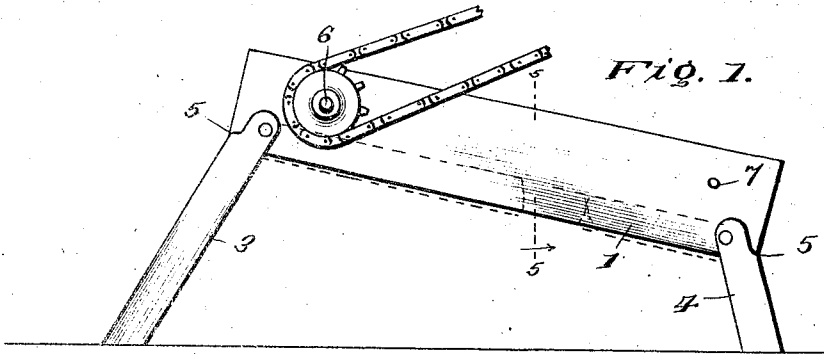
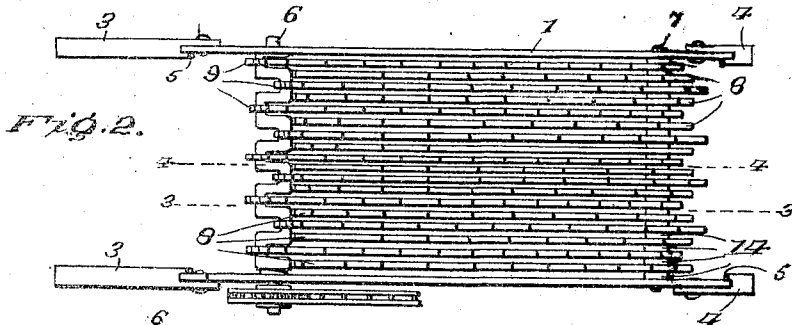
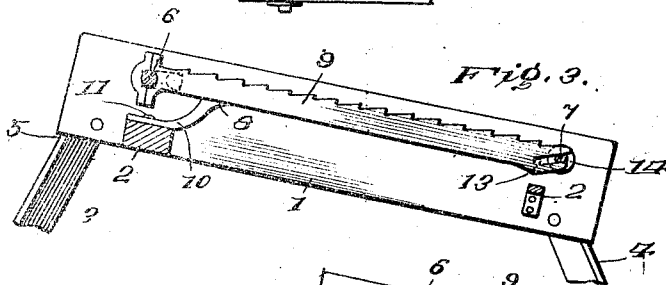
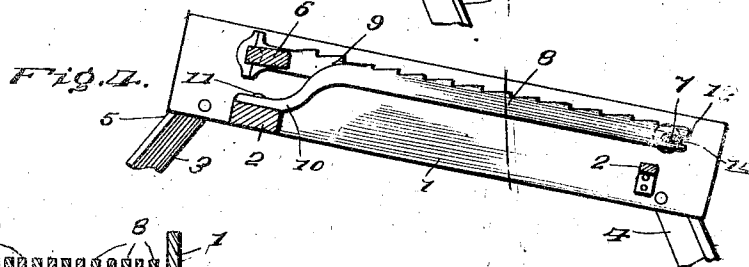
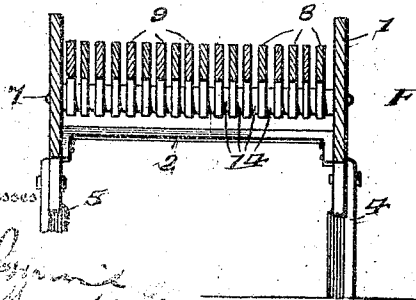


No. 810,922.

PATENTED JAN. 30, 1906.

E. R. DICKEY.
COAL SCREEN.

APPLICATION FILED OCT. 31, 1904.



Inventor
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Witnesses

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UNITED STATES PATENT OFFICE.

ELZA R. DICKEY, OF DUGGER, INDIANA.

COAL-SCREEN.

No. 810,922.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed October 31, 1904. Serial No. 230,813.

To all whom it may concern:

Be it known that I, ELZA R. DICKEY, a citizen of the United States, residing at Dugger, in the county of Sullivan and State of Indiana, have invented certain new and useful Improvements in Coal-Screens, of which the following is a specification.

This invention provides a screen of novel formation, designed chiefly for sifting coal, crushed coke or stone, or other material, the screen being of such construction as to positively feed the material thereover by a step-by-step movement and to fold to admit of its occupying a small space when not required for immediate use.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a side view of a screen embodying the invention, the legs being shown extended by full lines and in folded position by dotted lines. Fig. 2 is a top plan view thereof. Fig. 3 is a longitudinal section of the screen in front of a movable bar. Fig. 4 is a view similar to Fig. 2, taken on a line so as to disclose a stationary bar. Fig. 5 is a transverse section of the screen.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The frame for supporting the screen elements and actuating mechanism comprises side pieces 1 and transverse bars 2. The parts 1 and 2 may be of metal or wood or other material and are rigidly connected so as to provide a frame of substantial structure. The frame is supported by means of folding legs 3 and 4 of such relative length as to cause the screen to assume a slight inclination to the horizontal throughout its length, whereby the feed of the material thereover is assisted by gravity. The long legs 3 are at the receiving end of the screen. The legs

are oppositely inclined when extended, so as to prevent longitudinal movement of the screen when in operation. The legs are pivotally connected at their upper ends to the side pieces 1, and each is formed with a shoulder 5 to engage with an edge portion of the side pieces and limit the movement of the legs when unfolded. The legs are preferably formed of metal bars flanged along one edge, an edge portion of the flange being cut away to form the shoulder 5, and the flanges engaging with the lower edges of the side pieces when the legs are folded.

A compound crank-shaft 6 is arranged at the receiving end of the frame and is adapted to be driven either by hand or other suitable power. A rod 7 is located at the opposite end of the frame, both parts 6 and 7 being supported in the side pieces 1. The movable screen elements are supported at one end by means of the crank-shaft 6 and at the opposite end by the rod 7.

The screen elements comprise stationary bars 8 and movable bars 9 alternately arranged so that a stationary bar is located between adjacent movable bars, and vice versa. Each stationary bar has one end curved, as shown at 10, and apertured to receive a fastening 11, by means of which it is attached to a transverse bar 2, and the opposite end is formed with a longitudinal slot 12 for reception of the rod 7. The movable bars 9 have inclined slots 13 at one end to receive the rod 7, and the opposite end journaled to the respective crank portions of the shaft 6. Washers 14 are strung upon the rod 7 between the lower end portions of the bars 8 and 9 to properly space the same. The bars are of a width to prevent any material passing under them when the screen is in operation. The upper edges of the bars are toothed, the upper edges of the teeth inclining toward the receiving end of the screen to admit of the material freely riding over the teeth during the screening operation. By having the slots 13 inclined upward and rearward the movable members receive an upward tendency upon their downstroke and a falling movement upon their upward or return stroke, whereby their teeth are enabled to clear the material upon the return stroke of the bars 9 and to engage with said material upon the forward stroke of said bars, thereby producing the intermittent or step-by-step

motion. The several bars are transversely spaced to provide for escape of dust and fine material.

Having thus described the invention, what is claimed as new is—

1. A coal-screen comprising a frame provided with sifting mechanism, and legs pivotally connected to the sides of the frame and of unequal length to give an inclination to the screen, and having longitudinal edge portions bent to provide flanges to engage with the lower edges of the screen-frame sides to limit the folding of said legs, when turned up against the sides of the frame, the ends of the flanges adjacent their pivotal ends forming stop-shoulders to engage with the lower edge portions of the side pieces of the frame to limit the movement of the legs when unfolded, substantially as set forth.
2. A coal-screen comprising side pieces and

transverse connecting-bars, a transverse rod 7 at one end of the frame, longitudinal bars 8 transversely spaced and having slots at one end to receive the rod 7 and having their opposite ends deflected downwardly and secured to an end bar of the frame opposite to the rod 7, a compound crank-shaft and other longitudinal bars 9 arranged between the bars 8 and having inclined slots at one end to receive the rod 7 and having their opposite ends mounted upon the crank portions of said crank-shaft, the upper edges of the bars 8 and 9 being toothed.

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

ELZA R. DICKEY, [L. S.]

Witnesses:

J. H. McQUADE,

DOUGLAS L. BREWER.