(No Model.)

S. T. VARIAN.

SCREEN FOR COAL, &c.

No. 319,149. Patented June 2, 1885.

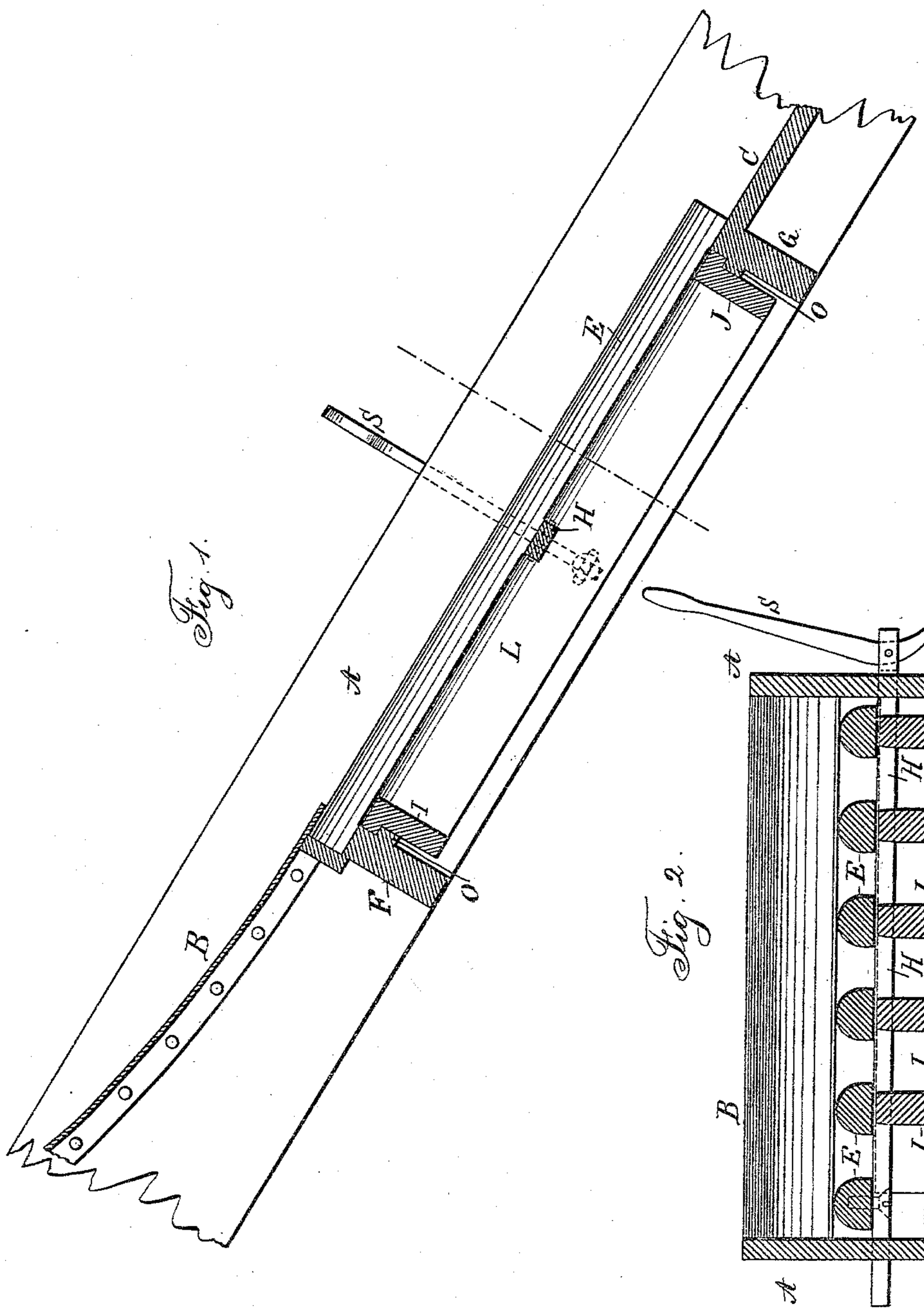

Fig. 1.

Fig. 2.

Witnesses:
I. Staub
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UNITED STATES PATENT OFFICE.

SAMUEL T. VARIAN, OF EAST ORANGE, NEW JERSEY.

SCREEN FOR COAL, &c.

SPECIFICATION forming part of Letters Patent No. 319,149, dated June 2, 1885.

Application filed March 21, 1885. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL T. VARIAN, of East Orange, in the county of Essex and State of New Jersey, have invented an Improvement in Screens for Coal and other Materials, of which the following is a specification.

Coal-screens have been made containing two sets of bars, one set being movable and at a distance above the other set, which is stationary.

My present invention relates to the combination, with a set of stationary bars, of a set of bars movable transversely beneath the stationary bars, so as to partially close the opening between such bars, and thereby adapt the screen to different sizes of coal or other material. The stationary bars have openings between them adapted to the screening of the largest sizes that are to be separated, and when the movable bars are slid laterally from beneath the stationary bars the openings are reduced in size, and the screen is adapted to the screening of smaller sizes of coal.

In the drawings, Figure 1 is a longitudinal section of the screen complete, and Fig. 2 is a transverse section of the same.

A A are the side pieces, and B and C the bottom portions, of a chute that is placed at an inclination, and down which the coal or other material to be screened is caused to run. The bars E are stationary and attached at their upper and lower ends to cross-bearers F G, placed across the chute, and the portion B of the chute is usually made of sheet-iron above the upper ends of the bars E, and the portion C of the chute is below the bars E and even with the top of the cross-bearer G. There is also a cross-bearer, H, beneath the bars E, and fastened to their under surfaces, so as to stiffen the bars and prevent lateral deflection. Beneath the bars E there is a frame composed of the end pieces, I J, and connecting-bars L. The end pieces, I J, are supported upon the cross-bearers F G, preferably by ribs O, so that the frame I J and bars L can be moved laterally across beneath the bars E. The bars L are notched in their upper edges, where the stationary bar H connects the bars E, so that the upper surfaces of the bars L are close to the under surfaces of the bars E. By means of a lever, S, or other suitable means—such as a screw—the frame I J L is adjusted laterally and held in any desired position. When the bars L are entirely beneath the bars E, the screen is adapted to the largest sizes of material, because whatever material is smaller than the distance between the bars E will fall through and the larger material will slide on the bars E and run down the chute. If, now, the screen is to be adapted to smaller sizes, the frame I J L is moved laterally, so that the bars L partially close the spaces between the bars E, thereby adapting such screen to the separation from the coal sliding down the chute of all material that is sufficiently small to pass through between the lower edges of the bars E and the upper edges of the bars L.

I claim as my invention—

1. The stationary bars E and chute A B C, in combination with the frame I J and bars L, supported beneath the bars E, and means for adjusting the frame and bars laterally, substantially as set forth.

2. The bars E E, end bearers, F G, and central bar, H, for supporting said bars E, in combination with the bars L, notched for the bar H, the end frames, I J, having the ribs, and mechanism for adjusting the frame and bars I J L laterally, substantially as set forth.

Signed by me this 12th day of March, A. D. 1885.

SAMUEL T. VARIAN.

Witnesses:
GEO. T. PINCKNEY,
WILLIAM G. MOTT.