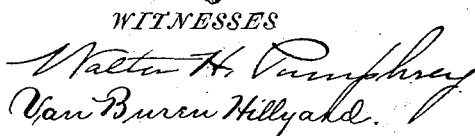


(No Model.)  
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SCREEN.

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No. 419,907.

Patented Jan. 21, 1890.



WITNESSES

WITNESSES  
 Walter H. Humphrey  
 Van Buren Hillyard.

INVENTOR

INVENTOR  
George W. Armstrong  
William A. Rankin

By R. D. & A. Lacey Attorneys

# UNITED STATES PATENT OFFICE.

GEORGE W. ARMSTRONG AND WILLIAM A. RANKIN, OF NEW LISBON, OHIO.

## SCREEN.

SPECIFICATION forming part of Letters Patent No. 419,907, dated January 21, 1890.

Application filed October 24, 1888. Serial No. 289,046. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE W. ARMSTRONG and WILLIAM A. RANKIN, citizens of the United States, residing at New Lisbon, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Screens; and we 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 screens which are especially designed for screening sand, coal, ore, &c., and has for its object to provide a device that will not readily clog, as the substance treated will glide down a roughened or broken incline in contradistinction to the smooth surface of the ordinary screen; also, to provide a screen that can be manufactured cheaply, and which will be compact, durable, and efficient.

The improvement consists in the peculiar construction and combination of the parts, which hereinafter will be more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a front view of a screen embodying our invention; Fig. 2, a vertical section, parts being broken away on the line X X of Fig. 1; Fig. 3, a detail perspective view, on an enlarged scale, of the longitudinal screen-wires; Fig. 4, a detail perspective view of a modification, and Fig. 5 a side view of the interposed washers.

The frame of the screen, consisting of the head and the foot boards A and B, respectively, and the side boards C, is of ordinary construction. The longitudinal wires D have offsets *d* formed therein at regular intervals, which are provided with eyes *d'*, preferably at the lower ends of the offsets. The eyes *d'* are provided by bending the wire to form one or more coils, which space the wires apart the

required distance. One coil is sufficient for a fine screen and two or more for a coarse screen. The cross-rods F, secured at their ends in the sides C C, pass through the eyes of the longitudinal wires and hold them in place.

In Fig. 4 is shown a construction in which the longitudinal wires are spaced apart by the washer G, which will be of varying thickness, according to the graduation of the screen. These washers will have grooves *g* in each side to receive the longitudinal wires. In this latter construction the longitudinal wires will not have any eyes and will fit in the grooves *g* in the washers simply, which grooves have their ends disposed at an angle relative to each other to correspond with the offsets in the said wires.

For convenience of support the screen is provided with the leg-section H, which is hinged thereto at its upper end.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with the longitudinal wires and the cross-wires, of the washers placed between the longitudinal wires and mounted on the cross-wires and having grooves to embrace the said longitudinal wires, substantially as described.

2. The combination, with the longitudinal wires having offsets formed therein and the cross-wires arranged in the angles of the offsets, of the washers placed on the cross-wires and arranged between the longitudinal wires and having grooves in their sides corresponding with and adapted to receive the offsets in the said longitudinal wires, substantially as and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE W. ARMSTRONG.  
WILLIAM A. RANKIN.

Witnesses:

J. N. CALHOON,  
WILLIS JORDAN.