

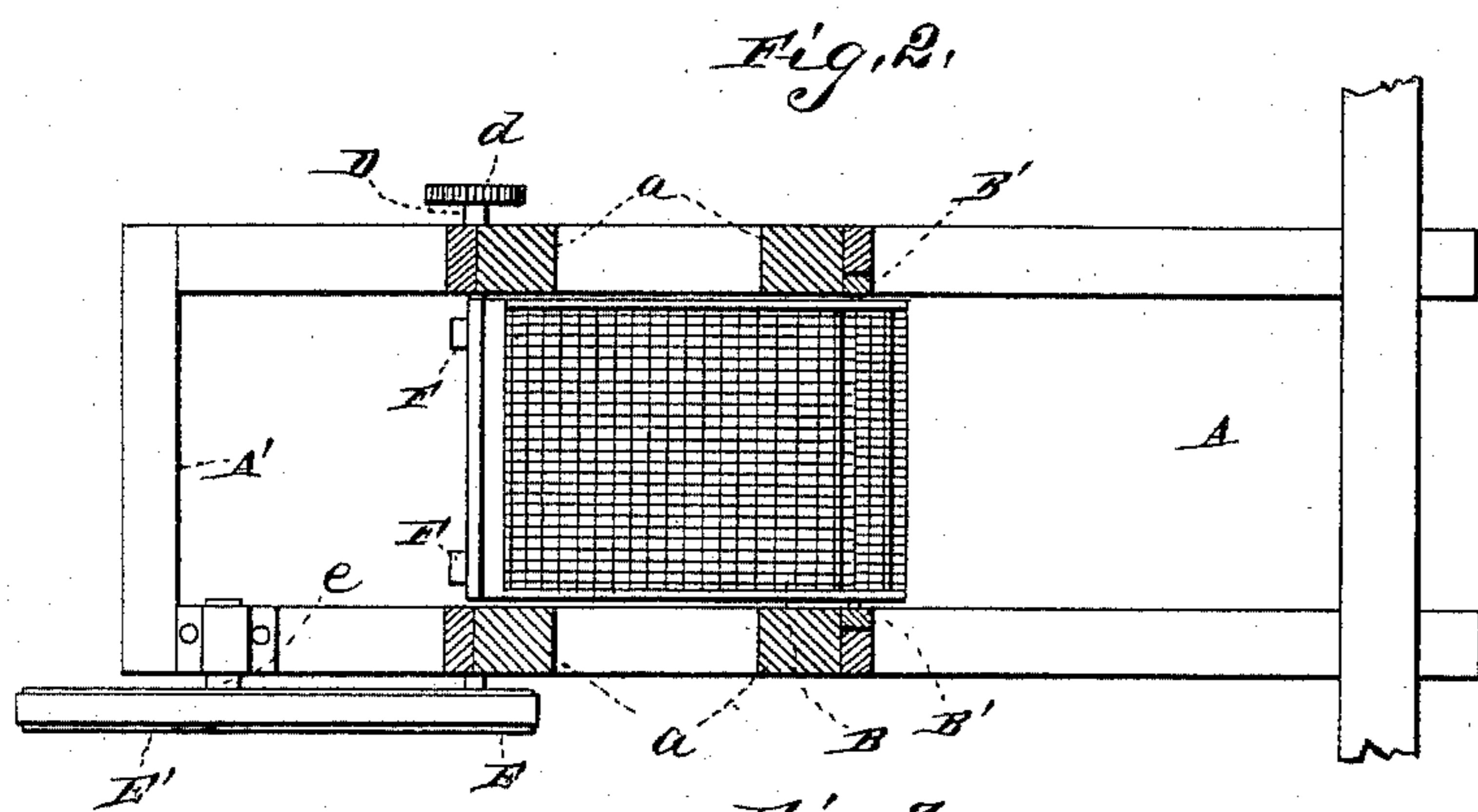
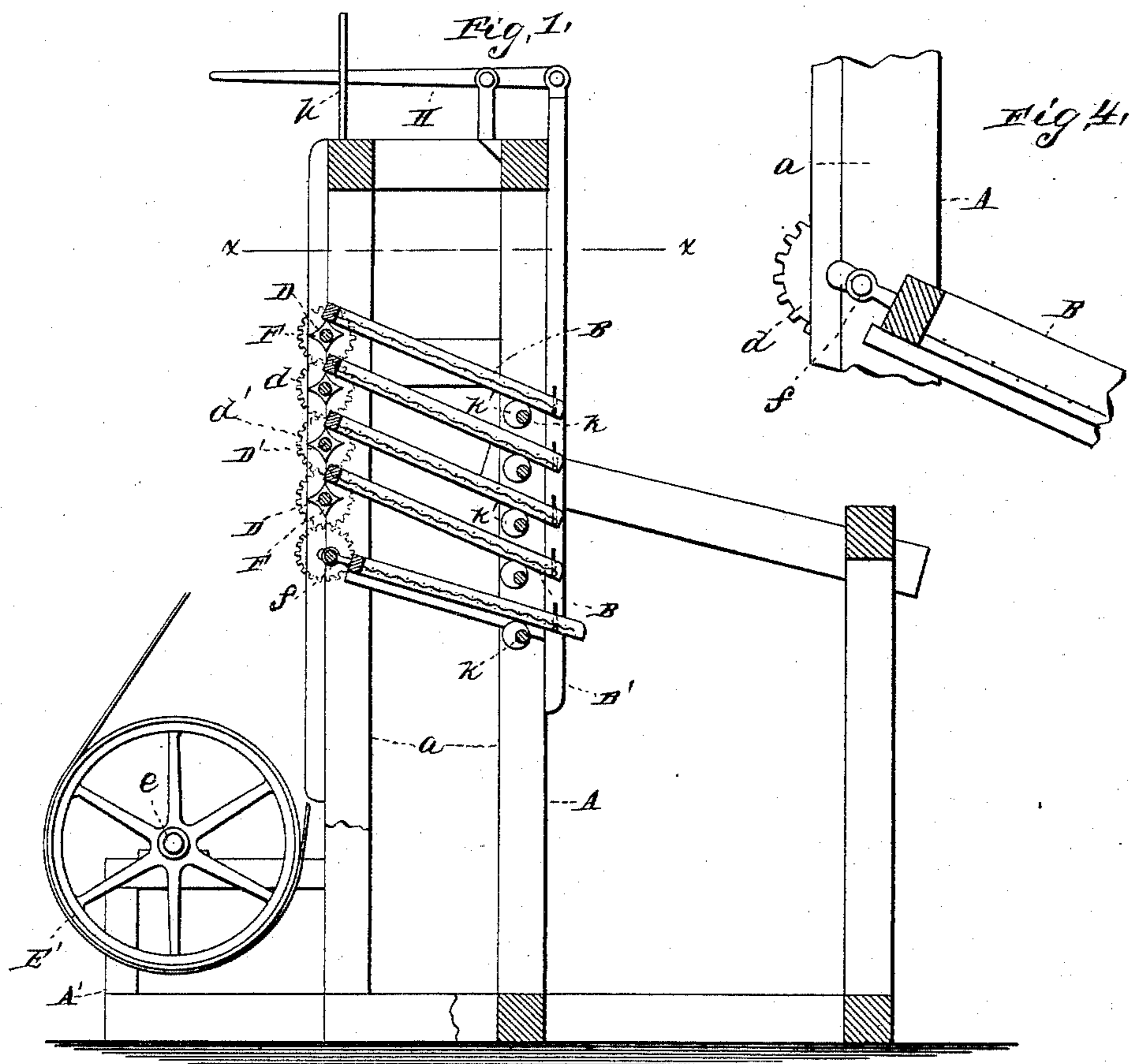
(No Model.)

S. THOMAS.

MACHINE FOR SIZING AND CLEANING COAL.

No. 456,448.

Patented July 21, 1891.



WITNESSES:

Chas. L. ...
Phil ...

INVENTOR

Septimus Thomas.

BY

E. W. Anderson
his ATTORNEY.

UNITED STATES PATENT OFFICE.

SEPTIMUS THOMAS, OF SCRANTON, PENNSYLVANIA.

MACHINE FOR SIZING AND CLEANING COAL.

SPECIFICATION forming part of Letters Patent No. 456,448, dated July 21, 1891.

Application filed February 6, 1891. Serial No. 380,439. (No model.)

To all whom it may concern:

Be it known that I, SEPTIMUS THOMAS, a citizen of the United States, and a resident of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Sizing and Cleaning Coal; and I 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical sectional view. Fig. 2 is a horizontal sectional view. Fig. 3 is a detail view of one of the series of shafts, and Fig. 4 is an enlarged sectional detail view.

The invention has relation to certain improvements in screening and sizing machines especially applicable to screening and sizing coal, but also applicable to other materials.

The invention consists in the novel construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, illustrating the invention, the letter A designates the frame of the machine, having supported between the uprights *a a* a series of graded sizing-screens B, five being shown, pivoted at one end to the piece B' and inclined upwardly toward their rear ends, as shown.

Journaled in the uprights, opposite and respectively a little above the pivoted ends of each of the screens, are a series of horizontal shafts D, arranged one above the other and corresponding in number to the screens, and provided with pinions *d*, intergearing one with the other and with a pinion or gear wheel *d'* on the central shaft D', which also carries a pulley E, driven by a belt from a drum or pulley E', mounted on a shaft *e*, journaled on an offset A' of the frame A.

Each of the shafts D, with the exception of the lower one, carries one or more cam-pieces F, which may be arranged correspondingly or alternately, as may be desired. These cams are in such a position as to engage the rear ends of the sizing-screens, and as their shafts are revolved will impart a

vertical reciprocating and vibrating motion to said screens. The lower screen is pivoted in such a manner as to allow its horizontal reciprocation, and this is imparted by means of perforated lugs or ears *f*, which engage eccentric-pins on its shaft, which also gives a vertical reciprocating movement thereto.

The screens are made all adjustable together at their front ends by means of the vertically-adjustable pieces B', to which they are connected by pivots, said pieces being so arranged as to have a vertical movement and operated by a lever H, suitable catches or locks *h* being provided to hold said piece with its screens at the required adjustment. The screens are also made each separately adjustable by means of having their pivotal points capable of vertical movement in slots in said pieces B', and are operated each by a series of rods *k*, journaled below each screen, and provided with eccentrics or cams *k'*, which as the shafts are turned may be brought to engage the frame of said screens and hold each at the desired adjustment.

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

1. The combination, with the frame, the series of inclined reciprocating screens supported therein, and the series of intergearing shafts for reciprocating said screens, of the vertically-adjustable pieces connected with said screens by pivots and slotted to permit the play of said pivots in the individual adjustment of said screens, substantially as specified.

2. The combination, with the frame, the series of inclined reciprocating vibrating screens supported therein, and the intergearing shafts arranged to operate said screens, of the vertically-adjustable piece B, connected to said screen by pivots and slotted to permit the play of said pivots in the individual adjustment of the screens, the lever for effecting the vertical adjustment of said piece B', and the eccentrics for effecting the individual adjustment of the screens, substantially as specified.

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

SEPTIMUS THOMAS.

Witnesses:

WILLIAM G. POWELL,
JOHN L. HAUGI.