

(No Model.)

W. J. PHILLIPS & C. HUMPHRYS.  
SCREEN.

No. 403,553.

Patented May 21, 1889.

Fig. 1

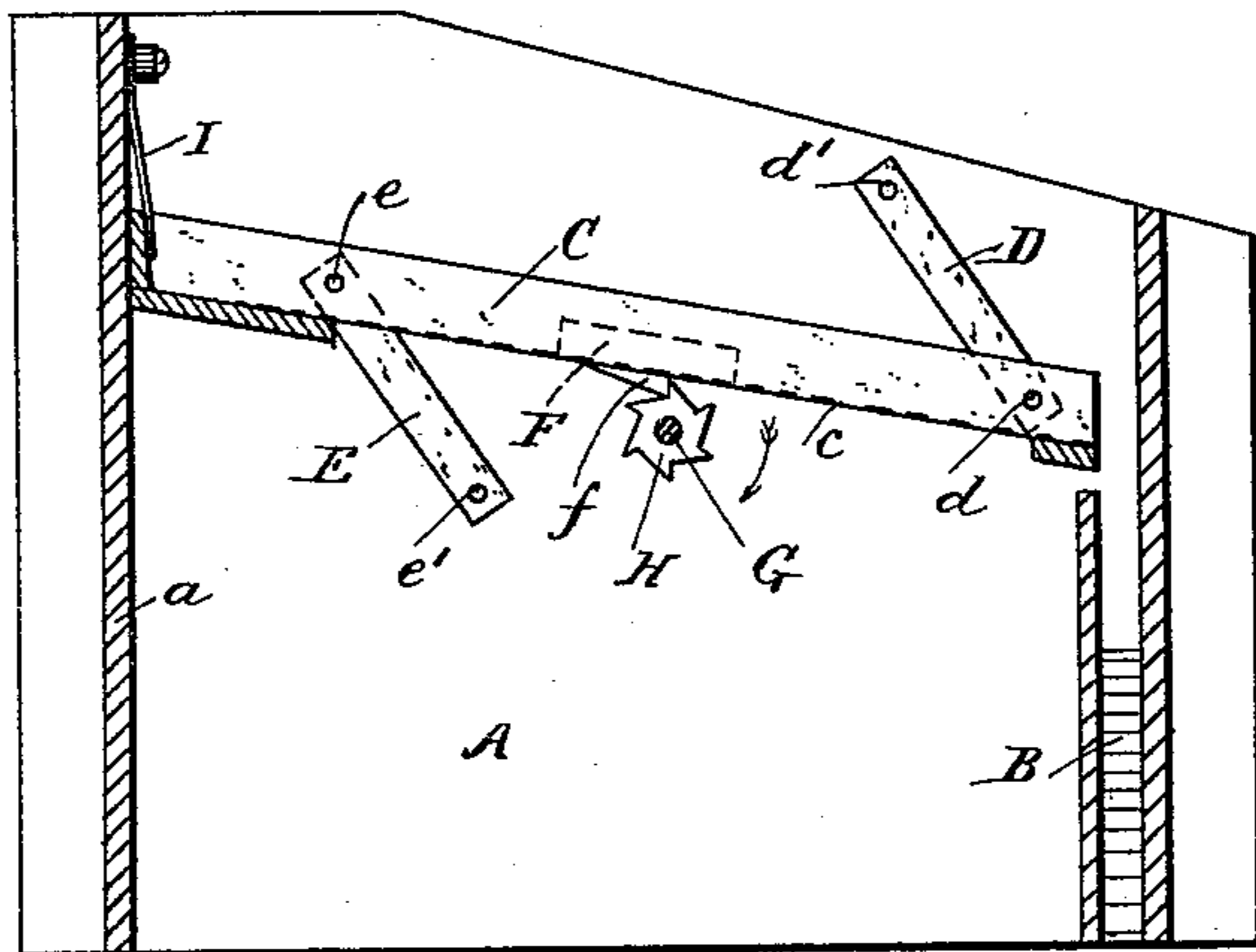
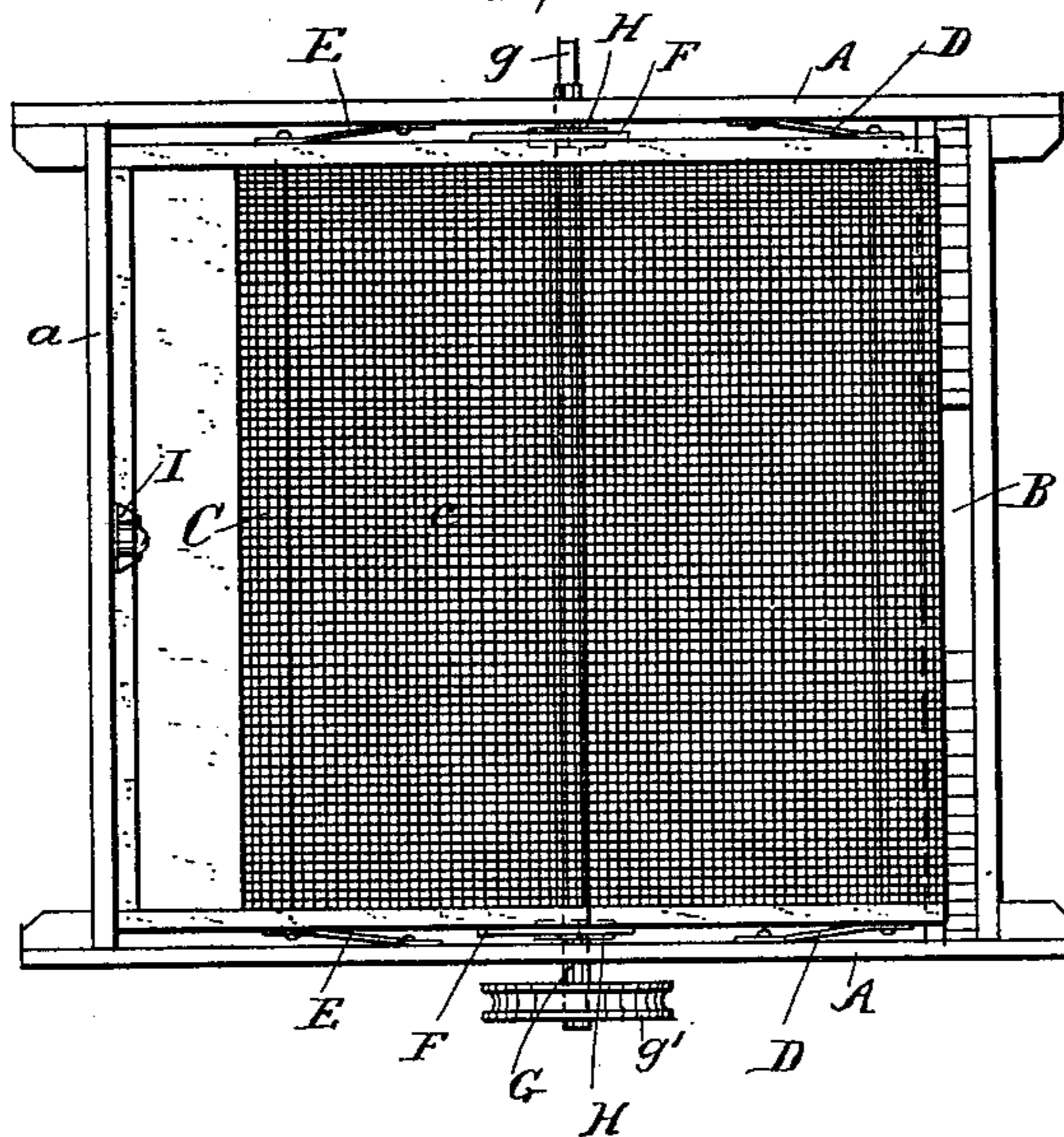


Fig. 2



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM J. PHILLIPS AND CHARLES HUMPHRYS, OF WAUSEON, OHIO.

## SCREEN.

SPECIFICATION forming part of Letters Patent No. 403,553, dated May 21, 1889.

Application filed July 17, 1888. Serial No. 280,189. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM J. PHILLIPS and CHARLES HUMPHRYS, citizens of the United States, residing at Wauseon, in the county of Fulton and State of Ohio, have invented certain new and useful Improvements in Screens; and we do hereby 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.

This invention relates to sieves; and it consists in the novel construction and combination of the parts, hereinafter fully described and claimed.

In the drawings, Figure 1 is a longitudinal section through the sieve, and Fig. 2 is a plan view of the sieve from above.

A are the sides of the stationary framework which supports the sieve, and *a* is the back piece.

B is a chute at the front end of the frame, for carrying off the coarse particles which do not pass through the sieve.

C is the sieve, which is provided with the wire-gauze separating-cloth *c*. The sieve C is inclined from back to front, and is connected to the sides A by the arms D and E. The arms D are pivoted to the sieve by the pins *d*, and to the sides A by the pins *d'*, above the sieve. The arms E are pivoted to the sieve by the pins *e*, and to the sides A by the pins *e'*, below the sieve. The said arms D and E are parallel with each other, and are inclined upwardly toward the back *a*, so that the weight of the sieve always tends to keep it bearing against the back piece, *a*. The arms E are arranged under the sieve, so that the pins *e* may be placed nearer to the back end of the sieve.

F are plates secured to the sides of the sieve midway between the pivots *d* and *e*, and *f* are sloping projections upon the lower edges of the said plates.

G is a shaft journaled in the sides A, and provided with a square portion, *g*, to which a crank-handle may be attached for turning the shaft by hand in the direction of the arrow, and *g'* is a pulley on the other end of the said shaft, so that it may be driven by a cord

from an engine or other convenient source of power.

H are ratchet-wheels secured to the shaft G under the plates F, for lifting the screen.

I is a spring secured to the back piece, *a*, and adapted to press the screen against the said back piece.

The ratchet-wheels raise the screen bodily as they operate upon the sloping projections *f* of the plates F, which are attached to the middle portions of the screen between the pivot-pins *d* and *e*. The inclined arms D and E oblige the screen to move horizontally at the same time it is moved vertically by the ratchet-wheels, and they allow the screen to fall with a sharp jerk against the back piece, *a*, each time the ratchet-teeth are moved past the ends of the sloping projections *f*. This rearward motion is assisted by the spring I, which also makes the jerks more sudden. The material to be sifted is thrown upon the higher end of the screen, and the peculiar motion of the screen causes it to travel over its inclined surface. The fine particles pass through the wire-gauze, and the coarse particles are discharged over the lower end of the sieve down the chute.

What we claim is—

1. In a sieve, the combination, with the stationary frame provided with a back piece for the screen to strike against, of the rearwardly-inclined arms pivoted to the ends of the sieve and to the said frame, the inclined sieve, the plates provided with sloping projections *f* and secured to the sieve midway between the screen pivot-pins, and the revolving ratchet-wheels journaled under the said plates and operating upon their sloping projections, and permitting the screen to fall downwardly and rearwardly against the said back piece, substantially as set forth.

2. In a sieve, the combination, with the stationary frame having sides A and back *a*, of the inclined sieve, the inclined arms D, pivoted to the front end of the sieve and to the sides A above the sieve, the inclined arms E, pivoted to the rear end of the sieve and to the said sides below the sieve, the spring secured to the back *a* and pressing the sieve against it, the plates provided with sloping

projections *f*, and secured to the sieve between the pivot-pins, and the revolving ratchet-wheels journaled under the said plates for lifting and releasing the sieve, thereby  
5 causing it to strike against the said back piece at the extremity of its rearward and downward motion, substantially as set forth.

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

WILLIAM J. PHILLIPS.  
CHARLES HUMPHRYS.

Witnesses:

THOS. F. HORN,  
WM. H. HANDY.