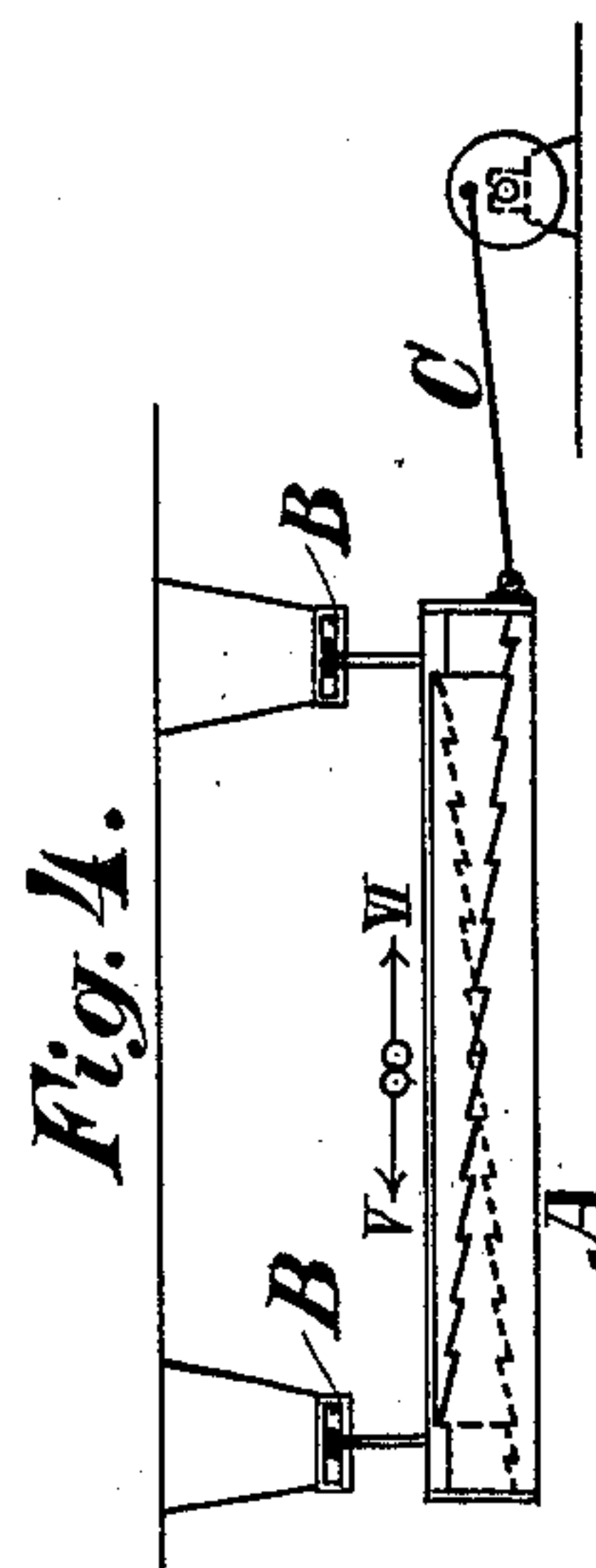
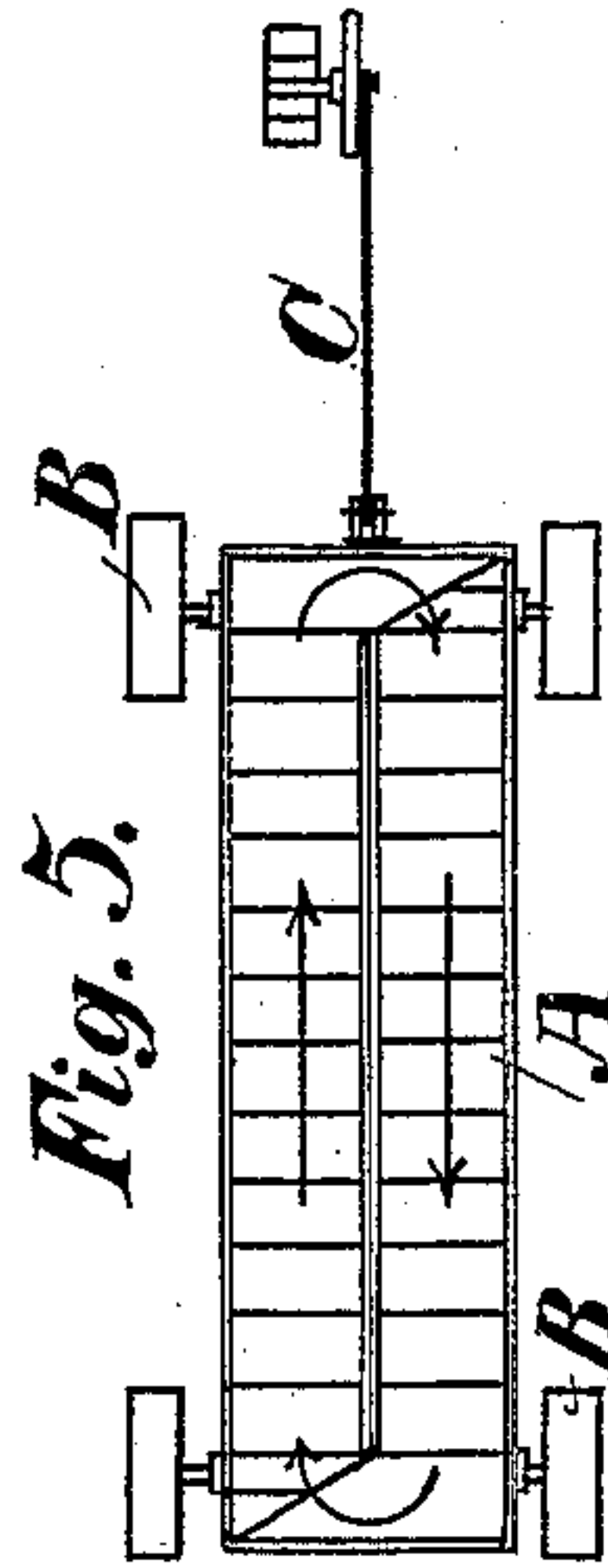
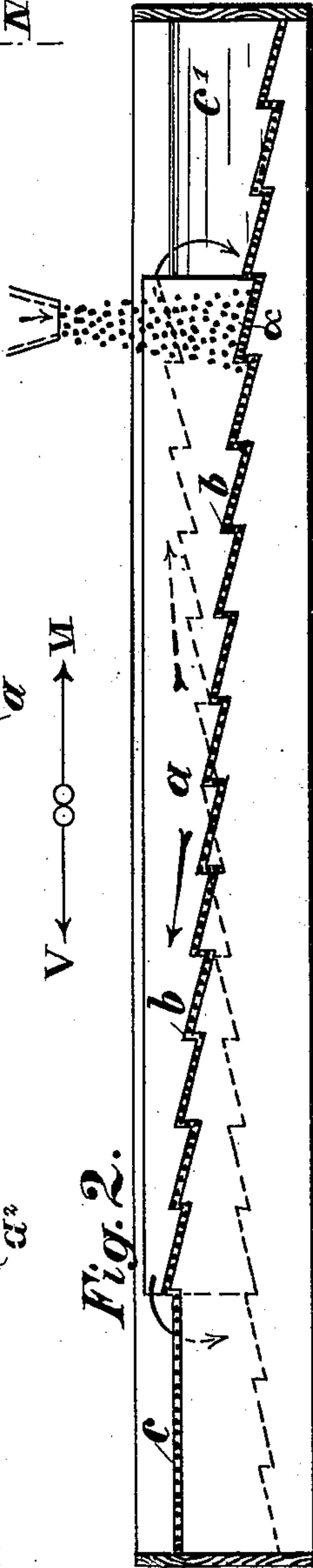
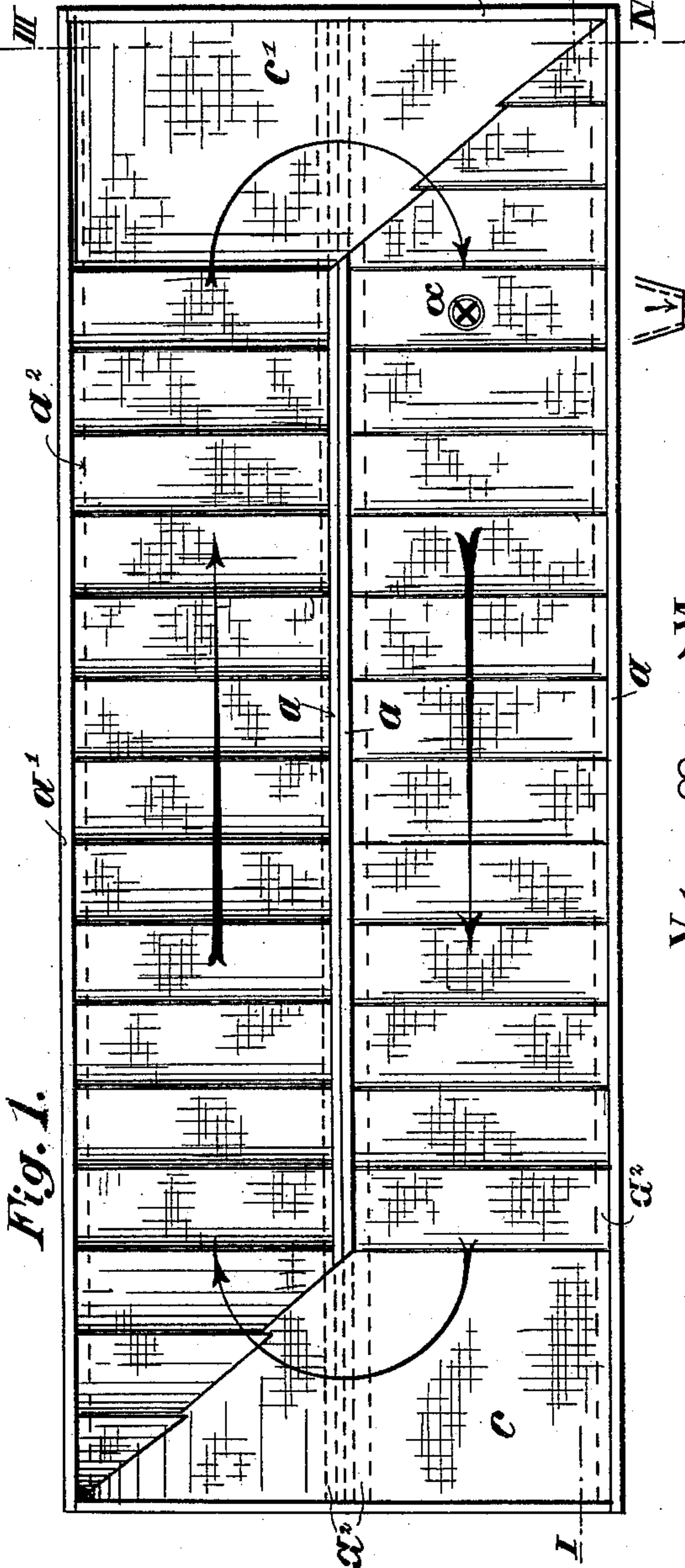
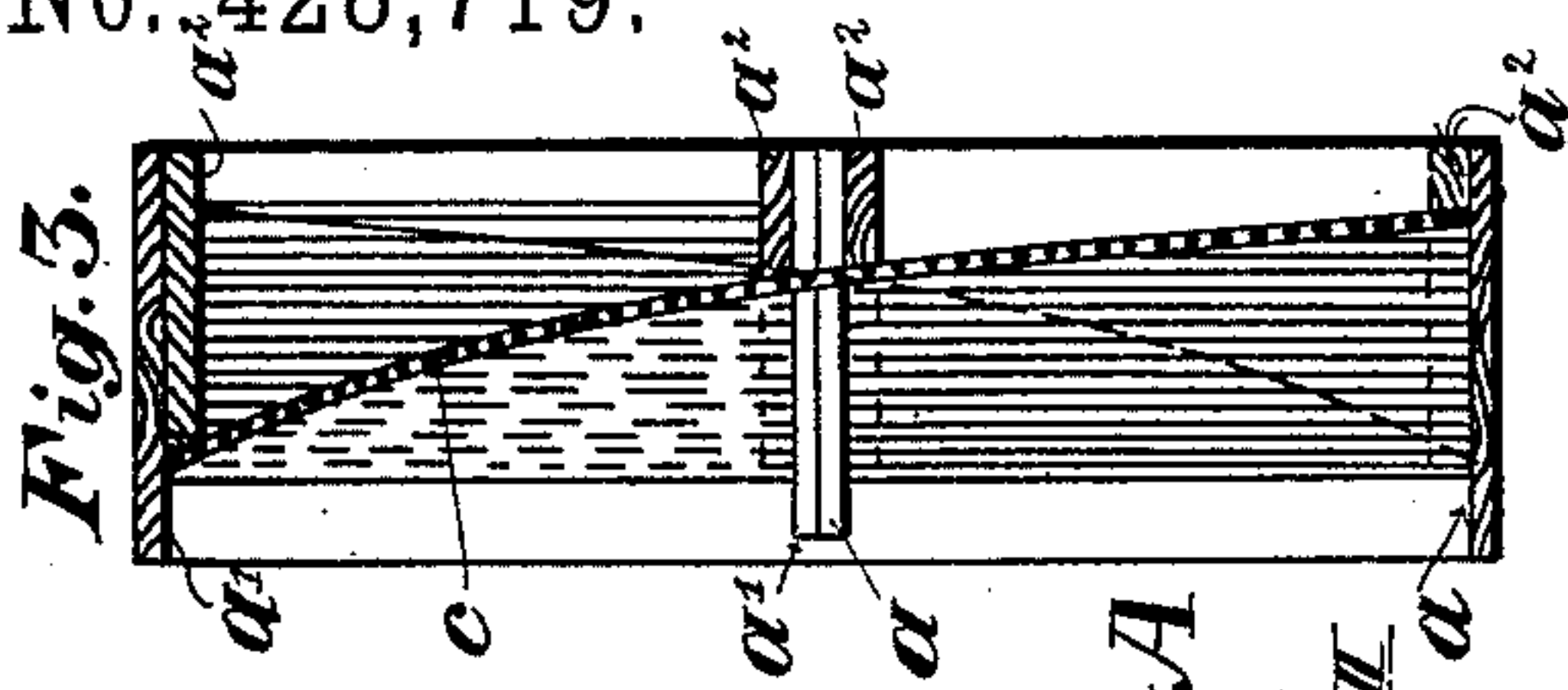


(No Model.)

W. HAHN.
SIEVE.

No. 428,719.

Patented May 27, 1890.



Witnesses:
Arthur Kraft
Theodor Stadel

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UNITED STATES PATENT OFFICE.

WILHELM HAHN, OF NEUMÜHLE, NEAR EUTIN, GERMANY.

SIEVE.

SPECIFICATION forming part of Letters Patent No. 428,719, dated May 27, 1890.

Application filed June 28, 1889. Serial No. 315,927. (No model.)

To all whom it may concern:

Be it known that I, WILHELM HAHN, a subject of the Emperor of Germany, residing at Neumühle, near Eutin, in the Empire of Germany, have invented a new and useful Sieve of Sifting-Machines, of which the following is a specification.

My invention relates to the sieves of sifting-machines which are moved with a horizontal reciprocating motion; and it consists more particularly in an improved construction of the sifting-surface therein, by means of which the material to be sifted is caused to travel along the sieve.

In the accompanying drawings, Figure 1 is a top view of the sieve; Fig. 2, a vertical section of the sieve on the line I II, Fig. 1; Fig. 3, a vertical section of the sieve on the line III IV, Fig. 1; Fig. 4, a side view, and Fig. 5 a top view, of a sifting-machine provided with the new sieve.

Similar letters refer to similar parts throughout the several views.

In Figs. 4 and 5, A is the new sieve, B the horizontal guide, and C the connecting-rod reciprocating the sieve A in the direction of the arrows V VI. The mechanism for guiding and moving the sieve A forms no part of my present invention.

The invention consists, essentially, in the arrangement of the gauze or sifting surface *b*, which is not plain, in the usual manner, but forms steps, each of the latter having a vertical and an inclined surface.

The sieve A has two, as shown in the drawings, or more parts or compartments, set side by side, each part having separate side boards *a a' a'*. To these side boards *a a' a'* are secured boards *a²*, cut or recessed in the shape of saw-teeth, Fig. 2. The gauze *b*, fastened to the upper edges of these boards *a²*, has alternately-inclined and vertical surfaces. The general plane of the sifting-surface *b* in each part of the sieve A is inclined so that the outthrow end is higher than the inlet end.

The ends of the two parts of the sieve are joined by inclined and smooth surfaces *c c'*, allowing the material to travel naturally

downward from the one part of the sieve to the other. In each part of the sieve A the general plane of the sifting-surface is inclined in opposite direction to that of the sifting-surface of the following part or compartment of the sieve A.

Material falling upon the sieve A at the point *x*, Fig. 2, is thrown by the vertical surface of the corresponding step of the gauze *b*, when the sieve A is moved in the direction of the arrow V, Fig. 1, up the inclined surface of this step, to fall over the upper edge of the latter in front of the vertical surface of the next step. The upright or vertical surface of this step prevents the material from being returned or thrown back when the sieve A is moved in the direction of the arrow VI, Fig. 1. The material ascends in such way by the reciprocating motion of the sieve A from step to step of the gauze disposed between the side boards *a a*, and falls finally from the highest point of the first compartment of the sieve to the lowest point of the following compartment, having in the drawings the side boards *a' a'*. Here the material is ascending from step to step of the sifting-surface by the motion of the sieve in the direction of the arrow VI, Fig. 1. Finally the material is conveyed by the smooth inclined surface *c'* from the highest point of this compartment of the sieve back to the lowest point of the first compartment, as shown in the drawings, or also to the lowest point of a third compartment, constructed in the same manner as the compartments described. In case the material is returning, as shown in the drawings, to the first compartment of the sieve, the track of the sieve is practically endless, and larger portions of material or coarse objects which do not fall through the meshes will continue to travel along the track of the sieve, and will thereby tend to keep every part of the sifting-surface free or unchoked. Instead of being straight, the track of the sieve may also be curved without departing from the essential feature of my invention.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

In the reciprocating sieve A of a sifting-machine, the combination of compartments having sifting-surfaces inclined alternately in opposite directions and forming steps,
5 with smooth inclined surfaces *c c'*, conveying the material from the highest point of one incline to the lowest point of the other,

whereby a continuous circulation of those coarse objects which do not fall through the meshes is produced, as set forth.

WILHELM HAHN.

Witnesses:

OTTO SCHULZ,

KARL WICKER.