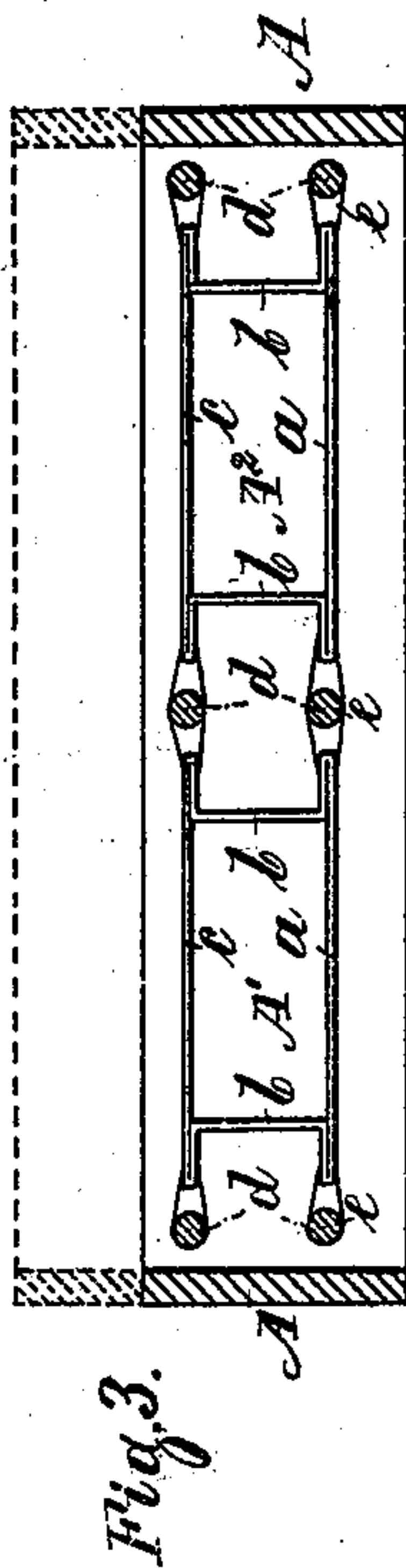
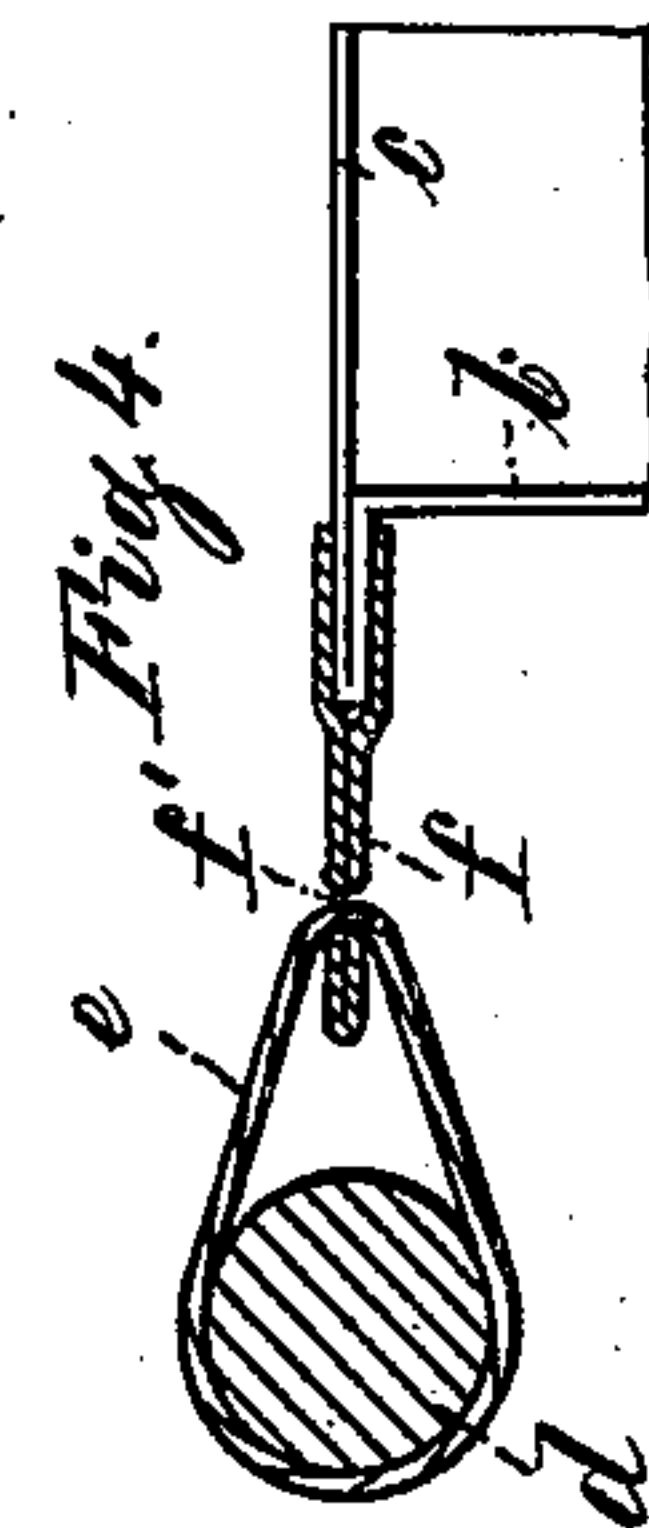
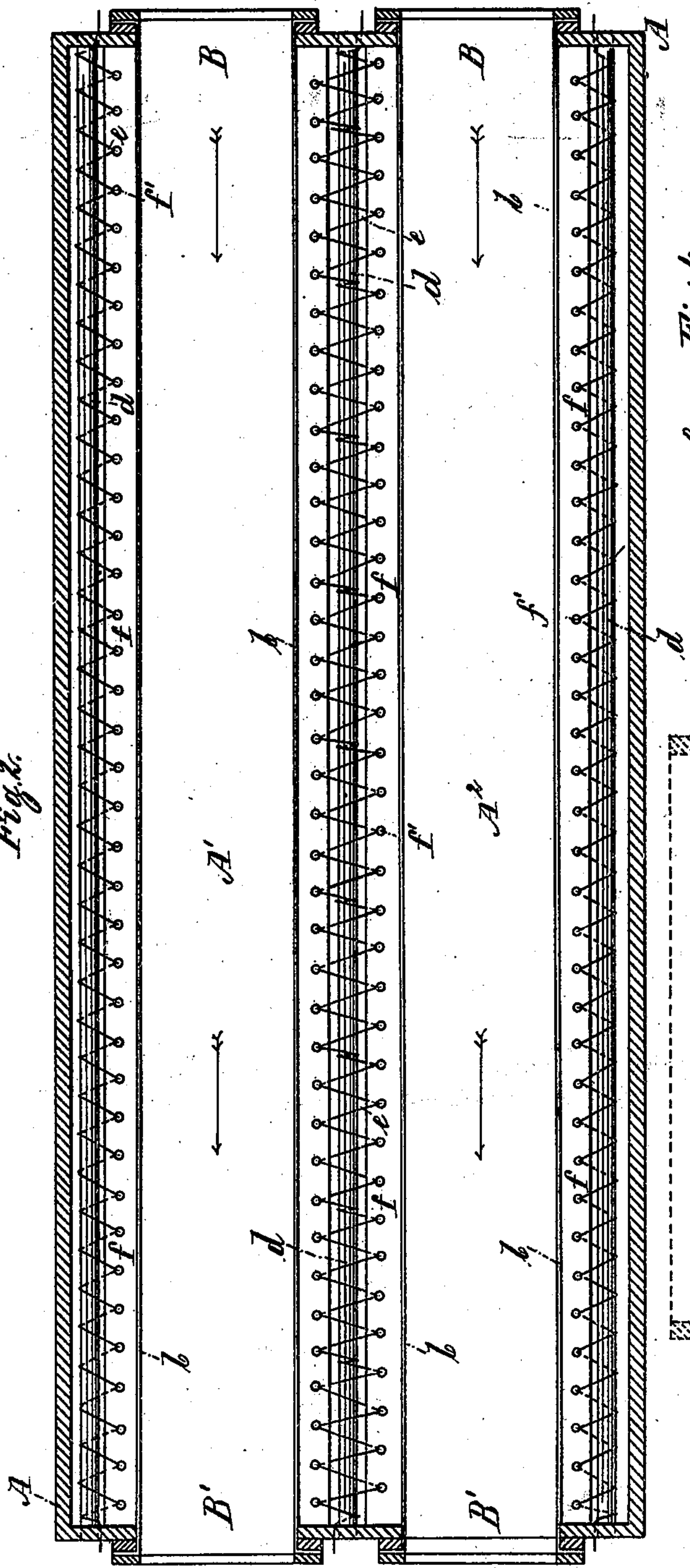
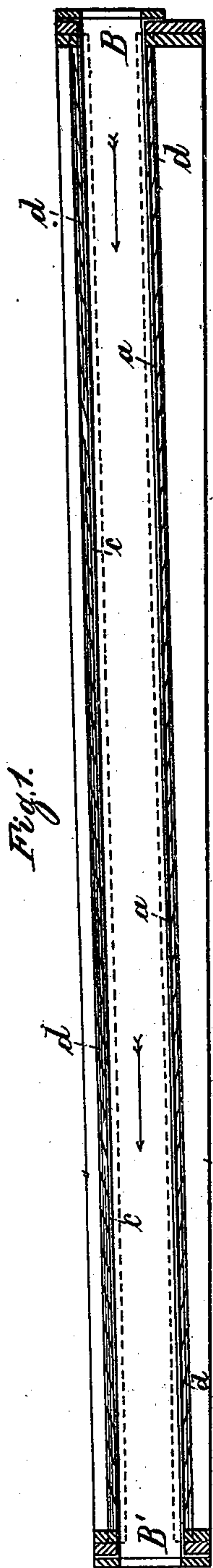


A. SCHLEE.
FLOUR SIFTING SIEVE.

No. 502,764.

Patented Aug. 8, 1893.



Witnesses
W. Harvey Muzzey.
J. Pittman.

Inventor
August Schlee
by W. H. Babcock
Atty.

(No Model.)

2 Sheets—Sheet 2.

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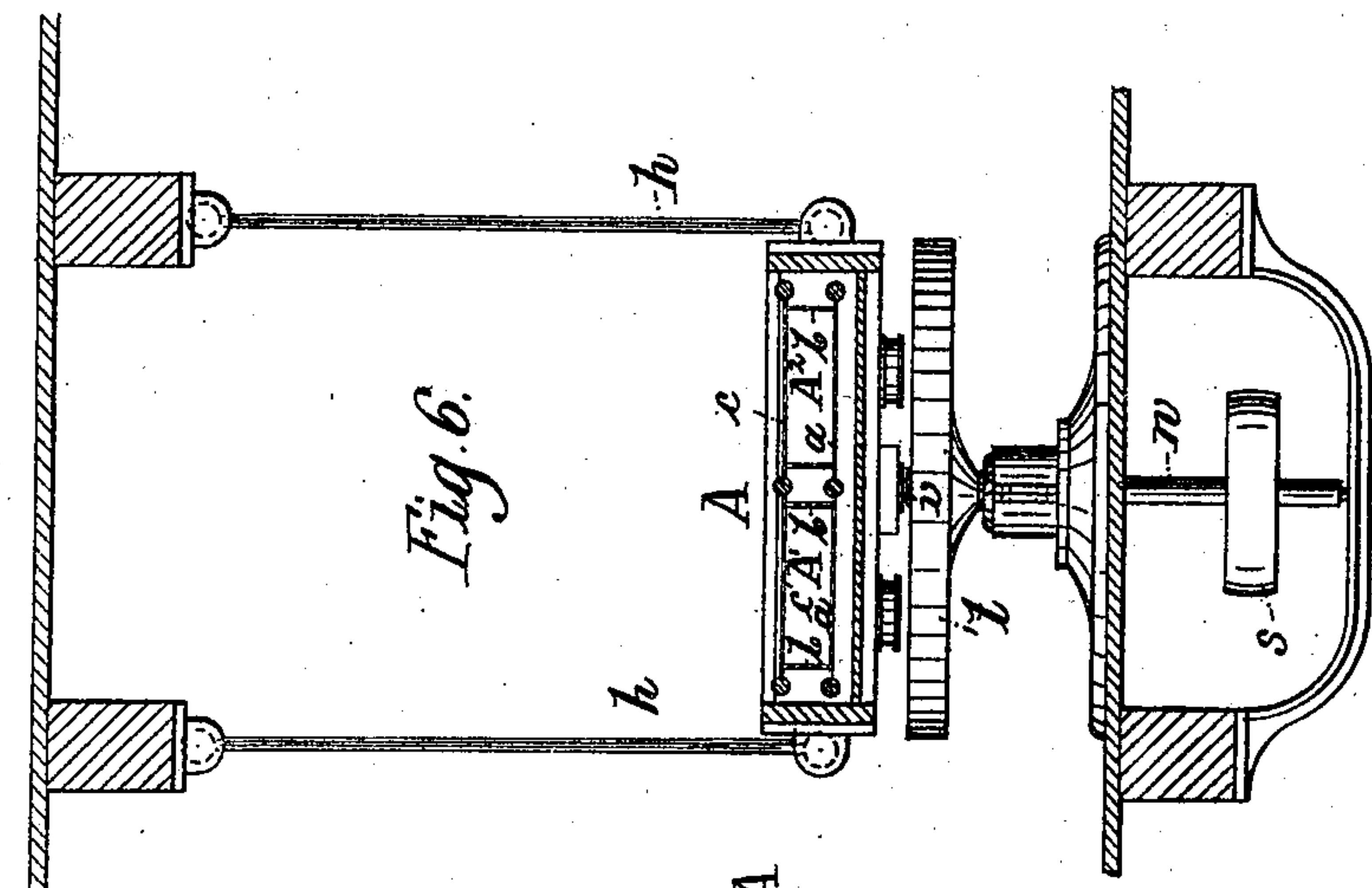


Fig. 6.

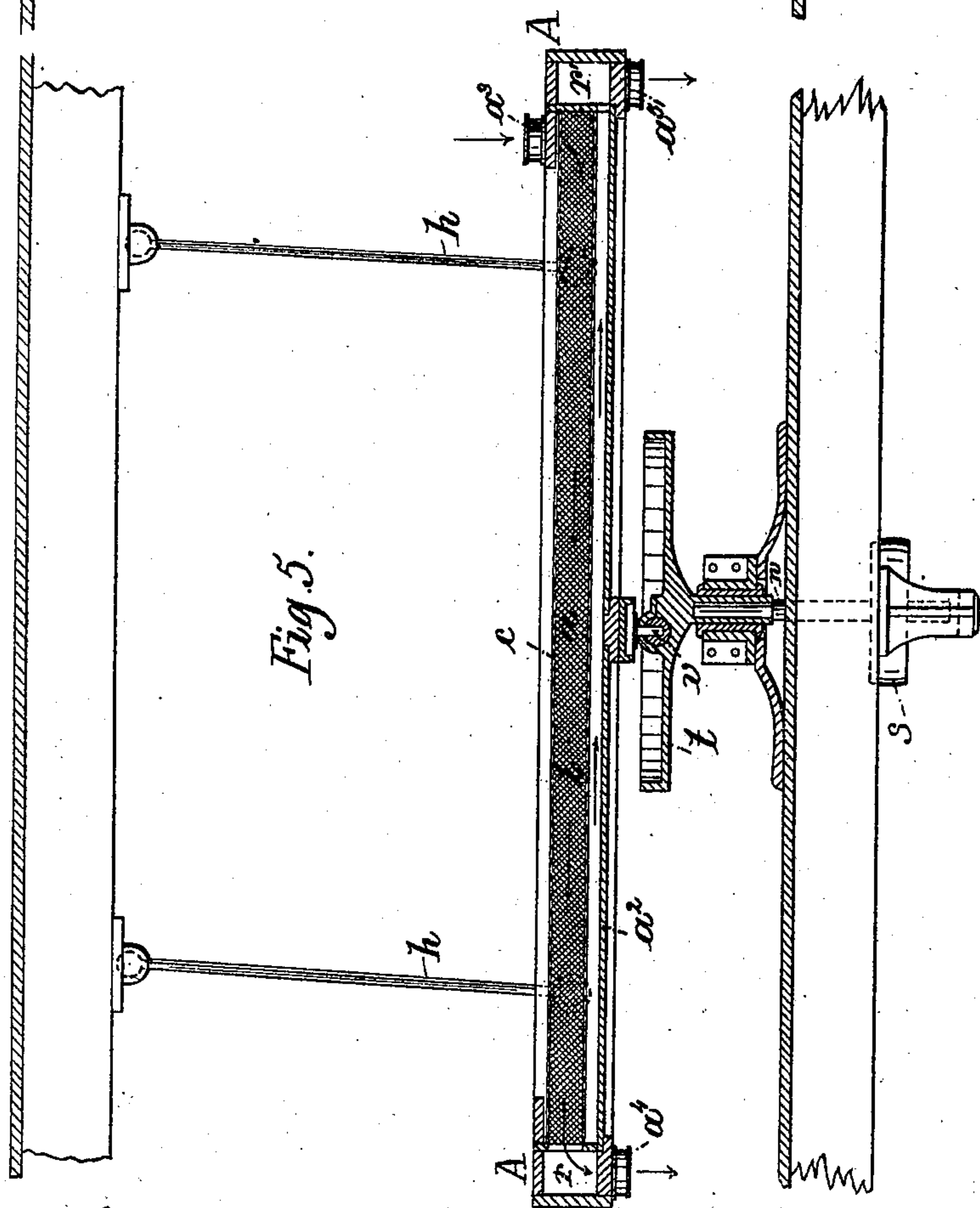


Fig. 5.

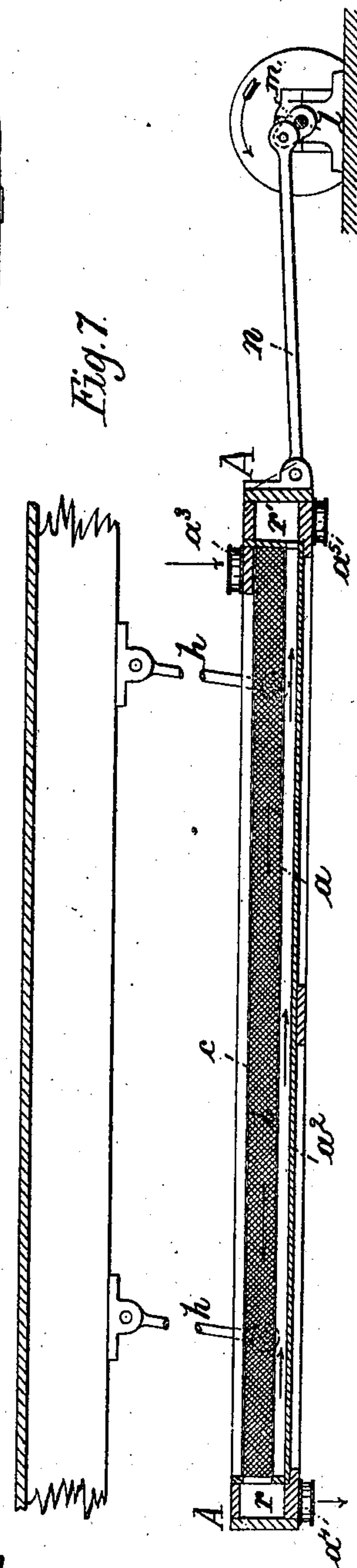


Fig. 7.

Witnesses:
Parks R. McBride.
W. Harry Muzzy.

Inventor.
August Schlee
by W. H. Babcock Atty.

UNITED STATES PATENT OFFICE.

AUGUST SCHLEE, OF HAGENOW, GERMANY.

FLOUR-SIFTING SIEVE.

SPECIFICATION forming part of Letters Patent No. 502,764, dated August 8, 1893.

Application filed January 5, 1893. Serial No. 457,353. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SCHLEE, a subject of the Emperor of Germany, residing at Hagenow, in the Grand Duchy of Mecklenburg, Germany, have invented certain new and useful Improvements in Flour-Sifting Sieves; and I 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.

The invention consists in the disposition of sifting surfaces on the sides of bolters as well as the regular bottom part, a shaking or a reciprocating swinging motion being imparted to the bolter. Besides the bottom and the lateral surfaces the ceiling also can be made a sifting surface, so that the bolter is formed of a complete bolting compartment, which offers over the ordinary bolting devices now in use, the advantage, that not only the bottom surface alone, but also the sides are working, so that the particles of the material thrown against these sides, are sifted here, and thus the devices, necessary in plane faced bolters for instance, to keep the material away from the sides, can be dispensed with. Moreover the sifting surfaces of my bolter are more elastic and more yielding than those of the bolters, having the bottom sifting surface firmly nailed on. Therefore the sifting surfaces are constantly making (on account of their yielding properties) small motions, which greatly diminishes the choking up of the meshes, a disadvantage, occurring in the ordinary plane bolters, when very floury material is thrown in, so soon, that it becomes necessary to clean the sifting surfaces by using brushes, dusters, or beaters, &c. This method of cleaning however very soon wears out the sifting surfaces. The present invention overcomes all these inconveniences by the pliable arrangement of the sifting compartment. My device offers another advantage by dispensing with the many wooden partitions of the frames, as they are now in use in ordinary plane-sifters; thereby the sieves become much lighter, which offers another great advantage, i. e., an easier way of motion, and consequently an avoiding of strong concussions by the driving machinery.

Figure 1 shows a longitudinal section

through two compartments of my sieve. Fig. 2 is a horizontal and Fig. 3 a vertical section of the same. Fig. 4 shows a method of securing and fastening the compartments. Figs. 5 and 6 show in longitudinal and vertical section a sieve with gyrating movement; Fig. 7 showing the same with a shaking motion consisting of a simple backward and forward movement.

In the said drawings one of the possible forms of a plane sieve is shown, provided with two bolting compartments formed in a frame beside each other. In the frame A the two bolting sieves A' and A² are stretched being made of silk gauze or similar fabric, which at the four edges, formed by the bottom *a*, ceiling *c* and sides *b b*, is sewed together with two strips of linen *f f* (Fig. 4). These strips of linen are provided with metal eyes *f'*, which receive a tightening wire *e*, by which the gauze is drawn tight, and attached to the rods *d*, provided in the frame A (Figs. 2 and 3). Instead of this mode of tightening the gauze any other may be chosen, or it may be nailed to the parts of the frame. Openings B B are arranged at the ends of the compartments for the entrance of the material, and openings B' B' for its exit. It is obvious, that the material entering at B, during a swinging or shaking motion of the bolting frame, and working its way down to the outlets B, will be sifted not only through the bottom *a*, but also through the sides *b b* and partly even through the ceiling *c*, so that *a*, *b b*, *c*, are sifting surfaces, whereby the device obtains its maximum of efficiency.

If it should be desired to make a special use of the ceiling *a*, it will be easy, by widening the sides of the frame A, as shown in dotted line in Fig. 3, to form an upper sieve, serving to separate previously the coarser parts, before the material is introduced inside the bolting compartment.

The sieve itself has already been described; so that Figs. 5 to 7 are devoted to illustrating the movement of the same. The sieve with the gyrating motion hangs by the suspending rods *h, h, h, h*, in any well known manner, such as by the ball-joints; or cord might be substituted for the said rods. By means of the eccentric *v* the sieve is joined to the plate *t* sitting on the axle *w*, which receives pro-

pulsion from a driving belt at s . By the rotation of the axle w , the hanging sieve is set in motion. The material to be sieved (meal for instance) is poured into the sieve-compartments A^1, A^2 , and passing through these compartments, the larger, coarser parts fall into the box r , and are taken out at the outlet a^4 , while the finer parts pass through the sieve-surfaces and collect on the board or shelf a^2 being taken out through the outlet a^5 . In Fig. 7 the sieve hangs also by the rods h , and has attached to its frame A a connecting rod n which works on the crank m , on the axle l . The movement of the axle l gives a straight backward and forward motion to the sieve. The material to be sieved enters at a^3 , the coarser parts passing out at r and a^4 , while the sieved material falls on the shelf or board and is taken away through r' and a^5 . The arrangements with which the sifting material is moved forward or the forward movement is assisted on the above described journey

through the sieving compartments are well known, and shall not therefore be here detailed. The sifting or sieving surfaces may consist of metal (wire sieve) or spun-thread netting or of silk gauze, &c., according to the fineness or coarseness of the grain of the material which is to be sifted.

I claim—

In a bolter having a shaking or swinging motion, the compartments formed of sifting surfaces not only on the bottom, but also on the sides and ceiling and means for flexibly supporting said compartments to allow free vibration substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

AUGUST SCHLEE.

Witnesses:

W. NOOSBACK,
CHAS. H. BURKE.