(No Model.)

H. BITTINGER.

SHAKING BOLT.

No. 398,692. Patented Feb. 26, 1889.

Fig. 1.

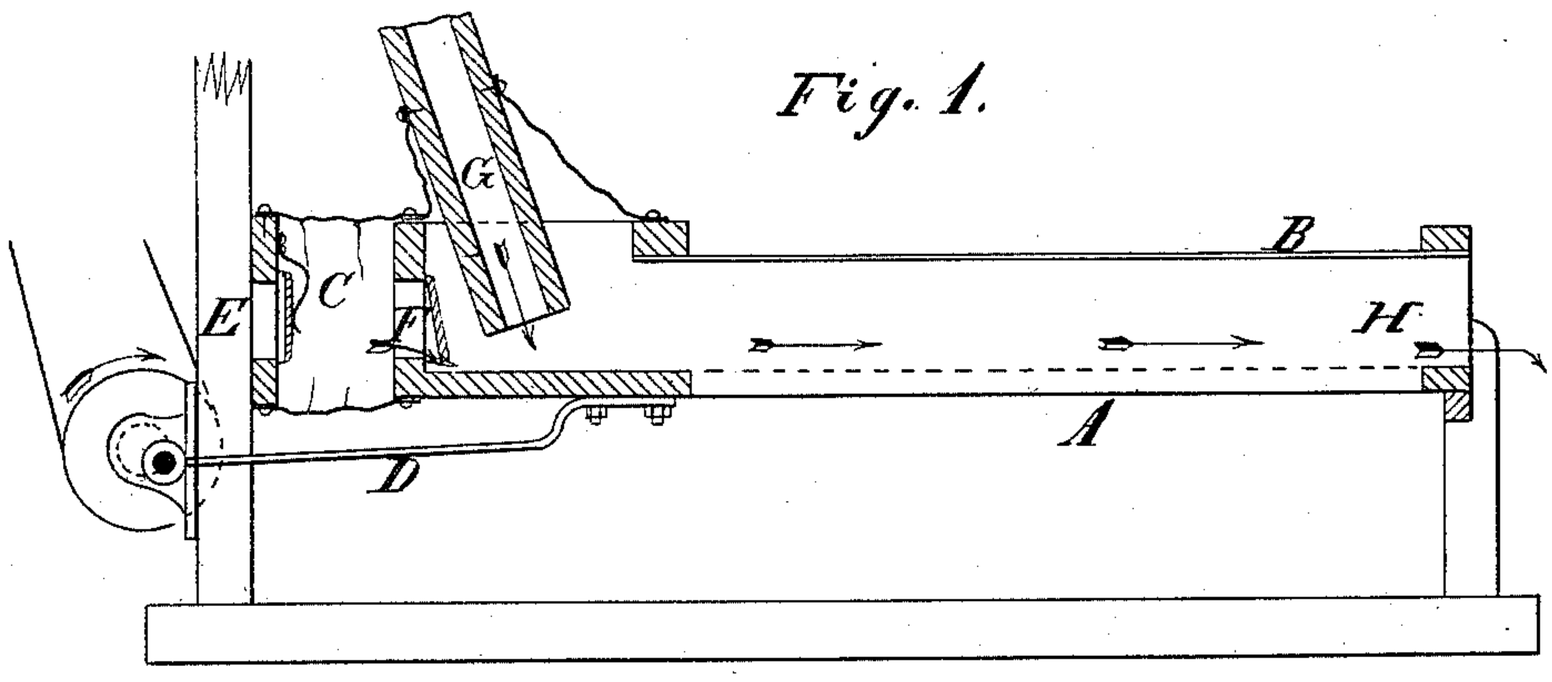


Fig. 2.

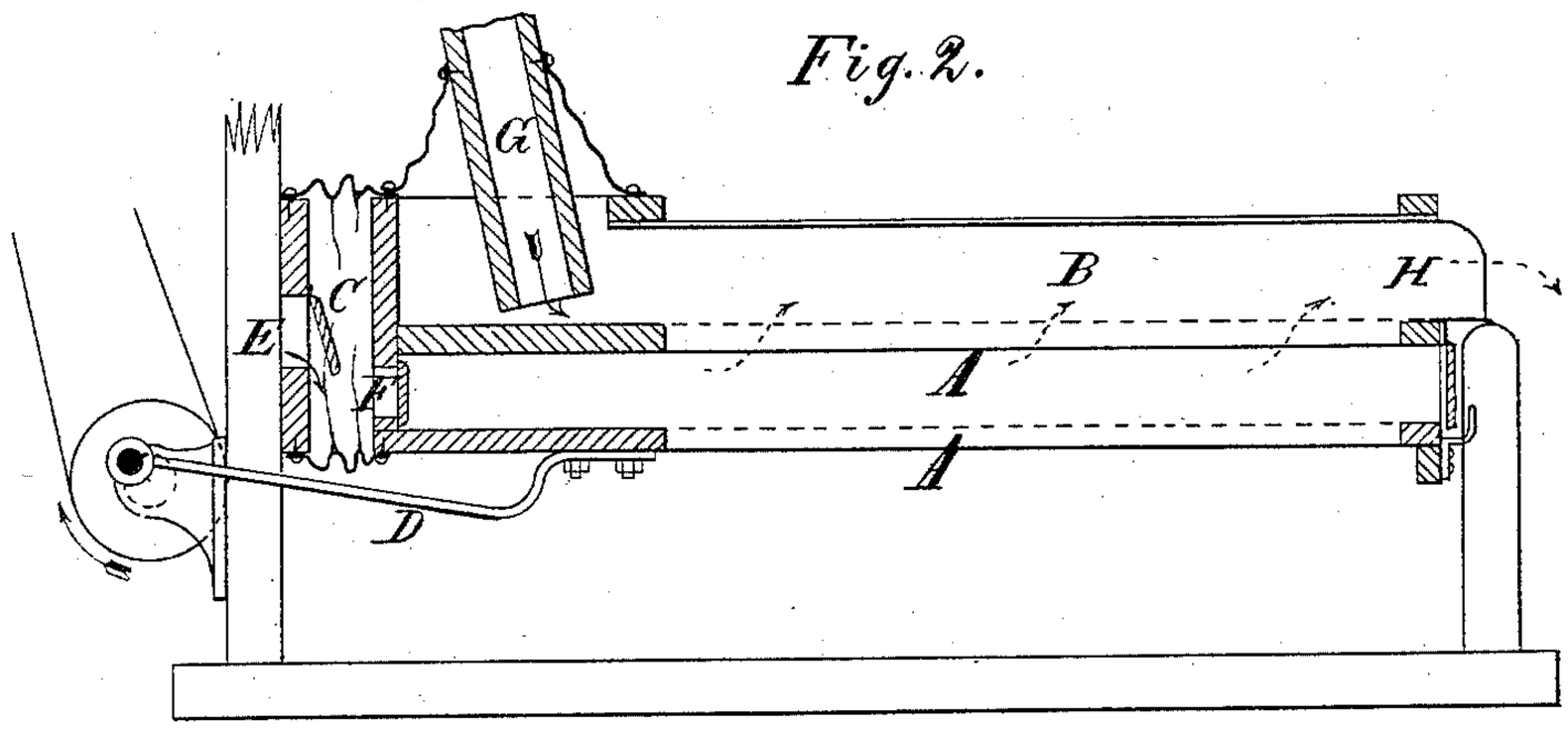
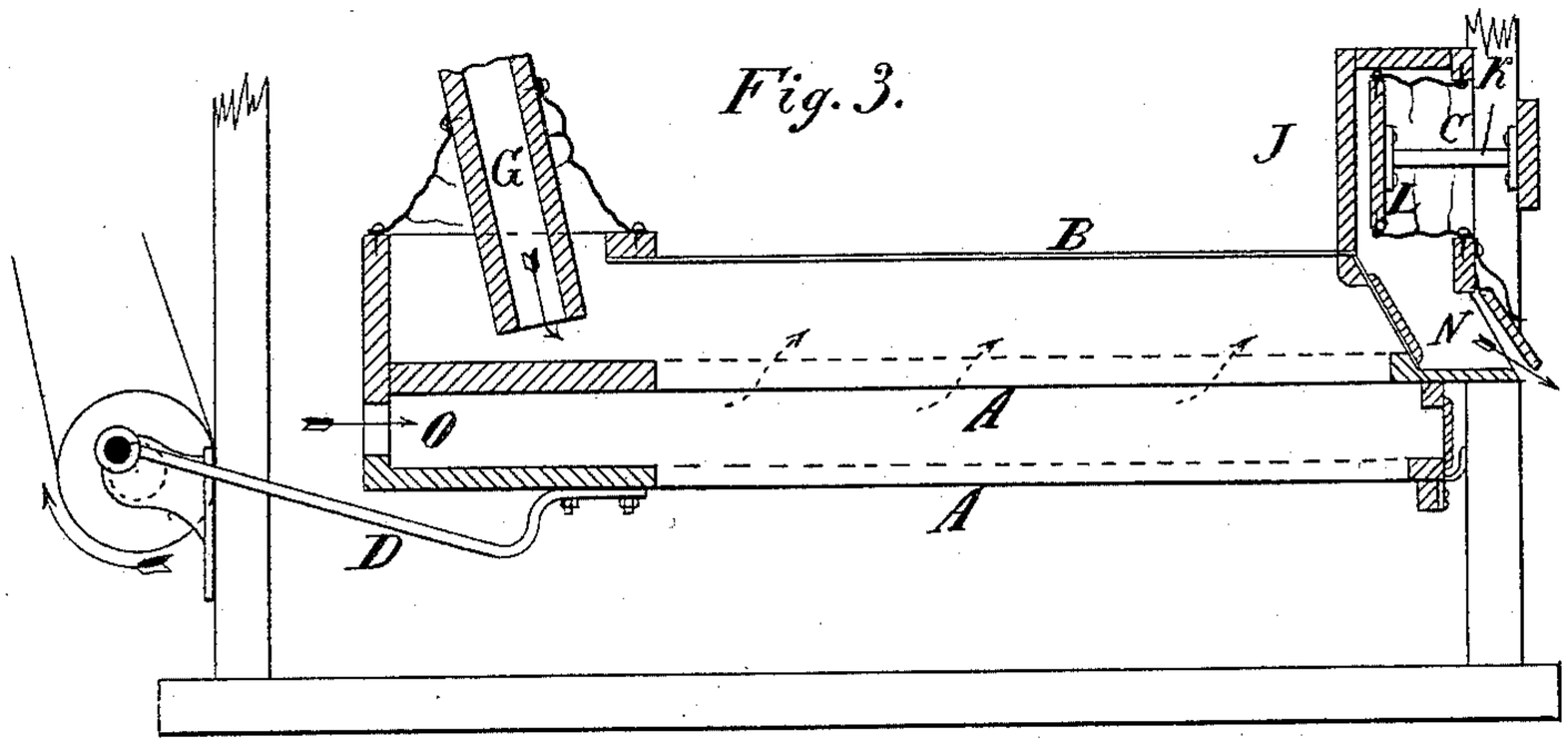


Fig. 3.



Witnesses.
William Miller
Eduard Wolff.

Inventor,
Hans Bittinger,
by Van Santvoord & Hauff
his attys.

UNITED STATES PATENT OFFICE.

HANS BITTINGER, OF BRUNSWICK, GERMANY, ASSIGNOR TO G. LUTHER, OF SAME PLACE.

SHAKING-BOLT.

SPECIFICATION forming part of Letters Patent No. 398,692, dated February 26, 1889.

Application filed May 17, 1888. Serial No. 274,174. (No model.)

To all whom it may concern:

Be it known that I, HANS BITTINGER, a subject of the King of Bavaria, residing at Brunswick, in the Duchy of Brunswick, German Empire, have invented new and useful Improvements in Shaking-Bolts, of which the following is a specification.

This invention relates to improvements in shaking-bolts; and it consists in the construction, combination, and relative arrangement of parts for causing air-currents to flow along parallel with and immediately above the sieves, as hereinafter more fully set forth.

In the annexed drawings, illustrating the invention, Figure 1 is a partial sectional elevation of my improved shaking-bolt and its accompaniments for producing an air-current along and over the sieve. Fig. 2 is a similar view of a machine provided with two sieves. Fig. 3 is a similar view showing a modification in the construction and location of the bellows.

The letter A designates the separating-sieves, and B is a stationary ceiling located above and parallel with the upper sieve, to cause an air-current to pass along and over said sieve.

C in Figs. 1 and 2 is a forcing-bellows, and in Fig. 3 an exhaust or sucking bellows. In Fig. 1 the pliable leathering of the bellows C connects the back wall of a single sieve, A, to a stationary portion of the sieve-casing. Owing to the shaking motion of the sieve produced by means of the connecting-rod D air is sucked up through the valve E and forced out through the valve F along the surface of the sieve. The material to be treated is afforded an entrance through the hopper G, and is exposed to the air-current, so that the light particles of the material are transported gradually toward the eduction-port H at the farther end of the sieve. The stationary ceiling B prevents the air from escaping upward, and forces it to flow along and over the sieve. In Fig. 2 the same principle is applied to two sieves arranged one above the other. The air introduced by the bellows C enters first the space between the two sieves, then passes from below through the upper sieve, and then flows in the same manner as in Fig. 1 along and beneath the ceiling B in a direction parallel to the upper sieve. In the construction shown in Fig. 3 the bellows C is arranged at the eduction-port. The upright bellows-casing J is secured to the eduction end of the sieve, and the rod K and plate L are fastened to the casing of the apparatus. Owing to the shaking motion of the sieve the air is sucked up through the valve O and escapes with the light particles of material through the valve N, the operation being otherwise the same as already described.

What I claim is—

1. The combination, with a horizontally-shaking sieve and its casing, of a bellows located at one end of said sieve and having its flexible leathering connected with the sieve and its casing, whereby the shaking of the sieve will actuate the bellows, substantially as described.

2. The combination, with a shaking sieve and its casing, of a bellows located at one end of said sieve and having its flexible leathering connected with the sieve and its casing, and a ceiling located close above and parallel to the sieve, whereby the shaking of the sieve will actuate the bellows and cause a current of air to flow along and between the sieve and ceiling, substantially as described.

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

HANS BITTINGER.

Witnesses:

A. HÖRMANN,

OTTO KAHUT.