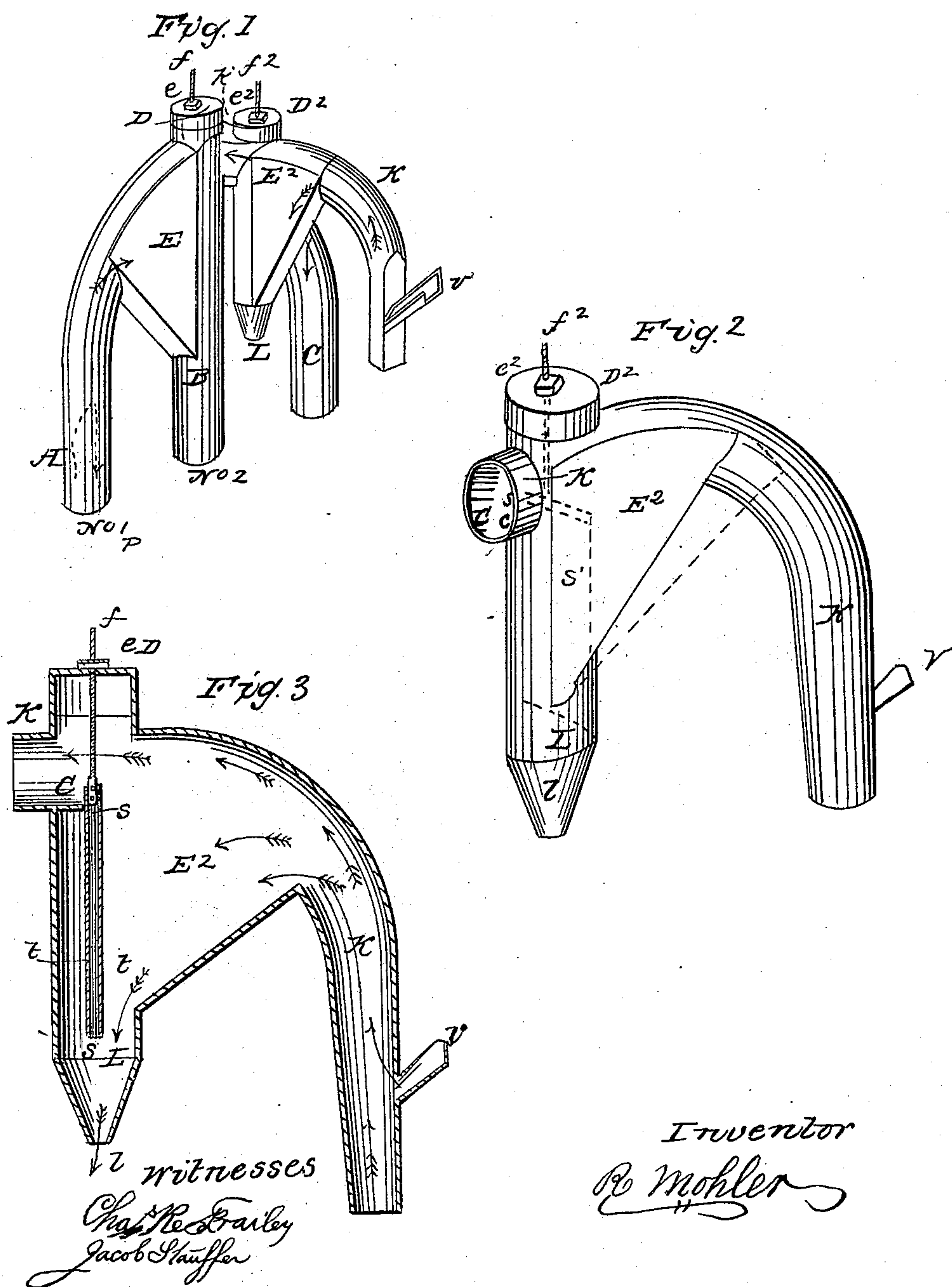


R. MOHLER.
Grain Separator.

No. 34,691.

Patented March 18, 1862.



UNITED STATES PATENT OFFICE.

RICHARD MOHLER, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN SMUT-MACHINES.

Specification forming part of Letters Patent No. 34,691, dated March 18, 1862.

To all whom it may concern:

Be it known that I, RICHARD MOHLER, of the city of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented a new and useful Improvement on a certain Smut-Machine for which Letters Patent were granted to me, the said RICHARD MOHLER, which Letters Patent are dated the 24th day of July, 1860.

The improvement consists in the attachment of a branch arch with a like chamber and device to the main arch and its chamber; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the branch attachment to my former or the main arch and chamber. Fig. 2 is a perspective view, on an enlarged scale, of the branch detached. Fig. 3 is a vertical section showing the interior of the same.

This branch arch may be attached to or on either side of the central tube B at any desired point, or as shown in Fig. 1.

The operation of this branch arch is so intimately connected with the main arch as to constitute but one, with increased advantages, however, inasmuch as by its use four distinct separations are obtained.

The mouth of the branch arch K fits over the stone or scourer, having a hopper V, through which the grain is fed, being at the same time subjected to strong suction, so as to draw up the screenings, smut-balls, and foreign matters. Within the tube K the heavier portions or screenings entering the chamber E² will, by gravitation and by being arrested by the vertical slide s within the tube L, (duly regulated by means of the bar e and screw f,) discharge the screenings through the contracted orifice l, while the chaff, dust, and lighter matters will be drawn over the slide s and enter the fan through the main arch, where it is blown off, there being a connect-

ing portion k both on the main and the branch arch or its equivalent opening for such an attachment on the main arch, as shown.

In combination with the main arch the further operation is as follows: The grain, when fed into the branch arch K at V, enters the scourer, from whence it is conveyed through a trough or tube to the mouth of the tube A on the main arch. There it is subjected to a draft sufficiently strong to carry up and separate the broken and lighter grains through the chamber E and tube B, effectually removing all the dust. Thus the fullest and more perfect grains are discharged through a connecting-tube at A for the manufacture of extra flour, the balance at B for what is usually termed "superfine" flour, while the screenings are separated at l in the branch arch, as aforesaid. The mouth of the tube C on the main arch is connected with and receives a powerful suction from the fan, which suction extends equally to all the other tubes, and their connections regulated in degree by means of the slides s and appliances within the several chambers, as more fully set forth in said patent referred to.

I am aware that single arches and double arches have been employed on smut-machines and grain-separators, but none having chambers like those for which Letters Patent were granted to me. I therefore do not claim said chamber E² as a part of this improvement, having already claimed the same in my former patent. I, however, employ such a chamber in my branch arch, also as shown.

What I claim as my invention, and desire to secure by Letters Patent, is—

The branch arch K, with its tube L, hopper V, and connecting-neck k, when combined with the main arch and its chambers, as herein specified, for the purpose and in the manner set forth.

R. MOHLER.

Witnesses:

CHAS. R. FRAILEY,
JACOB STAUFFER.