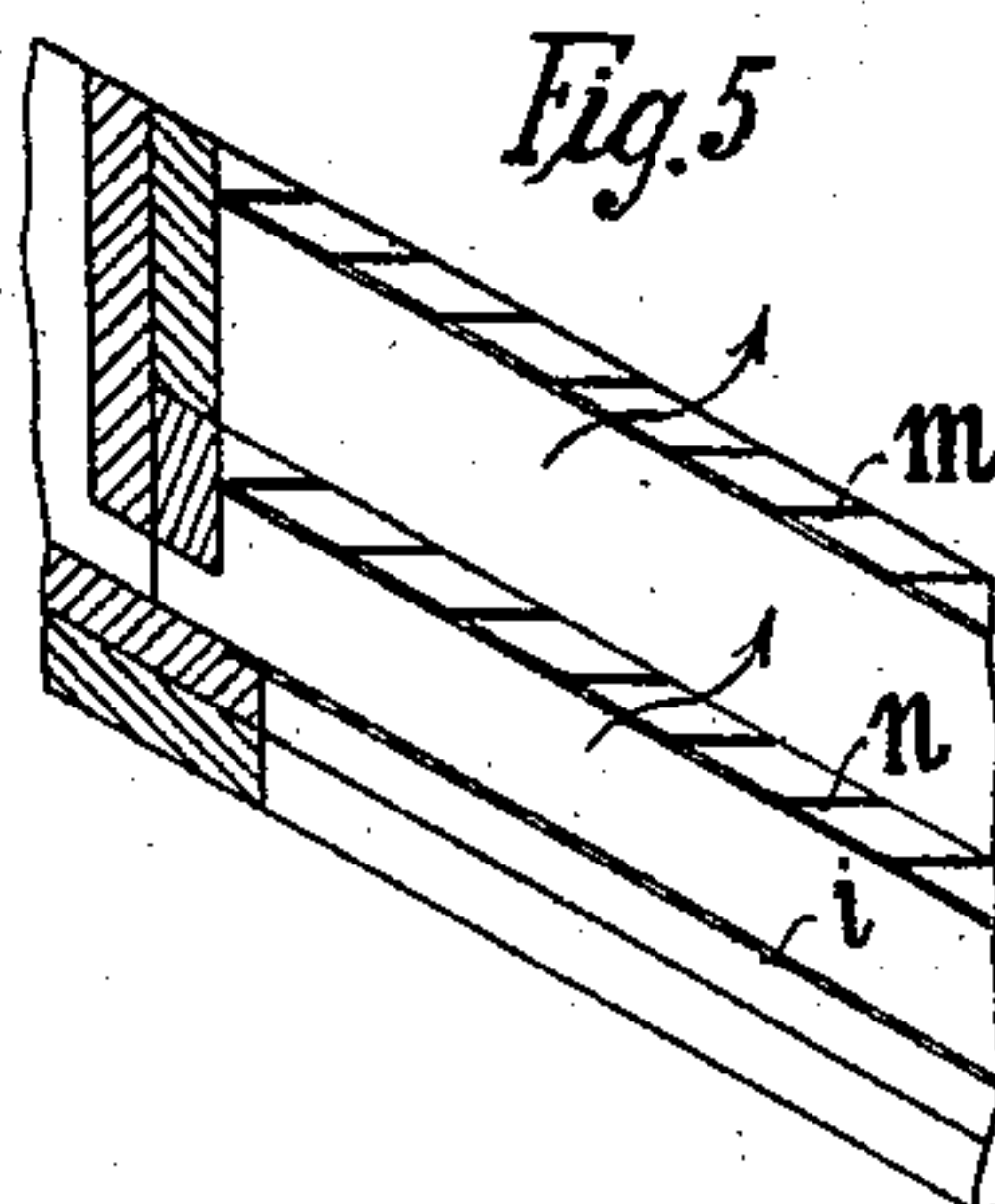
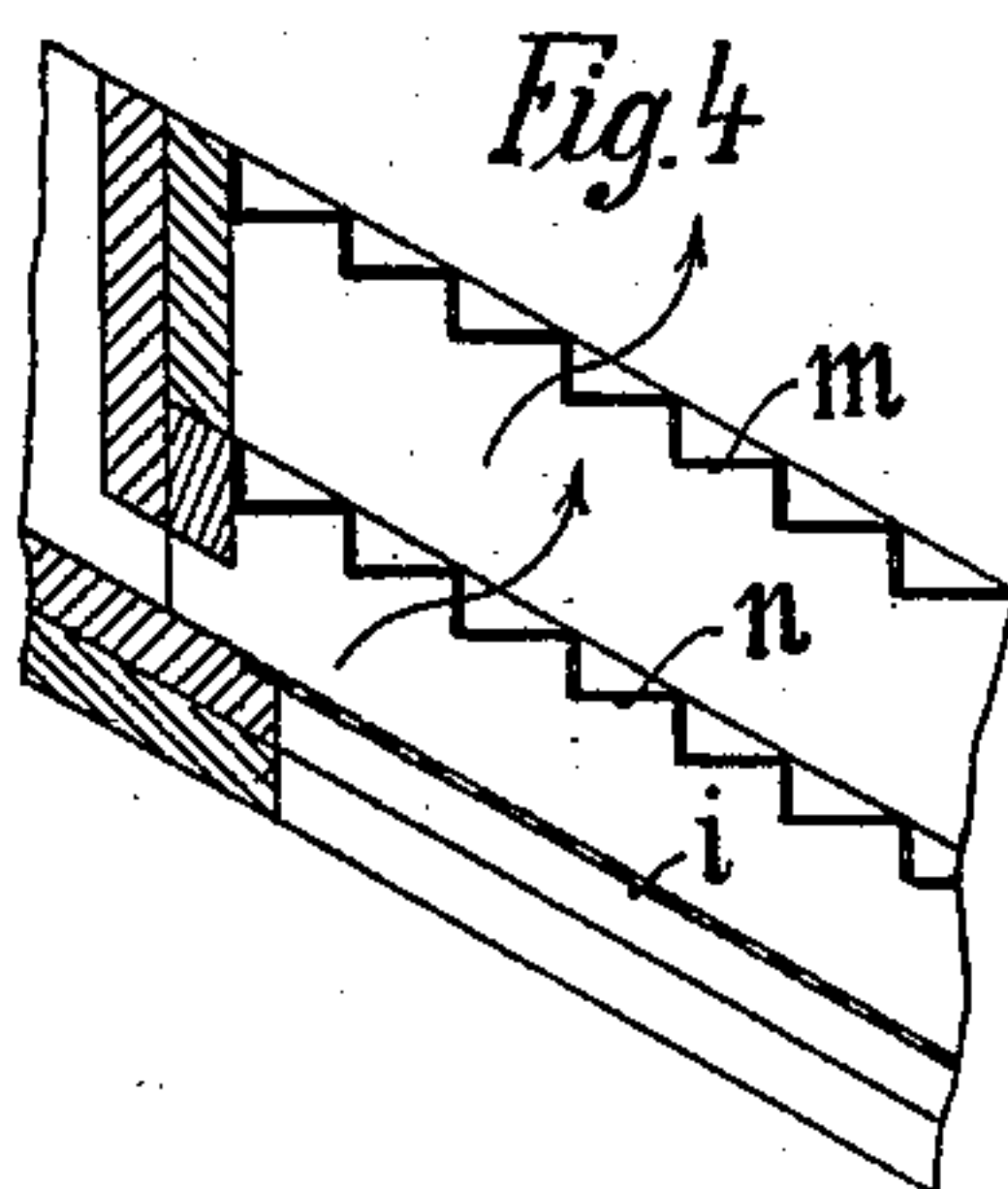
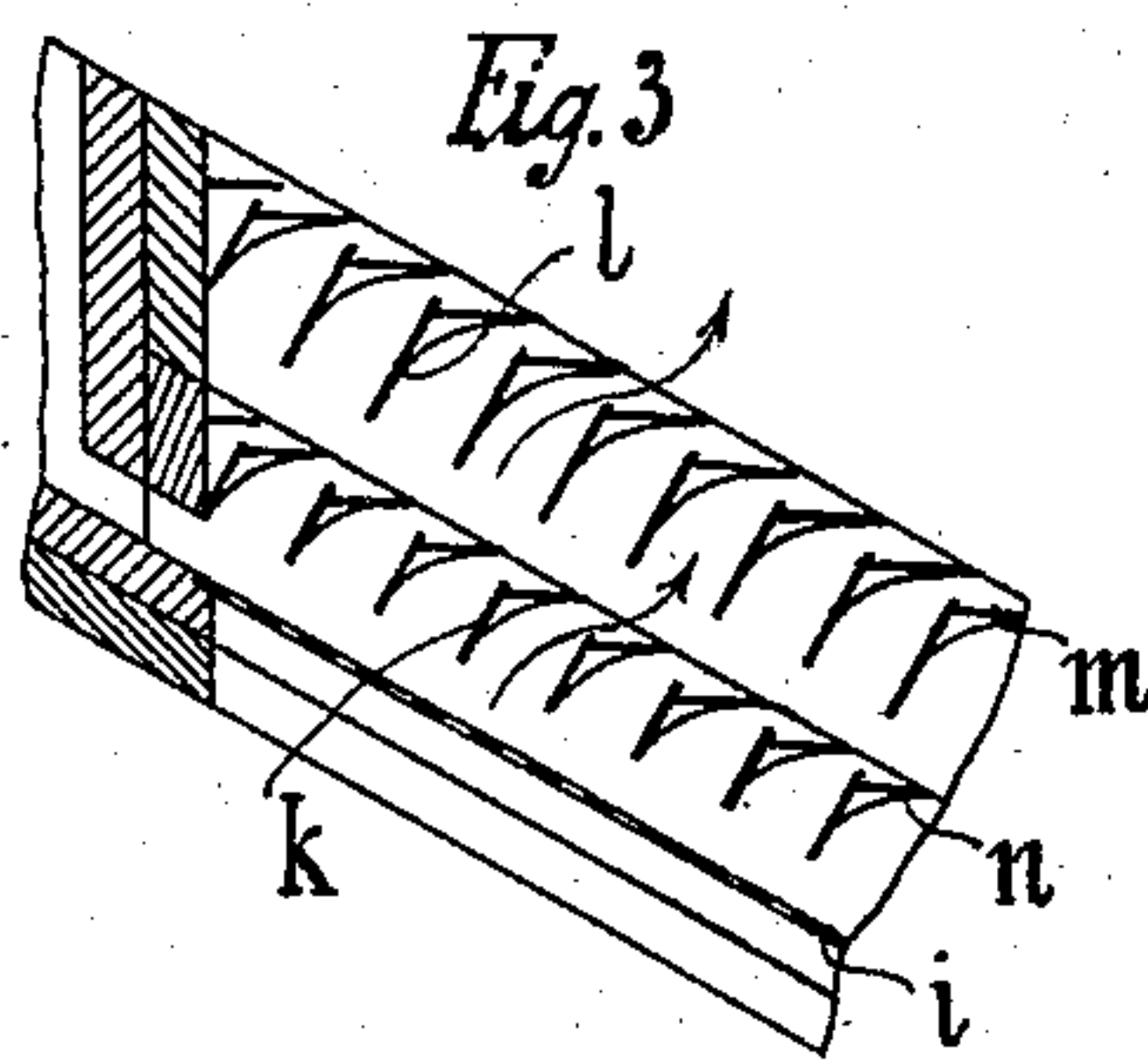
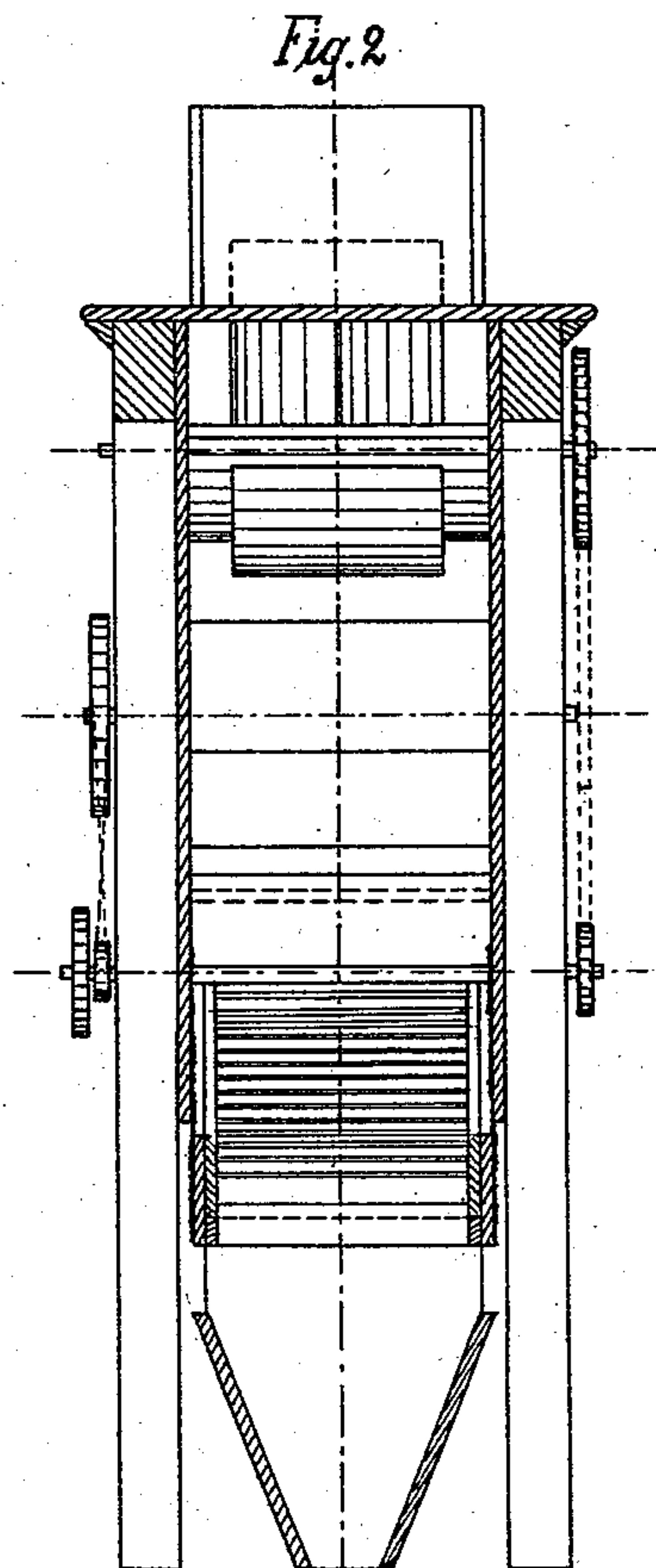
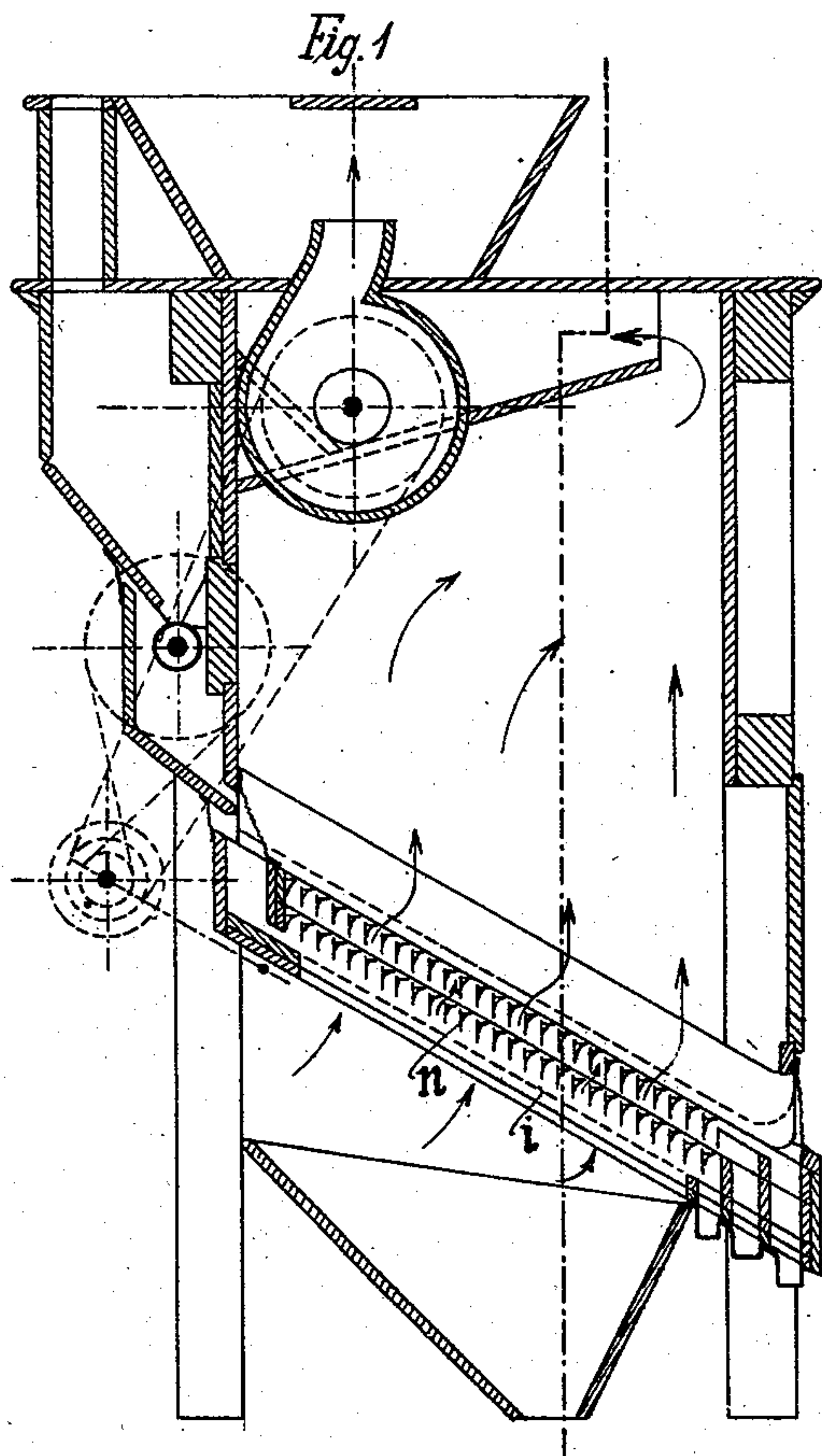


(No Model.)

C. HAGGENMACHER.
MACHINE FOR PURIFYING MIDDLEINGS.

No. 532,550.

Patented Jan. 15, 1895.



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UNITED STATES PATENT OFFICE.

CARL HAGGENMACHER, OF BUDA-PESTH, AUSTRIA-HUNGARY.

MACHINE FOR PURIFYING MIDDLEINGS.

SPECIFICATION forming part of Letters Patent No. 532,550, dated January 15, 1895.

Application filed March 27, 1894. Serial No. 505,327. (No model.)

To all whom it may concern:

Be it known that I, CARL HAGGENMACHER, milling engineer, a citizen of the Swiss Republic, and a resident of Buda-Pesth, Austria-Hungary, have invented a certain new and useful Machine for Purifying Middlings and other Materials, of which the following is a specification.

In most machines hitherto employed for purifying middlings, which work with a vibrating or swinging sieve combined with an air current, a horizontal or nearly horizontal sieve is generally used, above which a grid formed of slit ridges or troughs is arranged. The air current, sucked through the sieve passes through the slits of the grid carrying along the light particles of the stock, which particles fall back and are deposited in the parts or channels between the slits on account of the stillness of the air existing above these channels. For the purpose of removing the light particles, that have fallen into the channels of the grid, said channels had to be inclined in their longitudinal direction, or if they were horizontal, the stock on them had to be removed by mechanical devices such as brushes, sweepers and the like. In all such machines however, the particles which fall in the channels of the grid, are out of the air current and could no longer be affected by it and thus the purifying was imperfect.

The present invention is designed to subject the particles repeatedly to the air current after being lifted up from the sieve by the current and deposited on the ridges, whereby a far more perfect purification of the stock is attained.

In the drawings Figure 1, is a longitudinal section. Fig. 2, is a cross section. Figs. 3, 4 and 5 show on a larger scale, variations of the terraces or steps.

To the sieve a considerable incline is given which has the advantage that the layer of stock passing over it goes quicker and is thinner, so that it is more sensitive to the influence of the air current.

Above the sieve is placed a series of steps, ledges or terraces *n* to which is imparted either separately or jointly with the sieve a vibrating or swinging motion and the elements of which consist essentially of narrow ledges, upon which the stock or material falls in its downward course. These ledges are horizon-

tal in their longitudinal direction and are as a whole, arranged stairlike and parallel to the sieve underneath; one ledge projecting almost to or entirely above the next lower ledge, so that the material in passing down across the whole length of the grid falls like cascades over the ledges, whereby, as there is an open space between the ledges, the particles are at every ledge acted upon by the air current coming from below, so that a repeated and continual purifying results. Several of those series of steps may be arranged one above the other. In the accompanying drawings two of them are shown.

In Fig. 3 a part of such a series of terraces is represented on a larger scale. The sides *k* and *l* extending downward to the sieve serve for conducting the air current gradually and gently, while the lateral prolongation of the sides *k* and *l* over the surfaces *m* and *n* of the ledges prevents the stock from falling back.

Figs. 4 and 5 show varied forms of such steps, the only difference consisting in the manner of carrying out the same principle shown in Fig. 3. In Fig. 4, a sheet of metal is bent in the shape of steps, the risers of which are perforated, while Fig. 5 shows an inclined sheet of metal in which the steps or ledges, and at the same time the air passages are formed by making slits in the sheet and bending up the lips to form steps.

The rest of the mechanism is well known and requires no detailed description.

I claim—

1. In a machine for purifying middlings &c., an inclined sieve and a series of terraces or steps above the same and means for vibrating the same, and means for producing an upward current of air, substantially as described.

2. In a machine for purifying middlings &c., an inclined sieve, and a series of terraces or steps parallel to and above the sieve, openings through the steps for the passage of air and means for vibrating the steps and sieve and means for producing an upward current of air, substantially as described.

In witness whereof I have signed this specification in presence of two witnesses.

CARL HAGGENMACHER.

Witnesses:

WILLIAM MARIASSY,
H. GAITHER.