

No. 612,521.

Patented Oct. 18, 1898.

I. C. & M. C. LANDES.

SIEVE FOR GYRATORY BOLTING AND SCALPING MACHINES.

(Application filed Mar. 23, 1897.)

(No Model.)

Fig: 1.

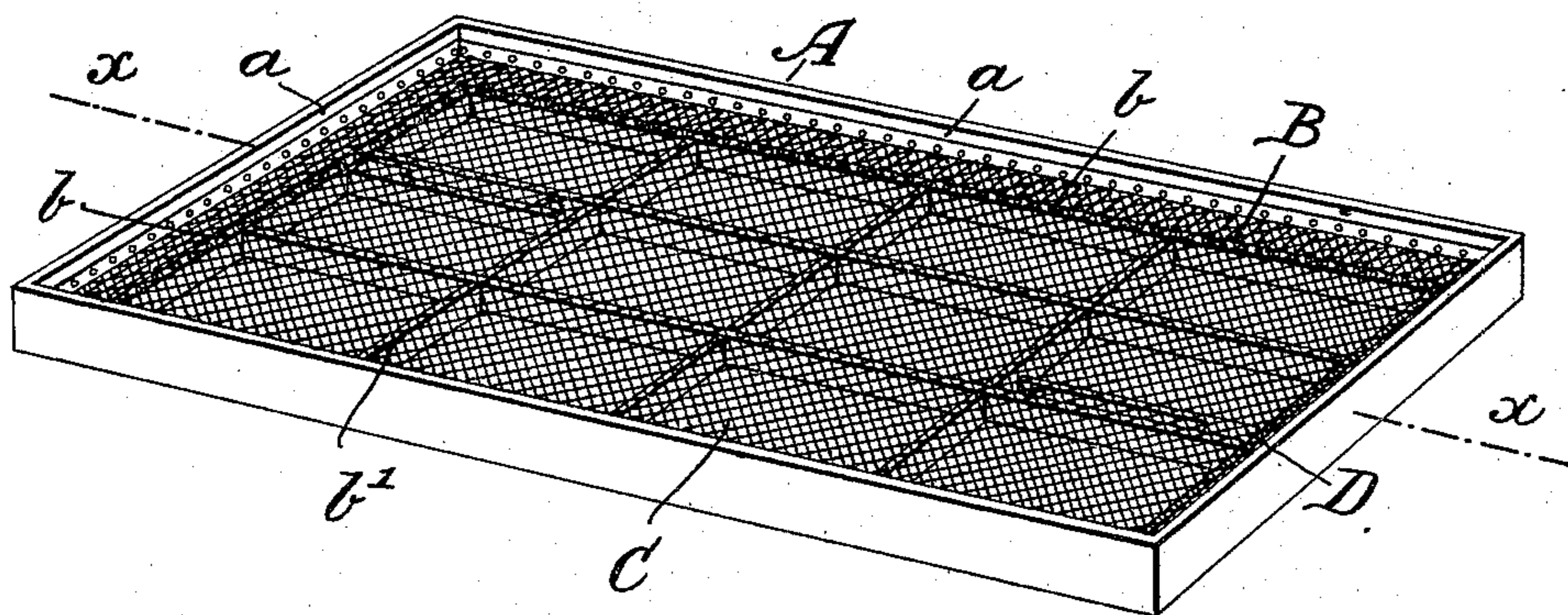


Fig: 2.

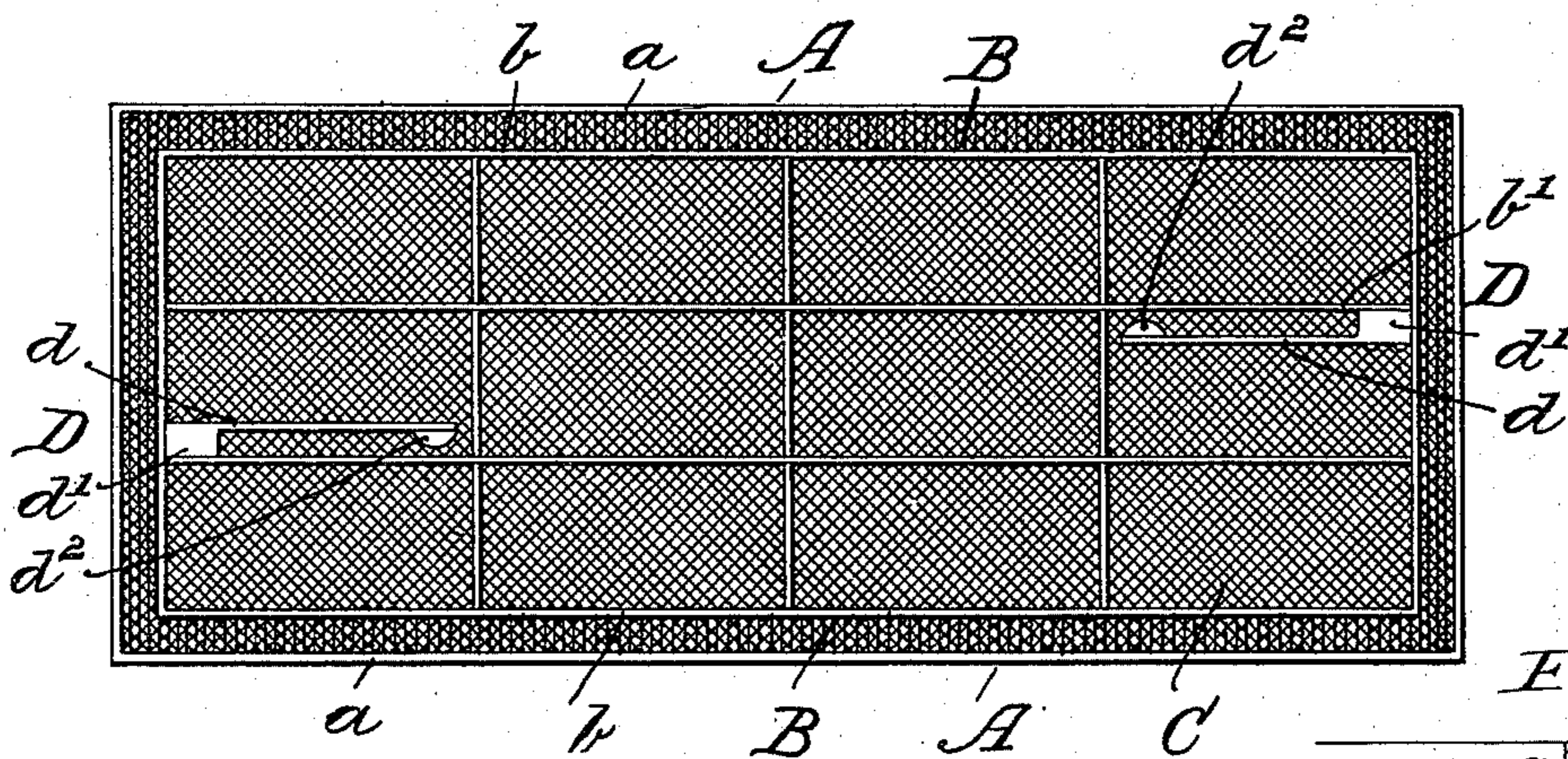


Fig. 4.

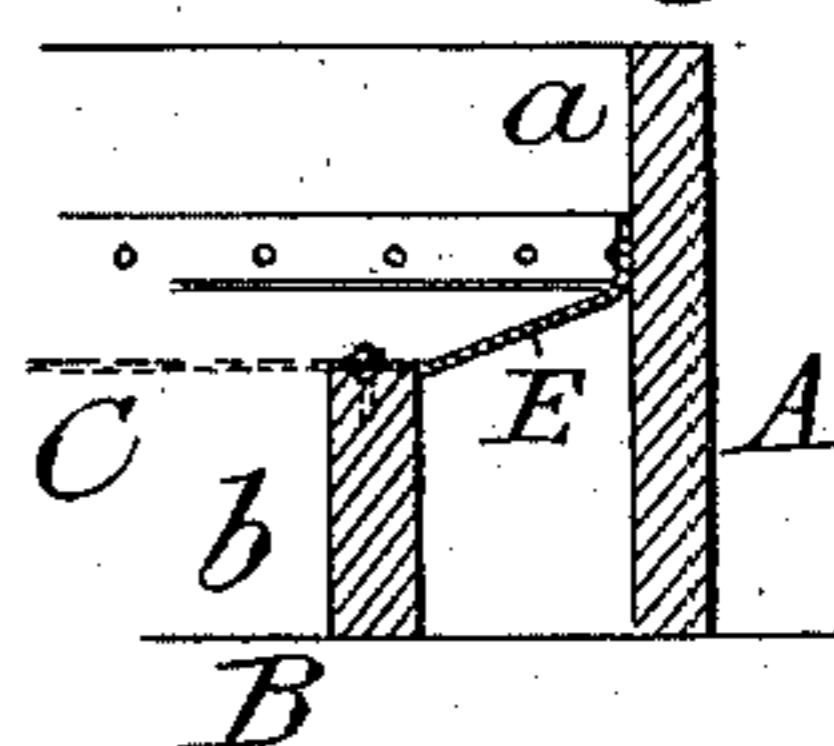
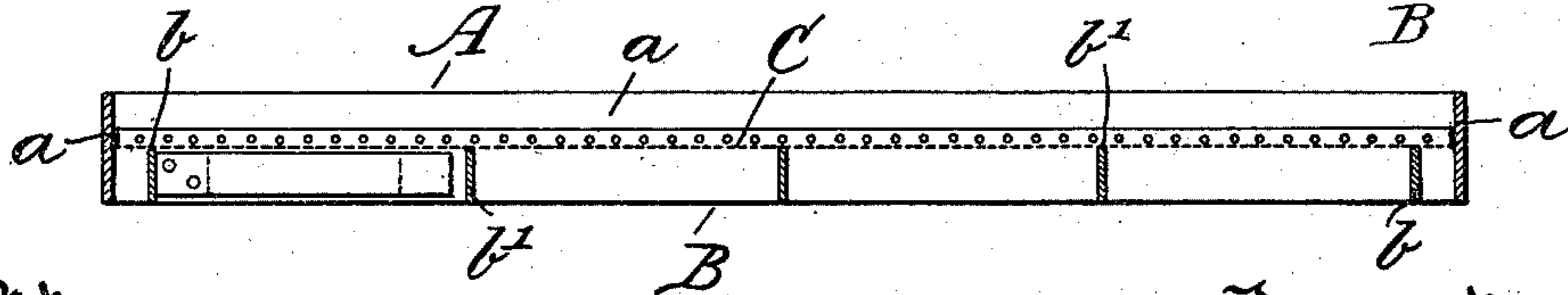


Fig: 3.



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UNITED STATES PATENT OFFICE.

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SIEVE FOR GYRATORY BOLTING AND SCALPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 612,521, dated October 13, 1898.

Application filed March 23, 1897. Serial No. 628,861. (No model.)

To all whom it may concern:

Be it known that we, ISAIAH C. LANDES and MILTON C. LANDES, citizens of the United States, residing at Yerkes, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Sieves for Gyratory Flour Bolting and Scalping Machines, of which the following is a specification.

Our invention has relation to a suspended vibrating sieve for a gyratory or other flour bolting and scalping machine.

The object of our invention is to provide a sieve adapted to a gyratory flour-bolting machine so constructed and arranged as that clogging of the meshes of the sieve by the matter undergoing treatment is prevented, to insure thereby better results in the general treatment of such matter in such a machine, and to which end our invention consists of a special construction of sieve for a gyratory flour bolting and scalping machine, constructed and arranged in substantially the manner hereinafter described and claimed.

The nature, characteristic features, and scope of our invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part thereof, in which—

Figure 1 is a perspective view of a sieve embodying main features of our invention, showing one form of device connected with the vibrating or oscillating suspended sieve for periodically knocking against parts or portions thereof, so as to prevent clogging of the meshes of the cloth applied to the sieve. Fig. 2 is a plan view, from the under side of the sieve, of our invention. Fig. 3 is a longitudinal sectional view on the line $x-x$ of Fig. 1, and Fig. 4 is an enlarged view of one end of Fig. 3.

Referring to the drawings, A is an oblong or other shape frame, within which is suspended a longitudinally and transversely slatted independently-vibratable frame B, having a silk or other bolting cloth C applied thereto. Between this cloth, on the surrounding rim b of the frame B and the surrounding rim a of the frame A, is a flexible strip of duck, canvas, ticking, or other suitable material E, whereby the said sieve B is given its suspended position within the surround-

ing frame A and free to vibrate. The cloth of the sieve, being of such material as silk, for instance, has the meshes thereof of such dimensions as to permit of the passage there-through of flour or the like from one sieve to another in a vertical series when suitably arranged in tiers or otherwise in a gyratory flour bolting or scalping machine of the general type illustrated in the Patent No. 569,211, dated October 13, 1896, granted to us; but it may be here remarked that the particular machine to which a sieve of our present invention is especially adapted forms the subject-matter of a separate application, Serial No. 644,046, filed July 10, 1897, and hence the said sieve has not been shown in its actual position in such a machine or to any other general type of machine, as its function in such a machine will be readily understood.

To certain of the walls of the squares b' of the sieve B are applied knocking devices D, each consisting of a strip d , having a lug d' at one end rigidly secured to a wall of one of said squares b' , and at the free end of the strip is provided a knocker d^2 , whereby the suspended sieve B, by means of the ticking or canvas, is adapted to be vibrated or oscillated by the gyratory motion of the machine, and in such actions the sieves arranged in series or tiers in the machine are periodically, by the knocking devices D, given a blow of such character as to prevent any clogging of the meshes of the bolting-cloth C of each sieve. Practice has demonstrated that this operation gives far better results in the bolting and scalping of flour and separation of different grades of flour in such general type of machine as hereinbefore referred to and briefly explained. As shown, the rigid ends d' of the knockers D are secured to the inner frame B and independent of the outer frame A. This permits a more free vibration, as the frame B has itself an independent vibration in view of its flexible suspension within the frame A. Furthermore, the knockers D are arranged to strike at different times in the gyratory movement, one being adapted to strike when the other is moving away from the frame. It is evident that any number of such knockers may be employed, if so desired.

It is obvious that the knocking device connected with each of the sieves may be varied

or modified with respect to its construction and arrangement to that illustrated and equally good results be obtained, and hence we do not wish to be understood as limiting ourselves to the precise form of the device as illustrated and hereinbefore described; but,

Having thus described the nature and objects of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a gyratory flour bolting and scalping machine, a movable sieve provided with a bolting-cloth suspended within an outer frame to which a direct movement is imparted connected therewith and a knocker device connected with said sieve independently of the outer frame and adapted to periodically deliver a blow thereto to prevent clogging of the meshes of said cloth.

2. In a gyratory flour bolting and scalping machine, a vibratory or oscillatory sieve provided with a bolting-cloth, an outer movable frame of larger area than the sieve, a flexible impervious connecting material between the outer frame and perimeter of the sieve, and a device independent of the means for moving the outer frame connected with said sieve adapted to deliver a blow thereto to prevent clogging of the meshes of said cloth.

3. In a gyratory flour bolting and scalping machine, a movable rectangular sieve provided with a bolting-cloth mounted in an outer frame and flexibly suspended therefrom and said sieve slatted longitudinally and transversely below the bolting-cloth, and knocking devices connected with said sieve independently of the outer frame and adapted to be periodically actuated to clear clogged meshes of said cloth.

4. In a sieve device for bolting flour, the combination of the outer frame to which the power is directly applied, an inner frame of less vertical height than the outer frame and having its upper surface covered with a bolting or screen cloth, and an impervious flexible floor connecting the upper edge of the perimeter of the sieve with the side and end walls of the outer frame at a distance below

its upper edge whereby the sieve may receive independent vibration to that directly given to the outer frame.

5. In a sieve device for bolting flour, the combination of the outer frame to which the power is directly applied, an inner frame of less vertical height than the outer frame and having its upper surface covered with a bolting or screen cloth, an impervious flexible floor connecting the perimeter of the sieve with the side and end walls of the outer frame whereby the sieve may receive independent vibration to that directly given to the outer frame, and two independent knockers adapted to operate upon the screen at different times or periods in the movement thereof.

6. In a sieve device for bolting flour, the combination of an outer frame A, an inner sieve-frame B of smaller area and having transverse slats, a bolting cloth or screen C arranged over the upper part of the frame B and its slats, and an impervious flexible connection E between the perimeter of the frame B and sides of the frame A, and in which the outer frame is adapted to receive a horizontal oscillation or gyration.

7. In a sieve device for bolting flour, the combination of an outer frame A, receiving a horizontal oscillation or gyration, an inner sieve-frame B of smaller area and having transverse slats, a bolting cloth or screen C arranged over the upper part of the frame B and its slats, an impervious flexible cloth connection E between the perimeter of the frame B and sides of the frame A, and one or more knockers D carried by the frame B independent of the outer frame A and adapted to knock upon the said frame B at a distance from their connection therewith.

In testimony whereof we have hereunto set our signatures in the presence of two subscribing witnesses.

ISAIAH C. LANDES.
MILTON C. LANDES.

Witnesses:

WILLIAM ZOLLERS,
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