

(No Model.)

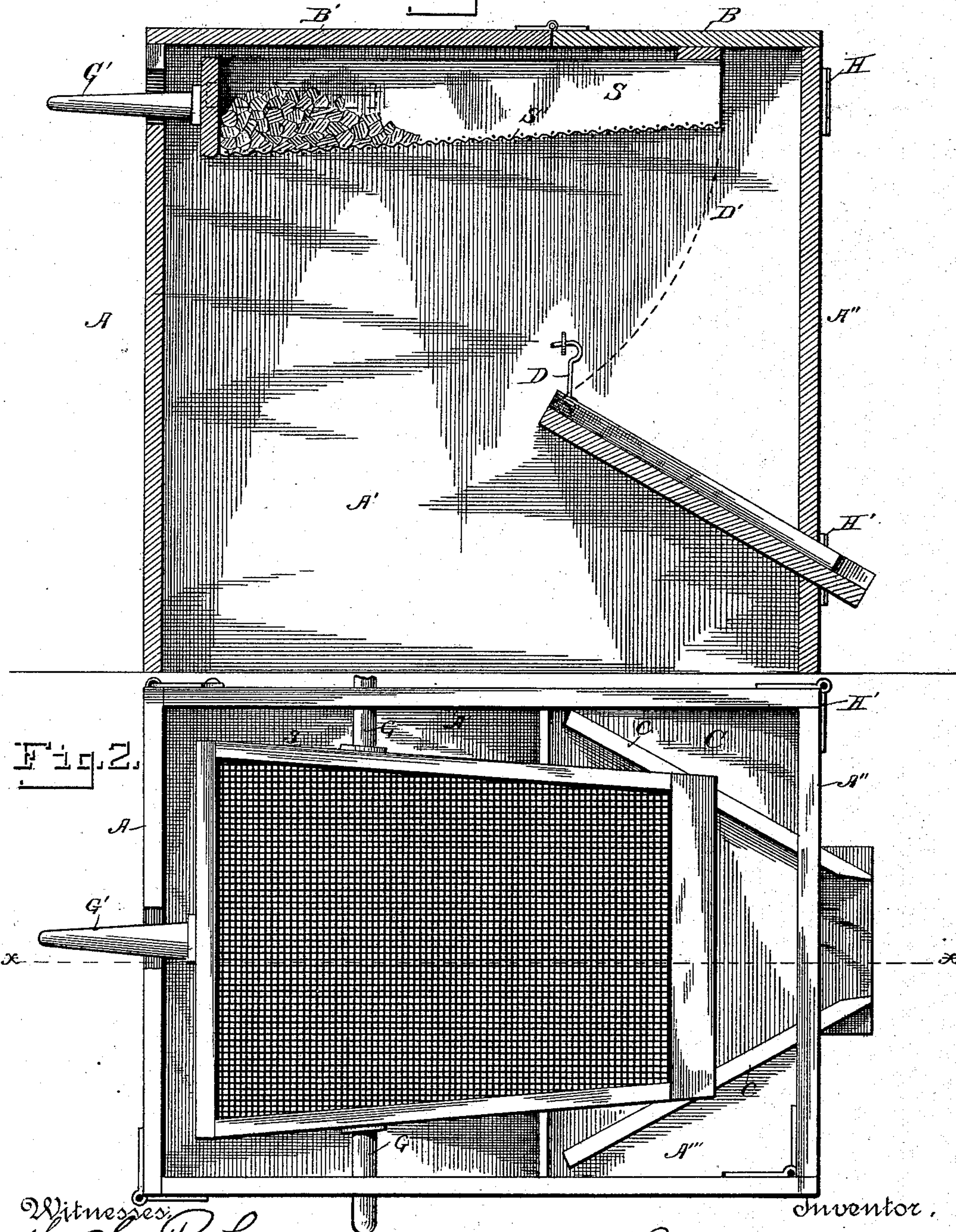
2 Sheets—Sheet 1.

L. M. NIXDORFF.

SIFTER.

No. 388,575.

Fig. 1. Patented Aug. 28, 1888.



Witnesses,
H. S. Rohrer,
D. P. Wright,

Inventor,
Lewis M. Nixdorff.
By his Attorneys
Lamar, Wiles & Greene.

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2 Sheets—Sheet 2.

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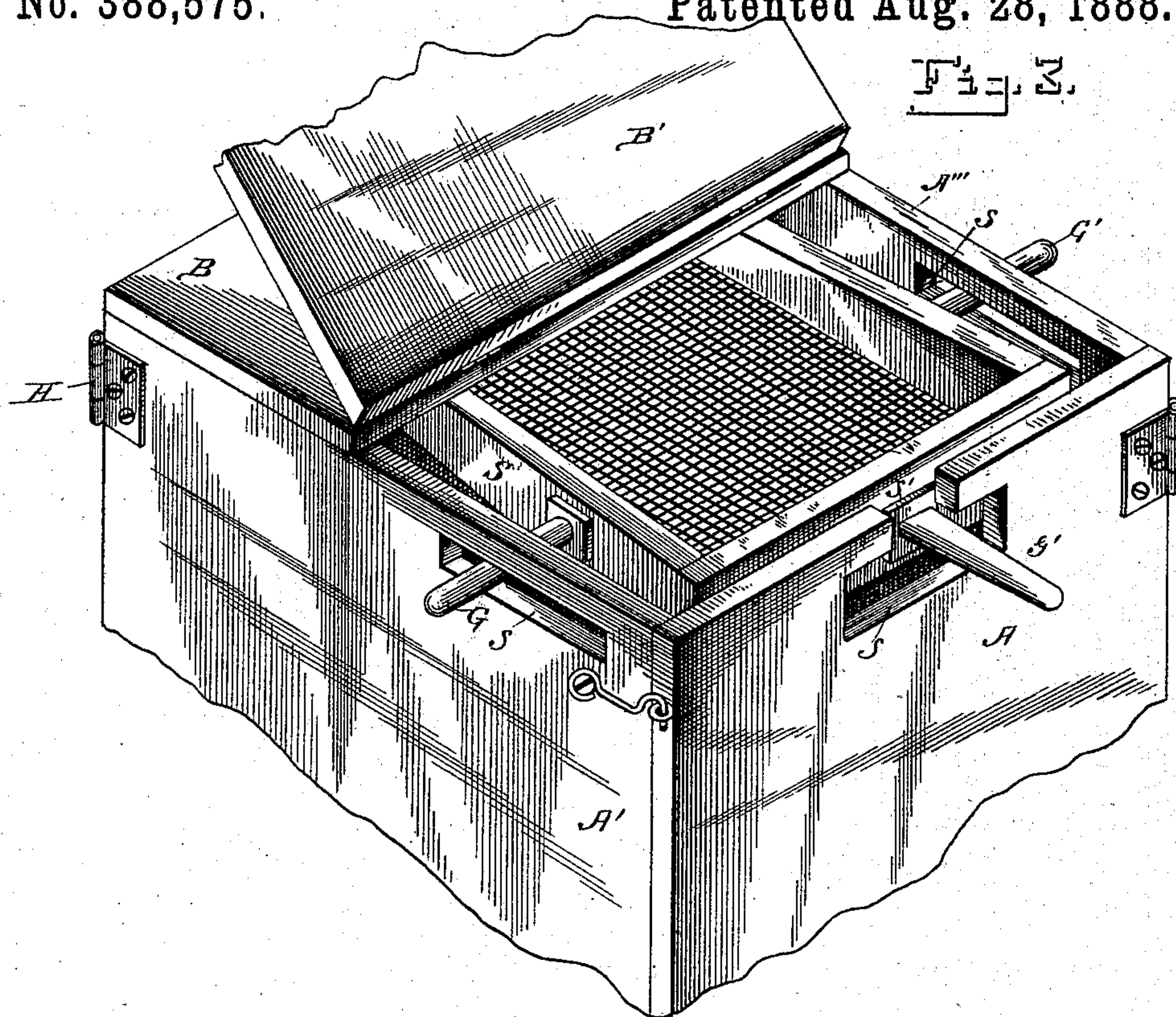
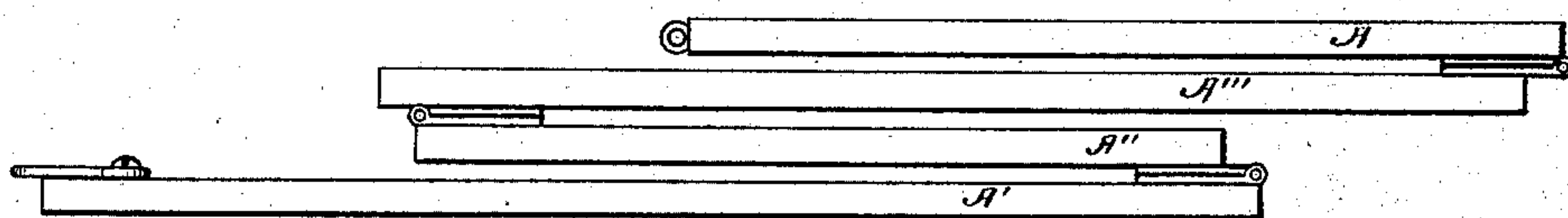


Fig. 4.



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UNITED STATES PATENT OFFICE.

LEWIS M. NIXDORFF, OF FREDERICK, MARYLAND.

SIFTER.

SPECIFICATION forming part of Letters Patent No. 388,575, dated August 28, 1888.

Application filed June 14, 1887. Serial No. 241,281. (No model.)

To all whom it may concern:

Be it known that I, LEWIS M. NIXDORFF, a resident of Frederick, in the county of Frederick and State of Maryland, have invented certain new and useful Improvements in Sifters; 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 pertains to make and use the same.

My invention relates to improvements in coal-sifters, and is fully described and explained in this specification, and shown in the accompanying drawings, in which—

Figure 1 is a vertical section of the entire sifter, the plane of section being passed through the line $x x$, Fig. 2. Fig. 2 is a top plan of the sifter, the top or cover being removed. Fig. 3 is a perspective view of the upper part of the sifter, the cover being raised; and Fig. 4 is a view of the sides of the sifter-box folded together and ready for shipment.

In these views $A A' A'' A'''$ are the four sides of a bottomless box constituting the frame and support of the sifter, and $B B'$ are the two parts of the cover thereof, the part B being permanently fastened, by means of screws or otherwise, to the sides, and the part B' being hinged to the part B so as to be readily opened or closed. The sides of the box may be fastened together in any desired manner; but I prefer to connect them by means of hinges $H H' H''$, placed at three of the vertical angles of the box, and by suitable hooks and eyes, H''' , placed at the fourth angle. By the use of these hooks, arranged as illustrated in Fig. 2, the sides of the box may be folded together in the manner shown in Fig. 4, forming a flat package, to which the top $B B'$ may be added, the whole being in convenient shape for shipment, and much less bulky than the box would be if its parts were rigidly fastened together before shipment. Within the box is a sieve, S , having an inclined bottom, S' , of wire-cloth or perforated metal, and provided with a rim extending about three of its sides, but leaving its front end open. The sieve is provided with two gudgeons, $G G$, projecting from its opposite sides, and with a handle, G' , projecting from its rear end, and these gudgeons and handle rest in horizontal slots s in the three corresponding sides of the box. The rear end of

the inclined bottom of the sieve is lower than the front end, and the gudgeons $G G$ are so placed that the rear end of the sieve is heavier than the front end, so that coal or mixed coal and ashes placed in the sieve remain at the rear end thereof so long as the handle G' rests on the bottom of the horizontal slots in the side A of the box. The sieve is operated by imparting to it by means of the handle G' a reciprocal rotary motion, the length of the slots s being sufficient to allow the necessary motion of the handle G' and the gudgeons G . By this oscillating motion of the sieve the ashes and other finer particles placed in the sieve pass through the bottom S' , leaving only the coal and other large bodies in the sieve. When the sifting is completed, the sieve is pushed forward until each of the gudgeons $G G$ reaches the front end of the slot in which it lies. The cover B is then raised and the handle G' is tilted upward, passing through the vertical slot s' at the center of the slot s in the side A of the box. As the handle G' is raised, the open front end of the sieve S is correspondingly depressed, describing the arc shown in dotted lines in Fig. 1, and striking the upper end of an inclined chute or spout, C , provided with suitable oblique guides, c , by means of which the material escaping at the front end of the sieve is carried downward through the front of the box and into any suitable receptacle arranged to receive it. The chute C may be secured in the box in any desired manner; but I prefer to fasten its upper end by means of hooks and eyes D , which can be readily attached or detached in putting the box together or in taking it apart for shipment.

Having now described and explained my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a sifter, the combination, with a suitable box provided with horizontal slots in three of its sides, of a sieve within the box, projections attached to three sides of the sieve and lying in said horizontal slots, whereby the sieve may be oscillated as described, said box being also provided with a vertical slot from one of the first-mentioned slots to the edges of the box, whereby one of said projections may be raised from its slot to rotate the sieve about the remaining two projections as an axis, substantially as set forth.

2. In a sifter, the combination, with a suit-

able box provided with horizontal slots in three
of its sides and a vertical slot from the edge of
the box to one of said horizontal slots, of a
rearwardly - inclined sieve having an open
5 front, projections passing from the sides of the
sieve through two of said horizontal slots in
two opposite walls of the box, a handle pro-
jecting through the rear wall of the sieve
through the horizontal slot in the correspond-
10 ing box-wall, permitting both horizontal and
vertical motion to the handle, and an inclined

chute adapted to limit the rotation of the sieve
about said projections and to receive its con-
tents when it is so rotated.

In testimony whereof I have signed this 15
specification in the presence of two subscrib-
ing witnesses.

LEWIS M. NIXDORFF.

Witnesses:

EDWIN C. MARKELL,
MARSHALL FOUT.