

No. 696,831.

Patented Apr. 1, 1902.

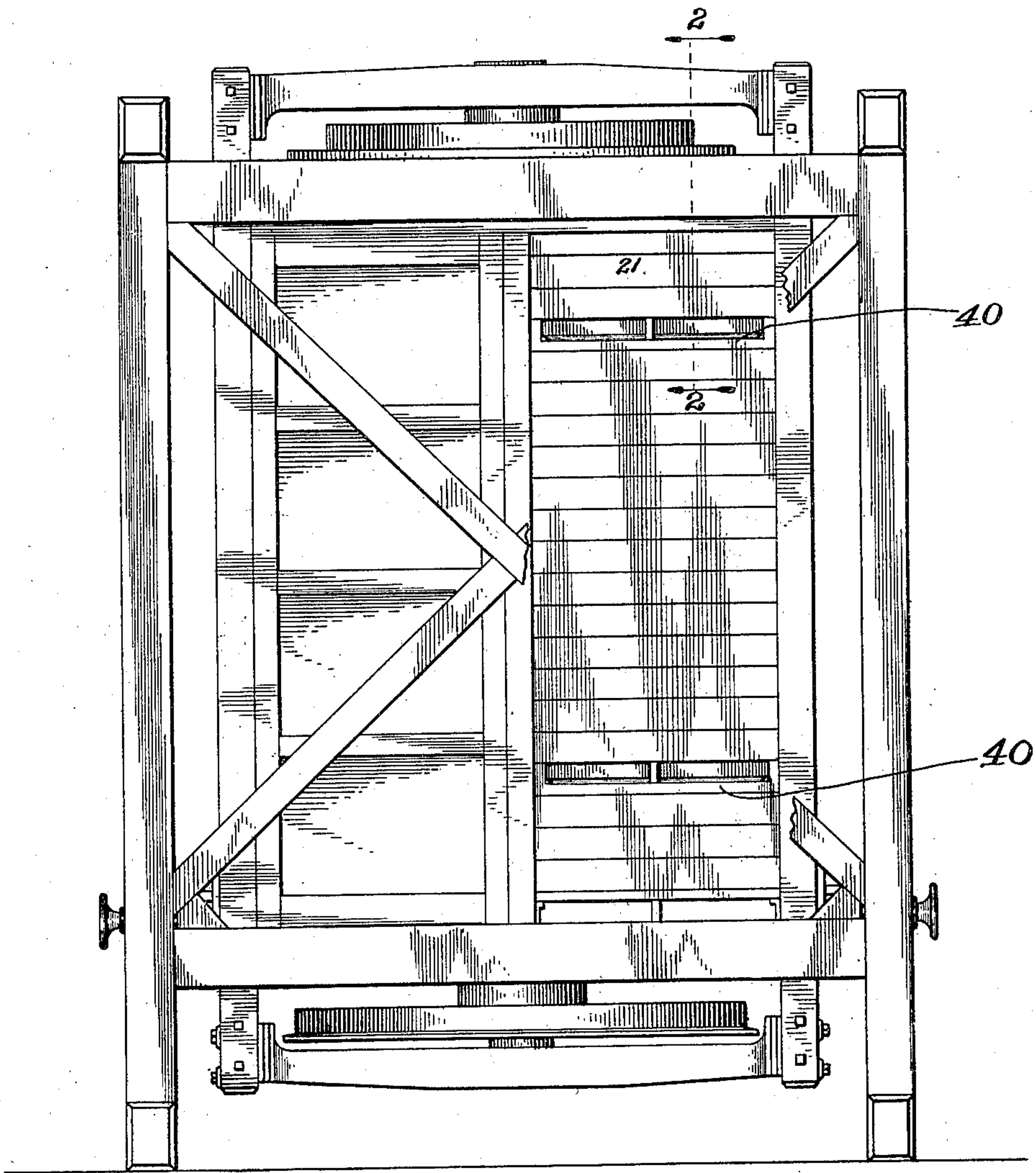
D. W. MARMON.
SEPARATING AND BOLTING MACHINE.

(Application filed Sept. 26, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES:

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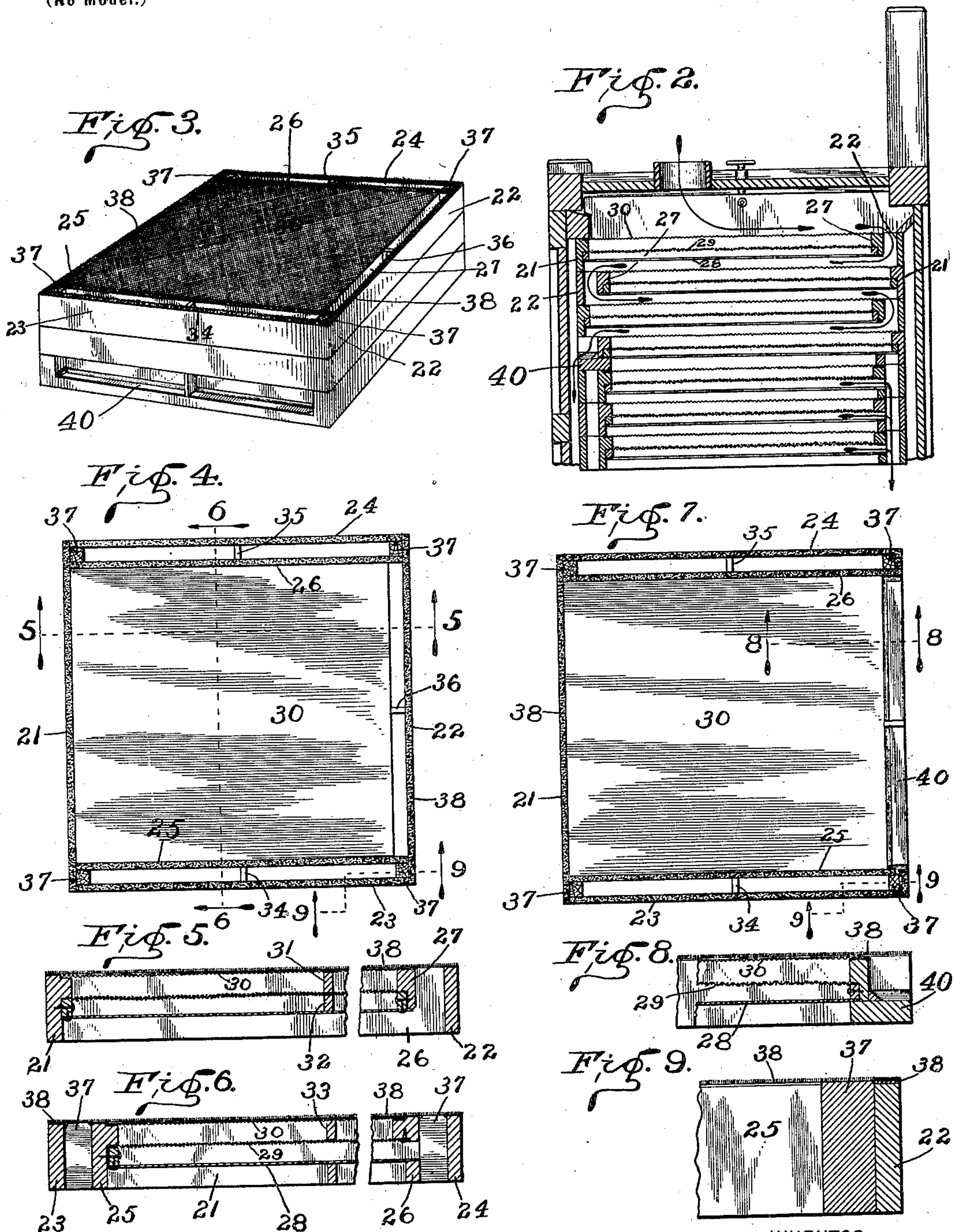
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SEPARATING AND BOLTING MACHINE.

(Application filed Sept. 28, 1901.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL W. MARMON, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO NORDYKE & MARMON COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF INDIANA.

SEPARATING AND BOLTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 696,831, dated April 1, 1902.

Application filed September 26, 1901. Serial No. 76,625. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. MARMON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Separating and Bolting Machines, of which the following is a specification.

My present invention consists in certain improvements in the sieves of the machine shown and described in Letters Patent of the United States No. 651,987, issued June 19, 1900, upon the application of Allen C. Brantingham, whereby I am enabled to embody in the sieves themselves a portion of the egress-passages heretofore formed in the sides or walls of the machine and also whereby I am enabled to render the sieves less subject to relative displacement under the influence of the weather, or, in other words, to substantially eliminate the disadvantages due to shrinking and swelling of the wood of which the sieve-frames are formed.

Said invention will be first fully described and the novel features thereof then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a machine of the character in question, a portion of one side being broken away, exposing one of the sets of sieves; Fig. 2, a vertical sectional view through several of the sieves and the immediately adjacent portions of the machine as seen from the dotted line 2 2 in Fig. 1; Fig. 3, a perspective view of several of the sieves in assembled relation; Fig. 4, a plan view of a sieve of one of the forms embodied in my invention; Figs. 5 and 6, sectional views thereof, on an enlarged scale, as seen from the dotted lines 5 5 and 6 6 in Fig. 4; Fig. 7, a top or plan view of another of the forms of sieve embodied in my invention; Fig. 8, a detail sectional view thereof, on an enlarged scale, as seen from the dotted line 8 8 in Fig. 7; and Fig. 9 a fragmentary sectional view through a sieve-frame corner, on a still further enlarged scale, as seen from the dotted line 9 9 in Fig. 4 or Fig. 7.

The machine, generally speaking, is similar to that shown and described in the Brant-

ingham patent, No. 651,987, above referred to, and will not, therefore, be further described herein except incidentally in describing the invention. In the machine of said patent the vertical passage-ways (into which the stock being treated is discharged from the sieves) were all in the frame or shell of the machine. By means of my improvement only one set of these passage-ways is in the frame or shell of the machine, the other being formed by my peculiar construction of the sieves themselves. As best shown in Figs. 4 and 7, two different forms of these sieves are necessary to enable the performance of all the desired operations. In one of these forms, that shown in Fig. 4, passage-ways are formed on three sides of the sieves. In the other, that shown in Fig. 7, passage-ways are formed on two sides, while on the other side is a turnout-shelf, by means of which that portion of the stock which comes upon that sieve is shunted off and discharged into the corresponding passage-way in the frame or shell of the machine.

In detail, the sieve of which Fig. 4 is a plan is composed of the four outer walls 21, 22, 23, and 24 and three inner walls 25, 26, and 27, with the ordinary imperforate floor 28, the screen-wire floor 29, and the sieving-cloth 30, arranged in the relation to each other shown, the floors and sieving-cloth extending to and covering the space between the outer wall 21 and the inner walls 25, 26, and 27. This leaves passage-ways or channels between the outer wall 23 and the inner wall 25, the outer wall 24 and the inner wall 26, and the outer wall 22 and the inner wall 27, respectively. Intermediate separating and strengthening strips 31, 32, and 33 may or may not be used, as desired. No such strips should be placed immediately below the strip 33 between the floors 28 and 29, as that would interfere with the discharge of the stock from the sieve. Stay-blocks 34, 35, and 36 are placed in the channels or sections of passage-ways between the inner and outer walls opposite the ends of the dividing or partition strips when used. Corner-blocks 37 are placed in the corners of the sieve-frames, between the inner and outer walls, and serve an important purpose, as will be presently more fully stated. The meeting surfaces of the sieves form when assembled substantially air and dust tight

joints, this being accomplished by means of suitable packing-strips 38 applied to one edge of each of the sieve-walls. These packing-strips may be of any suitable material, but are commonly and preferably of felt or plush.

The sieve illustrated in Figs. 7 and 8 is similar to that shown in Figs. 4, 5, and 6, except that at one side it has the turnout-shelf 40, so that said sieve forms a part of one less passage-way than is included in sieves of the other construction.

The method of assembling the sieves in use is illustrated in Fig. 2, where a number of them in various positions are shown. By shifting the positions of the sieves any desired treatment of the stock can be had, as will be readily apparent, and as many as eight different separations may be provided for. Two separations are illustrated in said Fig. 2, one about midway vertically at the left of the figure, where the discharge is into the passage-way formed in the frame or shell of the machine, and the other at the bottom and right of the figure, where one of the forms of discharge within the structure of the sieve itself is shown. The arrangement here illustrated is, however, merely one of the many that may be employed.

The blocks 37 in the corners of the sieve structures are formed of pieces of wood arranged to set on end on each other when the sieves are assembled, thus in effect providing posts extending from the top to the bottom of the pile of sieves, and as wood will shrink but slightly, if at all, endwise the sieves are thus held accurately in place under all conditions of weather, and the disadvantages incident to the shrinking and swelling of wood of which sieve-frames are composed are completely avoided. In order that the advantages of this construction may be fully secured, the blocks 37 are slightly longer than the width of the inner and outer sieve-walls between which they are placed, but not quite so long as the width of said walls and the thickness of the packing-strips added together, so that the compressibility of said strips may be availed of not only for the purpose of making air and dust tight joints, but also to compensate for the variations in the width of the walls, as they shrink and swell slightly under the influence of the weather. The corner-blocks 37 are always permitted to remain in contact and the purpose stated accomplished.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a separating and bolting machine, of a series of sieves having corner-blocks formed of endwise wood slightly longer than the width of the sieve-walls and arranged to rest upon each other when assembled thus forming practically continuous posts from the top to the bottom of the set of sieves, said sieves being each provided with elastic compressible packing-strips filling the interstices between the sieves when assembled and rendering the assembled structure substantially air and dust tight at the sides, substantially as shown and described.

2. The combination, in a separating and bolting machine, with the frame or shell, of a series of sieves mounted therein each sieve having inner and outer walls arranged near each other at sides thereof, the spaces between the inner and outer walls forming passage-ways for the discharge of the stock being treated, said sieves being equal in length and width and reversible in position whereby passage-ways at any of the various sides and of a length equal to the thickness of any desired number of sieves may be provided, substantially as set forth.

3. The combination, in a separating and bolting machine, of a series of sieves of equal length and width, each of said sieves having duplex walls along certain of their sides, and each sieve being shiftable in respect to the others, whereby passage-ways at any of the various sides, and within the sieve structures, may be variably provided, substantially as set forth.

4. The combination, in a separating and bolting machine, of the frame or shell, and a series of sieves mounted therein, said sieves having double walls with passage-ways between, and certain of said sieves having turnout-shelves whereby the stock may be discharged either through the passage-ways in the sieve structures or out into passage-ways in the frame or shell of the machine, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 23d day of September, A. D. 1901.

DANIEL W. MARMON. [L. S.]

Witnesses:

CHESTER BRADFORD,
L. H. COLVIN.