

(No Model.)

3 Sheets—Sheet 1.

J. ARTHUR.
THEATRICAL APPLIANCE.

No. 438,978.

Patented Oct. 21, 1890.

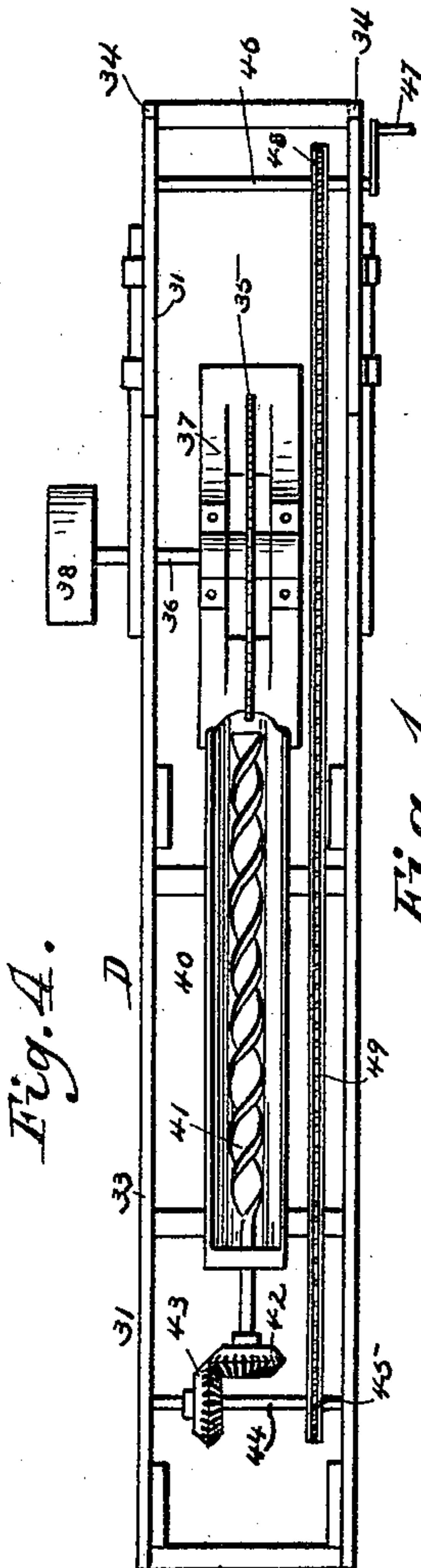


Fig. 1.

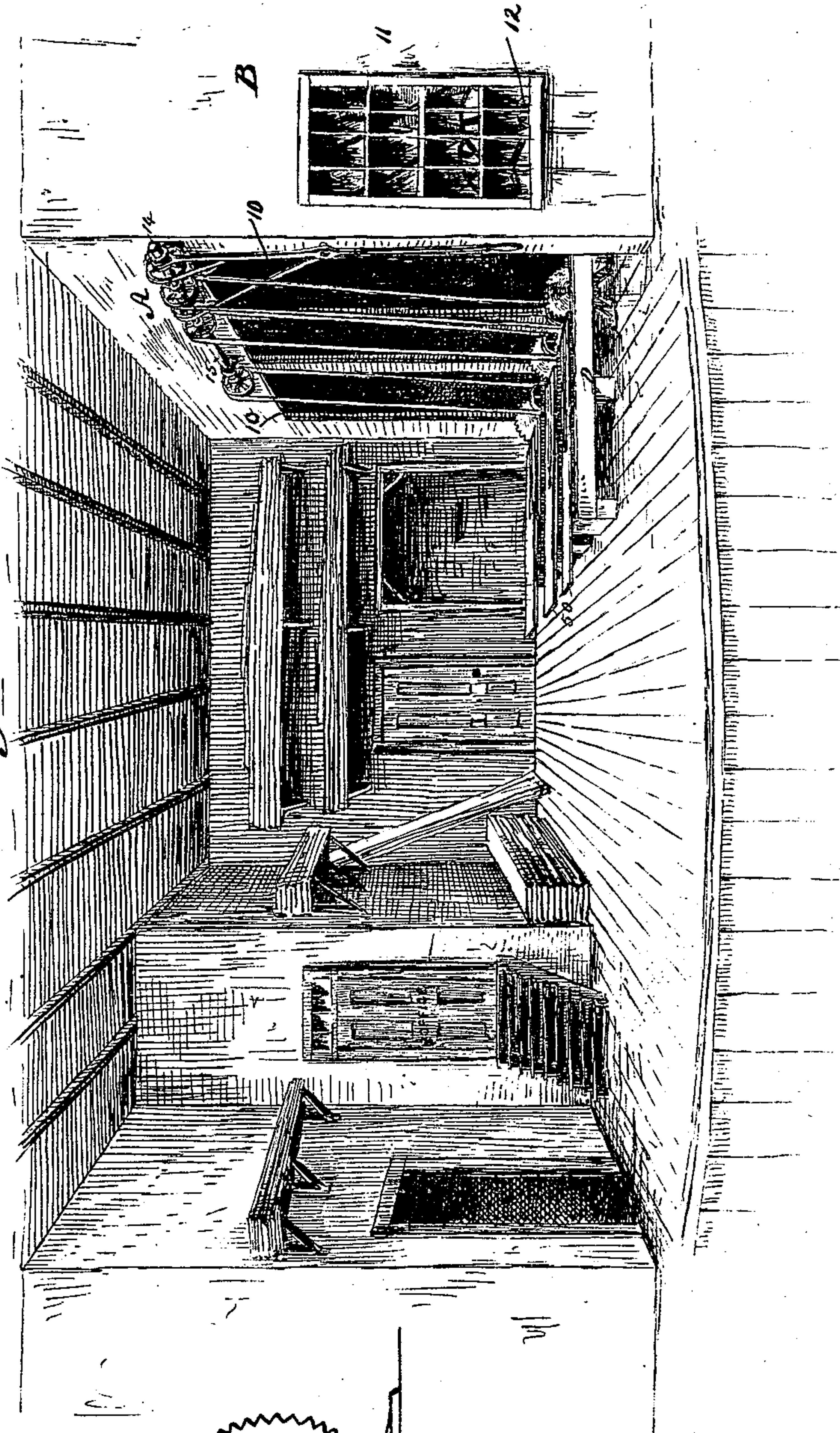
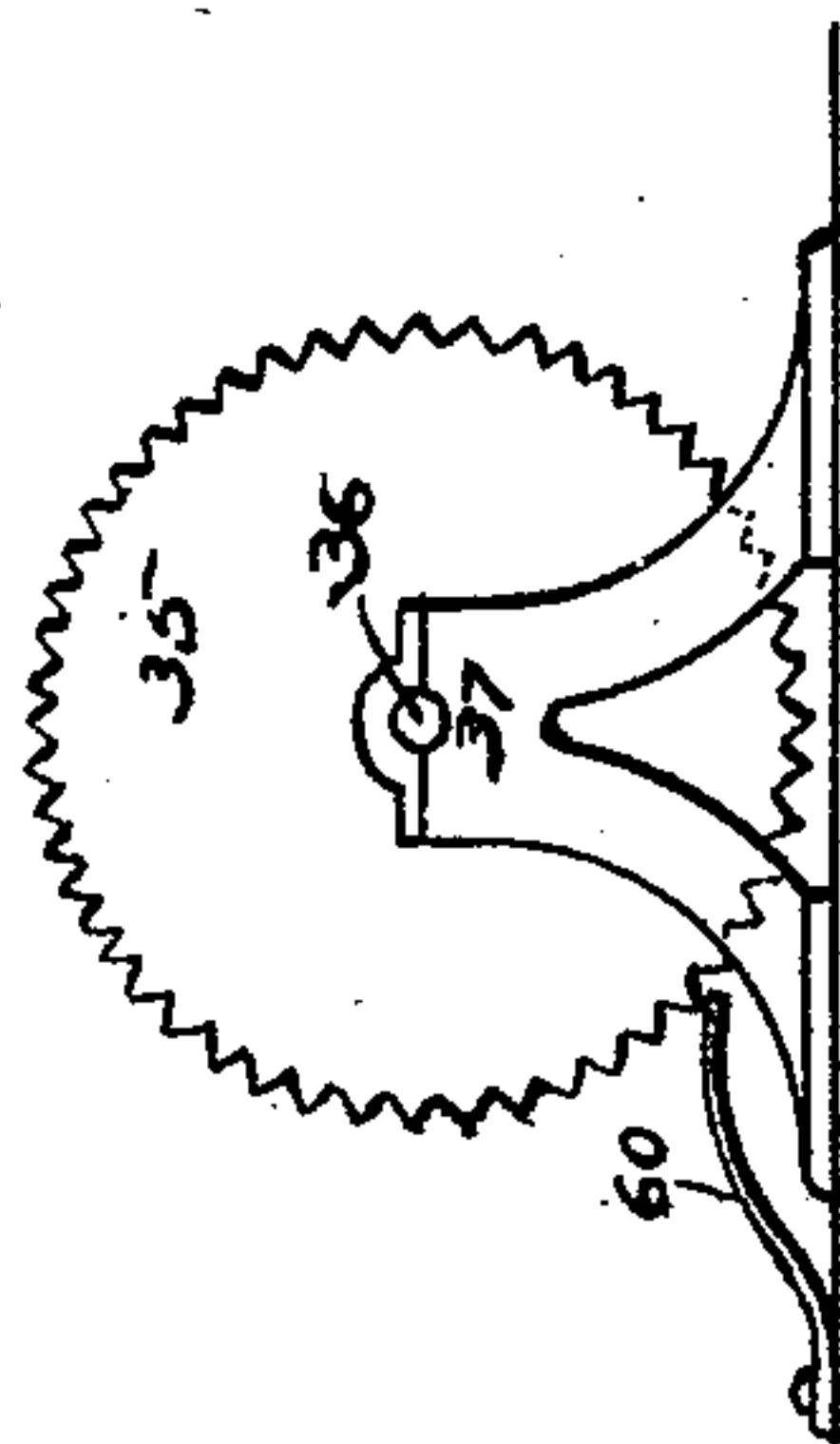


Fig. 9.



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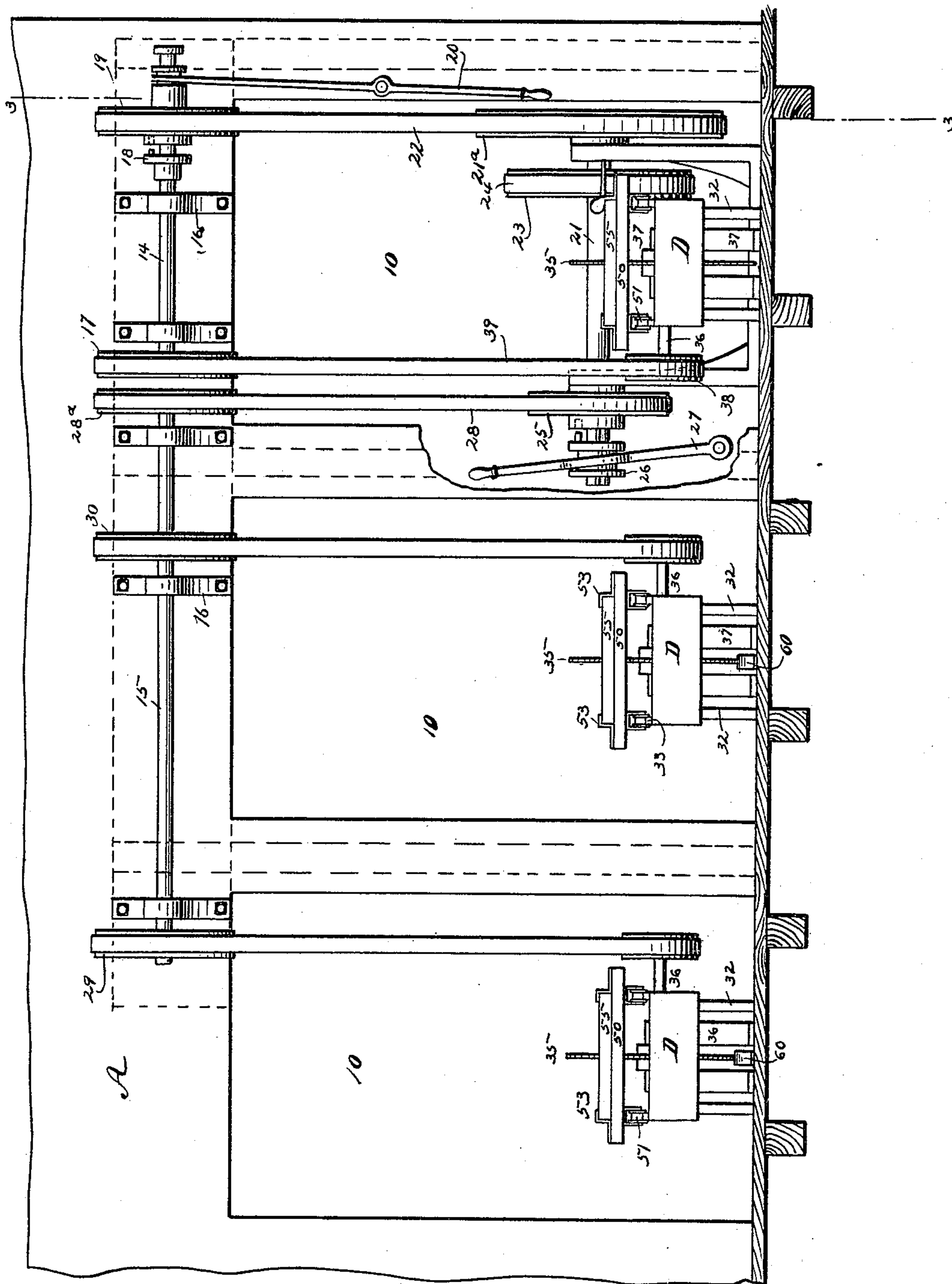
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Fig. 2.

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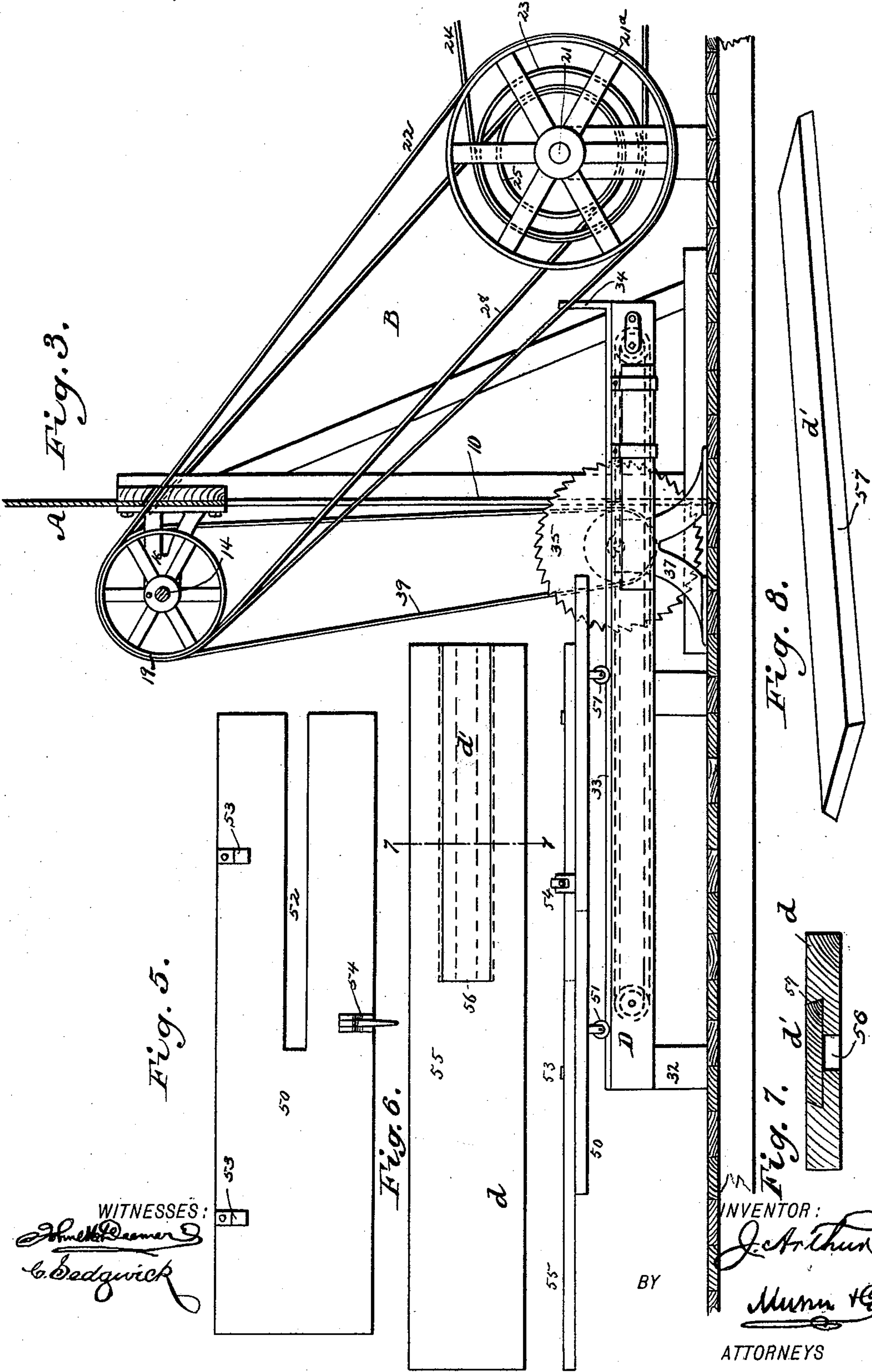
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J. ARTHUR.
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No. 438,978.

Patented Oct. 21, 1890.



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UNITED STATES PATENT OFFICE.

JOSEPH ARTHUR, OF NEW YORK, N. Y.

THEATRICAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 438,978, dated October 21, 1890.

Application filed March 28, 1890. Serial No. 345,776. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ARTHUR, of the city of New York, in the county and State of New York, have invented new and Improved
5 Theatrical Appliances, of which the following is a full, clear, and exact description.

My invention relates to theatrical appliances, and has for its object to produce a scene representing the interior of a saw or
10 planing mill and operative machinery adapted to impart to the scene a realistic effect.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter more fully de-
15 scribed, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of refer-
20 ence indicate corresponding parts in all the views.

Figure 1 represents the scene as viewed from the front of the stage. Fig. 2 is an enlarged elevation of one side of the scene, illustrating the mechanism in front elevation.
25 Fig. 3 is a vertical section on line 3 3 of Fig. 2. Fig. 4 is a plan view of the machine-bed with the table removed. Fig. 5 is a plan view of the table adapted to travel upon the bed of the machine. Fig. 6 is a plan view of a
30 board adapted to be clamped upon the table. Fig. 7 is a transverse section on line 7 7 of Fig. 6. Fig. 8 is a perspective view of the board to be operated upon, and Fig. 9 is a side elevation of the mock saw and the device employed in connection therewith to produce a
35 noise like sawing as the saw revolves.

The scene (shown substantially complete in Fig. 1) is a box-setting representing the interior of a saw or planing mill. The ceiling or
40 roof, including the rafters, is visible, and likewise the office and other doors, and upon the wall sundry shelves are constructed, upon which cut or uncut boards, or both, are piled, while at various points about the room piles
45 of loose pieces of timber are visible. In one side wall A, for instance, one or more (preferably three) openings or arches 10 are produced, which afford a view of an adjoining room or annex B, the side wall 11 of which
50 contains a window 12 or other opening, rendering the interior of the annex visible. In the annex the power is located, which con-

sists, preferably, of a motor driven either by steam, electricity, hand, or through the medium of animals or water. The motor, when
55 a steam or electric motor, is so located that it may be plainly seen by the audience through the window 12. Above the openings or arches 10 within the main room or chamber preferably two lines of horizontal counter-shafting
60 14 and 15 are held to revolve in suitable bearings or hangers 16, as shown in Fig. 2, the shafting 14 being of sufficient length to cross the opening nearest the audience, and the other shafting is made long enough to drive
65 any mechanism that may be placed in the adjoining openings.

Upon the inner end of the shaft 14 a pulley 17 is securely fastened, and near the outer end—the end nearest the audience—a clutch-
70 collar 18 is attached to the shaft, and in front of the collar a pulley 19 is loosely mounted, having a clutch-surface on its hub capable of engaging with the clutch-collar, the said pulley being carried in and out of engagement
75 with the collar by a shifting-lever 20 of any approved construction.

Within the annex, at the rear of the first opening or arch 10, the main drive-shaft 21 is located, as best shown in Fig. 3, upon which
80 is keyed a large pulley 21^a, connected by a belt 22 with the shifting-pulley 19, and a second smaller pulley 23, connected by a belt 24 with the motor, the largest pulley being at the outer end of the shaft and the drive-pulley
85 near thereto. Near the inner end of the drive-shaft another pulley 25 is loosely mounted, containing a clutch-face adapted for engagement with a clutch-sleeve 26, loosely splined upon the shaft, the said sleeve being
90 manipulated through the medium of a shifting lever 27, as shown in Fig. 2. The pulley 25 is connected by a belt 28 with a pulley 28^a, fast upon the outer end of the counter-shaft 15, which at its other end has secured thereto
95 another pulley 29 and a third pulley 30 intermediate of its ends.

At each arch or opening 10 a saw, planer, or other analogous machine is placed, a saw being illustrated in the drawings. The saw-
100 bed D consists, preferably, of a box-like frame 31, which is made in two or more sections, as shown in Fig. 4, for purposes of transportation, the said bed being open at top and bot-

tom, supported by legs 32, and provided with upper side rails 33, which may be substituted by grooves, if desired.

The rails or tracks are upturned at their rear ends to form stops or buffers 34; but other forms of stops may be employed.

Preferably at the rear of the center of the bed a saw 35 is secured to a suitable shaft 36, mounted in bearings 37, projecting upward within the bed. The saw-shaft is carried through one side of the bed and provided with a pulley 38, which is connected by a belt 39 with the inner pulley 17 of the counter-shaft 14. Within the bed in front of the saw is a sawdust-feeding device, preferably consisting of a horizontally-supported trough 40, containing a feed-screw 41, having attached at its outer end a bevel-pinion 42, which meshes with a similar pinion 43, secured to a shaft 44 near the front of the bed. The said shaft has also attached thereto a sprocket-wheel 45, and at the rear of the bed, which in practice is behind the scenes, another shaft 46 is journaled, provided with a crank-arm 47 and a sprocket-wheel 48, the sprocket-wheels 45 and 48 of the two bed-shafts being connected by a chain belt 49. Thus when the saw is revolved the shaft 46 may be revolved by hand, and, a quantity of sawdust having been previously placed in the trough, the sawdust will be supplied through the medium of the screw 41 to the saw, as the board cut is very thin.

In connection with the bed a table 50 is employed, having rollers 51 secured to its under face at each side to travel upon the tracks 33 of the bed. The end of the table nearest the saw is provided with a central longitudinal opening or slot 52 of sufficient width and length to enable the table to pass rearward to a contact with the buffers 34, which limit its rearward movement without the saw being brought in contact with the table, and upon one side of the table at the upper face guide-cleats 53 are fastened, while upon the opposite side of the machine at the top one or more clamps 54 of any approved construction are attached. The table is adapted to support and carry forward the plank 55 to be cut. The plank 55, which is to be secured to the table, consists of a main section d and a removable or auxiliary section d' . The main section or body of the plank d may be nicely planed and is adapted for permanent use, being of a width sufficient to pass beneath the cleats and be held upon the table by the clamps and of a length sufficient for practical purposes. This body-section d of the plank or board, as shown in the cross-section, Fig. 7, is provided at its inner end with a slot or opening 56, corresponding in size and location with the opening 52 of the table, and the upper face of the section d at the slotted end and at each side of the slot 56 is provided with a dovetail recess, into which the strip of board or section d' neatly fits, the said section or board to be cut being provided with dove-

tail side edges 57, as illustrated in Figs. 7 and 8. Thus when the saw is in operation and the table is carried forward the thin slab or auxiliary section d' only of the board is cut by the saw, while to the audience it appears that the solid board is being operated upon. The cut section after the performance may be removed and another uncut section substituted. This form of board avoids the necessity of carrying a number of nicely-planed boards to be placed upon the machine, and also economizes in the cost of the lumber destroyed.

I desire it to be distinctly understood that various modifications may be made in the machinery above described without departing from the spirit of the invention—as, for instance, the counter-shafting may continue across the openings as one shaft, and other like mechanical substitutes may be adopted.

I further desire it to be understood that but one operative machine may be employed, and when such is the case that machine is located nearest the audience, and the saws of the other machines, which are dummies and are so illustrated in the drawings, are the only parts revolved; but as these saws are not intended to actually cut any lumber, and yet pass through the lumber and seem to cut, it is necessary that the noise emanating from working saws shall be counterfeited to some extent, and this is accomplished by the mechanism shown in Fig. 9—that is, a spring 60 is attached to the floor or stage at one end, the other end being upwardly curved and brought in contact with the saw. Thus as the saw is revolved the teeth of the saw, constantly contacting with the spring, will cause a sound to be produced somewhat in imitation of that heard in a saw-mill.

Having thus described my invention; I claim as new and desire to secure by Letters Patent—

1. A theatrical appliance comprising a cutting-tool, a table for supporting and delivering the material to the tool, and a device for supplying independently to the tool waste material of the character similar to that which the tool cuts or is supposed to cut, substantially as described.

2. A theatrical appliance comprising a saw, a slotted and sliding table, a slotted board supported upon the table, a thin board fitted into the recess of the main board, and a device for supplying independently sawdust to the saw, substantially as herein shown and described.

3. A theatrical appliance comprising a series of saws, sliding slotted tables, screws for supplying sawdust to the saws, and a spring for engaging the teeth of one or more of the saws, substantially as herein shown and described.

4. In a theatrical appliance, the combination, with a bed and a saw mounted therein, of a sawdust feed-screw mounted in the bed in front of the saw and means for operating

the screw, substantially as described, where-
by provision is made for supplying sawdust
to the saw, as set forth.

5 In a theatrical appliance, the combina-
tion, with a machine-bed and a cutting-tool
attached thereto, of a table held to slide upon
the bed, a plank adapted to be carried by the
table and recessed for the passing of the tool,
and a smaller plank adapted to be cut by the
10 tool and fitted into the said recess of the main
plank, substantially as shown and described.

6. In a theatrical appliance, the combina-
tion, with a sectional machine-bed and a cut-
ting-tool attached thereto, of a table held to
15 slide upon the bed, a plank adapted to be car-

ried by the table and recessed to pass the tool,
a smaller plank adapted to be cut by the tool
and fitted into the recess of the main plank,
and means, substantially as described, for op-
erating the tool, as and for the purpose speci- 20
fied.

7. In a theatrical appliance, the combina-
tion, with a bed and a saw mounted to revolve
therein, of a spring held to engage the teeth
thereof, substantially as and for the purpose 25
set forth.

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Witnesses:

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