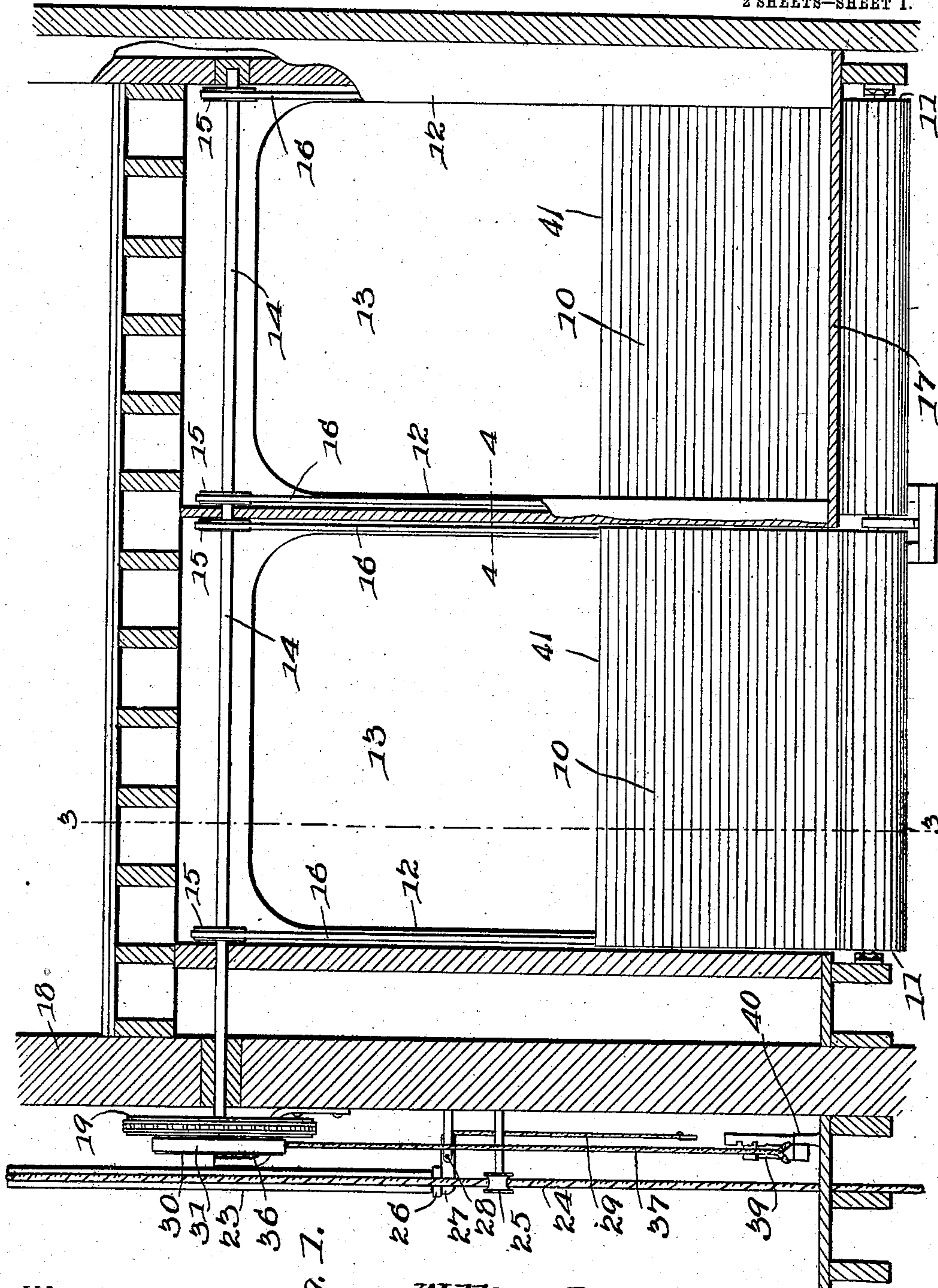


No. 854,963.

PATENTED MAY 28, 1907.

W. L. OSBORN.
CURTAIN OPERATOR.
APPLICATION FILED MAR. 10, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

E. J. Stewart
E. N. Woodward

Fig. 1.

William L. Osborn, INVENTOR.

By

C. A. Snow & Co.

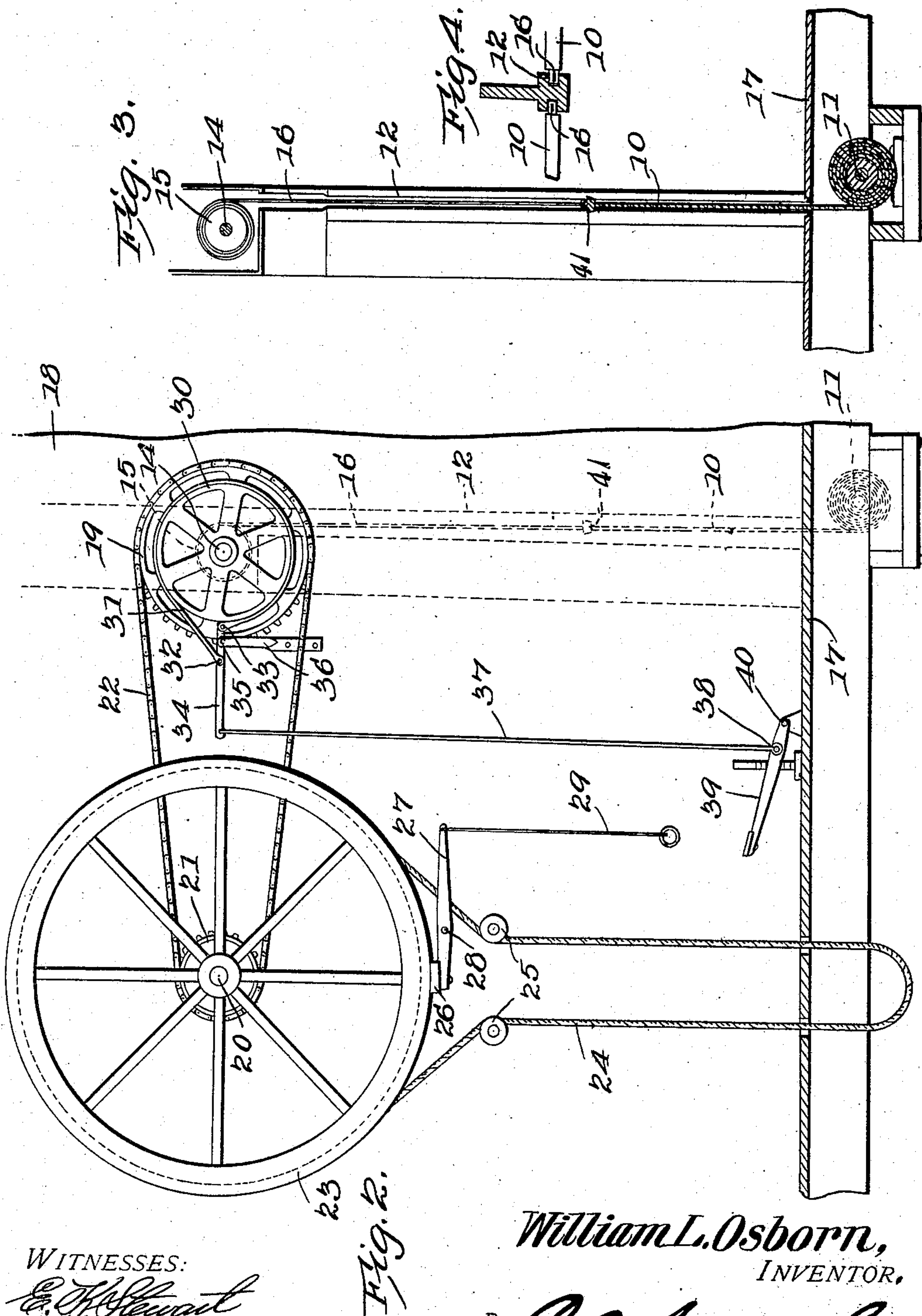
ATTORNEYS

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WITNESSES:
E. J. Stewart
G. W. Woodward

Fig. 2.

William L. Osborn,
INVENTOR.

By

C. A. Snow & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM L. OSBORN, OF YORK, NEBRASKA.

CURTAIN-OPERATOR.

No. 854,963.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed March 10, 1906. Serial No. 305,386.

To all whom it may concern:

Be it known that I, WILLIAM L. OSBORN, a citizen of the United States, residing at York, in the county of York and State of Nebraska, have invented a new and useful Curtain-Operator, of which the following is a specification.

This invention relates to devices employed for operating large curtains or rolling partitions used for dividing rooms in halls, schools, churches, and similar structures, and which may also be employed for handling curtains and stage scenery in theaters and the like, and has for its object to provide a simply constructed and arranged apparatus whereby a plurality of the curtains or partitions may be operated simultaneously.

With this and other objects in view which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction as hereafter fully described and claimed.

In the accompanying drawings forming a part of this specification and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation.

The apparatus is more particularly designed for operating the rolling partitions for curtains employed in churches, school rooms, and similar structures for dividing smaller recitation or class rooms from the larger audience room, and for the purpose of illustration is shown applied to a conventional structure of this character;

Figure 1 is a sectional view of a portion of a building with two of the improved partitions or curtains embodied therein, together with the improved operating mechanism. Fig. 2 is a side elevation of the operating mechanism. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a sectional detail on the line 4—4 of Fig. 1.

The curtains or partitions to which the improved device is applied are formed of slats 10 flexibly coupled to form belts or sheets, and connected at one end to rollers 11, preferably spring operated, of the ordinary form. The construction of the spring mechanism employed in rollers of this character is so well known that it is not necessary to illustrate further. The curtains thus constructed are generally arranged to operate vertically between guides represent-

ed at 12 disposed at the sides of the openings 13 which the curtains are designed to cover.

Mounted for rotation above the openings 13, and preferably concealed within the walls of the building, is a shaft 14 having a plurality of winding drums 15, over which flexible members 16 are arranged to be wound, the flexible members connected respectively to the drums and to the curtains, so that when the shaft is rotated in one direction the flexible members will be wound upon the drums and draw the curtains upward and cover the openings 13, and when the shaft is operated in the opposite direction the curtains will be released and wound upon the rollers 11 by the force of the springs contained therein, in the ordinary manner. The rollers 11 are arranged beneath the floor represented at 17, and the flexible members 16 are concealed by the stops 12, so that when the curtains are in their lowered position the openings 13 are entirely unobstructed.

The upper slat member 41 of the curtains is enlarged and formed to fit the opening in the floor through which the curtain passes, so that when the curtains are in their lowered position the upper slat member will form a closure to the aperture. The sides of the enlarged upper slats 41 are inclined, and are thus caused to closely engage the corresponding apertures in the floor, so that when the partitions are in their lowered positions no openings will appear in the floor.

Attached to one end of the shaft 14, preferably the end which passes through one of the side walls 18 of the building, is a chain pulley 19, and mounted for rotation upon a shaft 20 and supported upon the wall 18, is a smaller chain pulley 21 connected to the larger chain pulley 19 by a chain 22. Mounted upon the shaft 20 is a large grooved wheel 23, over which an endless cable 24 operates, the cable leading over idler pulleys 25 with its bight extending below the floor 17, as shown. By this arrangement the operator standing upon the floor 17 and drawing downward upon one side of the cable will cause the shaft 20 to be rotated in one direction and transmit its motion to the shaft 14, and thus elevate the curtains through the action of the drums 15 and flexible member 16, and when the operator draws downward upon the other side of the cable 24, the motion will be reversed and the curtains lowered and wound upon their rollers, as before described. The rim of the operating wheel 23, is in flat form,

and a brake shoe 26 is arranged to operate thereon, the brake shoe connected to a lever 27 pivoted at 28 to the wall 18, and operative by a draw rod 29 terminating in convenient position for the person operating the cable 24. By this means the operator can apply a brake power to the wheel 23 to check and control the motion.

Attached to the shaft 14, or to the wheel 19, is a brake rim 30, around which a resilient brake band 31 is passed and connected at its ends 32—33 to a lever 34, the latter in turn pivoted at 35 to a bracket 36 extending from the wall 18. The lever 34 is provided with a pull rod 37 connected at 38 to a lever 39, the latter in turn pivoted at 40 through the floor 17, or other stationary structure. The lever 39 is thus in position to be actuated by the foot of the operator, and when depressed, as will be obvious, will apply the brake band 31 with considerable force to the brake rim 30 and thus check and control the motion of the shaft 14.

The apparatus is simple in construction, can be varied in size and shape to fit various sized curtains or partitions, and thus readily adapted to the sizes of the openings 13 which they are designed to cover. Any number of openings 13 may be thus covered simultaneously, as will be obvious. The flexible members 16, may be of any suitable material, but will preferably be steel tapes or chains.

Having now described my invention, what I claim is:—

The combination with a structure having a floor and walls; of guides within the walls, a spring-controlled roller beneath the floor, said floor having a slot therein registering with the guides, a shaft above the guides, drums thereon above and registering with the guides, a flexible curtain adapted to be wound upon the spring-controlled roller and extending through the slot between the guides, said curtain having an end portion adapted to close the slot and lie flush with the upper surface of the floor, flexible connections between the edges of the curtain and the drums, a power wheel disposed adjacent one end of the shaft, means for transmitting motion therefrom to the shaft, flexible means for facilitating the actuation of the power wheel, guides therefor, a foot-controlled brake device for regulating the rotation of the shaft, and a hand-controlled brake device for regulating the rotation of the power wheel.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM L. OSBORN.

Witnesses:

H. E. BELCHER,
A. J. MARTIN.