

L. M. STEARNS.
LOCKING DEVICE FOR SHELVES.
APPLICATION FILED MAR. 18, 1909.

929,723.

Patented Aug. 3, 1909.

FIG. 1

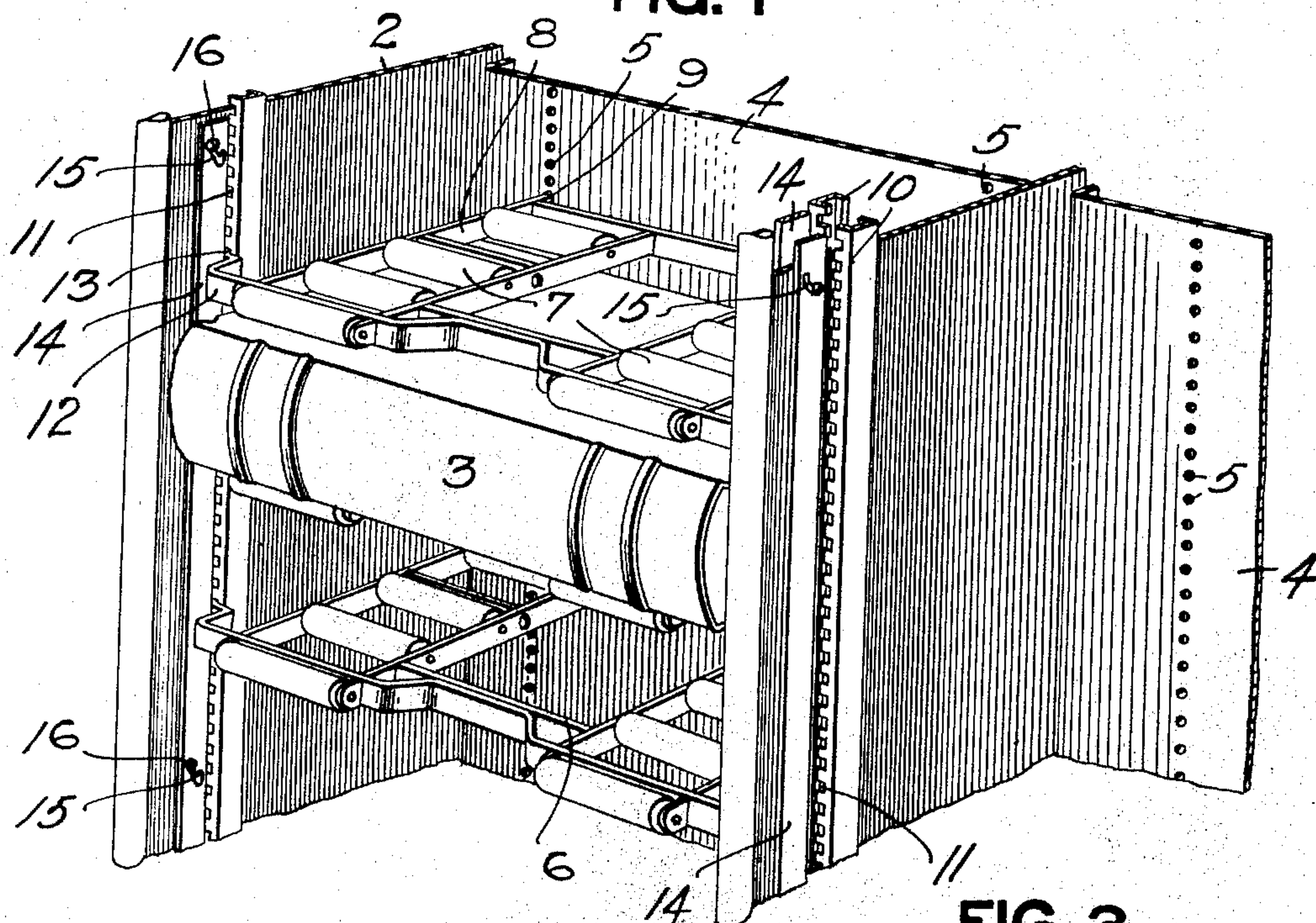


FIG. 3

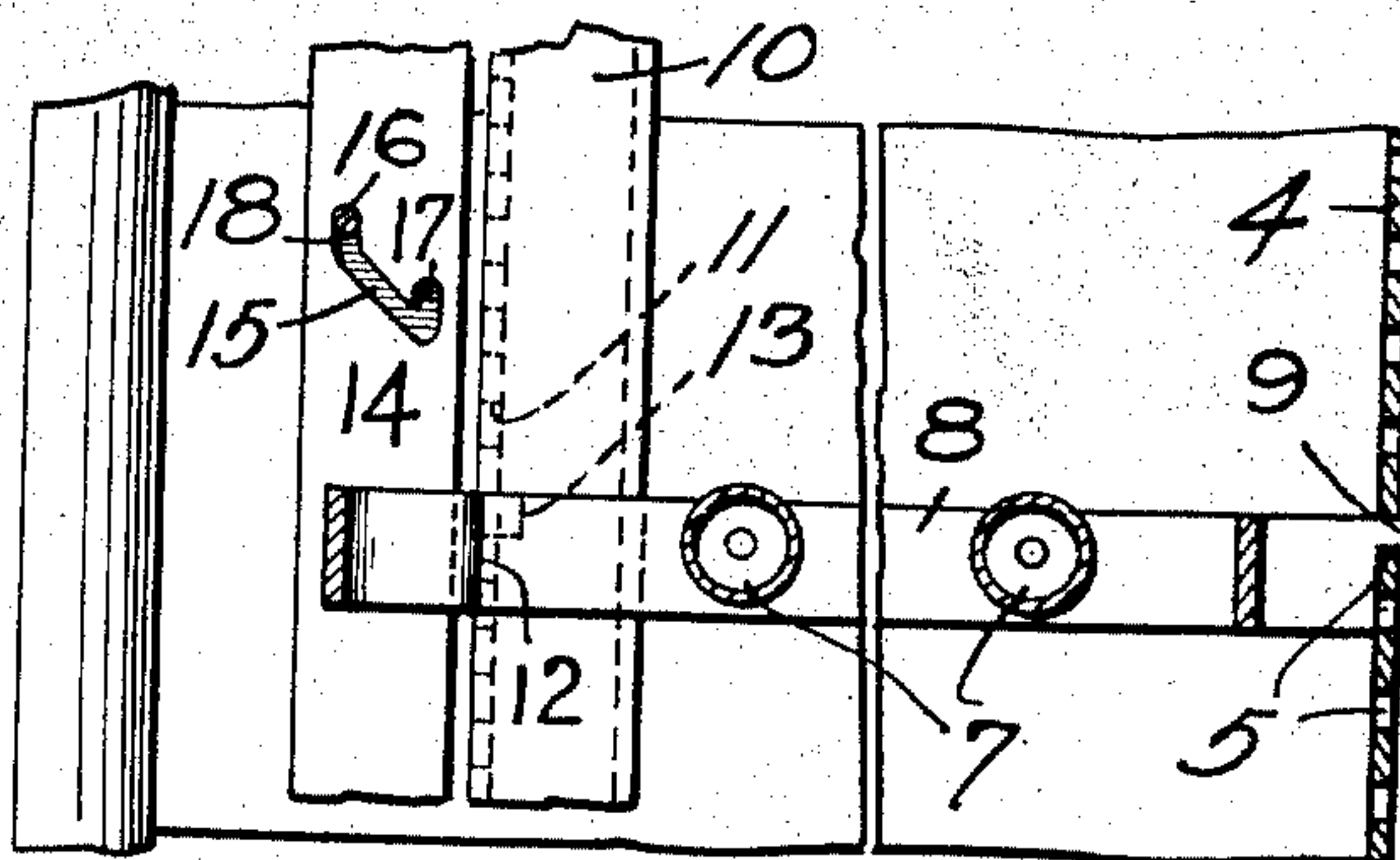


FIG. 4

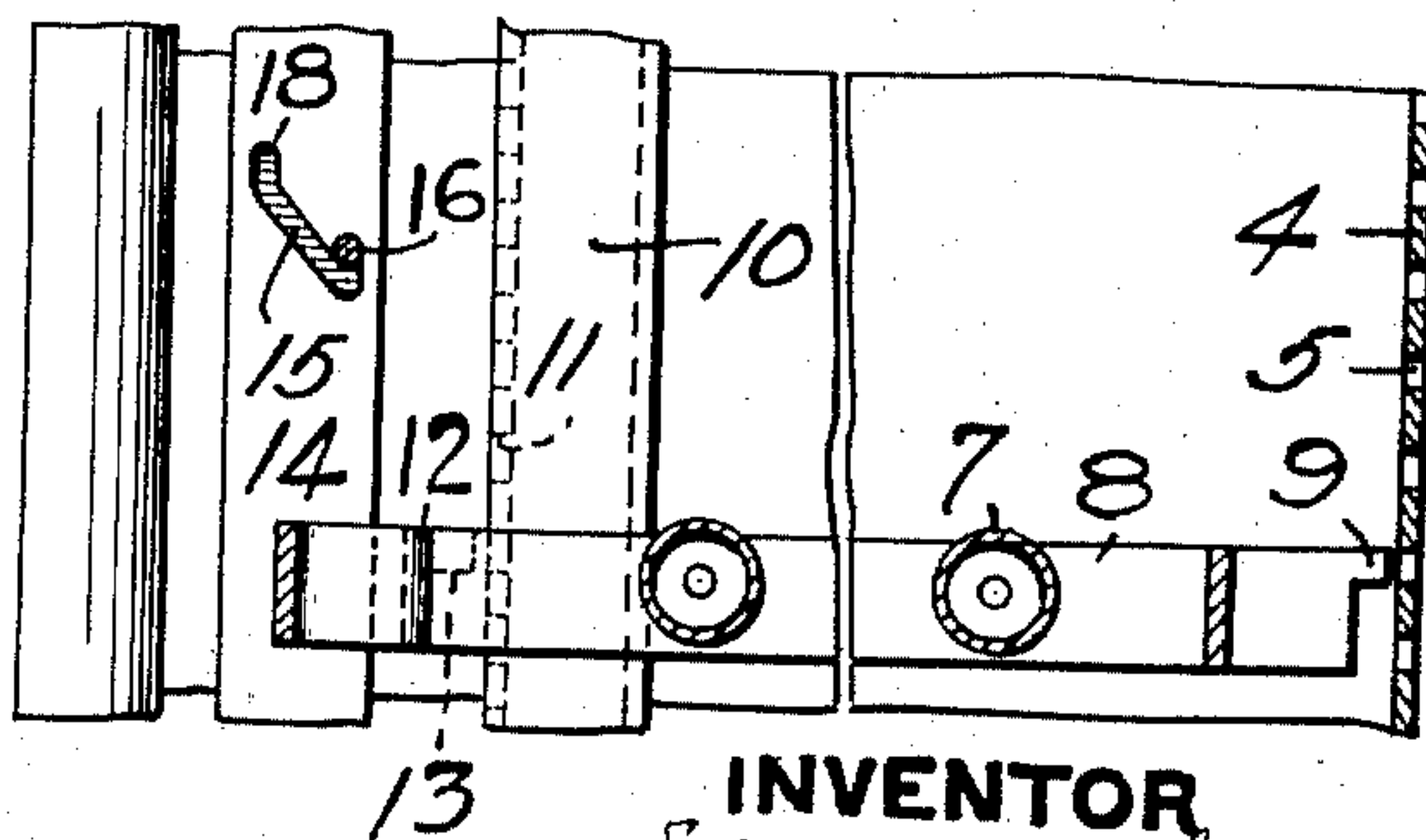
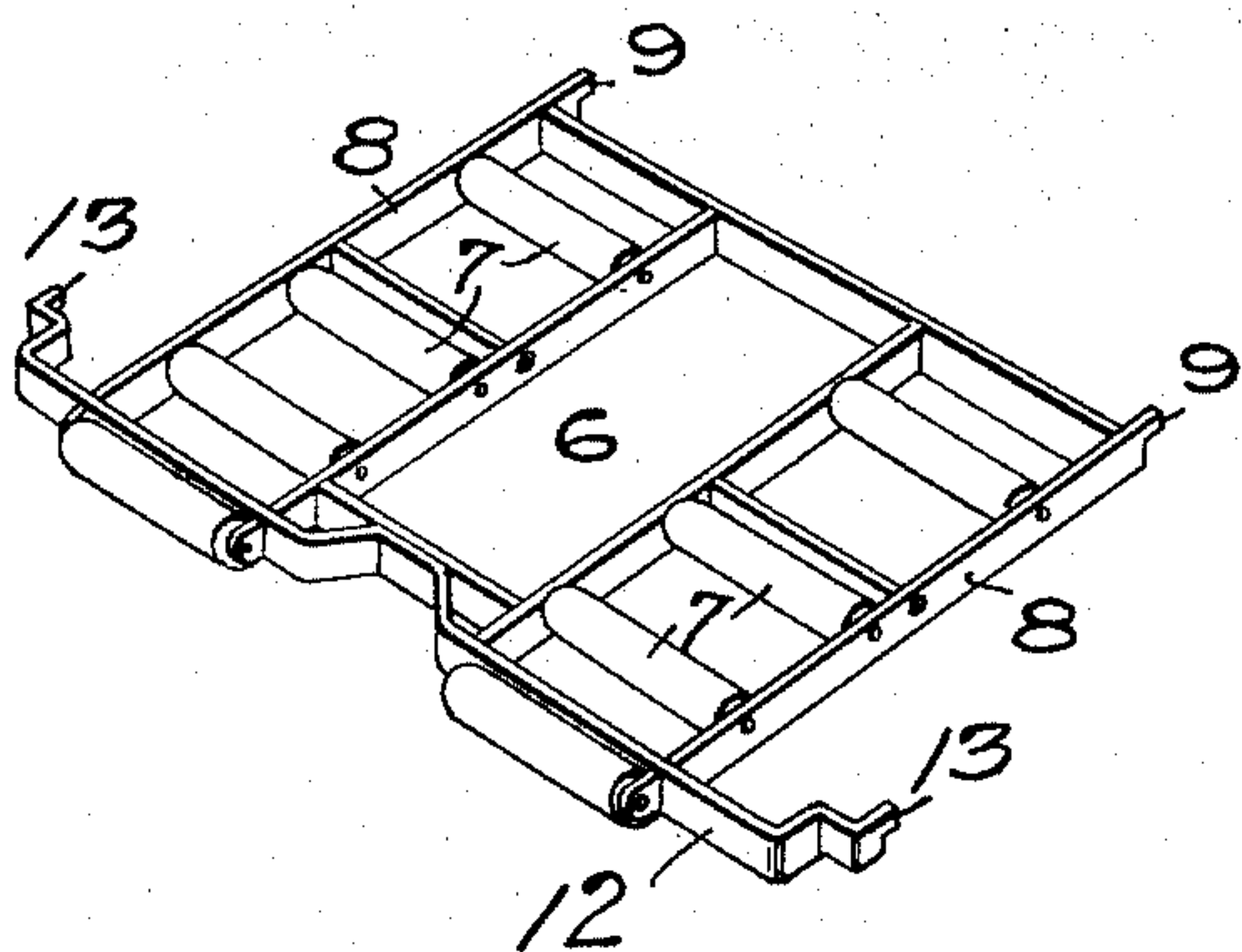


FIG. 2



WITNESSES.

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UNITED STATES PATENT OFFICE.

LINCOLN M. STEARNS, OF JAMESTOWN, NEW YORK, ASSIGNOR TO ART METAL CONSTRUCTION COMPANY, OF JAMESTOWN, NEW YORK, A CORPORATION OF NEW YORK.

LOCKING DEVICE FOR SHELVES.

No. 929,723.

Specification of Letters Patent.

Patented Aug. 3, 1909.

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To all whom it may concern:

Be it known that I, LINCOLN M. STEARNS, a resident of Jamestown, in the county of Chautauqua and State of New York, have
5 invented a new and useful Improvement in Locking Devices for Shelves; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a locking device
10 for shelves and more especially to shelves such as are employed in connection with book racks where it is desired to adjust the shelves at different heights.

The object of the invention is to provide a
15 locking device for shelves of this character which is simple in construction and which may be readily adjusted into and out of locking position so that when in the unlocked position the shelf may be readily re-
20 moved and adjusted at a different height and again locked securely in position to prevent the displacement of the shelf, due to jars or blows occasioned by the insertion or withdrawal of a book.

To these ends my invention comprises, generally stated, a suitable frame or casing, a removable shelf supported therein, with means for supporting the shelf at different heights in said casing, and a vertically mov-
30 able bar on said casing adapted to lock said shelf in position, said bar in its vertical movement moving toward and from said shelf, whereby said shelf is locked in one position of said bar and capable of being
35 readily removed in the outward position of said bar, all as fully hereinafter set forth and claimed.

Referring to the drawings Figure 1 is a perspective view of a portion of a case with
40 my invention applied thereto; Fig. 2 is a view of the shelf removed; Fig. 3 is an enlarged detail of the locking device when in its locked position; and Fig. 4 is a like view showing it in unlocked position.

In the drawings the numeral 2 designates a suitable case or rack for containing the books 3. The case may be made up of metal plates secured together in the proper man-
50 ner or, if desired, the case may be made from wood. In the rear wall 4 of the case are the apertures 5 arranged at suitable intervals apart to receive the inner ends of the shelves 6. The shelves illustrated are a com-
55 mon form of roller shelf made up of bars or strips of metal secured together with the

rollers 7 journaled therein. The side bars 8 of the shelf are provided with the end portions 9 which are adapted to enter the openings 5. To support the shelves at their
60 outer ends vertical channel bars 10 are secured to the side walls of the case and said channels are provided at suitable intervals with the apertures 11. The front cross bar 12 of the shelf is bent to form the inwardly
65 projecting end portions 13 which are adapted to enter the apertures 11 of the channel bars 10 to support the outer ends of the shelf.

Locking bars 14 have the slots 15 formed therein with which the pins 16 on the inner
70 faces of the side walls of the case engage. It is apparent that one locking bar for each set of shelves would suffice. These slots 15 are inclined and the lower ends of the slots
75 are provided with the recesses 17, while the upper ends of said slots are slightly turned inwardly, as at 18. When the locking bars 14 are in position as indicated in Fig. 3, the
80 pins 16 will be in the upper or inwardly curved portions 18 of the slots and the inner edges of the locking bars will bear against the outer faces of the outer cross bars 12 of the shelves so as to prevent any outward
85 movement on the part of said shelves. In this manner the shelf is held securely in position against outward movement and cannot be displaced in case it is struck by the withdrawal of a book from the shelf below, or from some other cause.

When it is desired to remove a shelf to ad-
90 just it at a different height it is only necessary to move the bar 14 upward, whereupon said bar with the pins 16 traveling in the slots 16 will be moved outwardly, as indi-
95 cated in Fig. 4, and when the bar has been moved to its extreme outward position by lowering the bar slightly the pins will take position up within the recesses 17 of the slots so that the bar is held in its outward posi-
100 tion and the shelf may then be readily removed by drawing it outward so as to disengage the projecting ends 9 and 13 from the apertures 5 and 11 respectively. The space between the bar 14 and the channel
105 bars 10, when the locking bar is withdrawn, will give sufficient space for the free movement of the inwardly projecting ends of the front cross bars 12 of the shelf so that the shelf may be readily moved up and down
110 and inserted in the desired apertures in the

channels 10. When the shelf has been adjusted to its new position and the locking bar 14 is raised slightly and then lowered until the pins 16 occupy their positions in the uppermost parts of the slots 14 the locking bar will be again in its locking position, bearing against the outer cross bars 12 of the shelves and holding the shelves against outward movement.

10 By my invention I provide locking means for the shelves which may be readily moved into and out of locking position without removing any of the parts, the bar 14 when unlocked remaining attached to the case in
15 such a way that all that is required is to move the locking bar slightly in a vertical direction without detaching it in any way from the case.

What I claim is:

20 1. The combination of a suitable case, removable shelves supported therein, shelf supports at different heights on said case, and a laterally movable locking bar adapted to engage said shelves.

25 2. The combination of a suitable case, removable shelves supported therein, shelf supports at different heights on said case, and a locking bar movable up and down in suitable guides and adapted to engage said
30 shelves, said locking bar being movable toward and from said shelves, simultaneously with its up and down movement.

35 3. The combination of a suitable case, removable shelves supported therein, shelf supports at different heights on said case, a locking bar having diagonal slots formed there-

in, and pins or projections on said case adapted to engage said slots and said locking bar adapted to engage said shelves.

40 4. The combination of a suitable case, removable shelves supported therein, shelf supports at different heights on said case, a locking bar having diagonal slots with upwardly extending recesses at the lower ends thereof, and pins on said case engaging said slots
45 and said bar adapted to engage said shelves.

50 5. The combination of a suitable case, a bar having openings therein at different heights, shelves having projecting portions adapted to engage said openings, and a locking bar movable up and down in suitable guides and adapted to engage said shelves to hold the projecting ends thereof in said openings, said locking bar movable toward and from said shelves simultaneously with its
55 up and down movement.

60 6. The combination of a suitable case, channel bars secured thereto, having openings in one of its flanges, shelves having inwardly projecting portions engaging said openings, and a locking bar movable up and down in suitable guides engaging said shelves, said locking bar movable toward and from said shelves simultaneously with
65 its up and down movement.

In testimony whereof, I the said LINCOLN M. STEARNS have hereunto set my hand.

LINCOLN M. STEARNS.

Witnesses:

C. W. STRONG,
L. M. LOMBARD.