(No Model.)

J. A. GUEST.

STORE SHELVING.

No. 274,488. Patented Mar. 27, 1883.

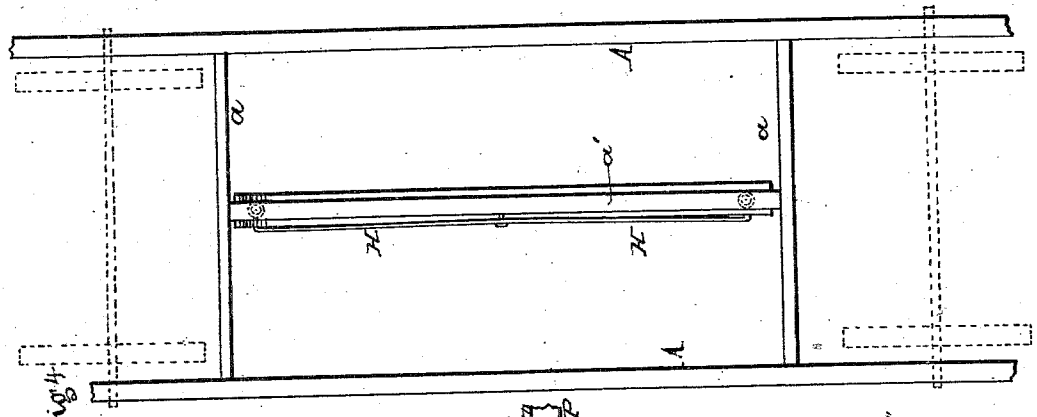


Fig. 4.

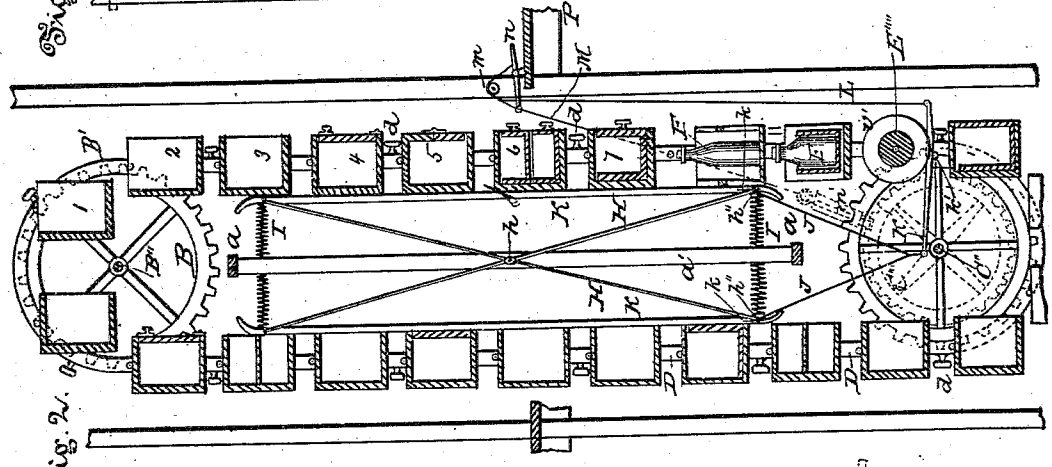


Fig. 2.

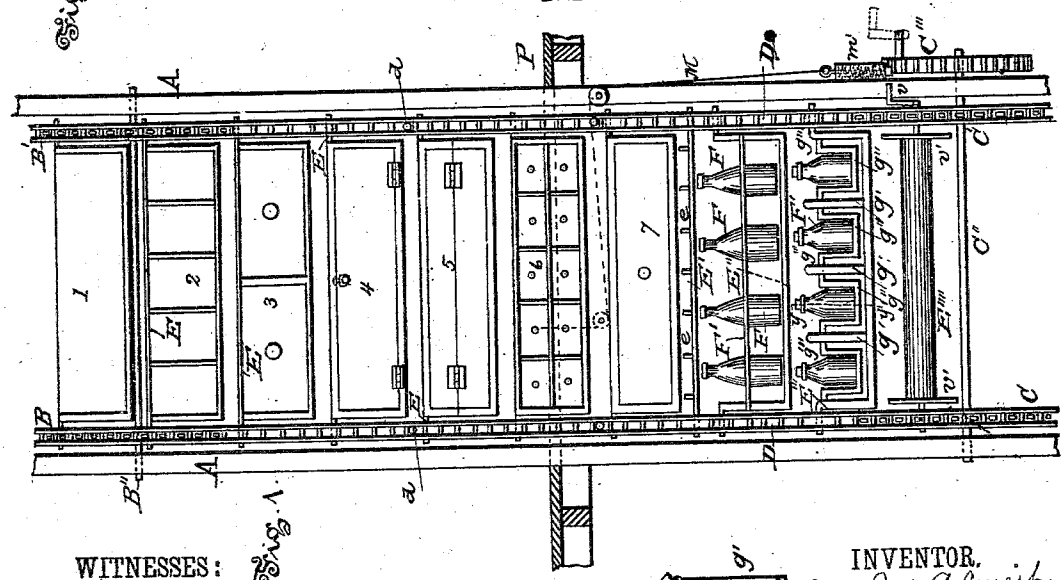


Fig. 1.

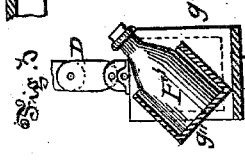


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES A. GUEST, OF BURLINGTON, IOWA.

STORE-SHELVING.

SPECIFICATION forming part of Letters Patent No. 274,488, dated March 27, 1883.

Application filed February 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. GUEST, a citizen of the United States, residing at Burlington, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Store-Shelving; 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to shelving for stores; and it consists in constructions and combinations hereinafter described.

In the accompanying drawings, which illustrate my invention, and in which the similar letters used as marks of reference apply to the like parts in all of the figures, Figure 1 is a front elevation. Fig. 2 is a sectional elevation in the line *x x* in Fig. 1, but only showing a part of the gravitating carriers or cases. Fig. 3 is a sectional elevation in line *y y* in Fig. 1. Fig. 4 is a side elevation of the frame alone.

Referring to the drawings by letters, A A represent vertical frame-bars. B B′ are sprocket-wheels carried on a shaft, B″, which is journaled in the upper part of the frame A; and C C′ are similar wheels, carried on a shaft, C″, which is journaled in the lower part of the frame A. A chain belt, D, extends over and gears with wheels B C, and a similar belt, D, gears with the wheels B′ C′. The shaft C″ is extended, and has a crank-wheel, C‴, on its outer end, by means of which the sprockets C C′ may be rotated to operate the belts D. Small handles *d* project from the belts D, by means of which the belts may also be operated. The belts D are provided with suitable bearings for rods E E′ E″, which are loosely hung in said bearings. Cases and drawers of various kinds—in fact, of any desired kind—may be attached at their upper sides to the rods E, so that the weight of said cases will retain them in proper upright position while they are carried by the belts D entirely around with said belts. I have shown at Fig. 1, suspended from the rods E, at 1, an open shelf; at 2, a series of open cases; at 3, two drawers; at 4, a hinged front side to a case; at 5, a hinged half-side; at 6, two tiers of drawers; at 7, a single drawer. Other classes of drawers or cases may be used, so that any class of goods may be contained therein.

E′ is a rod journaled in the belts, and provided with pins *e*, on which any desired articles may be hung or suspended.

E″ is a rod journaled in the belts, and bent as shown, so as to lower its central part for the reception of bottles F, which are prevented from falling by side rods, F′.

E‴ is a rod journaled in the belts, and bent so that its central or main part is lowered, as shown at Fig. 1. Standards *g′* project upwardly from the rod E‴, and between each pair of standards *g′* a case or crate, *g″*, of any suitable kind, is hinged at *g‴* at its upper side, whereby either case *g″* may be tilted or swung independently of the others, as shown at Fig. 3, in order to facilitate pouring from a bottle, F, contained in said tilted case.

E⁗ is a rod journaled in the belts, with one of its ends projecting and adapted to receive a removable crank, *v*. The rod E⁗ has an annular flange, *v′*, at each end, and carpets or other cloth may be wound onto or from this rod E⁗ when the belts are not moving and the crank *v* is in place on said rod. The crank is removed when the cloth is wound on the rod E⁗, so that it will not interfere with the movement of the belts.

The frame-bars A are connected by bars *a a*, which support a vertical bar, *a′*.

H H are bars crossed at their mid-lengths, where they are journaled on a bolt, *h*, to the bar *a′*.

K K are case or drawer sustainers, located between the two series of cases or drawers, as shown at Fig. 2, and are formed of straight bars, with their ends turned away from the cases, as shown at same figure, to prevent the bars catching on the cases when the belts are moving. The upper ends of the bars K or case-sustainers are connected to the bars H by pivots, and their lower ends by bolts *h″*, which operate in slots *k* in the bars K.

I I are springs located on each side of the bar *a′*, and between it and the bars K, and are adapted to press the bars K from each other and toward the cases.

J is a chain or cord, connected at its end to the bars K, as shown at Fig. 2, and its central part connected to the end of a lever, K′, which

is pivoted at k', and has a cord or chain, L, extending from its other end upward and over a pulley, m, and thence to a connection with a foot-treadle, n. The cord L may pass over pulleys, and thus dispense with the lever K', if preferred. A cord or chain, M, connected with the cord L, extends to and is connected with a spring-pawl, m', which engages (when not drawn back by the cord M) with teeth in the periphery of the crank-wheel C'''. The cord M may extend over the pulley m and connect with the treadle-lever n.

I have shown the device as extending above and below a floor, P, on which the treadle n is mounted. It may extend vertically through only one room, or through any number in a vertical series, and may extend downward into a basement. There may be different series of the complete device, and they may be arranged against or close to the walls, or in the centers or other parts of rooms. When arranged in the centers of rooms, the drawers, cases, and other gravitating receivers may be open at both sides to permit access from either side. They may also be arranged in show-windows or other desired and convenient places.

When it is desired to move the belts, as already described, to bring either case or drawer into reach of the operator, he places his foot on the treadle-lever n, and by pressure thereon draws down on the chain J, and thereby forces the bars K away from the cases, and the same movement of the treadle n also draws on the chain or cord M, and thereby releases the pawl m' from the crank-wheel C''', when the operator may take hold of the handles on the belts and move them as desired and as is necessary to bring any case or drawer convenient to and within easy access thereto by the operator. On releasing the treadle n the spring-pawl will engage with the crank-wheel C''', and thereby hold the belts, and at the same time the springs I will force the bars K outwardly against the cases or drawers, and thereby hold them steady for withdrawal of the drawers or for other purposes.

The rods on which the drawers or cases are suspended may be removably attached to the belts, as shown in Letters Patent No. 270,895, granted to me January 23, A. D. 1883, or in any other desired manner.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a store-shelving, in combination, the endless belts having rods journaled thereto and provided with handles d, for operating said belts, and the gravitating carriers, substantially as and for the purpose specified.

2. In a store-shelving, in combination with endless belts having rods journaled thereto, gravitating cases or drawers connected with said rods, and adapted to operate substantially as and for the purpose specified.

3. In combination with the sprocket-wheels, endless belts, and gravitating carriers, the drawer or case retainer formed of bars K, connected by cross-bars H, and operated by springs I and chain J, connected with a cord, and suitable mechanism to draw thereon, substantially as and for the purpose specified.

4. In combination with the endless belt and gravitating cases journaled thereto, the case-sustainers formed of bars K, operated by any suitable mechanism and adapted to operate by contact with the cases, substantially as and for the purpose specified.

5. In combination with the endless belts and rod E''', journaled thereto and provided with standards g', the case g'', hinged to the standards g', substantially as and for the purpose specified.

6. In combination with the endless belts, the rod E'''', journaled thereto and provided with a removable crank, substantially as and for the purpose specified.

7. In combination with the endless belts having gravitating cases suspended thereon, and the case-sustaining device operated by suitable chains or cords, and a lever or treadle, n, the spring-pawl m', adapted to lock the belts and to be operated by the treadle n, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. GUEST.

Witnesses:
JOHN C. MINTON,
C. A. SCHLICHTER.