

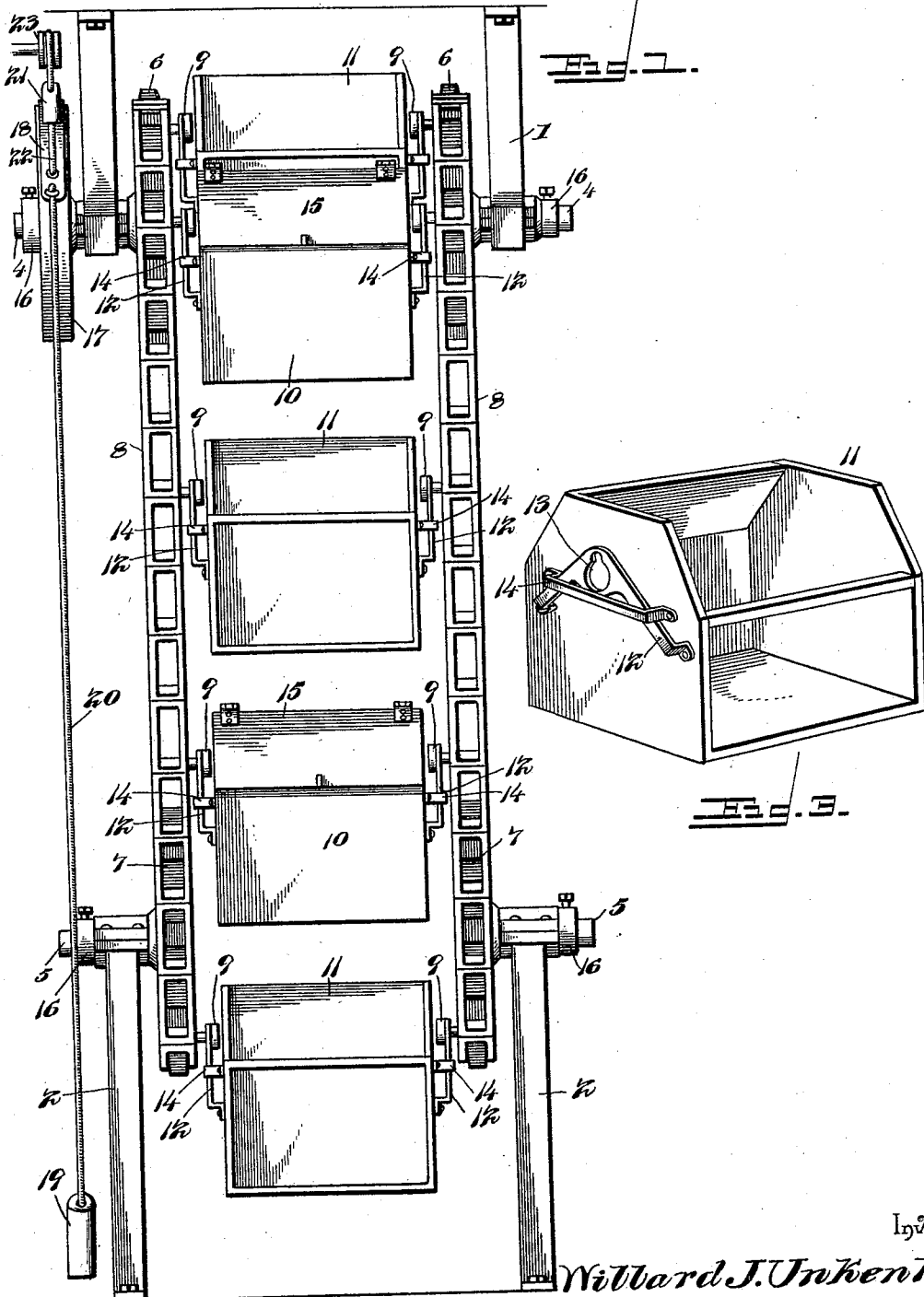
(No Model.)

2 Sheets—Sheet 1.

W. J. UNKENHOLZ.
DISPLAY RACK.

No. 581,049.

Patented Apr. 20, 1897.



Inventor

Willard J. Unkenholz

Witnesses

E. M. Stewart
J. J. Riley

By *W. J. Unkenholz* Attorneys,

C. A. Snow & Co.

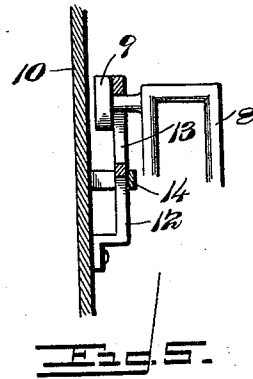
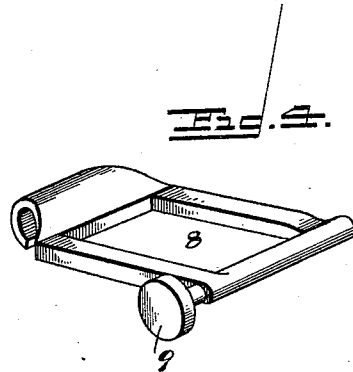
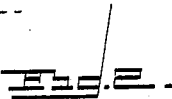
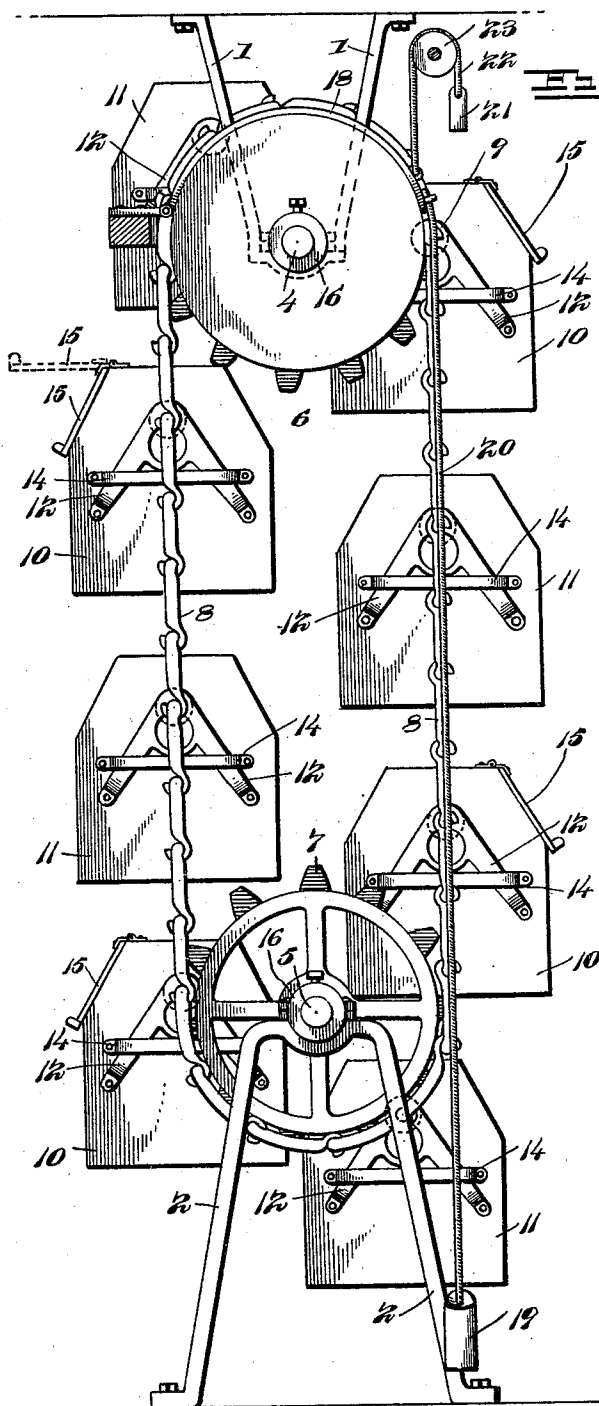
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

WILLARD J. UNKENHOLZ, OF LIVINGSTON MANOR, NEW YORK.

DISPLAY-RACK.

SPECIFICATION forming part of Letters Patent No. 581,049, dated April 20, 1897.

Application filed June 10, 1896. Serial No. 594,984. (No model.)

To all whom it may concern.

Be it known that I, WILLARD J. UNKENHOLZ, a citizen of the United States, residing at Livingston Manor, in the county of Sullivan and State of New York, have invented a new and useful Display-Rack, of which the following is a specification.

The invention relates to improvements in display-racks.

The object of the present invention is to improve the construction of display-racks and to provide one which will be capable of compactly arranging a large amount of merchandise and of enabling the same to be conveniently handled.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a front elevation of a display-rack constructed in accordance with this invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail perspective view of the open receptacle or shelf. Fig. 4 is a detail perspective view of one of the links, showing a headed stud. Fig. 5 is a detail sectional view illustrating the manner of mounting the receptacles on the endless chain.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 and 2 designate upper and lower bearing brackets or hangers adapted to be secured, respectively, to a ceiling and a floor or other suitable supports and having journaled on them upper and lower stub-shafts 4 and 5. The stub-shafts carry upper and lower sprocket-wheels 6 and 7, on which are arranged parallel endless chains 8, composed of substantially rectangular links, which are provided at intervals at their inner edges with headed studs 9, adapted to support receptacles 10 and 11.

The receptacles 10 and 11, which may be open or closed, are provided at opposite sides with substantially inverted-V-shaped hangers or supports 12, secured at the lower ends of their sides to the outer faces of the ends of the receptacles and provided at their apexes with inverted keyhole-slots 13, detachably re-

ceiving the headed studs 9 of the links of the endless sprocket-chains, whereby the receptacles are journaled on the latter. The links are prevented from sagging and becoming accidentally disengaged from the receptacles by transversely-arranged stays or guards 14, extending across the upper portions of the hangers or supports, arranged a short distance below the keyhole-slots and angularly bent at their ends to offset their central portions.

The hangers are adapted to be readily depressed or moved inward when it is desired to remove a receptacle from the display-rack, and the guards or stays 14 also prevent the hangers from springing outward too far.

The closed receptacles or bins 10, which are provided at their fronts with lids 15, are adapted to contain various kinds of merchandise, such as spices, meal, flour, and such material, and the open receptacles or trays are adapted to contain various other kinds of goods, such as canned goods and the like, but the display-rack, besides being adapted for grocery-stores, is also designed to be used in hardware-stores, dry-goods stores, and the like, and the open or closed receptacles may be constructed to adapt them to receive the character of goods designed to be held and displayed.

The stub-shafts are journaled in suitable bearing-boxes, and one of the upper ones and both of the lower ones are provided at the outer ends of the journal-boxes with removable collars 16, which detachably secure the stub-shafts in the bearings. The other one of the upper stub-shafts carries a brake-wheel 17, adapted to be engaged by a curved brake-shoe 18 to lock the receptacles and endless chains against movement in event of their being unequally loaded.

The brake-shoe 18, which is hinged at its back to a suitable support, is held in frictional engagement with the brake-wheel by a weight 19, which is connected to the front end of the shoe by a rope 20 or other suitable connection, and when the operator desires to obtain access to any particular receptacle the weight 19 is lifted to release the shoe, which is swung upward out of engagement with the brake-wheel by means hereinafter described to permit the operator to rotate the endless

chains freely to bring the desired receptacle within easy reach. The hinged brake-shoe is lifted out of engagement with the brake-wheel when the weight 19 is raised by a smaller weight 21, attached to one end of a cord 22, which passes over a pulley 23, and which has its other end connected to the shoe. The lower weight has sufficient heft to counterbalance the weight 21 and to produce the necessary frictional engagement with the brake-wheel.

The display-rack may be constructed of any suitable length and may, if desired, extend through one or more stories of a building, and the hangers or bearing-brackets are adapted to be secured to any suitable support to adapt the display-rack to its particular location.

The headed studs form journals for the receptacles and are located directly above the centers thereof, so that the center of gravity is beneath them to maintain the receptacles always in a vertical position, and as the endless chains are rotated the journals turn in the bearing-slots 13 of the hangers or supports 12, the receptacles always remain in a vertical position, as will be readily apparent.

It will be seen that the display-rack is exceedingly simple and inexpensive in construction, that it is adapted to store compactly a large quantity of merchandise, and that it will enable salesmen to obtain ready access to such goods without the use of a step-ladder.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, such as are necessary to adapt the display-rack to the particular store in which it is to be used, and to accommodate the receptacles to the character of goods to be displayed.

What I claim is—

1. In a display-rack, the combination of upper and lower sprocket-wheels, endless chains arranged thereon and provided at their inner edges with journals, receptacles having vertical sides, the resilient V-shaped hangers mounted on the outer faces of the sides of the receptacles, provided with bearing-openings to receive the journals and having their ends angularly bent and secured to the outer faces of the sides of the receptacles, said hangers

being adapted to be depressed to disengage them from the journals, and the transversely-disposed guards extending horizontally across the hangers and having their ends angularly bent and secured to the outer faces of the receptacles, the transverse portion of the guards being interposed between the endless chains and the hangers and preventing the latter from springing outward too far, substantially as described.

2. In a display-rack, the combination of upper and lower sprocket-wheels, endless chains arranged thereon, receptacles located between the sprocket-chains and connected therewith, a brake-wheel connected with one of the sprocket-wheels, a curved brake-shoe arranged at the top of the brake-wheel and hinged at one end, a weight connected with the other end and adapted to lift the shoe out of engagement with the brake-wheel, and a heavier weight connected with the free end of the brake-shoe for holding the latter in engagement with the brake-wheel, substantially as described.

3. In a display-rack, the combination of upper and lower bearing-brackets, stub-shafts journaled on the bearing-brackets, sprocket-wheels fixed to the stub-shafts, endless chains arranged on the inner ends of the stub-shafts, receptacles disposed at intervals and arranged between the sprocket-chains and journaled thereon, a brake-wheel connected with one of the stub-shafts, a curved brake-shoe arranged to engage the brake-wheel and hinged at one end to a suitable support, a pulley located above the brake-shoe, a cord passing over the pulley and having one end attached to the free end of a brake-shoe, a weight connected to the other end of the cord and adapted to lift the brake-shoe from the brake-wheel, and a weight 19 connected with the free end of the brake-shoe and adapted to hold the same in engagement with the brake-wheel, substantially as described.

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

WILLARD J. UNKENHOLZ.

Witnesses:

FRANK BARBER,
FRED M. BUCKLEY.