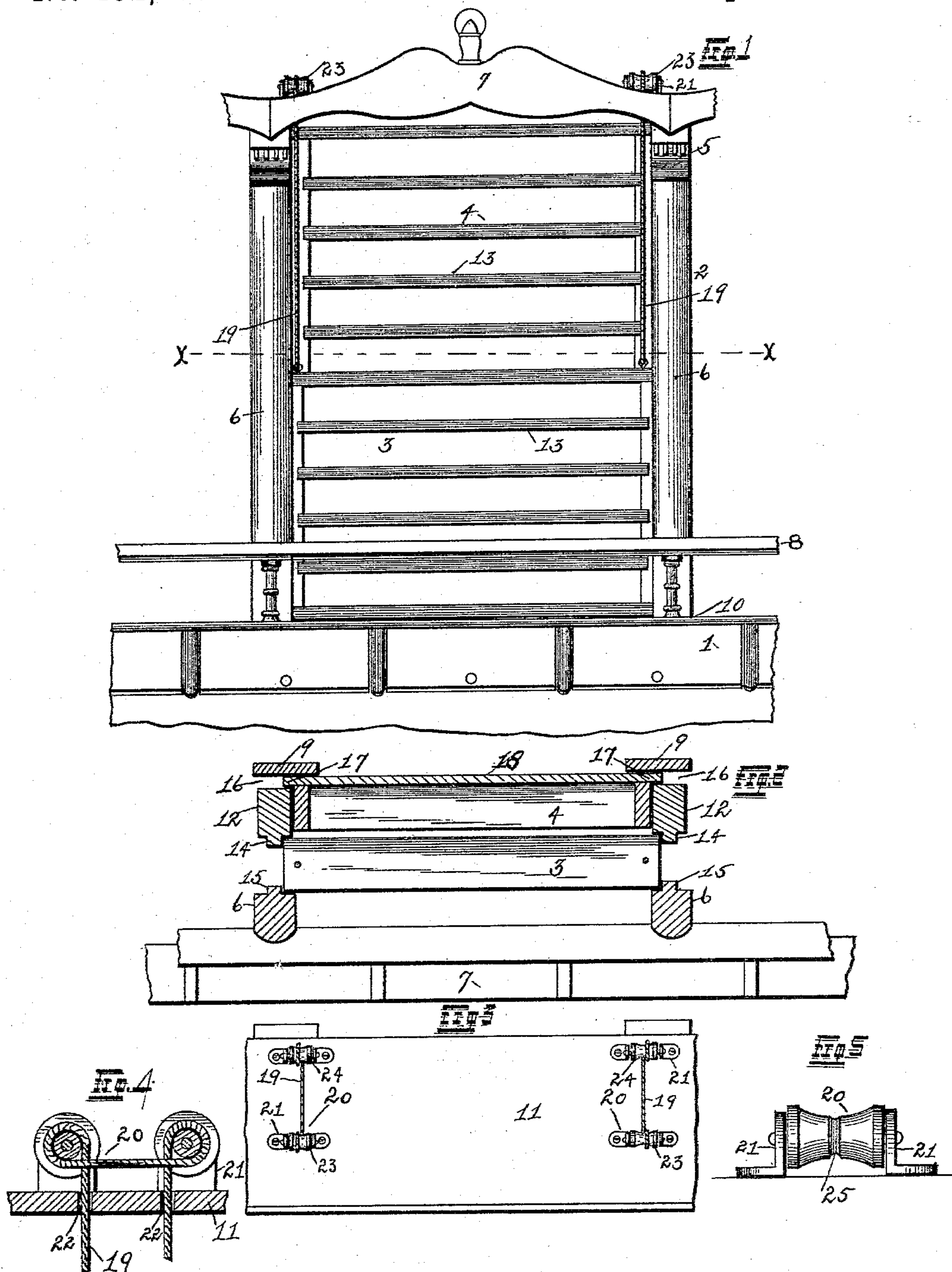


(No Model.)

C. BAUM.
SYSTEM OF SHELVING.

No. 494,835.

Patented Apr. 4, 1893.



WITNESSES
Alfred A. Eicher
Herbert S. Robinson.

INVENTOR
Christian Baum,
By his Attorneys Hydon & Hydon & Longan.

UNITED STATES PATENT OFFICE.

CHRISTIAN BAUM, OF ST. GENEVIEVE, MISSOURI.

SYSTEM OF SHELVING.

SPECIFICATION forming part of Letters Patent No. 494,835, dated April 4, 1893.

Application filed September 10, 1892. Serial No. 445,520. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN BAUM, of St. Genevieve, in St. Genevieve county, State of Missouri, have invented certain new and useful Improvements in Systems of Shelving, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in a "system of shelving," and consists in the novel arrangement and combination of parts as will be more fully hereinafter described and designated in the claim.

The object of my invention is to construct an improved shelving which may be made in sections and each section independently operative.

The main feature is to obviate the necessity of using ladders or other similar devices, to reach the top shelves in order to remove goods therefrom, as is the case in all stores where wall shelving is made use of and especially in stores that are crowded for room and are compelled to build the shelving to a great height, in order to accommodate the stock of goods.

In the drawings: Figure 1 is a front elevation of a complete section, and showing adjoining sections with parts broken away. Fig. 2 is a transverse sectional view taken on a line xx in Fig. 1. Fig. 3 is a top plan view of a section of shelving constructed according to the method of my invention. Fig. 4 is a transverse sectional view of the pulleys and showing the connection of the ropes therewith. Fig. 5 is a detail side elevation of a pulley made use of in carrying out my invention.

Referring to the drawings: 1 indicates the supporting construction for a complete section 2 of shelving and represents the style usually made use of in grocery stores wherein the supporting construction is divided into bins for the reception of flour, sugar and other staple articles.

3 indicates a front sliding section and 4 a rear sliding section, adapted to slide vertically in a plane adjacent each other in suitable guides, hereinafter described.

5 indicates the front supporting construction of the shelving proper and which consists of two upright fancy posts 6 with a suitable ornamental front piece at the top, and a shelf running horizontally along the front at a point

above the lower supporting construction 1, and which projects at right angles from the posts 6.

Each section is provided with a suitable back 9, bottom-board 10 and top 11 and with side guide strips 12 in both sides of each section.

The sliding sections 3 and 4 consist of ordinary frame-work provided with section shelves 13 and having suitable ends, sides and back pieces to form a secure construction.

The side guide strips 12 are placed intermediate of the back 9 and the posts 6, and are provided throughout their length upon the front side with longitudinal flanges 14 which correspond with coinciding flanges 15 upon the rear side of the posts 6. By reference to Fig. 2 of the drawings it will be seen that these flanges 14 and 15 leave a guide the same width as the front sliding section 3 and in which the same is adapted to travel in operation. This guide construction extends from the top to the bottom of the section 2 and is similar upon both sides of the same.

As before stated, the guide-strips 12 are placed intermediate of the back 9 and the posts 6 and therefore leaves a space 16 between the front face of the back 9 and the rear face of the guide 12 and in which is adapted to fit a projection 17 upon the sides of the back 18 of the rear sliding section and which forms a guide for the operation of said rear section 4. Thus it will be seen that proper guides are provided by the above described construction for the operation of both the front and rear sliding sections 3 and 4.

The projections 17 which form the guide-strip for the rear section 4 operative in the space 16 between the back 9 and side strips 12 only extend half way of the thickness of the guide 12, this construction allowing the next adjoining sliding shelf to operate in the same guide, and the guide construction upon the guide 12 and the posts 6 allows of a similar operation of the next adjoining front section of shelving.

A means for the operation of the sliding sections 3 and 4 is provided by the use of a system of ropes or cables 19 of which I preferably make use of two. One end of each rope 19 is secured to the top of the front section at one side, and the other end to the top

of the rear section while the other rope is secured in a similar manner to the tops of both sections 3 and 4 at the other side.

Pulleys 20 mounted in suitable bearings 21 are located upon the top 11 at both sides of each section 2 and are adapted to assist in the operation of the shelves 3 and 4. The pulleys 21 are located in pairs and each of the ropes 19 are placed so as to pass over both pulleys as shown in the illustrations. Perforations in the top 11 are provided in order that the ropes may pass through the same and over the pulleys 20. The rope which extends downwardly to the front section 3 passes up through the perforation 22 and over the inside of the pulley 23, thence under said pulley and over the back or outside of the outer pulley 24 and down through the perforation 22 to the rear section 4. This arrangement of the ropes over the pulleys is to guarantee the operation of one of the sections when the other is raised or lowered, by the frictional contact between the two pulleys 23 and 24, by means of the ropes 19.

I will now proceed to describe the operation of my invention. The normal position of the front sliding section 3 is down with its bottom resting on the bottom 10 of the section 2 and the position at this time of the rear section 4 is with its bottom in alignment with the top of the section 3 and in the rear of same, thus presenting shelving surface extending from the bottom 10 to the top 11 of the section 2. If for instance an article is desired from one of the shelves of the section 4, the same can be reached without the use of a ladder by pushing up the section 3, at which time the rear section 4 will immediately lower itself so that its bottom will be upon the bottom 11 and the front section 3 at the top of the section 2. This arrangement can be reversed at will and is attained both by the arrangement of the ropes and the weight of the section to be lowered. The frictional arrangement of the ropes upon the pulleys 23 and 24 prevents the sections from lowering too fast, thus jarring the contents of the shelves. The arrangement of the shelves

in this manner also presents a neat appearance to the eye, as the shelves when in their normal or reversed normal position, always hide the back wall of the section.

I do not wish to confine myself to the use of two sets of pulleys and ropes, as in some cases a single pair of pulleys with one rope could be used, if placed in the center of the top and also a single pulley upon the top could be made use of.

The pulleys 23 and 24 are provided with grooves 25 in which the ropes are adapted to run to prevent a wearing contact with each other, or rather with different portions of their length.

It will be seen that each post 6 and guide 12, furnish guides for the operation of one side of two sections of shelving, thus allowing of a number of sections 2 to be located in the side of a store-room.

The operation of the sliding sections 3 and 4 in each section 2 is independent.

The advantages of the above described system of shelving are apparent, and as a matter of economy will be of great service as it saves a good deal of time in the handling of goods and its simpleness of construction practically does away with any necessity for repairs.

Having fully described my invention, what I claim is—

As an improvement in shelving, the combination, with a framework, and front and back shelf sections sliding vertically therein, of grooved pulleys journaled on the top of said framework at the front and rear thereof, and each provided with an auxiliary peripheral groove 25, and a rope having its ends secured to the respective shelf sections and passing entirely around the pulleys and engaging the grooves 25; substantially as and for the purpose set forth.

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

CHRISTIAN BAUM.

Witnesses:

HERBERT S. ROBINSON,
ALFRED A. EICKS.