

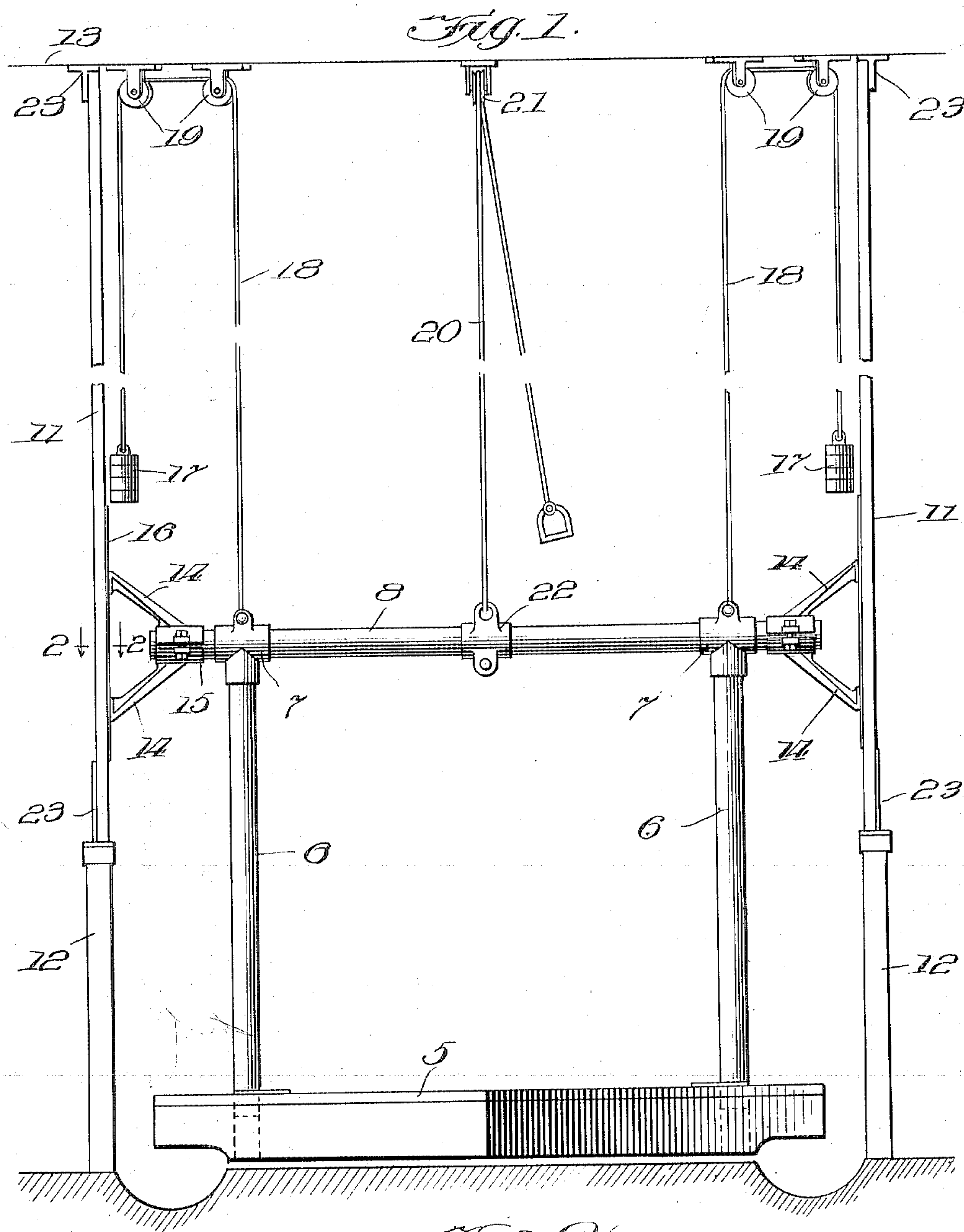
No. 811,612.

PATENTED FEB. 6, 1906.

C. L. BASTIAN.

GUIDING MEANS FOR BOWLING ALLEY PIN SPOTTERS OR SETTERS.

APPLICATION FILED MAR. 20, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES L. BASTIAN, OF CHICAGO, ILLINOIS.

GUIDING MEANS FOR BOWLING-ALLEY PIN SPOTTERS OR SETTERS.

No. 811,612.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed March 20, 1905. Serial No. 250,909.

To all whom it may concern:

Be it known that I, CHARLES L. BASTIAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Guiding Means for Bowling-Alley Pin Spotters or Setters, of which the following is a specification.

The object of this invention is to provide a simple means for guiding vertically-movable bowling-alley pin spotters or setters which can be manufactured at low cost and which can be made in a standard size and adjusted to reasonable variations in the framework of the alleys.

In the accompanying drawings, Figure 1 is an elevation showing the invention with the spotter lowered. Fig. 2 is a detail sectional view on the line 2 2 of Fig. 1.

It will not be necessary to enter into a detail description of the construction of the spotter 5, for it will be understood that the invention can be used with vertically-movable spotters or setters of various types with very slight, if any, changes in the particular construction and arrangement of parts shown in these drawings.

The spotter herein indicated is of the type covered by my Patent No. 729,118, dated May 26, 1903, and my application, Serial No. 238,517, filed December 27, 1904.

The spotter is carried by uprights 6, which are suitably fastened at their lower ends to the spotter and have clamps 7 screw-threaded or otherwise secured on their upper ends. A cross-rod 8 is rigidly secured in the clamps 7 and carries guide-brackets on its ends, which are arranged to travel in the channel-guides 11, suitably secured in an upright position, as to the kick-backs 12 and the ceiling 13. Each guide-bracket comprises the outwardly-diverging arms 14, provided at their inner converging ends with the two members of a clamp 15, which is rigidly bolted on the cross-rod 8. A shoe 16 is carried by the outer diverging ends of these arms and travels in the channel of the guide 11.

The spotter and guide-frame are counter-balanced by the weights 17, attached to ropes 18, running over pulleys 19, suspended from the ceiling and attached to some of the parts of the guide-frame. These ropes 18 can be attached to the clamps 7 or clamps 15 or to the cross-rod 8, and I have shown them attached to the clamps 7. The spotter may be

lifted by a hand-rope 20, traveling over the pulley 21, suspended from the ceiling and attached to a clamp 22 on the cross-rod, as shown, or directly to the cross-rod itself. Any other suitable means for lifting the spotter or setter may be employed.

My invention is very simple in construction and can be easily and quickly put up and adjusted to fit the conditions found in each particular alley. The guide-brackets can be adjusted lengthwise of the cross-rod 8 to fit any reasonable variations in width that may be found between the kick-backs, and this, together with the connection of the various parts by means of clamps, enables me to make this framework in a standard size adapted for use in all regulation alleys, as adjustments can be easily made to fit the frame to any ordinary variations that may be found. The frame is made of metal, the uprights 6 and cross-rod 8 being made of rolled tubing or ordinary pipe, the guides 11 and the shoes 16 being made of channel-iron and the guide-brackets and clamps being made of malleable castings. The frame can be made at very low cost and shipped knocked down, with the spotter, to bowling-alley proprietors, who will be able to easily and quickly install the spotter in place. The ends of the channel-guides 11 are adjustably secured in any suitable manner to the T-irons 23, which are fastened to the kick-backs 12 and to the ceiling, so that these guides can be adjusted to reasonable variations between the kick-backs and the ceiling.

Without limiting myself to the exact construction and arrangement of parts herein shown and described, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a vertically-movable bowling-alley pin spotter or setter, uprights fastened thereto, a cross-rod fastened to said uprights, guides at the sides of the alley, and guide-brackets adjustably mounted on the ends of said cross-rod and arranged to travel in said guides.

2. The combination of a vertically-movable bowling-alley pin spotter or setter, uprights fastened thereto, a cross-rod, clamps fastening said cross-rod to said uprights, guides at the sides of the alley, guide-brackets adjustably mounted on the ends of said cross-rod, and shoes on said brackets arranged to travel against said guides.

3. The combination of a vertically-movable

bowling-alley pin spotter or setter, uprights
fastened thereto, a cross-rod, clamps fasten-
ing the cross-rod to the upper ends of the up-
rights, channel-guides extended upward from
5 the kick-backs at the side of the alley, guide-
brackets adjustably mounted on the ends of
said cross-rod and comprising outwardly-di-

verging arms, and guide-shoes carried by said
arms and traveling in said channel-guides.

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Witnesses:

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