

No. 637,016.

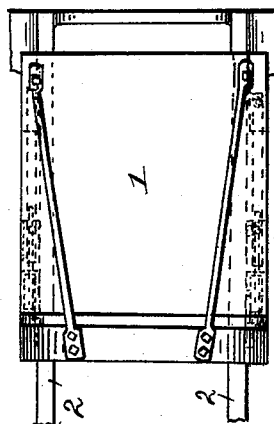
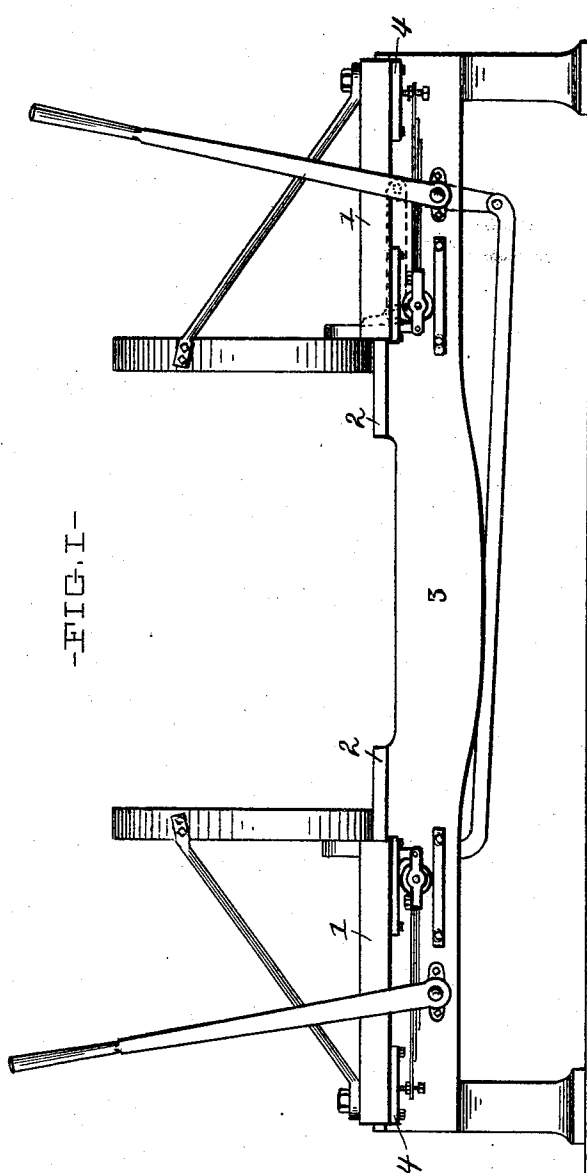
Patented Nov. 14, 1899.

J. S. ORAM.
ANTIFRICTION BEARING.

(Application filed May 20, 1899.)

(No Model.)

2 Sheets—Sheet 1.



-FIG. IV-

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UNITED STATES PATENT OFFICE.

JOHN S. ORAM, OF CLEVELAND, OHIO.

ANTIFRICTION-BEARING.

SPECIFICATION forming part of Letters Patent No. 637,016, dated November 14, 1899.

Application filed May 20, 1899. Serial No. 717,579. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. ORAM, a citizen of the United States of America, residing at Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Antifriction-Bearings, of which the following is a specification.

My invention relates to improvements in antifriction-bearings; and it consists in providing a roller-bearing for the parts of the machine requiring longitudinal adjustment, in means for regulating the weight borne by the said roller-bearing, and in other new and novel features of construction hereinafter set forth.

The annexed drawings and the following description set forth in detail one mechanical form embodying the invention, such mechanism being but one of various forms in which the principle of the invention may be used.

In said drawings, Figure I represents a side elevation of a barrel-making machine provided with my improved antifriction-bearing; Fig. II, an enlarged detail view of the same; Fig. III, a plan view of a part of the machine provided with my improvement, and Fig. IV a detail plan view.

In the drawings I have shown my improved antifriction-bearings applied to a barrel-making machine.

The platens 1, that carry the working parts of the machine, are movable upon guides 2, provided by the frame 3 of the machine, and are held against upward displacement by retaining-plates 4, secured to the under side of the platen. A projection 5 is formed integral with or is secured to each platen and depends a suitable distance therefrom. Pivoted to said projection is a lever 6, consisting of a rigid portion 7, and, preferably, of a spring portion 8, that is formed with one or more leaves 9. A roller 10 is journaled upon the rigid portion of the lever by means of a pin or projection 11 and travels upon a track 12, secured to or provided by the side of the frame. A perforation 13 is formed near the end of the spring portion of the arm, and a bolt or screw 14 is secured therein, that bears against the bottom of the platen.

The platens are movable backward and forward, and the rollers are arranged on both sides of each platen on a plane passing through or approximately through its center

of gravity and constitute the fulcrums of the levers. The screw at the end of each lever permits same to be adjusted in suitable relation to the platen. The spring or yielding portion provides sufficient elasticity to permit the parts to be adjusted so as to regulate the weight borne by the roller and guides, respectively. The spring also prevents the parts from binding and permits the platen to automatically adjust itself to any small inequality of the track or slight obstruction to the progress of the roller. A weight or any similar device that yieldingly holds the end of the rigid portion of the lever in proper relation to the platen may be substituted for the spring.

Heretofore it has been considered necessary in order to secure rigidity in machines of this class to provide the platen with grooves adapted to slide on guides formed on the frame. By my construction I am enabled to remove a great amount of the weight borne by the guides, and consequently reduce the friction and at the same time secure sufficient rigidity to cause the machine to operate successfully. The operator is thus relieved of the severe exertion heretofore necessary to move the platens backward and forward, and the output of the machine is considerably increased, as it can be operated more quickly. The weight still borne by the guides, which can be regulated through the yielding portion of the lever, is sufficient to cause the platen to work evenly and with precision.

What I claim is—

1. The combination with a movable part of a machine, and means for guiding said part, of a lever pivoted thereto and provided with a roller movable upon a bearing provided by the stationary part of said machine, and means for yieldingly adjusting the end of said lever to regulate the weight borne by said roller and guide respectively.

2. The combination with a platen movable on stationary guides and a lever pivoted thereto, of a roller movable upon a track beneath said platen and forming the fulcrum for the lever, the free end of said lever being yieldingly adjustable in relation to the platen to regulate the weight borne by said roller and guide respectively substantially as described.

3. The combination with a suitably-guided movable platen and a lever, consisting of a rigid portion and a yielding portion, pivoted to said platen, of a roller journaled upon said rigid portion and movable on a stationary bearing to form the fulcrum for said lever, said yielding portion being adjustable in relation to the platen, substantially as described.
4. The combination with a movable platen and a lever pivoted thereto, of a roller journaled on said lever to form the fulcrum therefor and movable upon a track beneath said platen, and means for yieldingly adjusting the free end of the lever in relation to the platen, substantially as described.
5. The combination with a movable platen and a lever pivoted thereto, of a roller journaled upon said lever on a plane passing approximately through the center of gravity of said platen, said roller forming the fulcrum for the lever and being movable upon a track arranged beneath the platen, and means for

yieldingly adjusting the free end of the lever in relation to said platen, substantially as described.

6. The combination with a movable platen and a lever, consisting of a rigid portion and a flexible portion, pivoted to said platen, of a roller journaled upon the rigid portion of said lever on a plane passing through, or approximately through, the center of gravity of said platen, said roller forming the fulcrum for the lever and rotating upon a track arranged beneath the platen, and means for adjusting the free end of the yielding portion of the lever in relation to the bottom of the platen, substantially as described.

In testimony whereof I sign this application, in the presence of two witnesses, this 17th day of May, 1899.

JOHN S. ORAM.

Witnesses:

G. H. FOSTER,
C. I. HENDERSON.