

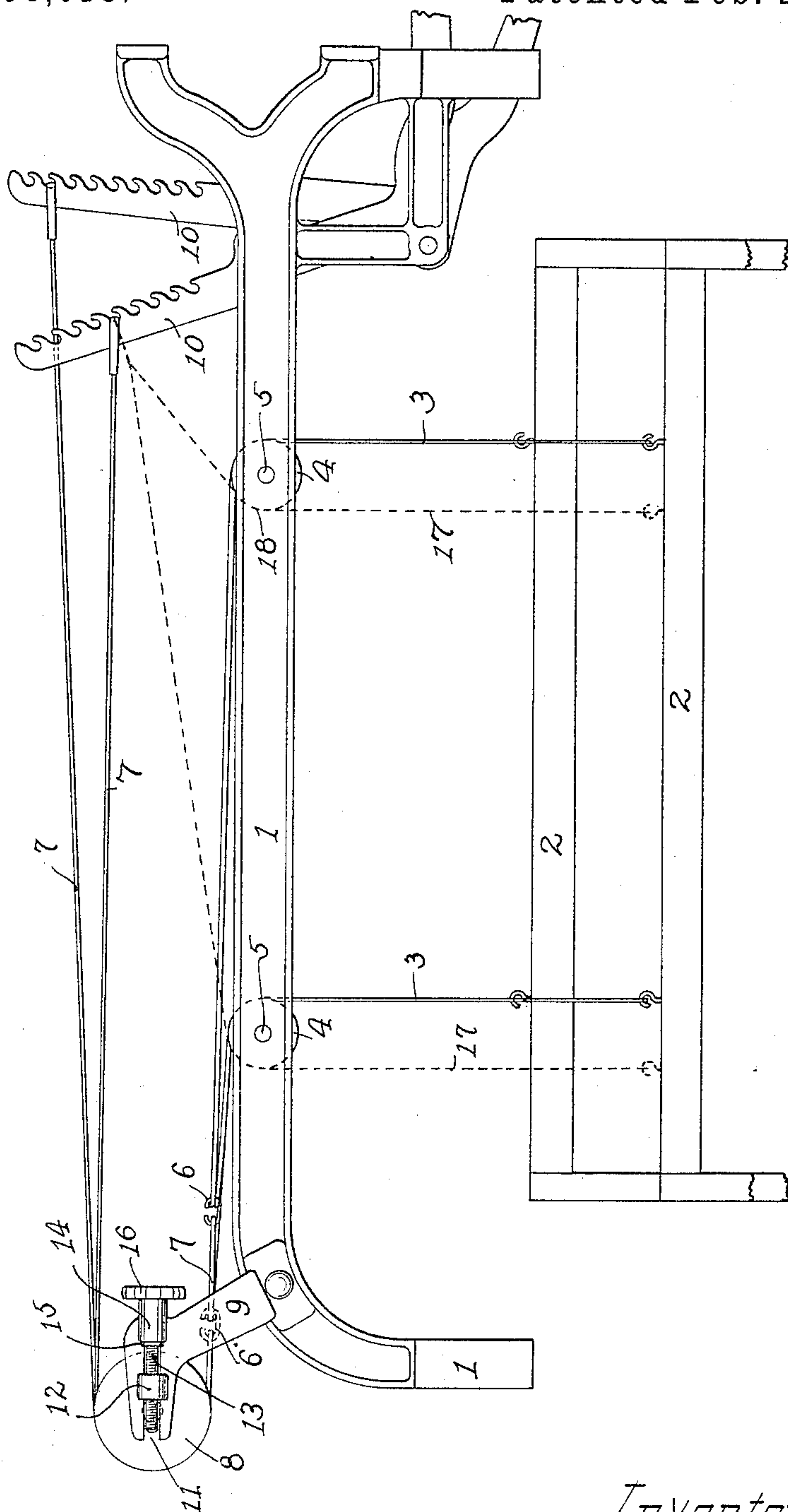
(No Model.)

G. F. HUTCHINS.

SHEDDING MECHANISM FOR LOOMS.

No. 398,618.

Patented Feb. 26, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE F. HUTCHINS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE
KNOWLES LOOM WORKS, OF SAME PLACE.

SHEDDING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 398,618, dated February 26, 1889.

Application filed November 10, 1888. Serial No. 290,420. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. HUTCHINS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shedding Mechanism for Looms; and I do hereby declare that the following is a full, clear, and exact description of the invention, which, in connection with the drawing making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to the harness mechanism for looms; and the object of my invention is to secure equal travel of each end of the harness-frame when lifted by a compound strap or cord connected to the lifting jack or lever, and to provide means of adjustment by which the harness-frame may be set higher or lower after being once leveled without disturbing the individual straps or cords at the ends of the frame.

The drawing represents a detached portion of a loom with my improvements applied thereto.

In the drawing, 1 is the arch or elevated portion of a loom-frame.

2 are the harness-frames.

3 are the individual straps or cords passing over the sheaves 4, supported on the same level by pins 5 in the frame and connected by hooks 6 to a single strap or cord, 7, which passes over a third supplemental sheave, 8, supported in the adjusting-stand 9, and thence to the usual connections with the jacks or harness-levers 10.

The supplemental sheave 8 is of such size that a horizontal line drawn from its top cuts the harness-levers 10 in about the center of the spaced notches, which are employed for obtaining an angular shed by giving an increased travel to the harness-frames toward the back of the loom, while a horizontal line drawn from the bottom of sheave 8 passes just above the tops of sheaves 4. The pin which supports sheave 8 is fitted to slide freely in a slot, 11, in the stand 9, and is provided with an ear, 12, which projects outside

the stand and is tapped to receive the adjusting-screw 13, which is fitted to turn loosely in hub 14, cast to stand 9, and which is confined longitudinally in said hub by the collar 15 and hand-wheel 16, fast on the screw-shank.

By turning the screw 13 out of hub 12 the sheave-pin is forced away from the harness-levers 10, thereby raising evenly both ends of the harness-frame.

I have shown by dotted lines 17 the old method of connecting the individual straps or cords to a single harness-lever. It is obvious that the travel of the end of the harness-frame farthest from the levers will be greater than that of the other end, owing to the difference in the angles which the straps or cords make in passing over the sheaves.

Carried to an extreme case, the strap or cord passing to the farther sheave would be approximately tangent to the sheave on top, and the horizontal arc movement of the lever transmitted scarcely diminished to the vertical part of the strap or cord, while the strap or cord passing to the nearer sheave would be tangent to the sheave near the point, around which it would swing as a center, the horizontal arc movement of the lever imparting scarcely any motion to the vertical part of the strap or cord. By the old method, if it was desired to adjust the vertical position of the harness-frame, it was necessary to move each end of the frame separately, necessitating a releveling of the frame; but by means of the adjustable supplemental sheave 8, I can adjust the position of the frames as desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a loom, the combination, with a harness-lever, harness-frame, and two sheaves, as 4, located in the loom-frame, of a third supplemental sheave, as 8, located in a plane above the sheaves 4 and at the opposite end of the frame from the harness-lever, and straps or cords connecting the harness-lever with the harness-frame, which passes over the sheave 8 to the sheaves 4, substantially as set forth.

2. In a loom, the combination, with a har-

ness-lever, two sheaves located in the loom-frame, a harness-frame, and individual straps or cords passing from said frame over said sheaves, of a third supplemental sheave supported above the loom-frame, means for adjusting said sheave laterally, and a strap or cord passing over said sheave to connect the

individual harness-frame straps or cords with the harness-lever, substantially as shown and described.

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