

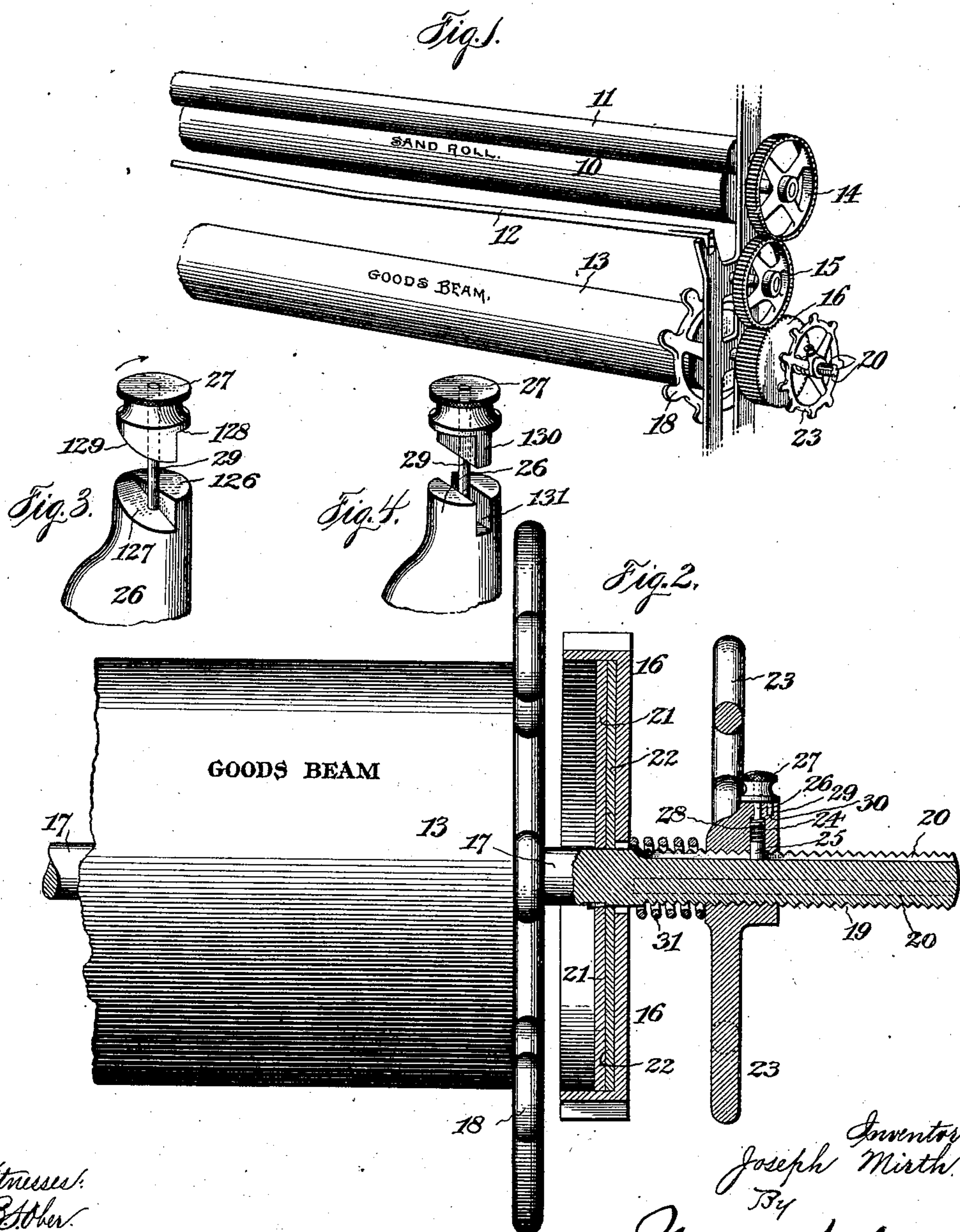
No. 712,831.

Patented Nov. 4, 1902.

J. MIRTH.
TAKE-UP FOR LOOMS.

(Application filed Mar. 24, 1902.)

(No Model.)



Witnesses:
Attest:
C. L. Summers

Inventor:
Joseph Mirth
By
[Signature]
Atty.

UNITED STATES PATENT OFFICE.

JOSEPH MIRTH, OF ALLENTOWN, PENNSYLVANIA.

TAKE-UP FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 712,831, dated November 4, 1902.

Application filed March 24, 1902. Serial No. 99,740. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MIRTH, a subject of the Emperor of Austria-Hungary, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Take-Ups for Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to take-up devices for looms, and more particularly to means applied to the goods-beam of silk and other looms, whereby the goods will be wound upon the goods-beam as fast as woven, irrespective of the quantity of goods on the beam, and hold said goods at the required tension.

Referring to the drawings, in which like parts are similarly designated, Figure 1 is a perspective view of so much of the front of a loom of well-known construction as is required with my device applied thereto. Fig. 2 is an enlarged view of a part of the goods-beam with my improvement thereon shown in section. Figs. 3 and 4 are modifications of the means for locking the hand-wheel, forming part of my improvement, to the goods-beam shaft.

In machines of this class and of the type shown the goods is suitably guided to a driven sand-roll 10, then over a guide-roll 11 and a temple 12 to the goods-beam 13. Motion is communicated from the sand-roll 10 by a gear 14, secured on its shaft, to a loose gear 15, which drives a hollow gear on the goods-beam to wind up the cloth. In my improvement I have made this gear 16 loose to frictionally drive the goods-beam. The goods-beam 13 has rigidly secured to it a hand-wheel 18, by means of which it may be held stationary by the weaver for adjusting the take-up device or any other purpose. The goods-beam shaft 17 is prolonged and provided with a threaded portion 19 at one end. This threaded portion has one or, preferably, a plurality of longitudinal slots 20, three of such being shown in the drawings. Between the hand-wheel 18 and the threaded portion 19 is keyed

or otherwise rigidly secured to the shaft 17 a friction-disk 21, having a rubbing-face 22, of leather or other suitable material. This disk fits into the hollow gear 16, which is loose on the goods-beam shaft 17. The threaded end of the goods-beam shaft carries a hand-wheel 23, having in its boss a recess 24. In this recess is a plug or stop 25, connected by a thin rod 26 to a finger-piece 27, that seats on the hub of said hand-wheel. Between the plug 25 and the top of the recess 24 and surrounding the rod 26 is a coil-spring 28, whose function is to hold the plug in operative position in one of the slots 20 in the threaded portion of the goods-beam shaft to lock the hand-wheel 23 against rotation thereon. On the thumb-piece is a lug 29, secured eccentrically on its under side and adapted to fit into a recess 30 in the hub of the hand-wheel 23, the function of which lug is to hold the plug 25 in retracted position, and this is accomplished by pulling out the finger-piece 27 until said lug 29 is clear of its recess and rotating said finger-piece, so as to allow the lug to rest on the hub or boss of the wheel, thereby permitting the hand-wheel 23 to be freely rotated on or off the shaft. Between the hand-wheel 23 and the hollow gear 16 and surrounding the goods-beam shaft is a coil-spring 31, the function of which is to press said hollow gear to a greater or less extent against the friction-disk, according to the position of the hand-wheel 23 on the shaft.

It will be seen from the foregoing that the goods-beam is frictionally driven, and by means of the hand-wheel 23, which can be locked into position at every one-third of a turn on its shaft, the coil-spring can be more or less compressed to increase or decrease the friction between the hollow gear and the friction-disk, thereby enabling the weaver to always keep the goods taut.

During the adjustment of the hand-wheel 23 the goods-beam can be held stationary by means of the hand-wheel 18.

In Figs. 3 and 4 I have shown the lugs on the finger-piece 27 modified in form.

In Fig. 3 the boss 26 has a horizontal surface 126 and an inclined surface 127, both meeting at one side of the boss. The finger-piece 27 is provided with complementary surfaces 128 and 129.

It will be evident from the structure shown that it is not absolutely necessary to pull out the piece 27, but simply to rotate it in the direction of the arrow, the two inclined surfaces 127 and 129 having a cam action, until the inclined surface 129 of the finger-piece rests on the surface 126 of the boss, which will hold the plug retracted. A further rotation will be sufficient to seat the piece in locking position.

In Fig. 4 the lug instead of being an eccentrically-secured pin, as in Fig. 2, is a central projection 130, through which the rod 29 passes, and this lug fits into a transverse slot 131 in the hub. The finger-piece 27 is pulled out and rotated to position the lug 130 transversely of the slot 131 on the boss 26.

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

1. In a loom, the combination with the goods-beam, of a goods-beam shaft having a threaded slotted end, a friction-disk secured to the shaft, a driven friction-wheel loose thereon, a hand-wheel on the threaded portion of said shaft, a spring between the hand and friction wheels and means on said hand-wheel to take into a slot in the shaft to lock the hand-wheel on the shaft, substantially as and for the purposes set forth.

2. In a loom, the combination with the goods-beam, of a goods-beam shaft having a

threaded end and longitudinal slots in the threaded portion thereof, a friction-disk secured to the shaft, a driven friction-wheel loose thereon, a hand-wheel having a threaded boss to screw on the threaded end of the shaft, a coil-spring between the hand and friction wheels, a spring-actuated stop, and means to hold said stop out of engagement with the shaft when desired, substantially as and for the purposes set forth.

3. In a loom, the combination with the goods-beam, of a goods-beam shaft having a threaded end and a plurality of longitudinal slots in the threaded portion thereof, a friction-disk secured to said shaft, a driven friction-wheel loose thereon, a hand-wheel having a threaded boss to screw on the threaded portion of the shaft, a coil-spring between the hand and friction wheels, a spring-actuated stop in the boss of the hand-wheel to engage a slot, a finger-piece to retract said stop and a lug, the finger-piece adapted to seat in the boss and rest upon it to hold the stop retracted, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOSEPH MIRTH.

Witnesses:

JAS. L. SCHAAD,
CHAS. W. KAEPPEL.