

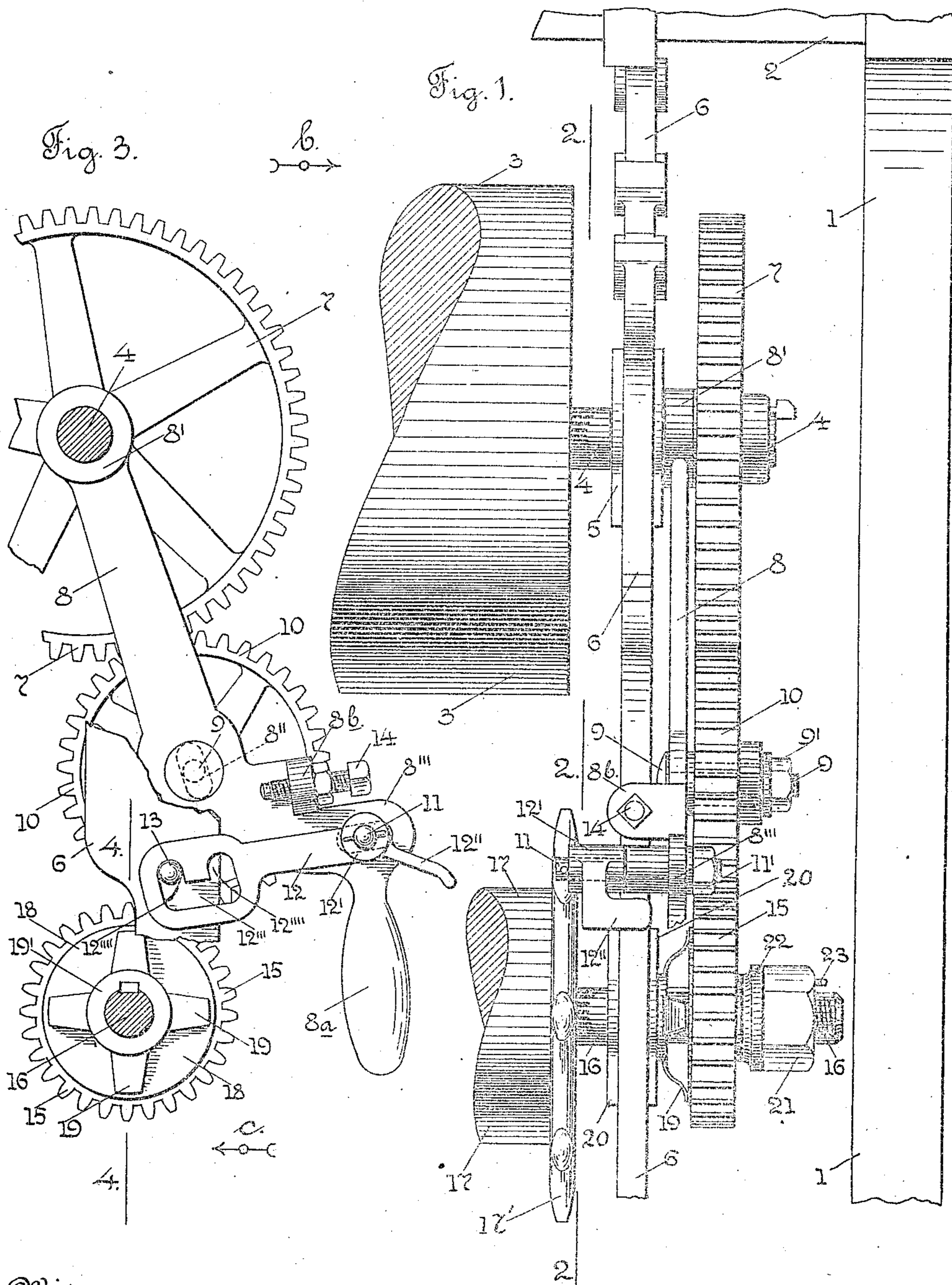
No. 889,237.

PATENTED JUNE 2, 1908.

L. B. JENCKES & E. H. RYON.
TAKE-UP MECHANISM OF A LOOM.

APPLICATION FILED MAY 11, 1906.

2 SHEETS—SHEET 1.



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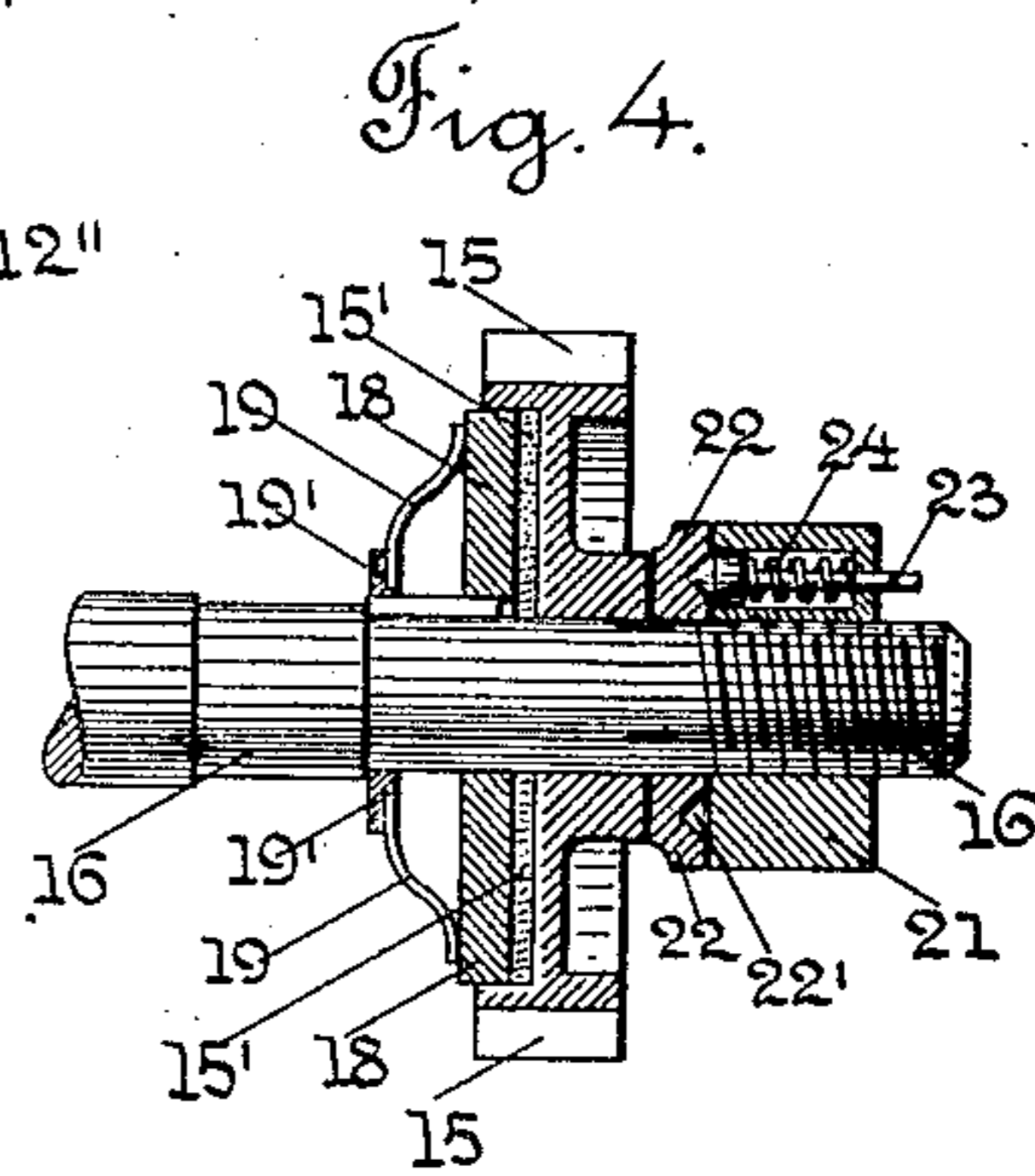
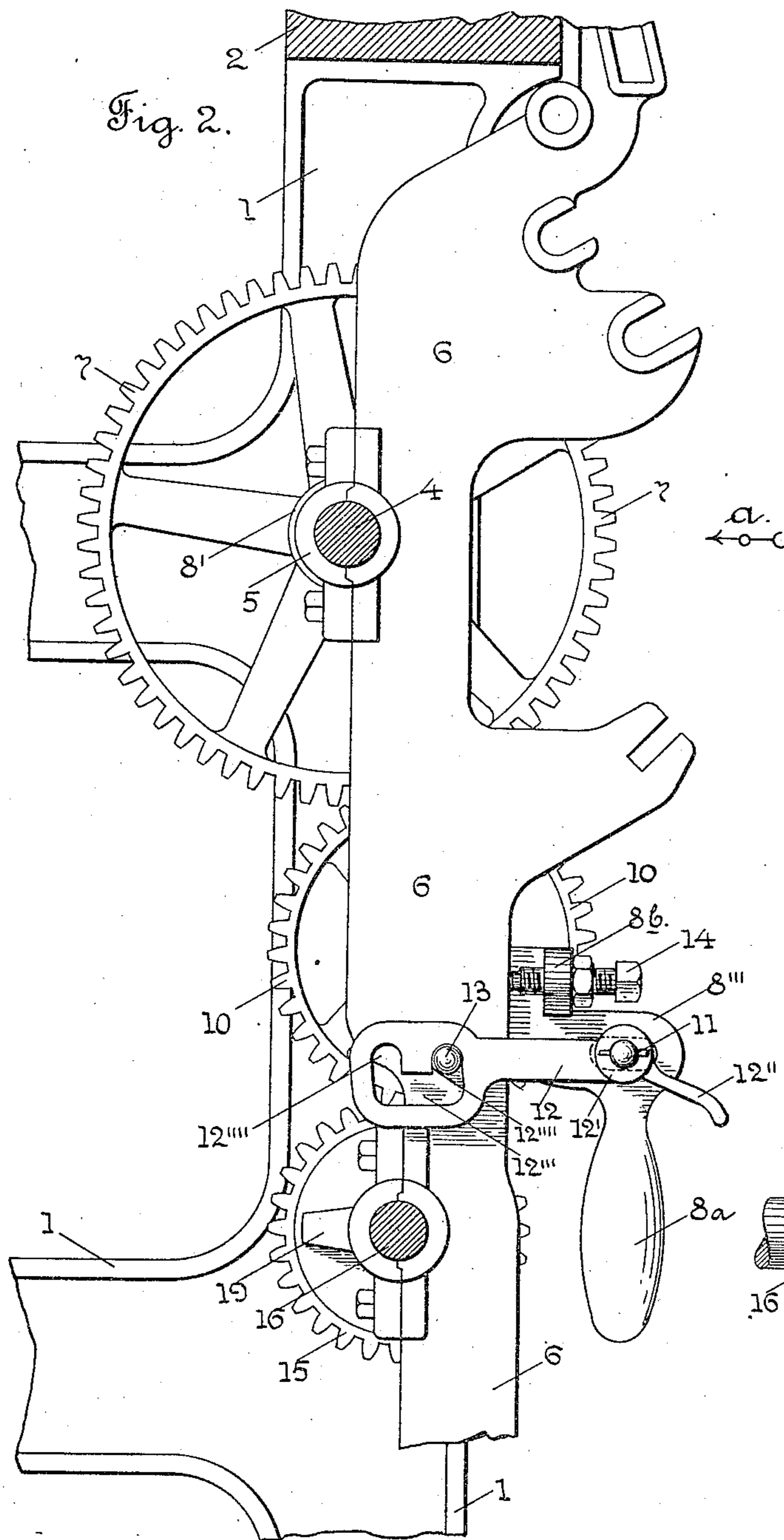
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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TAKE-UP MECHANISM OF A LOOM.

No. 889,237.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed May 11, 1906. Serial No. 316,283.

To all whom it may concern:

Be it known that we, LAWRENCE B. JENCKES and EPPA H. RYON, both citizens of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have jointly invented certain new and useful Improvements in a Take-Up Mechanism of a Loom, of which the following is a specification.

Our invention relates to a take-up mechanism of a loom, and the object of our invention is to improve upon the take-up mechanism as ordinarily made, and more particularly to provide improved means for disconnecting the gear of the cloth-roll from either one of the other gears of the take-up mechanism, and also to provide an improved friction drive for the gear of the cloth-roll.

Our invention consists in certain novel features of construction of our improvements as will be hereinafter fully described.

We have only shown in the drawings a detached portion of a take-up mechanism of a loom sufficient to illustrate our improvements applied thereto.

Referring to the drawings:—Figure 1 is a rear view of a take-up mechanism with our improvements applied thereto, looking in the direction of arrow *a*, Fig. 2. Fig. 2 is a section, on line 2, 2, Fig. 1, looking in the direction of arrow *b*, same figure. Fig. 3 shows some of the parts shown in Fig. 2, detached, and in an opposite position; the loom frame is broken away in this figure, and, Fig. 4 is a section, on line 4, 4, Fig. 3, looking in the direction of arrow *c*, same figure, showing the friction drive for the cloth-roll.

In the accompanying drawings, 1 is a detached portion of a loom frame end or side, 2 is the breast-beam, 3 the take-up roll fast on the shaft 4 mounted in suitable bearings 5 on the upright frame 6, secured at its upper end to the breast-beam 2, and at its lower end to a transverse bar on the loom, not shown.

7 is a gear fast on the take-up roll shaft 4, which shaft is operated through a gear not shown on the other end thereof, by a train of gears, and a pawl and ratchet, operated from some moving part of the loom in the usual way. On the shaft 4 of the take-up roll 3, in this instance between the hub of the gear 7 and the bearing 5 of the shaft 4, is in this instance loosely mounted the hub 8' of an arm 8, having an elongated slot or opening

8'' therethrough, to receive a stud 9 on which is loosely mounted a gear 10. By means of the elongated opening 8'' in the arm 8, the stud 9 may be raised or lowered therein, to adjust the position of the gear 10, and then secured in an adjusted position by means of a nut 9', see Fig. 1.

The swinging arm 8 has a side extension 8''' thereon, and extending down from, and in this instance integral therewith, is an operating handle 8^a. The side extension 8''' has secured thereto a stud 11, which is adjustable in an elongated opening in the extension 8''', and is secured in an adjusted position by the nut 11', see Fig. 1.

The stud 11 has loosely mounted thereon the hub 12' of a latch 12. The latch 12 has an engaging end or projection 12'' to operate said latch, and said latch has in this instance an opening 12''' therein, with two recesses 12'''' leading out therefrom, to receive a stationary stud or pin 13 secured to the stand 6.

On the swinging arm 8 is an adjusting screw or bolt 14, turning in a lug 8^b on said arm, and adapted to engage with its inner end the outer edge of the stand 6, as shown in Fig. 2, to limit the inward movement of the swinging arm 8.

Extending in the same vertical plane as the gears 7 and 10, is a third gear 15, in this instance loosely mounted on an extended end of the shaft 16 of the cloth-roll 17. The gear 15 is in this instance yieldingly attached to the shaft 16 in a rotary direction, by a disk 18 splined on the shaft 16, see Fig. 4, and a four pronged spring 19 having its hub 19' also splined on the shaft 16, and bearing against a bearing 20 for the shaft 16, see Fig. 1. The spring 19 forces the disk 18 against a friction surface 15' on the gear 15, and the revolution of the gear 15, through its frictional engagement with the disk 18, rotates the shaft 16 and the cloth-roll 17.

The action of the spring 19 may be regulated or adjusted, in this instance by means of a nut 21 turning on the threaded end of the shaft 16. The nut 21 bears against a collar 22, loosely splined on the shaft 16, and intermediate the nut 21 and the hub of the gear 15. A pin 23, actuated by a spring 24 which extends within a recess within the nut 21, has a tapering end which extends within a correspondingly shaped recess in the collar 22, and acts to hold the nut 21 in

position after adjustment, and prevents it from becoming loose on the threaded end of the shaft 16. There will be a series of recesses 22' in the collar 22 to receive the pin 23.

5 By means of the swinging arm 8 carrying the gear 10, the gear 10 may be moved into mesh with the gear 15, as shown in Fig. 2, to drive said gear, through the rotation of the gear 7 and the gear 10, and is held in mesh by
10 the latch 12 engaging with the pin 13, as shown in Fig. 2. By means of said swinging arm 8, the gear 10 may be moved out of mesh with the gear 15, the engaging end 12'' of the latch 12 being depressed to raise the inner
15 end of the latch and disengage the outer recess 12''' from the stud 13, and allow the inner recess 12''' to engage with said stud 13, as shown in Fig. 3, and hold said gear 10 out of engagement with the gear 15, so that the
20 cloth-roll 17, through the handle 17' thereon, see Fig. 1, may be turned freely in either direction.

The advantages of our improvements will be readily appreciated by those skilled in the
25 art. They are of simple construction and operation, and may be readily applied to loom take-up mechanisms of ordinary construction. By means of our improvements the cloth-roll can be readily disconnected
30 from, and connected with its operating gears.

It will be understood that the details of construction of our improvements may be varied if desired.

35 Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a take-up mechanism of a loom, the combination with the cloth roll shaft, of a friction clutch member attached thereto, to
40 move longitudinally thereon and rotate therewith, a spring for moving said clutch member in the direction of the length of the shaft, a second clutch member loose on said shaft and in engagement with the other clutch member,
45 one of said clutch members being a driven gear, and means for regulating the frictional engagement between said clutch members,

said means comprising a nut turning on the threaded end of said shaft, and carrying a spring actuated pin extending in a plane parallel to said shaft, and the engaging end of said pin adapted to enter in a collar loosely splined on said shaft, and said collar, intermediate said nut and the hub of one clutch member. 50

2. In a take-up mechanism of a loom, the combination with the cloth roll shaft, of a friction clutch member attached thereto, to move longitudinally thereon and rotate therewith, a spring for moving said clutch member
60 in the direction of the length of the shaft, a second clutch member loose on said shaft and in engagement with the other clutch member, one of said clutch members being a driven gear, and means for regulating the frictional engagement between said clutch members, said means comprising a nut turning on the threaded end of said shaft, and carrying a spring actuated pin extending in a plane parallel to said shaft, the engaging end
70 of said pin adapted to enter in a collar loosely splined on said shaft, and said collar, intermediate said nut and the hub of one clutch member, said nut and collar located on the opposite side of the clutch members from the
75 actuating spring.

3. In a take-up mechanism of a loom, the combination with a driving gear on the take-up roll shaft, and a driven gear on the cloth-roll shaft, of an intermediate gear, and a
80 swinging arm for supporting said intermediate gear, said arm adapted to be moved to carry said intermediate gear out of mesh with one of the other gears, or into mesh with one of said gears, and means for moving said arm and means for locking it in position, said locking means comprising a pivoted latch to be moved by the operator and engage a stationary pin or stud.

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