

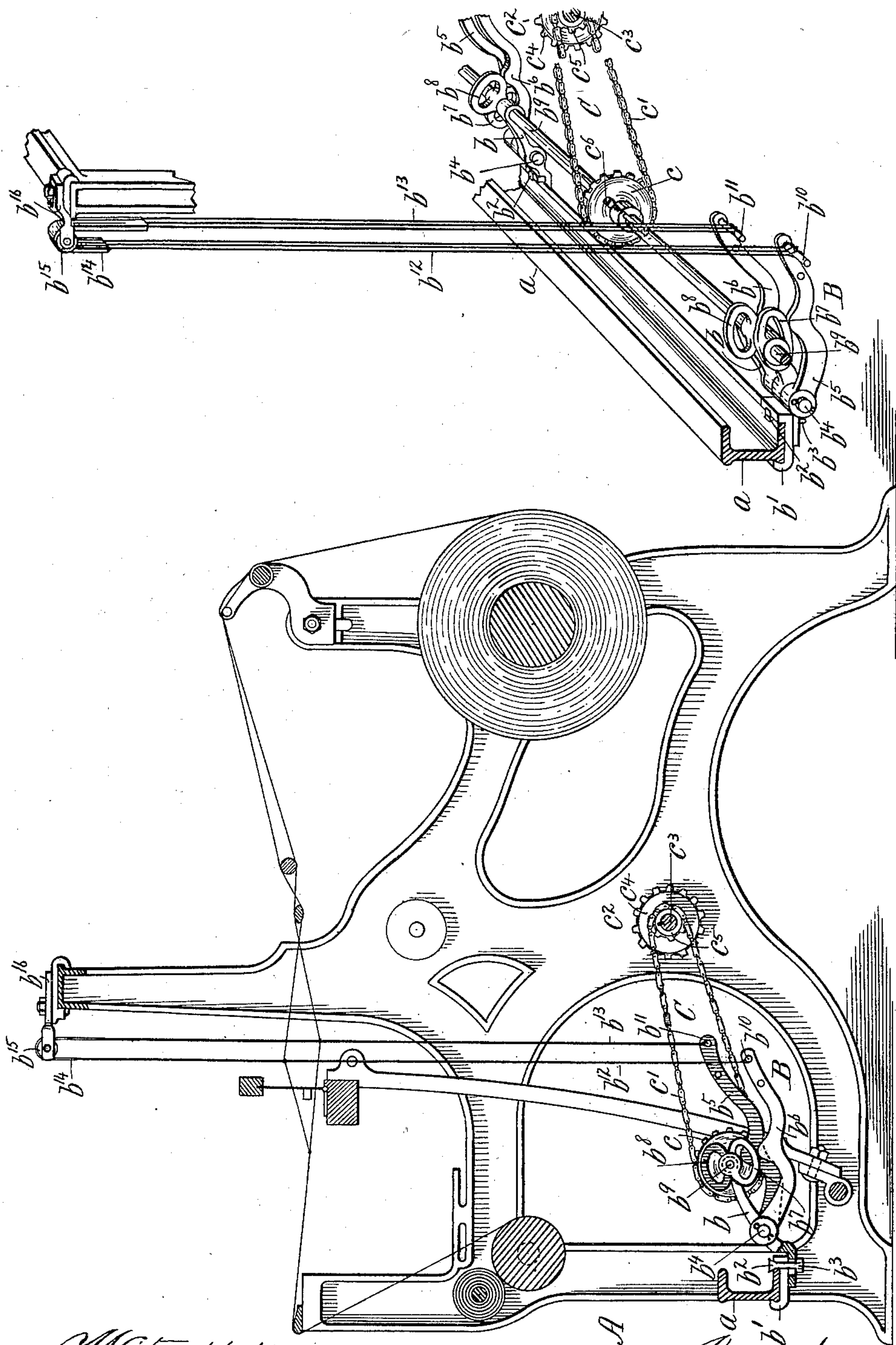
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Patented June 3, 1902.

J. WILKINSON.
SELVAGE HEDDLE MOTION.

(Application filed Oct. 5, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

JABEZ WILKINSON, OF FALL RIVER, MASSACHUSETTS.

SELVAGE-HEDDLE MOTION.

SPECIFICATION forming part of Letters Patent No. 701,528, dated June 3, 1902.

Application filed October 5, 1901. Serial No. 77,688. (No model.)

To all whom it may concern:

Be it known that I, JABEZ WILKINSON, of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Selvage-Motions, of which the following is a specification.

Figure 1 is a vertical cross-section of my invention embodied in a loom, and Fig. 2 is a fragmentary perspective view showing the form and arrangement of means essential to said invention.

The principal object of my invention is to provide a mechanism for a loom with which either a plain selvage or a basket-selvage can be woven.

Heretofore to weave a plain selvage a plain selvage-motion was used. To weave a basket-selvage a different selvage-motion was necessary, each motion being substituted for the other as often as occasion required. This substitution called for the services of persons particularly skilled in adjusting said motions to each loom and necessitated the stoppage of each loom and the consequent idleness of itself and its operatives. Obviously where, as in a cotton-mill, looms are counted by hundreds this substitution has a very substantial effect on the productive capacity of each loom, and consequently of the mill.

Another feature of my invention lies in the location of a selvage-motion, the treadle and cams therefor being mounted nearer the front of the loom than the rear thereof. By reason of such location the motion is accessible for any purpose—such as cleaning, adjustment, and the like—and the front and rear selvage-heddles can be operated, respectively, by short and long heddle-treadles instead of long and short heddle-treadles, as was formerly the case. Any increased movement of the front selvage-heddles necessarily resulting from the longer vertical movement of the rear selvage-heddles to form a shed or raceway of proper size for the shuttle is communicated to the short instead of the long treadle, as formerly. Hence there is a saving in power and wear and tear of the operating parts and a uniformity of operation heretofore not obtainable.

In the drawings illustrating the principle of my invention and the best mode now known to me of applying the principle, A is a loom-

frame, B the selvage-motion, and C the driving mechanism.

The selvage-motion B is mounted on two brackets *b*, one near each end of the loom-frame A, and adjustably secured to the front flanged rail *a* by a jaw *b'* and a V-bolt *b²*, that engage the flange and are held in such engagement by a nut *b³* on the threaded shank of the bolt *b²*, projecting down through the jaw *b'* and the slotted base of the bracket *b*. Each bracket *b* has a treadle-stud *b⁴*, and on this stud are pivoted heddle-treadles *b⁵ b⁶*, operated by their respective cams *b⁷ b⁸*, which are fixed to a cam-shaft *b⁹*, having suitable bearings near the free ends of the brackets *b*. The free end portions of the treadle *b⁵ b⁶* have threaded holes therein to receive correspondingly-threaded arms *b¹⁰ b¹¹*, which extend outwardly therefrom in a horizontal direction and at right angles thereto. To these arms *b¹⁰ b¹¹* are fastened the front and rear selvage-heddles *b¹² b¹³*, operatively connected by the heddle-strap *b¹⁴*, that passes over a plain roll *b¹⁵*, mounted in a stand *b¹⁶*, bolted to the arch of the loom and adjustable in and out in a manner similar to that shown and described in reference to the brackets *b*. The treadles, cams, bracket, and heddles near each end of the cam-shaft are identical in construction and operation, except those at one end are ninety degrees in advance of the other.

The driving mechanism C is made up of a sprocket-wheel *c*, splined to the cam-shaft *b⁹*, a chain *c'*, and a double sprocket-wheel *c²*, fixed to the pick-cam shaft *c³* in any well-known manner. The double sprocket-wheel *c²* is composed of two members *c⁴ c⁵*, preferably in one piece, the larger member *c⁴* being twice as large as the smaller member *c⁵*, but of the same size as the single sprocket-wheel *c* on the cam-shaft *b⁹*. A chain *c'* is in operative engagement with the sprocket-wheel *c* and either of the members *c⁴ c⁵* of the double sprocket-wheel *c²*, the chain *c'* being longitudinally lengthened or shortened by the addition or subtraction of a suitable number of its links.

In the drawings the warp selvage-motion is shown ready to weave a basket-selvage. The chain *c'* being in engagement with the sprocket-wheel *c* on the cam-shaft and with

the smaller member c^5 of the double sprocket-wheel c^2 on the pick-cam shaft c^3 , obviously the movement of the cams, treadles, and heddles operate once for every two revolutions 5 of the pick-cam shaft—that is, the selvage-heddles will move once at every other pick and a basket-selvage is woven by the loom. Now should it be desirable to weave a plain selvage instead of a basket-selvage the chain 10 c' is lengthened by the insertion of a number of links and caused to engage the larger member c^4 of the double sprocket-wheel c^2 , the sprocket-wheel c being moved longitudinally along the splined cam-shaft b^9 until it is in 15 the same plane of the larger member c^4 of the double sprocket-wheel. It is then locked in position, as by a set-screw C^6 . If motion is now imparted to the driving mechanism, the sprocket-wheels c c^4 being of the same diameter, 20 the heddles operate once for every revolution of the pick-cam shaft—that is, the selvage-heddles will move once at every pick—and the loom weaves a plain selvage.

It will be noticed that by reason of the 25 short and long treadles operating, respectively, the front and rear heddles neither of the arms b^{10} and b^{11} in their upward and downward movements rubs the heddles secured to the other arm. This, obviously, is 30 a valuable result.

It will be plain to those skilled in the art

that my invention can be embodied in different forms without departing from the spirit thereof. For example, the cam-shaft can be driven by gearing that will give the desired 35 speeds thereto; but I prefer the use of sprocket wheels and chain, because between the latter there is no jamming of lint, as there is between the teeth of gearing. I therefore wish to claim my invention in the broadest manner 40 legally possible.

What I claim is—

In a selvage-motion for looms, the combination of a pick-cam shaft; a cam-shaft; two 45 adjacent sprocket-wheels, one having a diameter twice as great as that of the other, said wheels being mounted on the pick-cam shaft; a sprocket-wheel having the same diameter as the larger sprocket-wheel on the pick-cam shaft; a chain to engage the 50 sprocket-wheel on the cam-shaft, and either of the two different-sized sprocket-wheels on the pick-cam shaft; cams fixed on said cam-shaft; selvage-heddles; selvage-treadles connected with said selvage-heddles, and operated by said cams. 55

In testimony whereof I have affixed my signature in presence of two witnesses.

JABEZ WILKINSON.

Witnesses:

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