

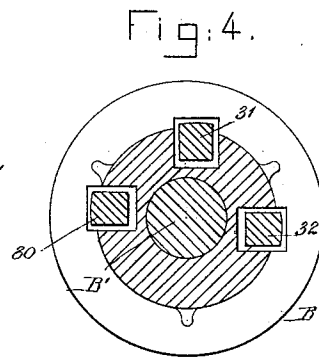
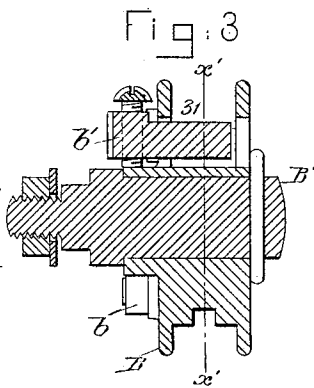
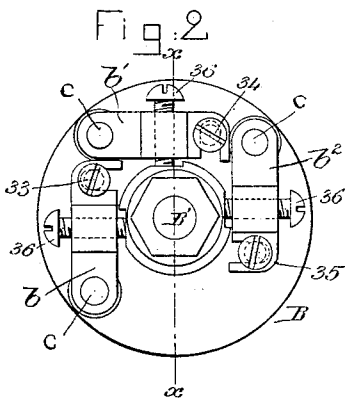
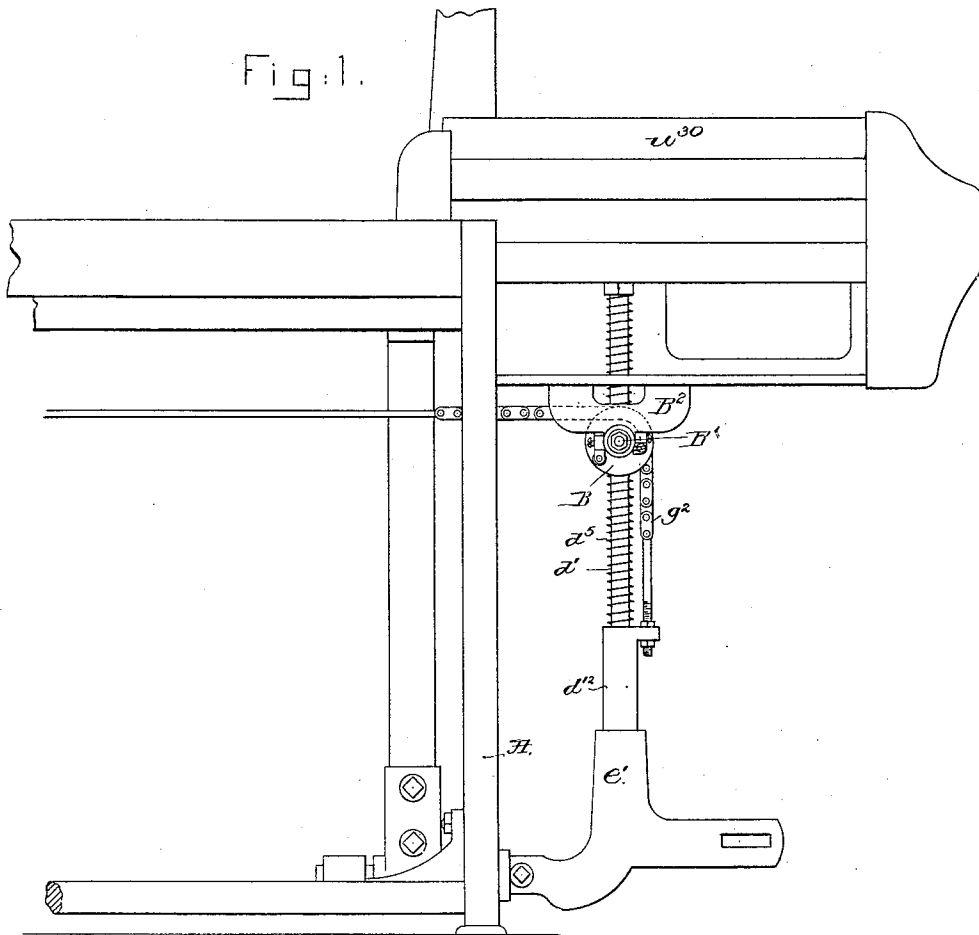
(No Model.)

H. WYMAN.

EXPANDING PULLEY OF SHUTTLE BOX MOTIONS FOR LOOMS.

No. 385,896.

Patented July 10, 1888.



Witnesses.  
*Frederic L. Emery,*  
*John F. B. Powell,*

Inventor.  
*Horace Wyman,*  
*by Crosby & Gregory, attys.*

# UNITED STATES PATENT OFFICE.

HORACE WYMAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE  
CROMPTON LOOM WORKS, OF SAME PLACE.

## EXPANDING PULLEY OF SHUTTLE-BOX MOTIONS FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 385,896, dated July 10, 1888.

Application filed July 5, 1887. Serial No. 243,400. (No model.)

*To all whom it may concern:*

Be it known that I, HORACE WYMAN, of Worcester, in the county of Worcester and State of Massachusetts, have invented an Improvement in Expanding Pulleys of Shuttle-Box Motions for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide means whereby the diameter of the pulley over which passes the chain for actuating the shuttle-box rod may be changed to thus provide for wear of the chain and to enable the shuttle-boxes to be brought exactly into line with the race of the lay.

My invention consists, essentially, in the combination, with a shuttle-box, its rod and sleeve and shuttle-box chain or connector, of the double-flange slotted pulley provided with blocks having arms adapted to enter slots in and cross the pulley, and with set and adjusting screws, as will be described, to adjust the said blocks and arms toward and from the center of the pulley to adjust the said shuttle-box into proper position.

Figure 1 in front elevation represents a sufficient portion of a loom to illustrate my invention; Fig. 2, an enlarged outer side view of the pulley; Fig. 3, a section of Fig. 2 in the dotted line *x*, and Fig. 4 a section of the said pulley in the line *x'*.

The frame-work *A* of the loom, the series of shuttle-boxes *w*<sup>30</sup>, the shuttle-box rod *d'*, its spring *d*<sup>2</sup>, the sleeve-guide *d*<sup>2</sup>, and chain or connection *g*<sup>2</sup> are all substantially as in English Patent No. 3,655, for 1883, to which reference may be had, like letters designating like parts.

The pulley *B*, mounted on a stud, *B'*, held in the bracket, *B*<sup>2</sup>, is, as herein shown, slotted or cut away at three places (see Fig. 4) to receive three arms, 30 31 32, of blocks *b b' b*<sup>2</sup>, the said arms crossing the said pulley.

The blocks *b b' b*<sup>2</sup> at one end are slotted, as shown in Fig. 2, the said slots receiving in

them set-screws 33 34 35, by which the said blocks are held in position on the pulley, each block having extended from it an adjusting-screw, 36, and by the action of the inner end of the screw 36 against the said pulley the clamping-screw being loosened, the block and arm may be adjusted toward or from the center of the pulley, as may be desired, to always insure the placing of the bottom of the cell of each shuttle-box directly in line with the race-way of the lay, notwithstanding wear in the chain.

The clamping-screws 33 34 35 do not constitute pivots for the blocks, which are pivoted at their opposite ends at *c*.

The pulley *B* has double flanges, as best shown in Fig. 3, to receive between them the shuttle-box chain and guide it in its motions.

I claim—

1. The combination, with the shuttle-boxes and the chain connected therewith, of the double-flanged slotted pulley, the blocks arranged and supported at the outer side of the said pulley and having arms extended through the slots across the face of the said pulley, and means to adjust the said blocks and arms to increase or decrease the effective diameter of the said pulley, substantially as described.

2. The combination, with a shuttle-box, its rod and sleeve, and shuttle-box chain or connector, of the double-flanged slotted pulley *B*, provided with blocks having arms adapted to enter the slots and cross the pulley, and with set and adjusting screws, substantially as described, to adjust the said blocks and arms toward or from the center of the pulley to adjust the said shuttle-box, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HORACE WYMAN.

Witnesses:

S. B. SCHOFIELD,  
JUSTIN A. WARE.