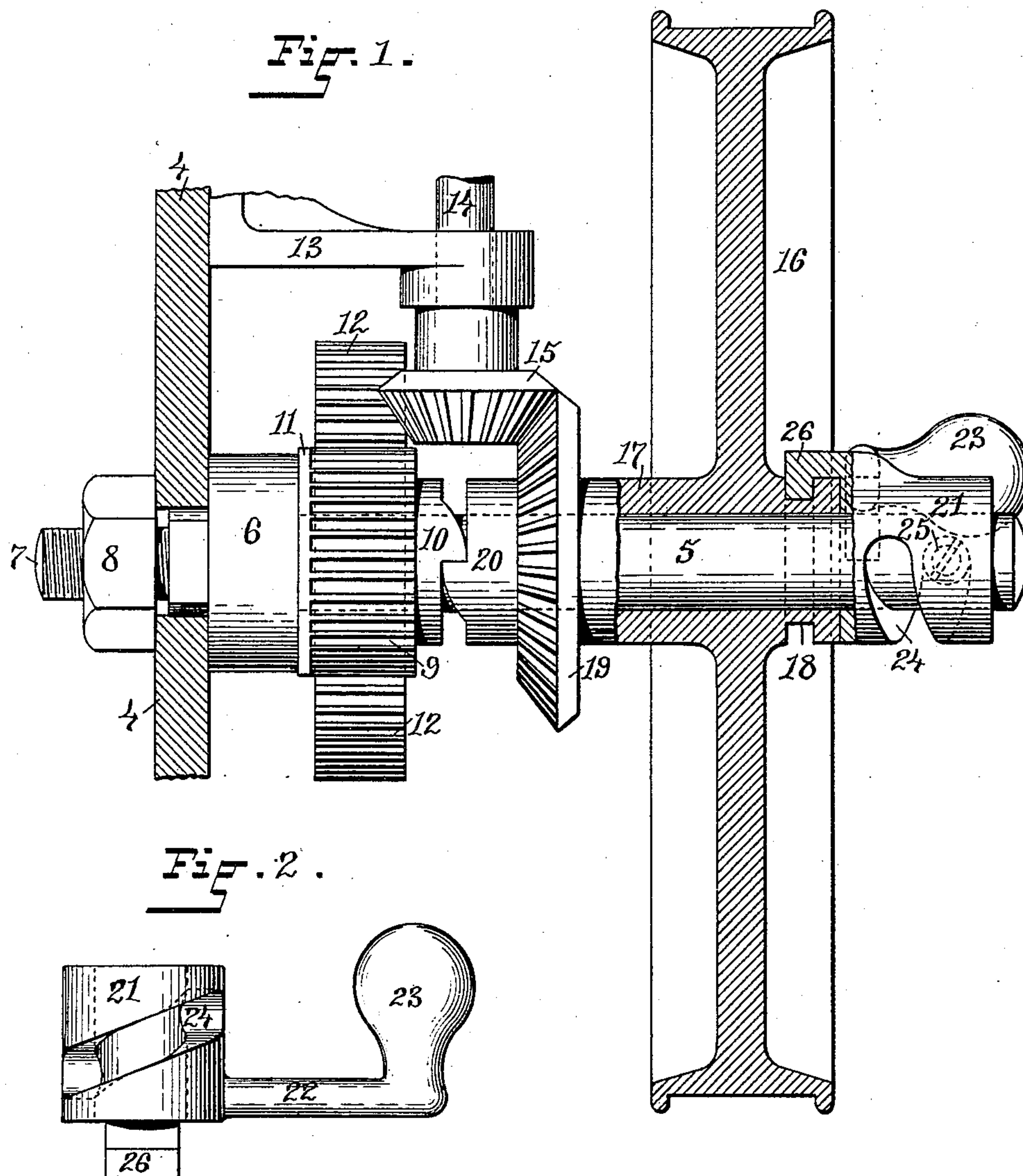


(No Model.)

J. E. PREST.  
CARDING ENGINE.

No. 449,088.

Patented Mar. 24, 1891.



WITNESSES:

Chas. H. Luther Jr.  
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INVENTOR:

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# UNITED STATES PATENT OFFICE.

JOHN E. PREST, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR TO THE  
WHITIN MACHINE WORKS, OF SAME PLACE.

## CARDING-ENGINE.

SPECIFICATION forming part of Letters Patent No. 449,088, dated March 24, 1891.

Application filed July 23, 1890. Serial No. 359,580. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. PREST, of Whitinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Carding-Engines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improved mechanism by means of which the feed-rolls and doffer mechanism of a carding-engine may be quickly and simultaneously connected with or disconnected from the driving-pulley; and it consists in the peculiar arrangement of the gears, the novel construction of the driving-pulley, and means by which the same is held in connection with the gears or by which it can be rapidly disconnected therefrom, as will be more fully set forth hereinafter.

Figure 1 is a side view, partly in section, of my improved arrangement of gears and the clutching device. Fig. 2 is a side view of the cam-shipper lever by means of which the driving-pulley is moved along its shaft to connect or disconnect the same with the gears.

In the figures of the drawings the number 4 indicates part of the frame of a carding-engine.

5 is a spindle or shaft provided with the collar 6, secured to the shaft, so as to form a shoulder. The spindle 5 is also provided with the screw 7, on which the nut 8 turns to clamp the spindle to the frame 4. The gear 9 turns loosely on the spindle 5, and is provided with the clutch-tooth 10 on one side and with the rim 11 on the opposite side. This rim 11, being of a diameter equal to that of the gear 9, serves to engage the edge of the gear 12, and prevents the gear 9 from moving outward on the shaft 5. The gear 9 meshes with the gear-wheel 12, and through the same imparts motion to the doffer mechanism of the carding-engine. The bracket 13 forms a bearing for the shaft 14, one end of which is provided with the beveled pinion 15. The shaft 14 is connected with the mechanism for driving the feed-rolls of the carding-engine. The band-wheel 16 also turns loosely on the spindle 5. It is rotated by means of a driving-

belt connecting it with a band-wheel or pulley (not shown) on the shaft of the main cylinder or any other shaft from which rotary motion can be imparted to the band-wheel 16 at the desired speed. The hub 17 of the band-wheel 16 is provided with the groove 18 at one side and the beveled gear 19 on the opposite side. The end of the hub is provided with the clutch-tooth 20.

The shipper consists of the tube 21, having the laterally-extending arm 22 and the handle 23. The spiral way 24 is formed in the side of the tube 21, so that when the screw-pin 25 is secured in the way to the spindle 5 the tube 21 can be turned half-way round the spindle, the arm 22 and handle 23 by their weight holding the tube in either of the two positions. The shipper is connected with the band-wheel 16 by the spline 26, extending from the tube 21, so as to enter the groove 18 of the band-wheel.

Fig. 1 represents all the parts in their respective positions when the drawing-rolls and the doffer are in operation, and are held in that position by the weight of the handle 23, which extends laterally at or nearly at a horizontal line from the center of the spindle 5. In this position the rotary motion of the band-wheel 16 is transmitted by the beveled gear 19 and the beveled pinion 15 to the shaft 14, and by it to the feed-rolls, and also by means of the clutch-teeth 20 and 10 the gear 9 is rotated, and by the same the gear-wheel 12, by which motion is imparted to the doffer mechanism.

By turning the handle 23 and with the same the tube 21, so as to place the handle on the opposite side of the spindle, the spiral way, acting on the pin 25, slides the tube 21, the band-wheel 16, the beveled gear 19, and clutch-tooth 20 outward and disengages the beveled gear 19 from the pinion 15 and the clutch-tooth 20 from the clutch-tooth 10, thus simultaneously stopping the feed-rolls and the doffer. The weight of the handle 23 securely holds the parts in this disconnected position. The mere turning of the handle from one side to the opposite side connects or disconnects the driving mechanism, and the weighted arm holds the same in either position against accidental displacement.

By the novel construction of the device the



feed-rolls and doffer of a carding-engine can be quickly and always simultaneously connected and disconnected from the driving mechanism without stopping the carding-engine and without waste.

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

1. In a device for stopping and starting the feed-rolls and doffer mechanism of a carding-engine, the combination, with the band-wheel 16, revolving on the shaft 5, the beveled gear 19, and clutch-tooth 20, of shaft 14, the beveled pinion 15, gears 9 and 12, clutch-tooth 10, and a shipper device constructed to move the band-wheel along its shaft, as described.

2. The combination, with the spindle 5, the gear 9, provided with the clutch-tooth 10, and

the shaft 14, provided with the beveled pinion 15, of the band-wheel 16, the beveled gear 19, the clutch-tooth 20, and the shipper consisting of the tube 21, provided with the way 24, the spline 26, and weighted arm 22, and connected with the spindle by the pin 25, as described.

3. The shipper device herein shown and described, the same consisting of the tube 21, provided with the spiral way 24, the arm 22, and handle 23, in combination with the spindle or shaft 5 and the pin 25, constructed to operate as and for the purpose described.

JOHN E. PREST.

Witnesses:

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