

(No Model.)

2 Sheets—Sheet 1.

W. S. REEDER.
BELT TIGHTENER FOR COTTON GINS.

No. 462,931.

Patented Nov. 10, 1891.

Fig. 1.

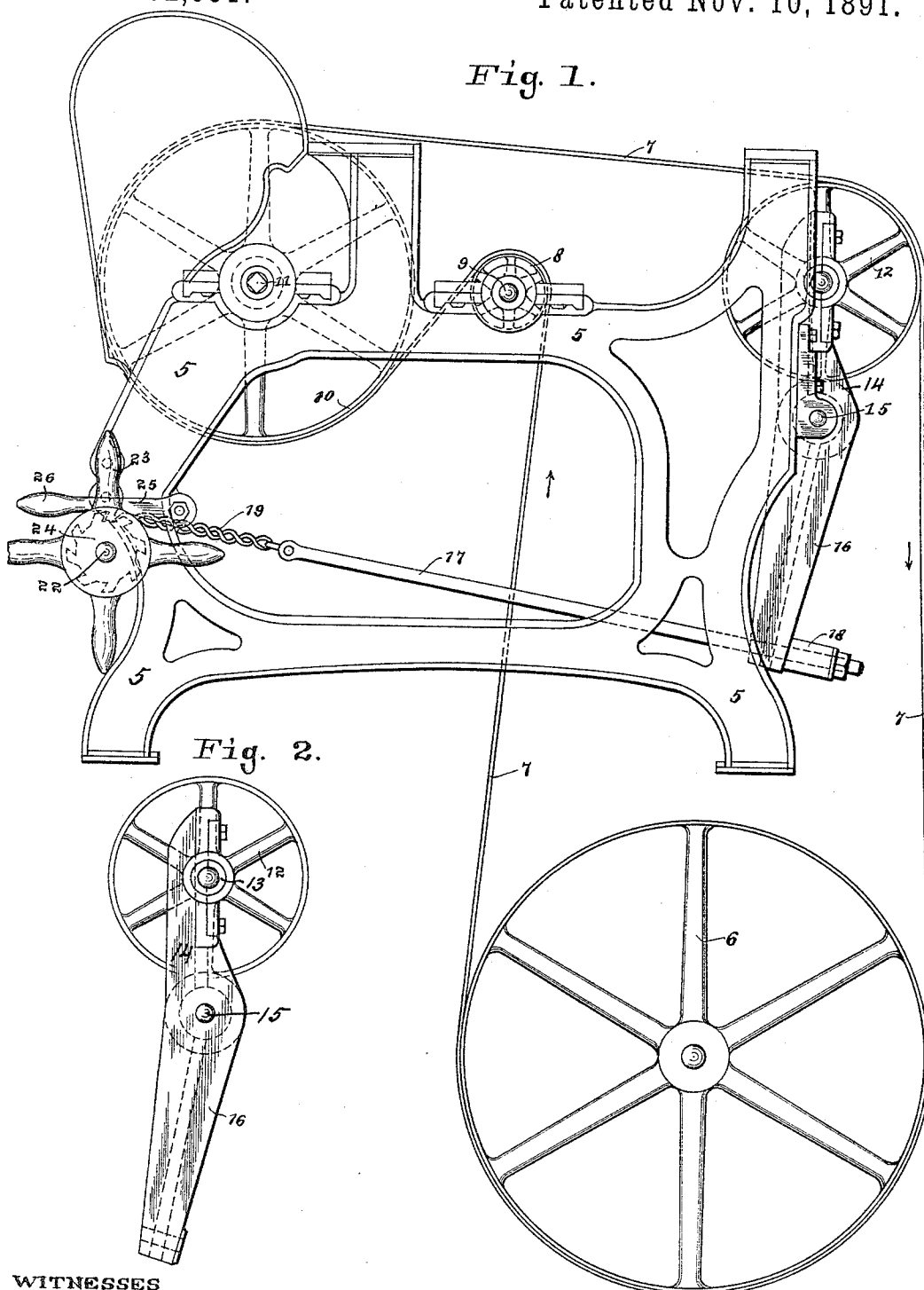


Fig. 2.

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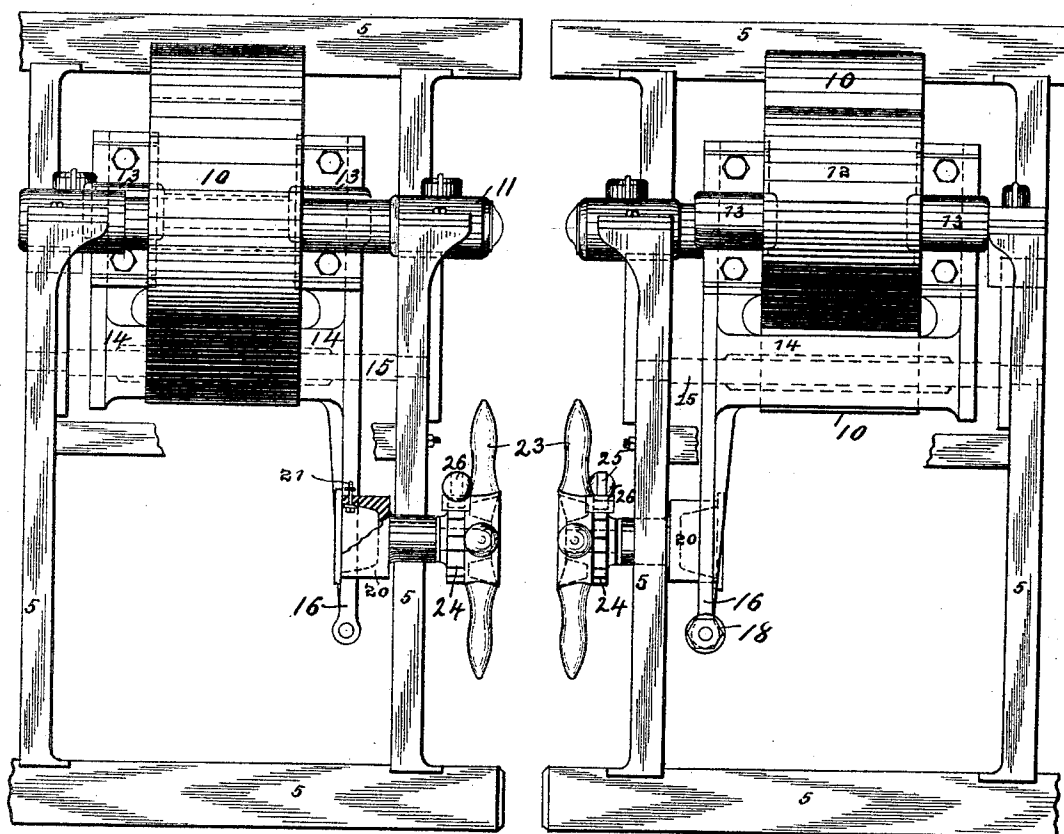
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Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM S. REEDER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE KINGSLAND & DOUGLAS MANUFACTURING COMPANY, OF SAME PLACE.

BELT-TIGHTENER FOR COTTON-GINS.

SPECIFICATION forming part of Letters Patent No. 462,931, dated November 10, 1891.

Application filed July 17, 1891. Serial No. 399,813. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. REEDER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Belt-Tighteners for Cotton-Gins, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The invention will be best understood by referring to the accompanying drawings, in which—

Figure 1 is a side elevation of a cotton-gin provided with my improvements. Fig. 2 is a side elevation of the tightener-pulley and the oscillating frame which carries the same. Fig. 3 is a front elevation of part of a cotton-gin provided with my improvements, and Fig. 4 is a rear elevation of the latter.

In the said drawings, in which the same marks of reference indicate the same parts throughout the several views, 5 is the framework of a cotton-gin; 6, a drive-wheel; 7, a belt passing over the same to a pulley 8, carried by the brush-shaft 9, and thence encircling a pulley 10 upon the saw-shaft 11, and finally traveling over a tightener-pulley 12. These features form no part of my invention, the same being now quite generally in use. The tightener-pulley 12 is supported by bearings 13 upon a frame 14, which is swiveled upon a shaft 15, and has an arm 16 depending therefrom, to the lower end of which devices are attached for throwing outward or inward the tightener-pulley to loosen or tighten, respectively, the belt 7. To the lower end of the depending arm 16 of the oscillating frame carrying the tightener-pulley is elastically secured a rod 17, a piece of rubber 18 or other elastic means being interposed between the rod 17 and the said depending arm 16. To the other end of the rod 17 is secured a chain 19, or other flexible connection, adapted to pass over a drum 20, the other end of said chain being connected to a pin 21

upon the said drum. This drum is carried by a shaft 22, which projects at one side of the gin, and is provided with a hand-wheel 23, whereby the drum may be rotated to take up the chain. Upon the shaft 22 is a ratchet-wheel 24, and this is adapted to be engaged by the tooth of a detent 25, the free end of which is fashioned into a handle 26. When turning the hand-wheel 23 to rotate the drum in the direction so as to take up the chain and throw outward the tightener-pulley 12 to tighten the belt 7 the detent 25 automatically engages the ratchet-wheel 24 and locks it against rotation in the reverse direction. To loosen the belt 7, the detent 25 is lifted by the foot or by one hand from the ratchet 24 and the drum over which the chain passes allowed to unwind the chain, the amount of chain so unwound from the drum being regulated by the hand having hold of the hand-wheel 23. By this means the belt 7 can be conveniently tightened and loosened.

I am aware that other means of throwing the tightener-pulley in and out have been devised, but such means are difficult and inconvenient to operate.

Another feature of my invention relates to the elastic connection between the rod 17 and the oscillating frame carrying the tightener-pulley. Sometimes the seed from the cotton or other obstructions will get between the belt 7 and the pulleys, especially the driving-pulley 6, and will break the belt or cause serious strain thereof, so that the belt will sometimes run loosely and sometimes tightly. The elastic connection obviates this and allows the tightener-pulley 12 to respond to tighten and loosen the belt under such circumstances.

Having fully set forth my invention, what I desire to claim and secure by Letters Patent of the United States is—

The combination, in a cotton-gin, of a driving-pulley 6, a tightener-pulley 12 therefor, an oscillating frame 14, carrying such pulley, having a dependent arm 16, a rod 17, a rubber or elastic connection 18 between said rod and the depending arm 16, a flexible connec-

tion 19, attached to the other end of said rod, a drum 20 upon which said flexible connection may be wound, a hand-wheel 23, fast upon the shaft carrying said drum, a ratchet-wheel 24 also upon said shaft, and a detent 5 25 for said ratchet-wheel and provided with a suitable handle, substantially as described. In testimony whereof I have hereunto set

my hand and affixed my seal this 15th day of July, 1891, in the presence of the two subscribing witnesses.

WILLIAM S. REEDER. [L. S.]

Witnesses:

A. C. FOWLER,
DANIEL N. KIRBY.