G. W. BAKER.

SEWING-MACHINE DRIVE-WHEEL AND SHAFT-LOCKING DEVICE.

No. 195,436. Patented Sept. 25, 1877.

Fig. 1.

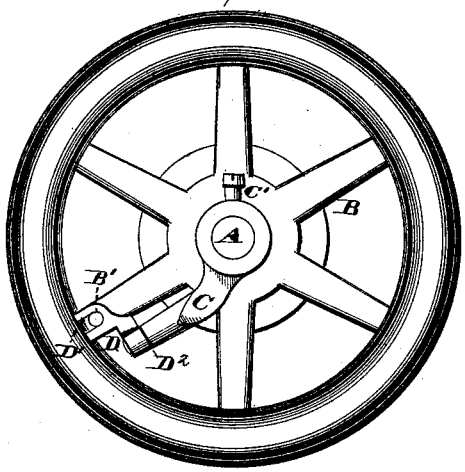


Fig. 2.

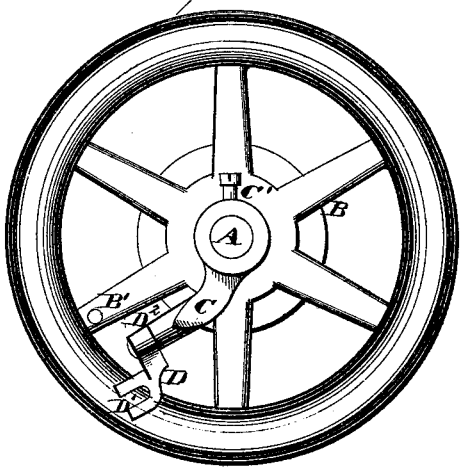


Fig. 3.

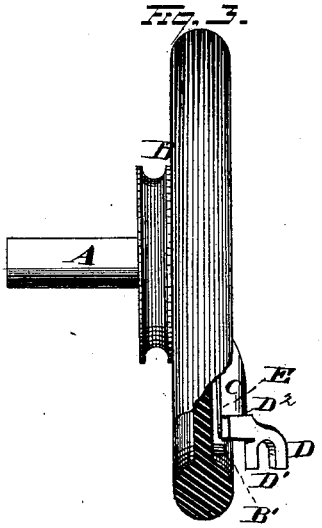
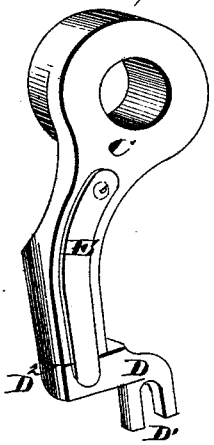


Fig. 4.



WITNESSES

Ed. L. Nottingham

A. W. Bright

INVENTOR

Geo. W. Baker,

By Seggett & Seggett

ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE W. BAKER, OF CLEVELAND, OHIO.

IMPROVEMENT IN SEWING-MACHINE DRIVE-WHEEL AND SHAFT-LOCKING DEVICE.

Specification forming part of Letters Patent No. **195,436**, dated September 25, 1877; application filed August 21, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. BAKER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in sewing-machines, and more especially to a device whereby the shaft may be disconnected from the band or drive wheel when it is desired to reverse the motion of the wheel in winding the bobbin.

My invention consists in an arm extending from the shaft alongside of the loosely-journaled wheel, and providing that arm with a hinged or pivoted latch, which may be set down over a pin projecting from said wheel, as will be hereinafter more fully set forth and claimed.

In the drawing, Figure 1 represents a side elevation of a wheel with my improvement attached. Fig. 2 represents the same with my improvement attached, but with the latch disengaged from the pin. Fig. 3 is an edge view of the wheel with a portion of the periphery broken away, and representing the latch partially thrown down. Fig. 4 is a separate view of my attachment, showing how it is held engaged or disengaged by a spring.

A is the shaft; B, the drive-pulley or band-wheel. This wheel is journaled loosely upon the shaft A, so as to turn with the shaft when the two are engaged, or to turn loosely upon the shaft when the two are disengaged. C is an arm, securely fastened to the shaft by a set-screw, C′, or other suitable keying mechanism. D is a latch, provided with a throat, D^1, and hinged or pivoted to the arm C at D^2. B′ is a pin or lug projecting from the side or face of the band-wheel, in such position as to engage with the throat D^1 in the latch D. E is a spring, so secured to the arm C that it shall impinge against the latch D, and hold it in position when engaged with the pin B′, or to hold it disengaged when it is released from the pin or stud B′. This latch is thrown into or out of gear with the pin B′, when desired, by hand.

It is not absolutely necessary, however, that the pin B′ should engage with the slot, for the latch may be thrown down so that its forward edge will strike against the pin, and thereby be driven by the wheel, and therefore the slot or throat D^1, not being absolutely essential, may, if desired, be dispensed with, though I prefer to employ it.

The operation of the device is as follows: When it is desired to drive the shaft with the wheel, the latch is thrown down in front of the pin B′, or it is thrown down so as to engage the pin with the throat D^1. The wheel will then carry the shaft with it.

If at any time, however, it is desired to reverse the wheel, or move it independently of the shaft, as, for instance, in winding the bobbin, without running the shaft A, then the latch D is disengaged by the finger from the pin B′, and the wheel B may then move in either direction without disturbing the shaft A.

It will be observed that in use it is objectionable to employ any kind of locking device that will project to any extent beyond the plane of the face or dish of the wheel, because in revolving there is great liability of injuring the hands or arms of the operator, as well as to tear or tangle the clothes of persons near the machine. This is especially so when the projecting parts are near the periphery of the wheel; while at the same time it is desirable to engage the wheel and shaft as near the periphery of the wheel as possible, so as to procure the greatest leverage.

In my device the parts composing the locking device are all so constructed and arranged that they lie almost entirely within the dish of the wheel while the engaging-point is at the periphery, thus obtaining the greatest leverage and avoiding all dangerous projections.

What I claim is—

The combination, with the shaft A and pulley-wheel B, the latter provided with the stud

B′ near its periphery, of the arm C, rigidly attached to the shaft, and bearing the engaging-latch D and spring E, the said locking device constructed to engage near the periphery of the wheel, and resting within the dish of the wheel, substantially as and for the purposes set forth.

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

GEORGE W. BAKER

Witnesses:

F. TOUMEY,

WILLIAM E. DONNELLY.