

(No Model.)

J. BOLTON.

BELT REMOVING AND REPLACING DEVICE FOR SEWING MACHINES.

No. 389,789.

Patented Sept. 18, 1888.

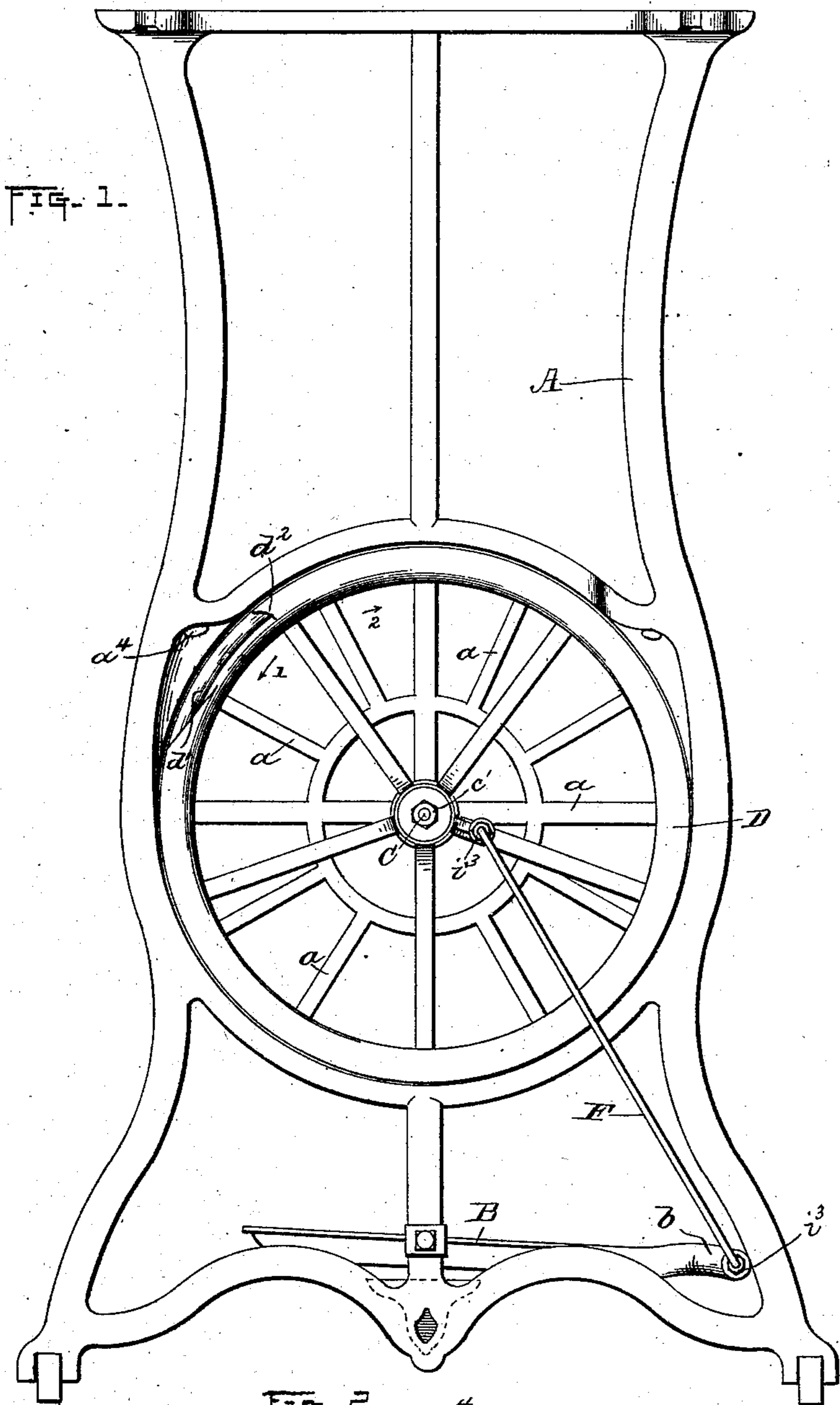
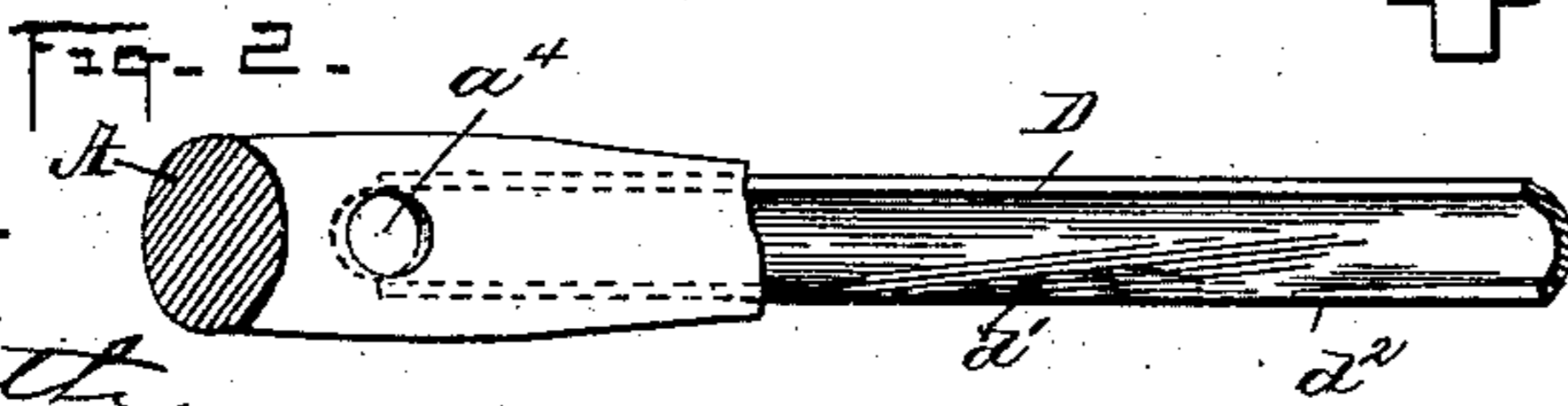


FIG. 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JAMES BOLTON, OF NEW YORK, N. Y.

BELT REMOVING AND REPLACING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 389,789, dated September 18, 1888.

Application filed February 6, 1888. Serial No. 263,126. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BOLTON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Belt Removing and Replacing Devices for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to the driving mechanism connected with the stand or table of a sewing-machine; and the principal object thereof is to provide a cheap, convenient, and reliably-acting device, whereby the belt will be run off from the driving-wheel when the latter is turned backward, and will be automatically replaced on the said wheel when it is off if the wheel be turned forward.

In the drawings, Figure 1 is an end elevation of a sewing-machine stand embodying my invention. Fig. 2 is a detail plan view of a portion of the driving-wheel, showing also a part of the leg of the stand.

A denotes one of the legs or side frames of a sewing-machine stand, and B the treadle, hung to the stand in any suitable manner. The side frame, A, is shown in the present instance as having a series of inwardly-curved arms, *a*, to form a dress-guard similar to that shown in my patent, No. 374,578, dated December 13, 1887.

The driving-wheel D is provided with the usual central belt-groove in its periphery, and has on its outer side or face an inclined cut-away portion, *d'*, which will run the belt off from the said wheel when the latter is turned backward, or in the direction denoted by arrow 2, Fig. 1, the rear end of the said cut-away portion being of such shape as to form a belt-replacing hook, *d*<sup>2</sup>, which is a portion of the outer flange of the said wheel, and which is within the vertical plane of the outer side of the said wheel, in that it does not project laterally beyond the body of the rim of the wheel, and is also within the periphery thereof, in that it does not extend radially beyond the circle of the wheel to form an objectionable projection, as is the case with some belt-replacing devices now in use.

When the driving-wheel is turned forward,

or in the direction indicated by the arrow 1, Fig. 1, the hook *d*<sup>2</sup> automatically takes up the belt when the latter is off the wheel and brings it into working position in the groove of the wheel. To insure this belt-replacing action by the hook *d*<sup>2</sup>, I prefer to provide the frame or leg A with a hole, *a*<sup>1</sup>, adjacent to the driving-wheel, for the reception of the belt running from said wheel to the driving-pulley of the machine, the walls of the said hole forming an inclosed belt-guide, which will always hold the belt in place adjacent to the said wheel, even when the belt is off the latter, so that the belt-replacing device or hook cannot fail to take up the belt when it passes the said hole in its forward rotation. This inclosed belt-guide formed in the frame or leg of the machine may, however, be used in connection with the belt-replacing devices, which differ from that herein shown, and it will also serve a useful purpose in connection with a driving-wheel which does not have a belt-replacing device by retaining the belt in such position that when off the wheel it may easily be run thereon, and thus the inconvenience and annoyance which sometimes occur when an operator endeavors to run a belt on a sewing-machine driving-wheel will be avoided.

I am aware that belt-replacing devices of various kinds have heretofore been in use, and that it has also been proposed to provide driving-wheels with switch-grooves for running the belts off from the said wheels when they are turned backward; but I believe that I am the first to provide a driving-wheel with a belt-replacing device or hook which is an integral part of the flange of the wheel, and does not, therefore, extend beyond the rim of the wheel laterally, or beyond the circle or periphery of the wheel, and the first to use such a belt-replacing device in connection with an inclosed belt-guide formed in the leg or side frame of the machine-stand.

In the use of my belt-replacing device the belt is hooked onto the wheel when the latter is turned forward, and is unhooked from the wheel when the wheel is turned backward, the belt being always held in position, so that the hook *d*<sup>2</sup> cannot fail to take it up by the inclosed belt guide or hole *a*<sup>1</sup>, cast in the frame or leg

of the machine adjacent to the wheel and opposite the belt-groove therein.

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

5 1. The combination, with the leg or side frame of a sewing-machine stand, of a driving-wheel having a central belt-groove, said wheel having on its outer side an inclined cut-away portion,  $d'$ , and at the end of said cut-away  
10 portion a belt-replacing hook,  $d^2$ , which is a part of the rim or flange of the said wheel, substantially as set forth.

15 2. The combination, with the leg or side frame of a sewing-machine stand, of a driving-wheel having a central belt groove, said wheel having also on its outer side an inclined cut-away portion,  $d'$ , and at the end of said cut-away portion a belt-replacing hook,  $d^2$ , which is within the circle or periphery of the said

wheel and also within the vertical plane of the outer side thereof, substantially as set forth. 20

3. The combination, with the leg or side frame of a sewing-machine stand provided with an inclosed belt-guide, of a driving-wheel having a central belt-groove and on its outer 25 side an inclined cut-away portion,  $d'$ , and at the end of said cut-away portion a belt-replacing hook,  $d^2$ , which is within the circle or periphery of the said wheel and also within the vertical plane of the outer side thereof, substantially as set forth. 30

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

JAMES BOLTON.

Witnesses:

JAMES J. MUIR,

E. A. SAALFELD.