No. 665,820. Patented Jan. 8, 1901.

J. B. WILLINGS.

POWER TRANSMITTING MECHANISM.

(Application filed Sept. 20, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

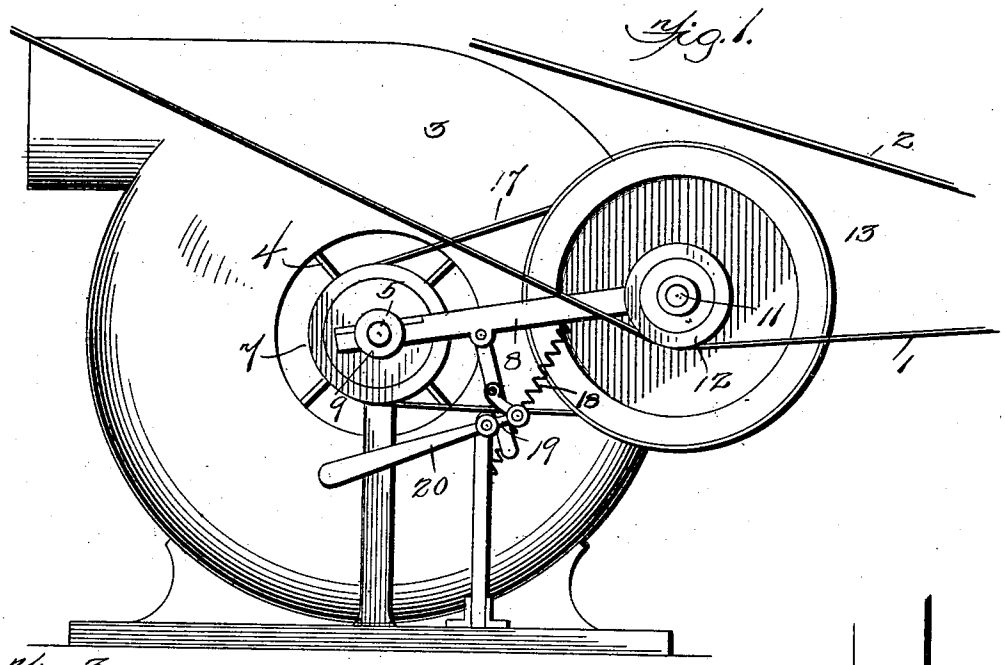


Fig. 3.

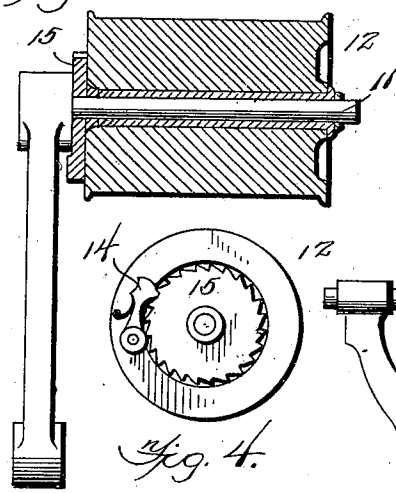


Fig. 4.

Fig. 2.

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Fig. 6.

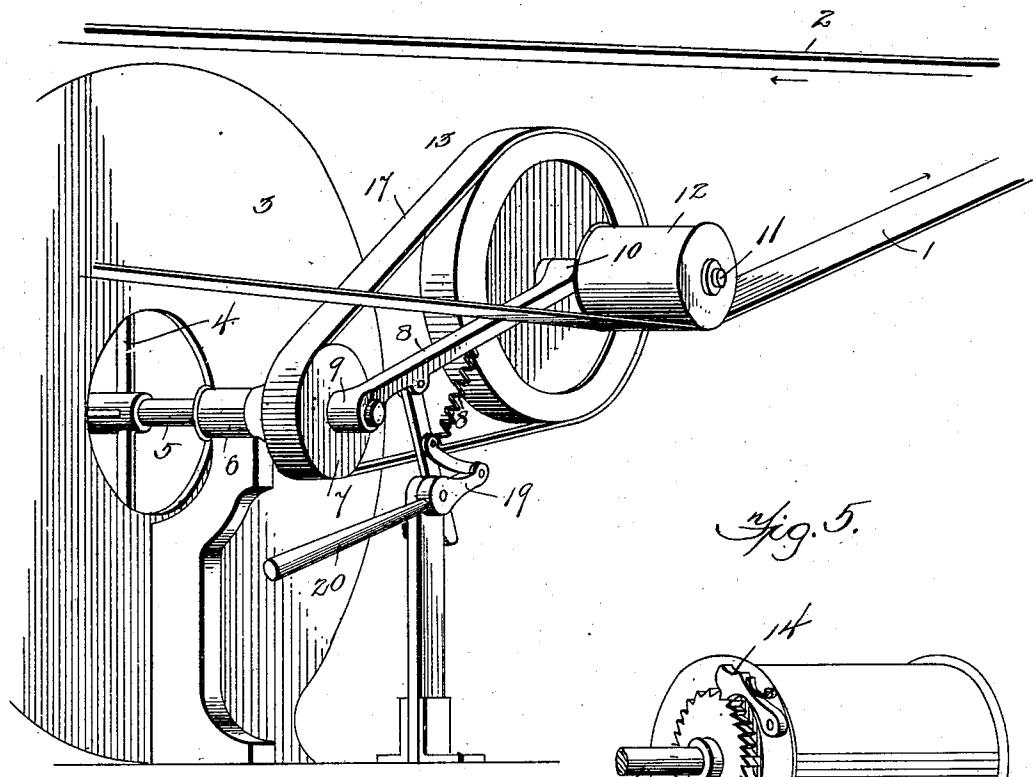


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOSEPH B. WILLINGS, OF LIMA, OHIO.

POWER-TRANSMITTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 665,820, dated January 8, 1901.

Application filed September 20, 1900. Serial No. 30,612. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. WILLINGS, a citizen of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Power-Transmitting Mechanism; and I do 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 appertains to make and use the same.

The invention relates to mechanism for collecting and transmitting power from driven belting.

The object of the invention is to provide mechanism capable of being installed within the path of movement of a driven belt and to be actuated by such belt for the purpose of transmitting movement therefrom to another piece of machinery or a device desired to be driven, and in the present instance I employ mechanism for the purpose of actuating the fan of a blower, although it should be borne in mind at the beginning that the invention is not necessarily restricted to such application.

With this and other minor objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of the mechanism, showing it connected to a blower. Fig. 2 is an end view of the same parts. Fig. 3 is a vertical sectional view of the power-pulley. Fig. 4 is an inner end view of the same. Fig. 5 is a perspective view of the same, and Fig. 6 is an enlarged detail perspective view of the mechanism.

Referring now more particularly to the drawings, 1 denotes the lower run, and 2 the upper run, of the driven belt, the drive-pulley and the driven pulley not being shown, as the same form no part of the present invention.

3 denotes a blower, which consists of the usual casing, having mounted therein a fan 4, the shaft 5 of which is journaled in bearing 6. Mounted upon the shaft is a pulley 7.

8 denotes a hanger-arm having a hub 9 journaled on the shaft and having at its free end a bearing 10, in which is mounted a shaft 11, supporting at one end a power-pulley 12 and at the other end a differential pulley 13. The power-pulley 12 is connected to said shaft by a pawl and ratchet 14 and 15, thus permitting the wheel to rotate independently of the shaft in one direction and causing it to rotate the shaft when moved in an opposite direction. The power-pulley 12 is adapted to engage the upper surface of the lower run of the belt, as shown in Fig. 1, and does all of the driving and when the belt is moved in the direction of the arrow rotates the differential pulley 13, which through its belt connection 17 with the pulley 7 rotates the fan.

A coiled spring 18, connected to a fixed point and to the arm 8, serves to hold the power-pulley 12 in frictional engagement with the belt and prevent it from jumping due to the irregular movement of said belt.

19 denotes toggle arms, the upper end of which is pivoted to the arm 8 and the lower end to a lever 20, pivoted to a post 21. By operating this lever in the proper direction the power-pulley may be moved into engagement or out of engagement with its belt when desired.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of my invention will be readily understood without a more extended explanation of the same.

Changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof. For instance, while I have shown a belt for transmitting the power from the power-pulley to the shaft 5 it is evident that any other means or form of gearing may be employed for this purpose without departing from the invention.

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

1. The combination, with a driven belt, of a shaft to be driven, an arm journaled upon said shaft, a power-pulley supported by said arm and adapted to frictionally engage the belt, gearing between said shaft and the power-pulley for transmitting movement from the said pulley and to said shaft, and means

for removing said pulley from frictional contact with said belt, substantially as and for the purpose set forth.

2. The combination, with a driven belt, of a shaft to be driven, a spring-actuated arm journaled upon said shaft, a power-pulley supported by said arm and adapted to frictionally engage the belt, gearing between said shaft and the power-pulley for transmitting movement from said pulley and to said shaft, and toggle-levers connected to said arm for removing the power-pulley from engagement with said belt, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

J. B. WILLINGS.

Witnesses:
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OSA P. BAYER.