

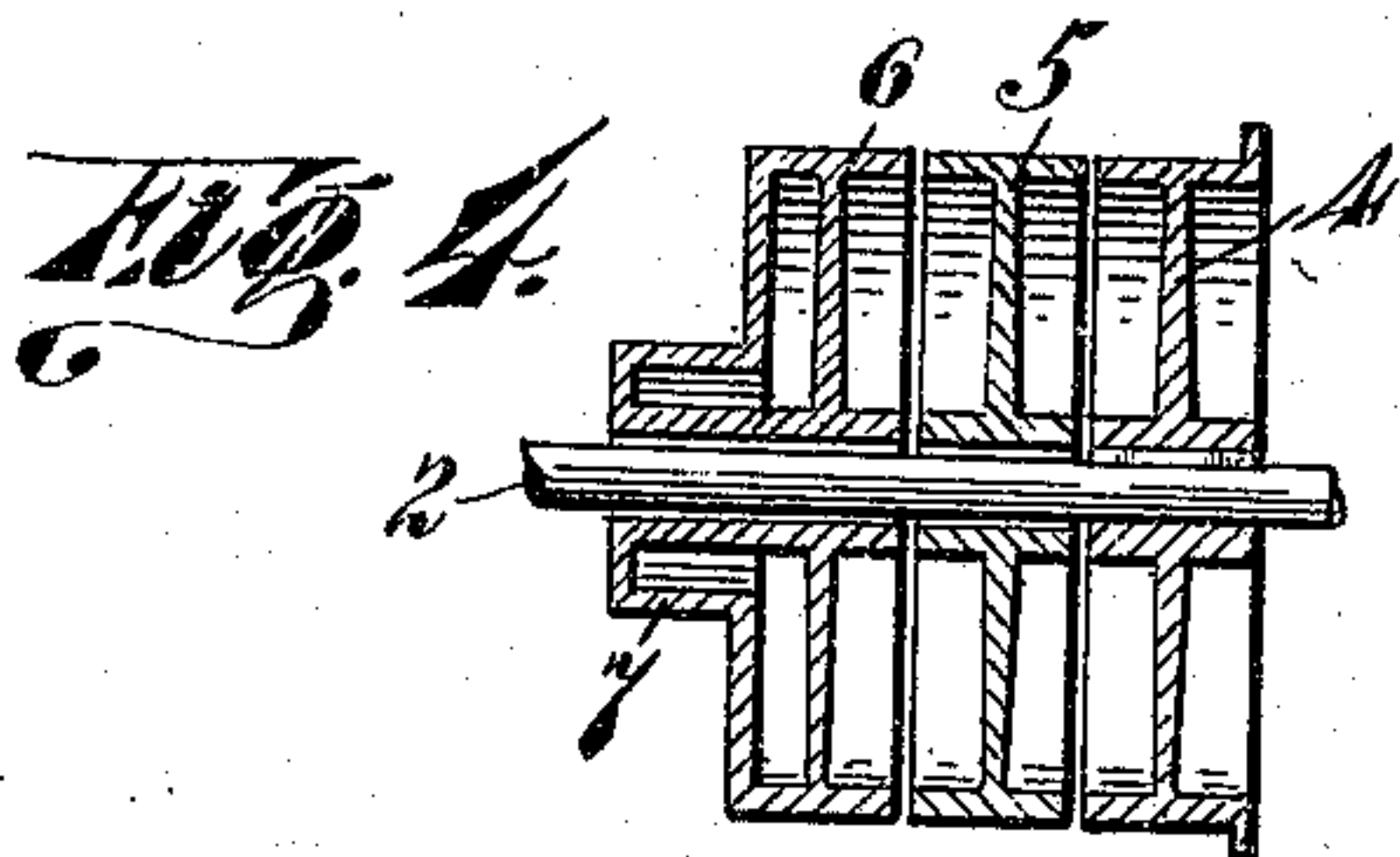
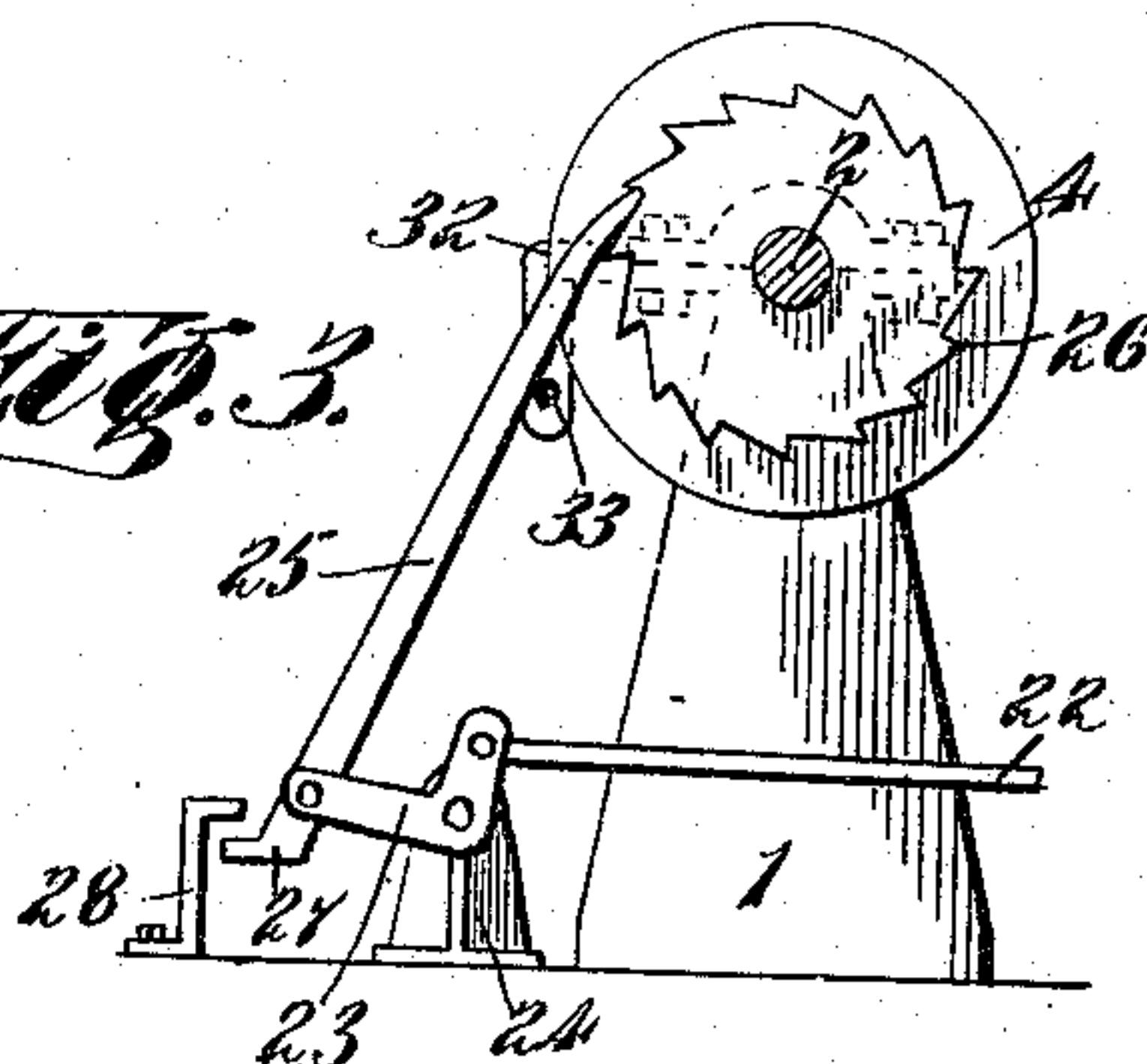
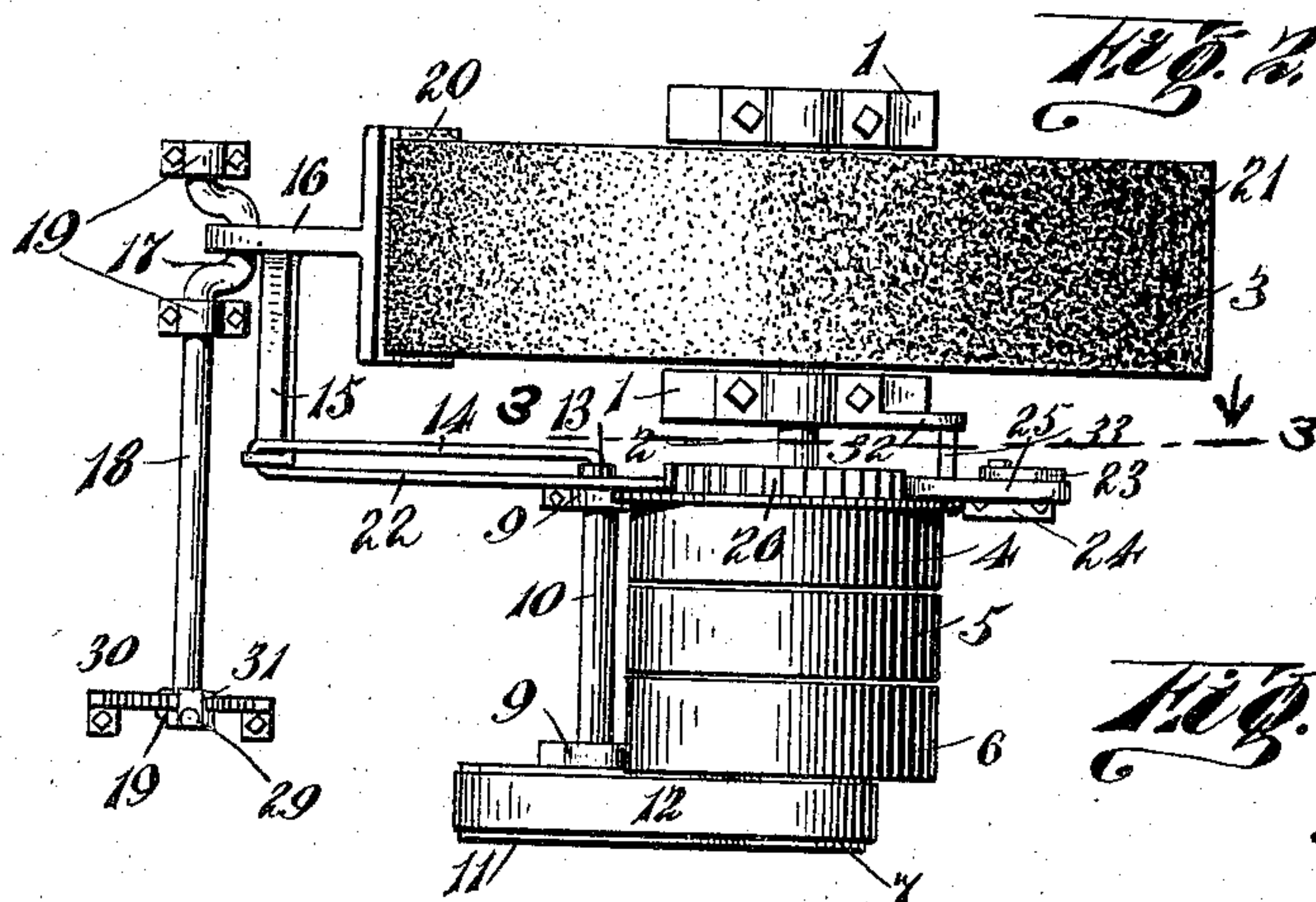
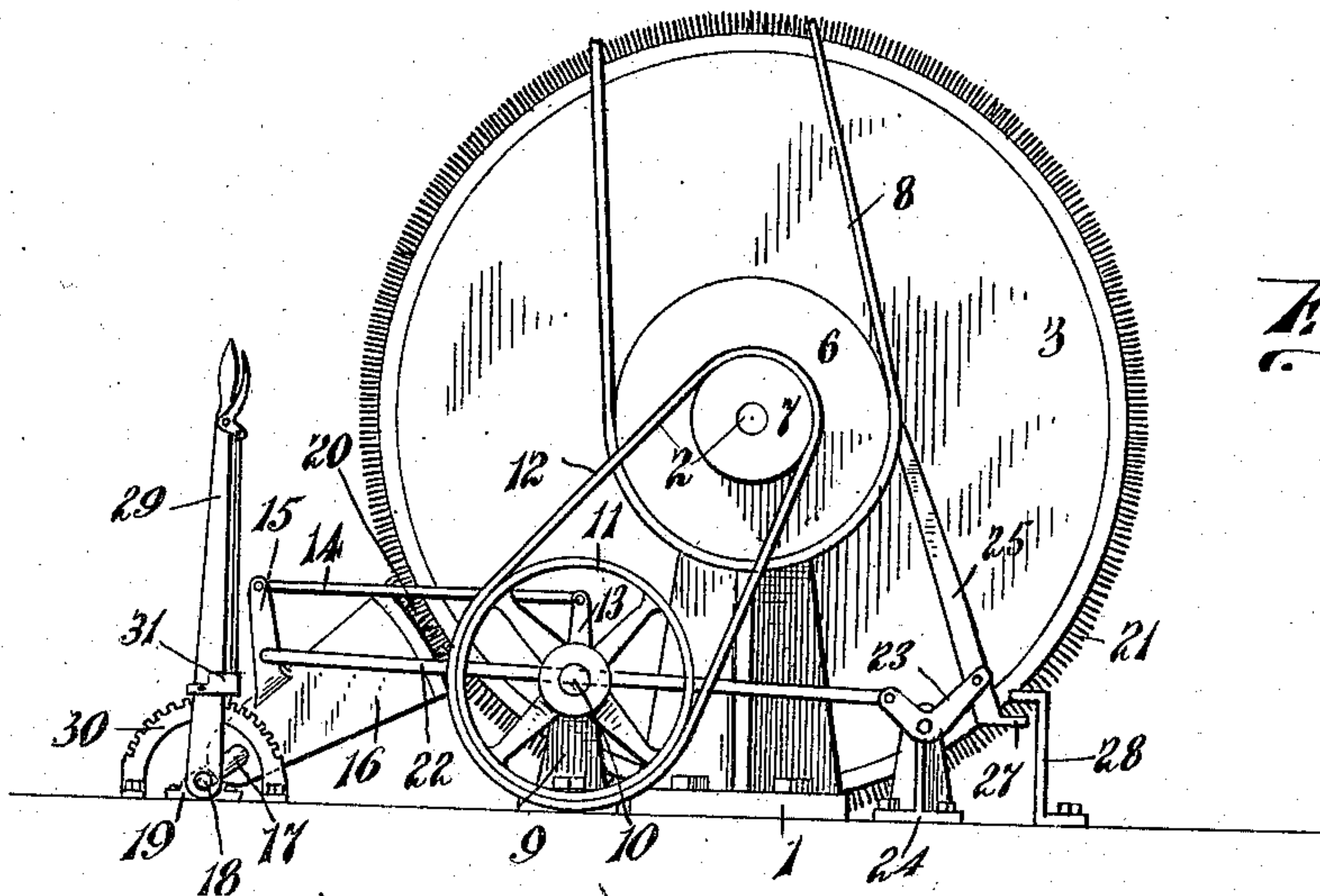
No. 840,476.

PATENTED JAN. 8, 1907.

R. COUTURE.
CARDING MACHINE CLEANER.

APPLICATION FILED DEC. 1, 1905.

2 SHEETS—SHEET 1.



Witnesses:

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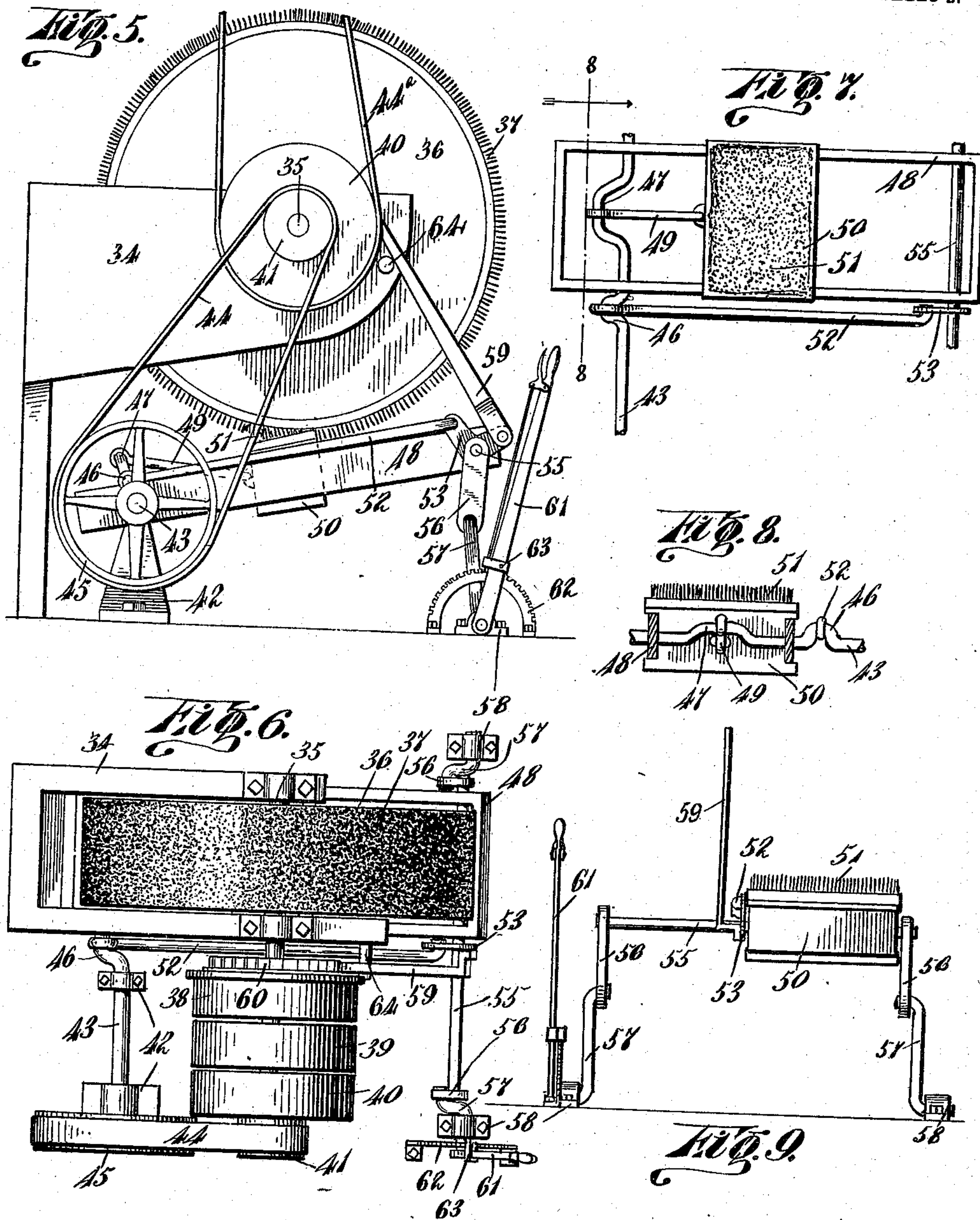
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ROMAIN COUTURE, OF SOMERSWORTH, NEW HAMPSHIRE

CARDING-MACHINE CLEANER.

No. 840,476.

Specification of Letters Patent.

Patented Jan. 8, 1907

Application filed December 1, 1905. Serial No. 289,767.

To all whom it may concern:

Be it known that I, ROMAIN COUTURE, a subject of the King of Great Britain, residing at Somersworth, county of Strafford, in the State of New Hampshire, have invented certain new and useful Improvements in Carding-Machine Cleaners; and I do hereby declare that the following is 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.

My invention relates to wool-carding machines.

The object of my invention is to provide means for cleaning cylindrical wool-cards.

A further object of my invention is to provide means for disengaging the cleaning means when not in use; and my invention consists of the construction, combination, and arrangement of parts, as herein illustrated, described, and claimed.

In the accompanying drawings, forming part of this application, I have illustrated an embodiment of my invention, in which drawings similar reference characters designate corresponding parts, and in which—

Figure 1 is a side elevation showing the application of my invention to a card-cylinder. Fig. 2 is a plan view of the same. Fig. 3 is an end elevation of a card-cylinder and its rotating means and showing its shaft in section, and Fig. 4 is a vertical section through the pulleys used on the shaft of the card-cylinder. Fig. 5 is a side elevation of a modified form of cleaning apparatus, showing its application to a carding apparatus. Fig. 6 is a plan view of the same. Fig. 7 is a detached detail in plan of a portion of the cleaning apparatus. Fig. 8 is a vertical section on line 8 8 of Fig. 7, and Fig. 9 is a front elevation of the cleaning apparatus detached from the carding apparatus.

Referring to the drawings, 1 designates pedestals adapted to support a shaft 2. Carried by the shaft 2 is a card-cylinder 3 of ordinary form. Secured on the shaft 2 is a pulley 4, adjacent which is disposed on the shaft 2 a loose pulley 5. A cleaner driving-pulley 6 is disposed on the shaft adjacent the loose pulley 5 and is provided with a reduced portion 7. A driving-belt 8 passes over the pulley 4 and is adapted to rotate the shaft 2.

Disposed adjacent the pedestals 1 are pedestals 9, rotatably carried by which is a shaft 10, having on one end a pulley 11, over

which is passed a belt 12, connecting with the reduced end 7 of the cleaner driving-pulley 6, carried on the shaft 2. The shaft 10 is provided with a cranked end 13, to which is pivotally connected one end of a rod 14, the opposite end of which is pivotally connected to an arm 15, carrying a cleaner-bar 16. The rear end of the cleaner-bar 16 is pivotally secured to a cranked portion 17 of a cleaner rocking shaft 18, which is pivotally supported in bearings 19.

The free end of the cleaner-bar 16 is provided with bristles 20, which are adapted to pass through the card-teeth 21 on the card-cylinder 3. As the cleaner-bar 16 is reciprocated by means of the rod 14, the bristles 20 pass through the card-teeth 21, and thereby clean the loose wool therefrom. When the cleaner-bar is to be actuated, the driving-belt 8 is shifted to the cleaner driving-pulley 6, so that the shaft 10 is actuated through the medium of the pulley 11 and the belt 12, and at this time the card-cylinder 3 is not rotated except as hereinafter described.

Connected to the arm 15 and extending forwardly is a rod 22, the opposite end of which is pivotally connected to a bell-crank lever 23, which bell-crank lever is pivoted to a pedestal 24. Pivotaly connected to the bell-crank lever is a pawl 25, the upper end of which is adapted to engage a ratchet 26, fixed on the shaft 2. As the cleaner-bar 16 is reciprocated, as hereinbefore described, the pawl 25 engages the ratchet 26 and causes rotation of the card-cylinder 3 as each successive portion of its periphery is cleaned by the bristles 20, carried by the cleaner-bar.

The pawl 25 is provided with an extension 27, adapted to engage a bracket 28, secured adjacent to the pedestal 24, when the cleaner rocking shaft 18 is rocked by means of the lever 29, which is secured to the shaft 18. Disposed adjacent the lever 29 is a segmental rack 30, adapted to be engaged by the pawl 31 on the lever 29. When the lever 29 is moved toward the left hand of Fig. 1, the cleaner rocking shaft 18 is rocked, carrying the cleaner-bar upward, so that its bristles will not come into engagement with the card-teeth of the card-cylinder 3. This movement is communicated to the bell-crank lever 23 by means of the rod 22, so that the bell-crank lever is rocked, causing engagement of the extension 27 of the pawl 25 with the bracket 28, so that the pawl 25 is rocked out of engagement with the ratchet 26, and the

card-cylinder may then be rotated by shifting the belt 8 to the pulley 4.

One of the pedestals 1 is provided with an extension 32, which carries a pin 33, adapted to limit the movement of the pawl 25.

Referring particularly to Figs. 5 to 9, inclusive, which illustrate a modified form of the cleaning apparatus, 34 designates a frame adapted to rotatably support a shaft 35, carrying a card-cylinder 36, which card-cylinder is provided with card-teeth 37. Disposed on the shaft 35 is a fixed pulley 38, a loose pulley 39, and a loose pulley 40, having a reduced end 41.

Disposed adjacent the frame 34 are pedestals 42, supporting a shaft 43. A belt 44 is passed over the reduced end 41 of the loose pulley 40 and over a pulley 45 on the shaft 41 and is adapted to cause rotation of the shaft 43 by means of the belt 44 and the driving-belt 44^a, which may be shifted to the pulley 40.

The shaft 43 is provided with a crank portion 46 and a second crank portion 47. Disposed adjacent the crank portion 47 of the shaft 43 is an approximately rectangular frame 48, pivotally supported on the shaft 43. A link 49 has one end loosely connected to the cranked portion 47 of the shaft 43 and has its opposite end connected to a slidable member 50, disposed on the frame 48, carrying the bristles 51, adapted to pass through the card-teeth 37 of the card-cylinder 36 and to clean the card-teeth of the card-cylinder when the member 50 is reciprocated by rotation of the shaft 43.

Secured to the crank portion 46 of the shaft 43 is one end of a link 52, the opposite end of which is connected to a bell-crank lever 53. The bell-crank lever 53 is pivotally mounted on a shaft 55. Connecting with the shaft 55 are links 56, pivotally connected at their lower ends to cranks 57, and the cranks 57 are carried in bearings 58. Connected to one end of the bell-crank lever 53 is a pawl 59, adapted to engage a ratchet 60 on the shaft 35, which carries the card-cylinder 36. Secured to one of the cranks 57 is a lever 61, and disposed adjacent the lever 61 is a segmental rack 62, adapted to be engaged by the pawl 63, carried on the lever 61. The shaft 43 being rotated, as hereinbefore described, the rod 52 will be reciprocated, causing a rocking movement of the shaft 55, and the consequent movement of the pawl 59, which engages the ratchet 60, and thereby causes rotation of the card-cylinder 36, as portions of the surface thereof are successively cleaned by means of the slidable member 50.

The lever 61 being moved toward the right-hand of Fig. 5, it will cause a downward movement of the crank 57, to which it is connected, and the consequent downward movement of the links 56, which are connected to the rectangular frame 48. The down-

ward movement of the frame 48 carries with it the pawl 57, which contacts against a pin 64, carried by one of the frame members 34, so that the pawl 59 is moved out of engagement with the ratchet 60. By shifting the driving-belt 44^a to the pulley 38 the card-cylinder 36 may then be rotated.

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

1. In combination with a card-cylinder, a pivotally-supported cleaning member, a rocking shaft connected to the cleaning member; a cranked shaft, means for driving the shaft, a link connecting the cranked shaft and the cleaning member, a pawl coacting with the cleaning member, a ratchet connected with the card-cylinder; and adapted to be rotated by the pawl, and means for rocking the pawl out of engagement with the ratchet, comprising a lever connected to the cleaning-member-rocking shaft.

2. In combination with a card-cylinder, a pivotally-supported cleaning member, a cranked shaft, means for driving the shaft, a link connecting the cranked shaft and the cleaning member, a pawl coacting with the cleaning member, a ratchet connected with the card-cylinder and adapted to be rotated by the pawl, means for rocking the pawl out of engagement with the ratchet, and means for locking the cleaning member out of contact with the card-roll and locking the pawl in engagement and out of engagement with the ratchet.

3. In combination with a card-cylinder, a cleaning-member-rocking shaft, a cleaning member connected to the cleaning-member-rocking shaft, means for rocking the cleaning member, a lever connected to the cleaning-member-rocking shaft, a segmental rack disposed adjacent the lever, a pawl on the lever adapted to engage the segmental rack, a rod connected to the cleaning member, a bell-crank lever pivoted to the rod, a pawl pivoted to the bell-crank lever, and a ratchet connected to the card-cylinder adapted to be engaged by the pawl.

4. In combination with a card-cylinder, a cleaning-member-rocking shaft, a cleaning member connected to the cleaning-member-rocking shaft, means for rocking the cleaning member, a lever connected to the cleaning-member-rocking shaft, a segmental rack disposed adjacent the lever, a pawl on the lever adapted to engage the segmental rack, a rod connected to the cleaning member, a bell-crank lever pivoted to the rod, a pawl pivoted to the bell-crank lever, a ratchet connected to the card-cylinder adapted to be engaged by the pawl, and means adapted to rock the pawl out of engagement with the ratchet.

5. In combination with a card-cylinder, a cleaning-member-rocking shaft, a cleaning

member connected to the cleaning-member-rocking shaft, means for rocking the cleaning member, a lever connected to the cleaning-member-rocking shaft, a segmental rack disposed adjacent the lever, a pawl on the lever adapted to engage the segmental rack, a rod connected to the cleaning member, a bell-crank lever pivoted to the rod, a pawl pivoted to the bell-crank lever, a ratchet connected to the card-cylinder adapted to be en-

gaged by the pawl, and a bracket adapted to engage the pawl and rock the same out of engagement with the ratchet when the lever is rocked.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ROMAIN COUTURE.

Witnesses:

JAMES A. EDGERLY,
PAUL LA BONTE.