(No Model.) 2 Sheets—Sheet 1.

J. FENNESSEY & J. M. PILLING.

MECHANISM FOR VIBRATING DOFFER ROLLS.

No. 576,262. Patented Feb. 2, 1897.

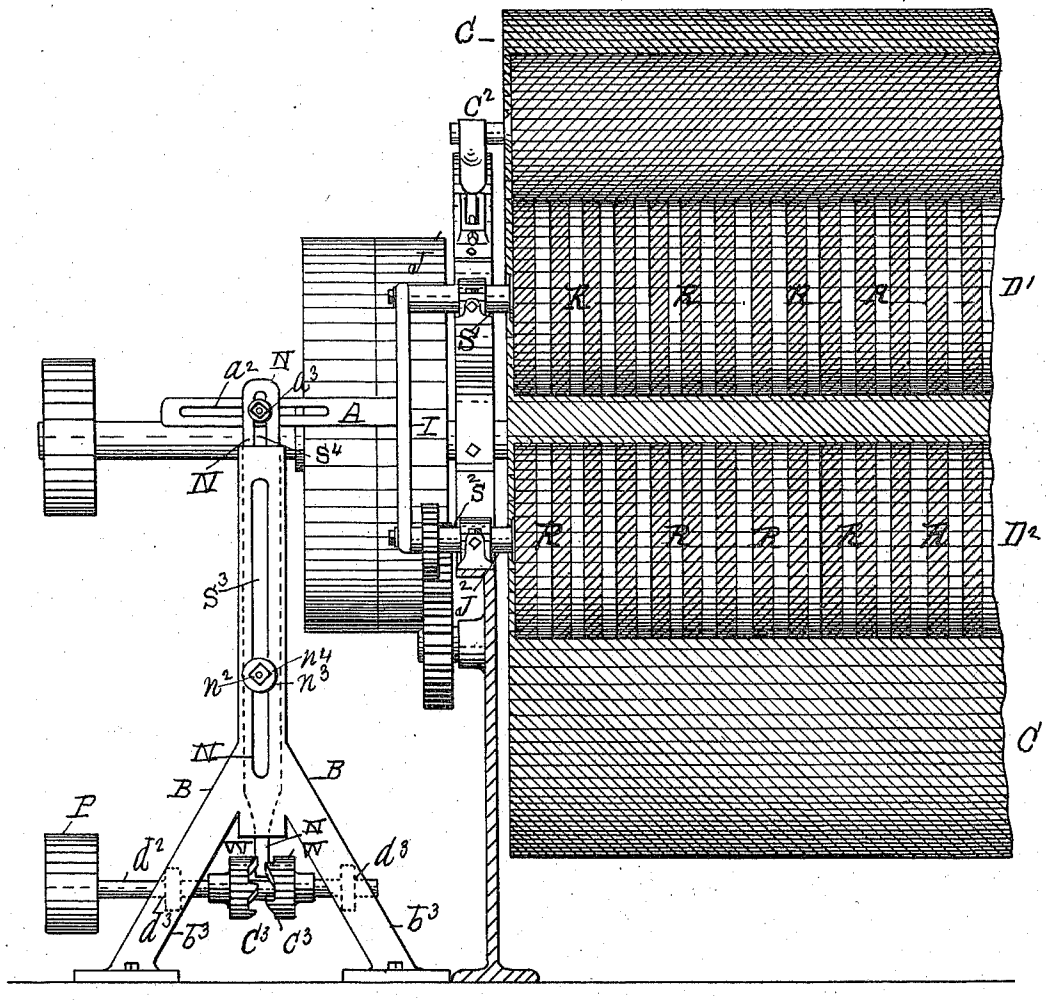

Fig 1.

WITNESSES

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INVENTORS

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(No Model.) 2 Sheets—Sheet 2.

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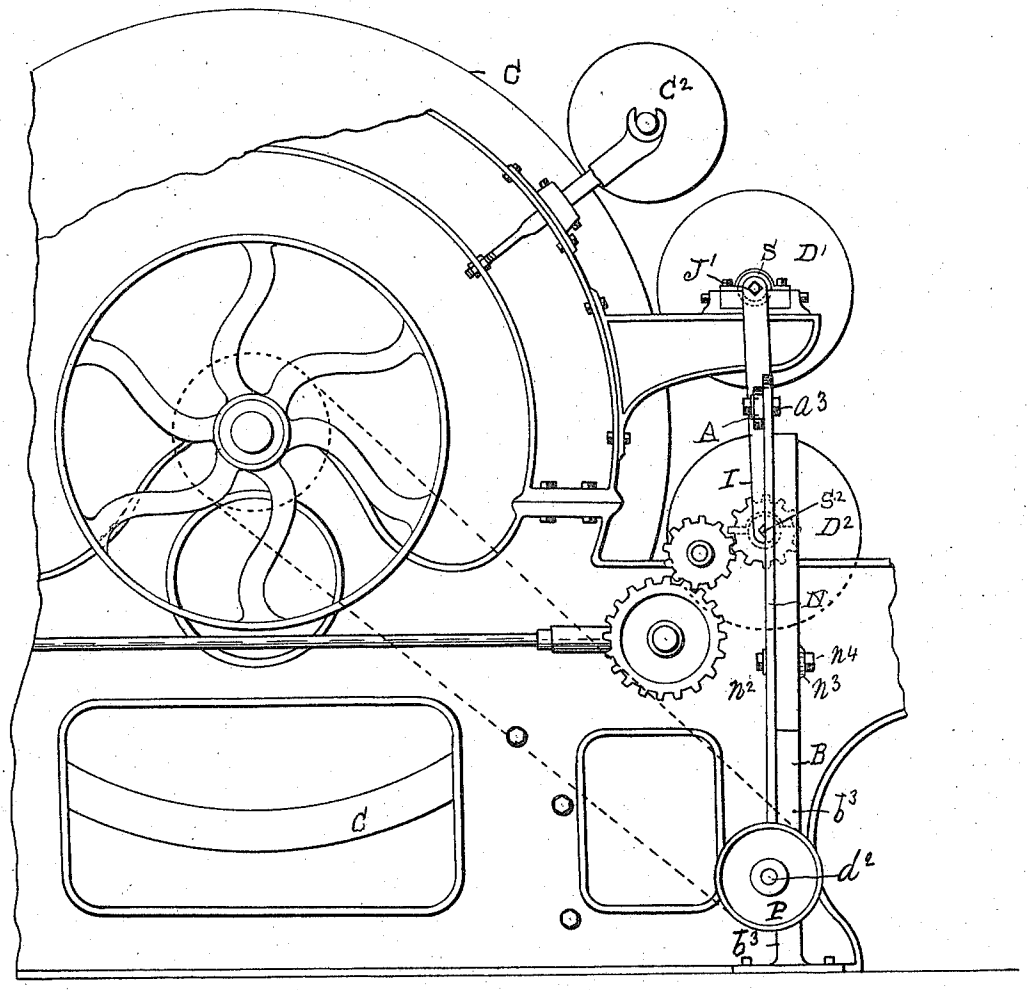

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Alexander S. Brintnall

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Fig 2

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UNITED STATES PATENT OFFICE.

JOHN FENNESSEY AND JOHN M. PILLING, OF COHOES, NEW YORK.

MECHANISM FOR VIBRATING DOFFER-ROLLS.

SPECIFICATION forming part of Letters Patent No. 576,262, dated February 2, 1897.

Application filed April 15, 1896. Serial No. 587,605. (No model.)

To all whom it may concern:

Be it known that we, JOHN FENNESSEY and JOHN M. PILLING, of the city of Cohoes, county of Albany, and State of New York, have invented a new and useful Improvement in Mechanisms for Vibrating Doffer-Cylinders, of which the following is a specification.

Our invention relates to a mechanism for vibrating the doffer-rollers of a carding-machine by which when used for producing rovings having mixed colors from rovings or slivers having differing colors the measure of horizontal movement imparted to the doffer-rollers may be regulated by a mechanism which is adjustable.

Accompanying this specification, to form a part of it, there are two plates of drawings containing two figures illustrating the application of our invention, with the same designation of parts by letter reference used in all of them.

Of the illustrations, Figure 1 is a front elevation of a carding-machine containing our improvement; and Fig. 2 is an end elevation of the same.

The several parts of the apparatus thus illustrated are designated by letter reference, and the function of the parts is described as follows:

The letter C designates the main cylinder, having the usual covering of card-clothing.

The letter C^2 designates the fancy roll, having straight teeth, and D′ and D^2 the doffer-rollers, each of which is covered with card-clothing and provided with encircling spacing-rings R. Each of these doffer-rollers D′ is provided with bearings J′, in which its shaft S is arranged to turn and slide horizontally, but one of these journal-bearings J′ being shown, as both of them are the same in construction. The doffer D^2 is provided with a shaft S^2, turning in journals J^2 and adapted to be moved horizontally therein, but of which, both bearings being alike, only one is shown.

The letter I designates a vertical bar which at its upper end connects with the shaft S′ and at its lower end with the shaft S^2 in such a manner that the shafts S′ and S^2 may turn in said bar I.

The letter A designates a horizontal bar which at its inner end connects with the vertical bar I at right angles thereto, and this horizontal bar A is provided with a horizontal slot a^2.

The letter B designates a vertical standard provided with an **A**-form support constructed with legs b^3 b^3 and having a central slot S^3, with its **A**-form legs firmly secured to a base.

The letter N designates a vibrating bar provided with a pivot-bolt n^2, having a washer n^3 and securing-nut n^4, arranged on the outer end of said bolt outside of its washer. The inner end of this bolt is attached to the vibrating bar N, and the bolt n^2 is passed through the slot S^3 of the standard A, with its washer n^3 straddling the sides of said slot, and therein secured by the nut n^4.

The letter S^4 designates a slot formed in the upper end of the vibrating bar N, whereby, by means of a bolt a^3, the latter bar adjustably connects with the slot a^2 of the horizontal bar A.

The letter d^2 designates a shaft having journals d^3 d^3 in the legs b^3 b^3 of the standard B, in which the shaft d^2 may turn.

The letter P designates a driving-pulley arranged on the shaft d^2, from which it receives rotary power by means of a driving-belt. (Not shown.)

The letters C^3 designate cams arranged on the inner face of the two-part wheel W, secured to the shaft d^2. The lower end of the vibrating bar N is arranged to move between these cams in the inner side of the two-part wheel W, and as the shaft d^2 is turned these cams C^3 engage with the lower end n^5 of the vibrating bar N to have it weave back and forth between them, thus causing the bar N to vibrate on its pivotal connection with the standard B by means of the pivot-bolt n^2, arranged in the slot S^3 of the standard. As this bar N is thus vibrated on its pivot (acting as a fulcrum) it causes the horizontal bar A to reciprocate horizontally, and by means of its connection with the vertical bar I and the latter with the shafts S′ and S^2 of the doffer-rollers it causes the latter to reciprocatingly move on their journals.

By means of the pivotal connection made between the vibrating bar N and the standard B through the slot S of the latter and the pivotal connection made between the vibrating bar N and the horizontal bar A a varied meas-

ure of horizontal reciprocation may be given to the doffer-rolls, and thus the colors of yarn coming from the cylinder C may be mixed as to measure of color as desired.

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

1. In an apparatus for horizontally vibrating doffer-rollers, the combination with a standard that is vertically slotted, and has downwardly and outwardly projected legs provided with bearings; of a driving-shaft having a two-part wheel mounted thereon and provided with cams on its inner surfaces; a vertically-arranged bar provided with an adjustable fulcrum connection with the slot in said standard, and its lower end adapted to be vibrated by said cams; a horizontal bar making a connection with said vertical bar; and doffer-rollers provided with shafts on which to turn and reciprocatingly move horizontally, said shafts connecting with said horizontal bar, substantially as and for the purposes set forth.

2. The combination with the doffer-rollers D′, and D^2, each having the spacing-rings R, and provided with shafts having bearings on which to turn and be reciprocated horizontally, of the arm I, connected to said doffer-roller shafts; a horizonal bar A, connected to said arm I; the standard B, provided with the slot S^3; the vibratory bar N, adjustably connected pivotally to the bar A, at its upper end; the two-part wheel W, constructed with the cams C^3, on its inner surface; making a connection with the lower end of the bar N, and the driving-shaft d^2, constructed and arranged to be operated, substantially in the manner as and for the purposes set forth.

Signed in the presence of the two witnesses whose names are hereto written, at Troy, New York, this 16th day of May, 1895.

JOHN FENNESSEY.
JOHN M. PILLING.

Witnesses:
W. E. HAGAN,
CHARLES S. BRINTNALL.