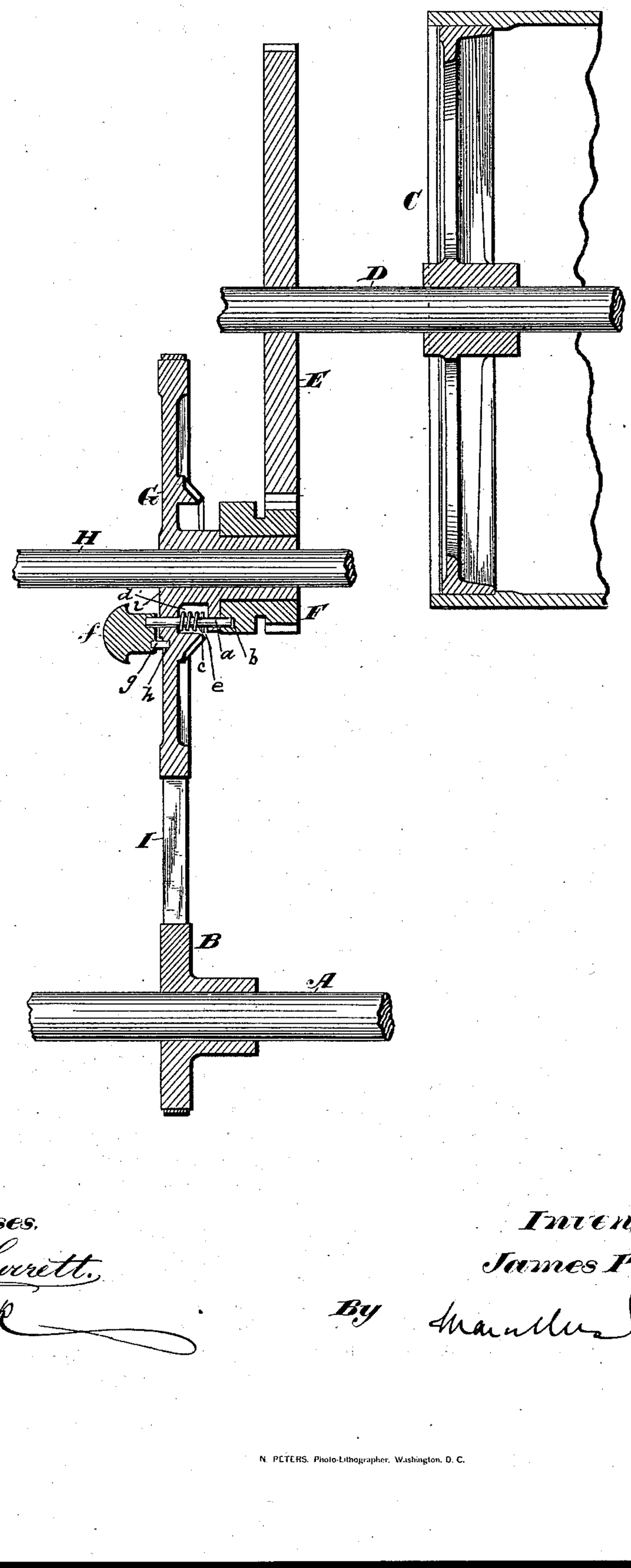
(No Model.)

J. POTTER.

CARDING MACHINE.

No. 280,238. Patented June 26, 1883.



Witnesses.
Robert Everett.
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Inventor:
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UNITED STATES PATENT OFFICE.

JAMES POTTER, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE WHITEHEAD & ATHERTON MACHINE COMPANY, OF SAME PLACE.

CARDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 280,238, dated June 26, 1883.

Application filed February 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES POTTER, of Lowell, in the State of Massachusetts, have invented a certain new and useful Improvement in Carding-Machines, of which the following is a specification.

In cotton-mills it is usual to arrange carding-machines in sets, or what are termed "sections," of from six to ten or more. In each section the parts of each card which deliver the cotton to and remove it from the main cylinder are driven from a shaft common to all the machines. This shaft extends along under the railway-trough, (which receives and carries off the sliver or fleece from the several machines,) and is termed the railway-shaft. From this shaft motion is communicated to the doffer of each machine, and from the doffer movement is transmitted to the feed-rolls or lickers-in and lap-roll of the machine. The doffer is connected to the railway-shaft by a belt and pulleys; and heretofore, whenever, for any reason, it has been desired to stop the doffer, this has been accomplished by throwing off the belt. This operation is not only inconvenient and takes time, but, since the belt is short, and therefore necessarily very tight, is also attended frequently with actual damage to the machine, for, when the operative attempts to throw off the tight belt quickly, so great a strain is put upon the railway-shaft as to frequently spring it, thus causing the belt to slip on the pulley when it is next applied thereto. When any trouble arises in a card, it is necessary to stop this particular card without stopping the railway-shaft and the other cards of the section, and frequently this stopping must be effected in a moment's time, in order to prevent the card from being seriously damaged. It becomes, therefore, a great desideratum to provide means whereby this result can be attained without injuriously influencing or acting upon the railway-shaft; and it is this object which the present invention has in view.

The nature of the improvement and the manner in which the same is or may be carried into effect can best be explained and understood by reference to the accompanying drawing, which represents in sectional elevation so much of the card-operating mechanism as is needed to illustrate the invention.

I have not deemed it necessary to represent a section of carding-machines; nor have I deemed it requisite to represent one carding-machine. It will suffice for the purposes of this specification to show only a portion of the doffer of one card, together with the mechanism through the intermediary of which it is connected to the railway-shaft common to all the cards.

A is the railway-shaft, provided at suitable points with pulleys for driving the doffers of the respective carding-machines. One of these pulleys is indicated at B. C is the doffer, and D is the doffer-shaft, provided with gear E, which meshes with a pinion, F, that is loose on the hub of a pulley, G, mounted on an intermediate shaft or arbor, H, and driven from pulley B by a belt, I. Pulley G and pinion F are connected by a spring-controlled locking-pin, *a*, which passes through pulley G into a socket, *b*, in the adjoining face of the pinion. The pin is pushed forward into the socket by a spring, *c*, situated in a recess, *d*, in the hub of the pulley, said spring encircling the pin, and bearing at one end against the pulley and at the other end against a shoulder or cross-pin, *e*, on the pin. Upon the end of the locking-pin that projects beyond the outer face of the pulley is a knob or handle, *f*, from the inner face of which projects a stud, *g*, adapted, when the parts are in position, to admit of the locking-pin entering socket *b* to enter a recess, *h*, in the pulley far enough to permit the spring to push forward the pin and seat it in the socket. The pin is capable not only of a sliding, but a rotary movement, so that if it be desired to disengage it from the pinion this can be done by taking hold of handle *f*, drawing back the pin out of engagement with the pinion, and then turning it, so as to bring the stud *g* to a point where it will rest upon the unrecessed part *i* of the pulley, in which position the stud will serve to retain the pin against the stress of its spring. By this means it will be seen that the doffer can be readily and instantaneously thrown into and out of operative connection with the railway-shaft without disturbing the belt I or interfering with the continuous rotation of pulley G.

Having described my improvement and the best way known to me of carrying the same

into effect, what I claim as new and of my invention is—

The combination, with the railway-shaft and the doffer of a carding-machine, of the pulleys B G, belt I, doffer-gear E, loose pinion F, and spring-controlled locking mechanism connecting said pulley G and pinion F, under the arrangement and for operation as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 1st day of February, 1883.

JAMES POTTER.

Witnesses:
A. T. ATHERTON,
CHAS. T. ATHERTON.