

UNITED STATES PATENT OFFICE.

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DUST-REMOVER FOR CARDING-MACHINES.

1,065,179.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERBERT SMETHURST, of 64 Albert street, Hollinwood, in the county of Lancaster, England, engineer, have invented new and useful Improvements in Dust-Removers for Carding-Machines, of which the following is a specification.

This invention relates to apparatus for removing dust from cotton and like carding engines during the processes of "stripping" and "grinding" the cards, and has for its object to simplify and improve said apparatus so that it shall be more economical to manufacture, less liable to get out of order, and more readily adaptable to suit the various arrangements and dispositions of carding engines to be found in mills.

My invention comprises the improved combinations and arrangements of parts hereinafter described.

Referring to the accompanying sheet of explanatory drawings:—Figure 1 is a front elevation partly in section of my improved apparatus, showing the interior of the same, and Fig. 2 an end elevation showing the apparatus in use upon the doffer.

The same reference letters in the two views indicate the same parts.

The dust removing device comprises a fan *a* or the like mounted within a box like casing *b* containing a dust separator and collector *c*, the said casing being adapted to run on wheels *d* along the rear side of the carding engines.

The stripping brush *e* is partly inclosed within a casing or hood *f* with which the suction pipe *g* of the fan *a* communicates by way of the flexible pipe *h* the latter being detachable from the said hood *f*. A portion of the casing *f* is hingedly mounted in position so as to allow of the casing being opened for stripping the brush *e* of the waste collected thereon.

I provide upon the top of the casing *b* brackets as *i* for supporting the stripping brush and its casing when they are being moved from one carding machine to another.

For driving the fan, I employ a rope *j* which passes over an intermediate pulley *k* and a pulley *m* on the stripping brush shaft *n*. The pulley *o* on the fan shaft is driven from the pulley *p* on the counter shaft car-

rying the intermediate pulley *k*. A longer driving rope is employed between the pulleys *k* and *m* when the brush *e* is on the cylinder than when it is on the doffer.

The skelton casing *b* within which the fan *a* and dust separator *c* are mounted is surrounded at its sides by wire or like perforated grids or frames as *q* upon which canvas or other filtering material is supported on the inner or fan side. One or more of said grids or frames *q* is hinged to *b* (see Fig. 1) to enable the interior of the casing to be readily accessible for removing the dust separator *c*.

To use the apparatus, it is moved into position with the wheel *d*, nearest to the carding engine at the end where the driving rope *j* is employed, against the bottom of the coiler of the carding machine. By this means the length of the drive between the pulleys *k* and *m* can be determined. The brush *e* with its hood *f* is then placed on the cylinder or doffer and connected up by a driving rope *m'* with the cylinder pulley of the machine and with the pulley *k*. The stripping is performed and the dust and waste collected in the bag *c* and also on the filtering screens carried by the grids or frames *q*.

To remove the waste from the stripping brush, the flexible pipe *h* is detached from the hood *f* and the hinged flap upon the latter opened.

After a number of carding machines have been "stripped" the bag *c* is removed and turned inside out. It is then ready for reuse.

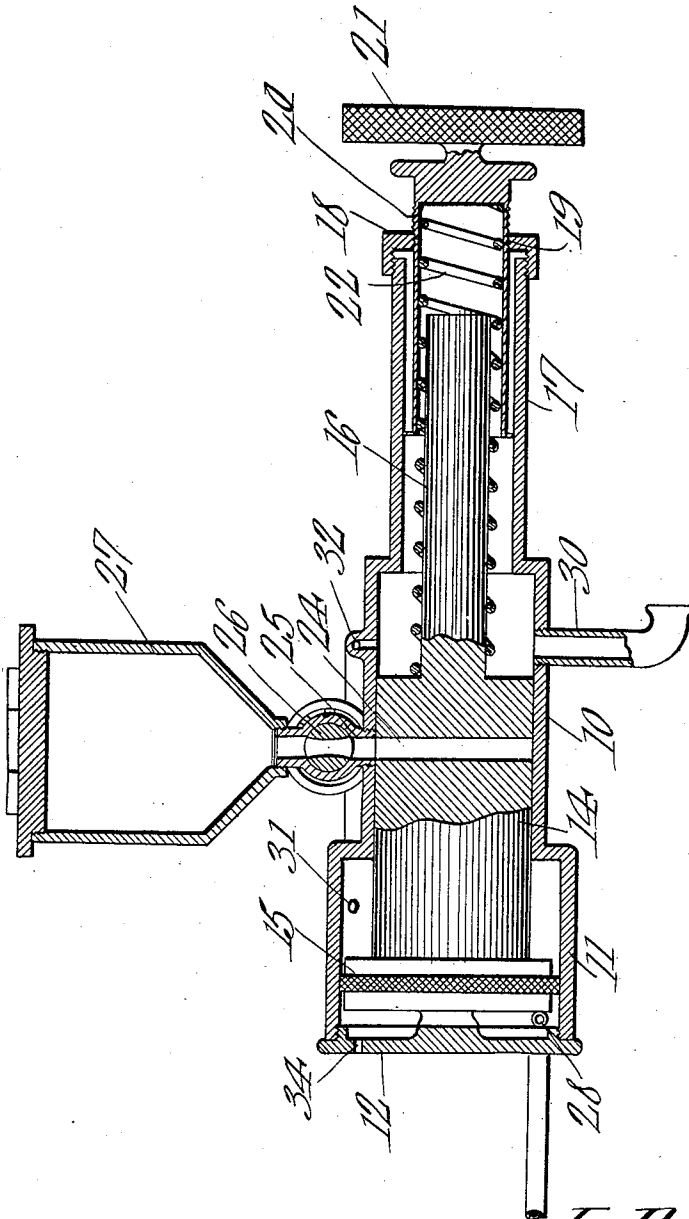
The flexible armored pipe *h* allows of the brush *e* being placed upon the cylinder or the doffer or upon the brackets *i*.

By the employment of my invention, I obviate the use of exhaustion pipes extending the length of the cardroom, and also of the large number of inlets to such pipes which result in leakage and involve the employment of an exhaustion fan of an unduly large capacity for the work which is accomplished. Further as all the air drawn in through the hood *f* and pipe *g* is, after filtration, returned to the cardroom, the ventilating, warming and humidifying arrangements of said room will not be interfered with by the installation of my improved dust removing apparatus.

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 GRAPHITE LUBRICATOR.
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Witnesses

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