J. BARKER.

Device for Operating the Doffer-Combs of Carding-Machines.

No. 227,202. Patented May 4, 1880.

Fig. 1.

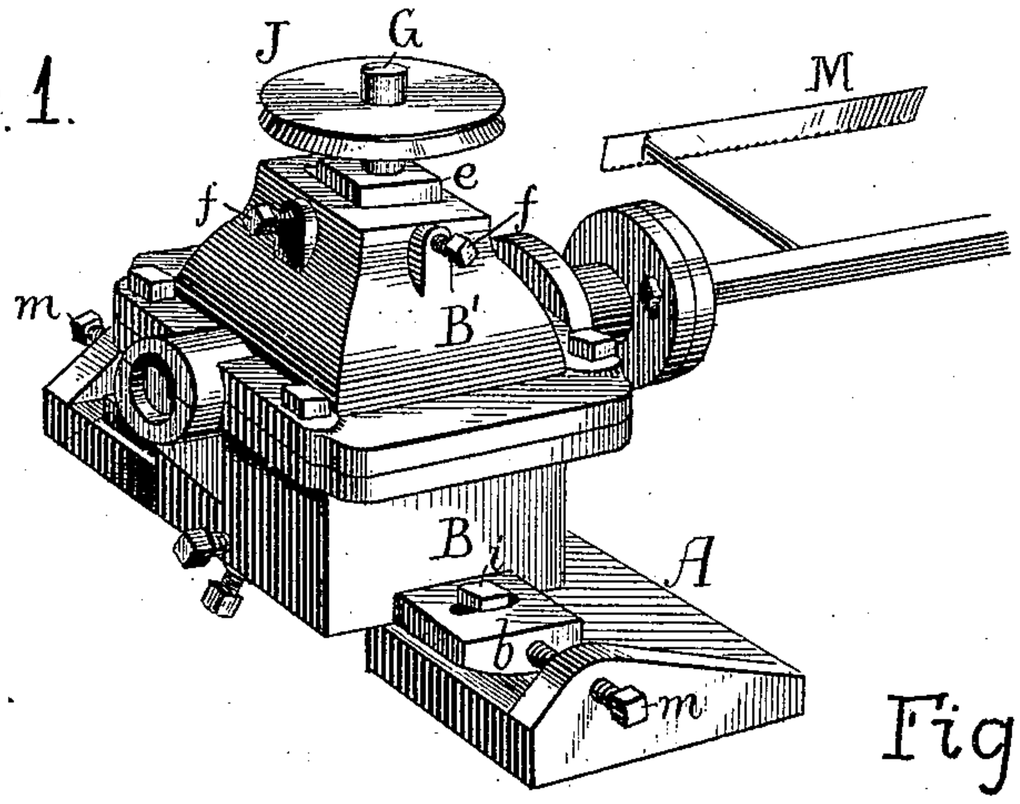


Fig. 2.

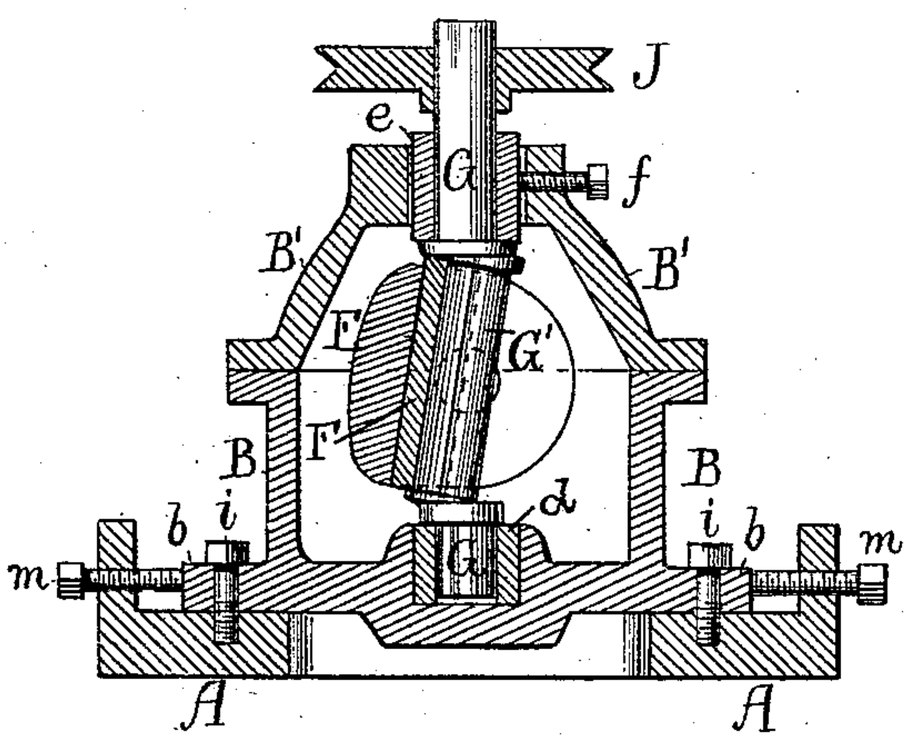


Fig. 3.

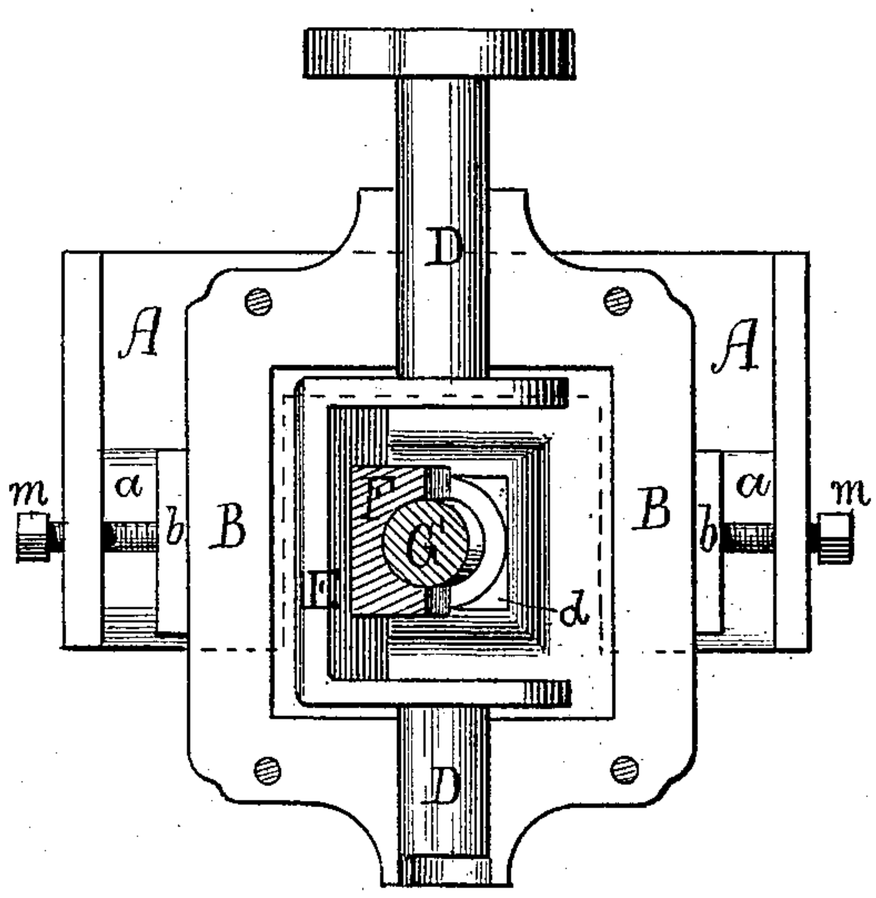
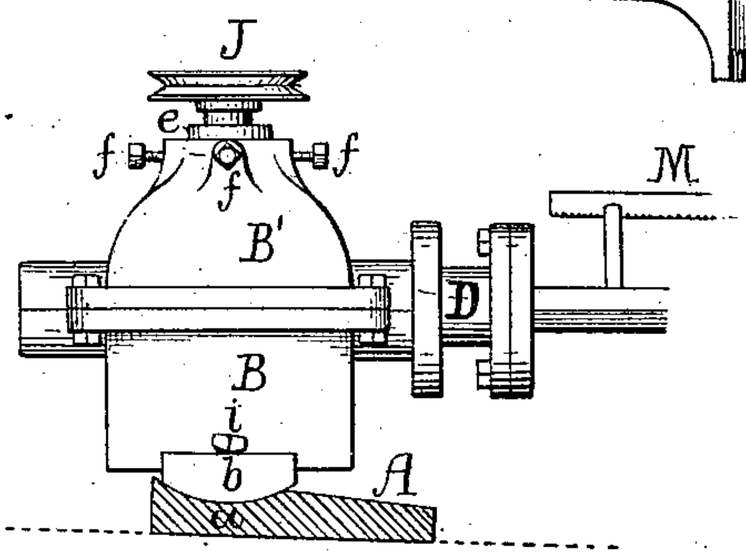


Fig. 4.



Witnesses

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JAMES BARKER, OF CAMDEN, NEW JERSEY.

DEVICE FOR OPERATING THE DOFFER-COMBS OF CARDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 227,202, dated May 4, 1880.

Application filed July 1, 1879.

To all whom it may concern:

Be it known that I, JAMES BARKER, a citizen of the United States, residing in Camden, New Jersey, have invented an Improvement in Devices for Operating the Doffer-Combs of Carding-Machines, of which the following is a specification.

The objects of my invention are to so construct the device that the comb may be run at a high rate of speed without rattling, to reduce the friction, and to provide for the ready adjustment of the parts to compensate for wear.

In the accompanying drawings, Figure 1 is a perspective view of my improved device for operating the doffer-combs of carding-machines; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a sectional plan of the device with the cap or cover removed; and Fig. 4 a side view, partly in section and drawn to a reduced scale.

A represents a frame adapted to be bolted to one of the side frames of a carding-machine, as shown in Fig. 4. This frame has in the top concave recesses *a a*, to which are adapted the convex lower faces of lugs *b*, projecting from the opposite sides of a box, B, which has a suitable cap or cover, B′, bearings for the comb-shaft D being formed partly in the box and partly in the cover, as shown in Fig. 1. The opposite end of the comb-shaft should be supported in a suitable bearing on the opposite side frame of the machine in the usual manner.

The continuity of the shaft D within the box B is interrupted for the formation on said shaft of a yoke, E, against the inner face of which bears the outer face of a block, F, the inner face of the latter having a concave recess adapted for the reception of the inclined portion G′ of a vertical shaft, G. The lower end of this shaft is fitted to and turns in a bearing-block, *d*, adapted to a socket in the bottom of the box B, and the upper end of said shaft G passes through a block, *e*, which occupies a position within an opening in the top of the cap B′, the opening being somewhat larger than the block, so that the latter may be adjusted therein for the purpose of compensating for wear of the shaft G′ or block F, the adjustment of the block *e* and the securing of the same in position after adjustment being effected by means of set-screws *f*.

The upper end of the shaft G carries the pulley J, to which power is applied, and as said shaft G is rotated the action of the inclined portion G′ of the same on the block F is such as to cause a vibrating movement to be imparted to the yoke E and a rocking movement to the comb-shaft D, thereby insuring the proper operation of the comb M.

The lugs *b* of the box B are slotted for the reception of bolts *i*, adapted to threaded openings in the frame A; and the ends of said lugs are acted upon by set-screws *m*, passing through the flanges of said frame A, the bolts *i* securing the box B laterally in position, and the set-screws *m* serving to effect the proper securing of the said box, so that the comb M will properly act on the cylinder of the carding-machine.

The upper edges of the side frames of carding-machines are very often out of truth—that is to say, they are not perfectly horizontal; hence the concaved recesses in the frame A and the slotted and convex lugs on the box B, this construction enabling the frame A, before the tightening of the bolts *i*, to accommodate itself to the side frame of the carding-machine without interfering with the proper alignment of the comb and box B. (See Fig. 4.)

I am aware that shafts having inclined disks adapted to yokes on the comb-shaft have been heretofore used; but in such arrangements the power is applied at a disadvantage, the frictional surface is extended, and it is difficult to compensate for wear—objections which I overcome by simply forming the shaft with an inclined portion.

I claim as my invention—

1. The combination of the box having bearings, the shaft G, having an inclined portion, G′, means for rotating said shaft, the comb-shaft D, having a yoke, E, and the block F, interposed between the yoke E and the inclined portion of the shaft G, as set forth.

2. The combination of the box B and its cover B′, the comb-shaft D, having a yoke, E, the shaft G, having an inclined portion, G′, adapted to said yoke, a bearing-block, *e*, and means for adjusting said block, as set forth.

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Witnesses:

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