(No Model.)

E. & S. TWEEDALE & J. SMALLEY.

CARDING ENGINE BEND.

No. 564,125. Patented July 14, 1896.

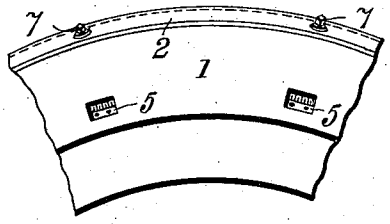


Fig. 1.

Fig. 2.

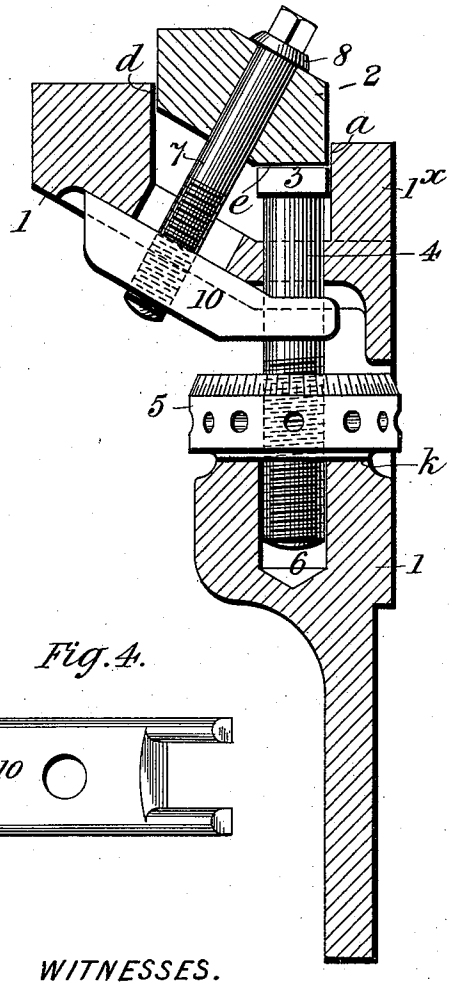


Fig. 3.

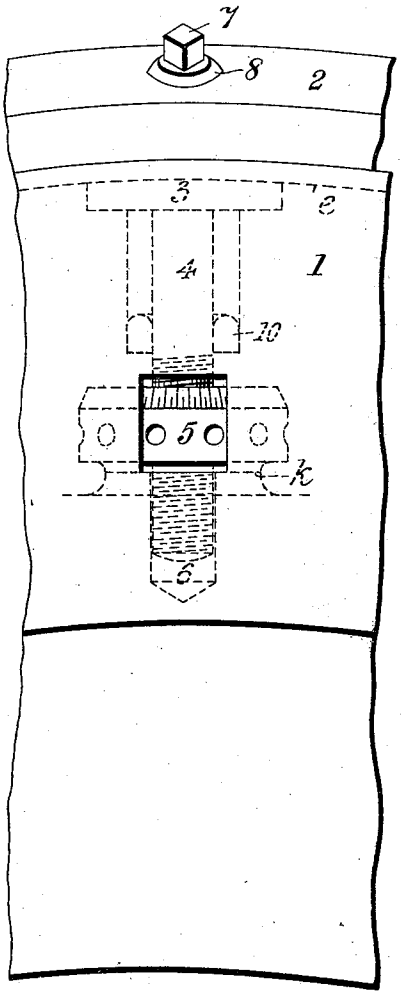
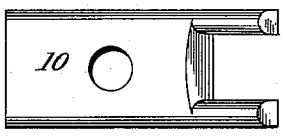


Fig. 4.



WITNESSES.

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UNITED STATES PATENT OFFICE.

EDMUND TWEEDALE, SAMUEL TWEEDALE, AND JOSEPH SMALLEY, OF MANCHESTER, ENGLAND.

CARDING-ENGINE BEND.

SPECIFICATION forming part of Letters Patent No. 564,125, dated July 14, 1896.

Application filed March 7, 1896. Serial No. 582,291. (No model.) Patented in England February 20, 1894, No. 3,612.

To all whom it may concern:

Be it known that we, EDMUND TWEEDALE, SAMUEL TWEEDALE, and JOSEPH SMALLEY, subjects of Her Majesty the Queen of Great Britain, residing at Castleton, Manchester, in the county of Lancaster, England, have invented a certain new and useful Improvement in Carding-Engines, (for which we have obtained Letters Patent in Great Britain dated February 20, 1894, No. 3,612,) of which the following is a specification.

Our invention relates to an improvement in carding-engines; and it consists of an improved arrangement of parts for the purpose of setting or regulating the flexible bends on which the flats work in such engines.

In carrying out our invention we insert five or any other convenient number of regulating-screws in that part of the bend and framework of the carding-engine made for the reception of the flexible bend. The head ends of these screws are formed to the requisite curve of the cylinder, and support the flexible bend, the sides of the latter resting against the framework of the carding-engine. To force the flexible bend to follow the curve to which the heads of the regulating-screws are set to, we place a screw-bolt opposite each regulating-screw. The heads of these screw-bolts bear upon an inclined surface formed on one side of the flexible bend. On the screw-bolts being tightened, they lock the flexible bend tightly on the head ends of the regulating-screws, and against the side of the bend or framework of the carding-engine. The nuts on the regulating-screws are provided with the usual dial to show the amount of adjustment.

Referring to the accompanying drawings, Figure 1 is an elevation of a part of a frame and bend. Fig. 2 is a vertical section on an enlarged scale showing the flexible bend, framework, adjusting-screw, and screw-bolt. Fig. 3 is a front elevation of Fig. 2. Fig. 4 is a part shown detached.

At 1, 1 is the framework which carries the flexible bend 2, the latter fitting between the surfaces *a d* of a recess in the framework 1. The under surface *e* of the flexible bend 2 rests upon the curved head 3 of the adjusting-screw 4, and on which screw is the dial-nut 5. The threaded end of the adjusting-screw 4 is received in the hole 6, formed in the framing 1.

At 7 is a setting-screw, its lower threaded end being received in a tapped hole formed in the forked nut 10, the forked portion embracing the bolt 4, so that the nut is prevented from turning round on the screw 7. The upper end of the nut bears on the under side of the framework 1, as shown.

To effect any required adjustment of the flexible bend 2, for example, say, to raise the bend 2, the setting-screw 7 is slackened, then by turning the dial-nut 5, the bolt 4 will be raised, its curved head 3 lifting the bend 2 until sufficiently elevated, whereupon the screw-bolt 7 is tightened, its head 8 pressing the bend 2 firmly down upon the curved head of the bolt 4, and against the face *d* of the frame 1; thus the bend is firmly held on the head of said bolt 3, and secured and confined between the parts *a* and *d* of the framing 1. Turning the dial-nut in the opposite direction will lower the adjusting-screw 4, and the screw 7, when turned, will force the bend 2 to follow, and secure the bend 2 on the head 3 and against the face *d*, as described.

The dial-nut 5 bears on the face of the boss *k*.

That part of the framing marked $1^{\times}$ is not indispensable, but we prefer to use it as shown, as such part screens the head 3 and upper part of the adjusting-screws 4.

In the foregoing reference is made for convenience in description to one adjusting-screw 4, one screw 7, and one dial-nut 5; but such appliances are employed at intervals of distance, as will be seen by reference to Fig. 1.

What we claim is—

1. In a carding-engine, the combination with a frame, adjusting-bolts having curved heads mounted in the said frame, nuts having graduations thereon, screwed on the adjusting-bolts and resting in the frame, and means for turning the said nuts; of a flexible bend resting in the frame and on the curved heads of the adjusting-bolts, clamping-bolts passing through the said bend and through a part of the frame, bifurcated nuts, screwed on the threaded ends of the clamping-bolts and partly inclosing the adjusting-bolts, and means for turning the clamping-bolts to

clamp the bend down upon the heads of the adjusting-screws, substantially as described.

2. In a carding-engine, the combination with a frame having an annular groove therein, adjusting-bolts journaled in the said frame, curved heads on the said adjusting-bolts, nuts, having graduations thereon, screwed on the threaded parts of the said adjusting-bolts and bearing on the frame, and means for turning the said nuts to raise or lower the said adjusting-bolts; of a flexible bend resting in the said groove in the frame and upon the curved heads of the adjusting-bolts, clamping-bolts passing through, and having heads to bear upon, the flexible bend, clamping-nuts screwed upon the threaded ends of the clamping-bolts and bifurcated to receive the adjusting-bolts, and means for turning the clamping-bolts to draw the flexible bend down into the groove in the frame and upon the curved heads of the adjusting-bolts, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

EDMUND TWEEDALE.
SAMUEL TWEEDALE.
JOSEPH SMALLEY.

Witnesses:
WALTER BRIERLEY,
FREDERICK A. VERITY.