

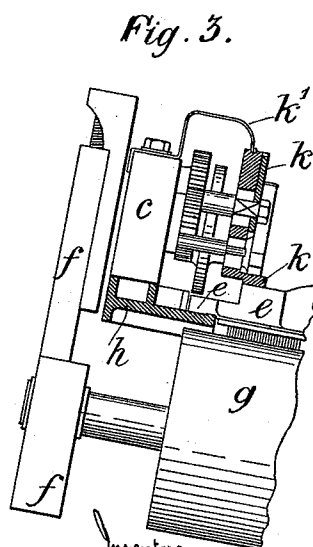
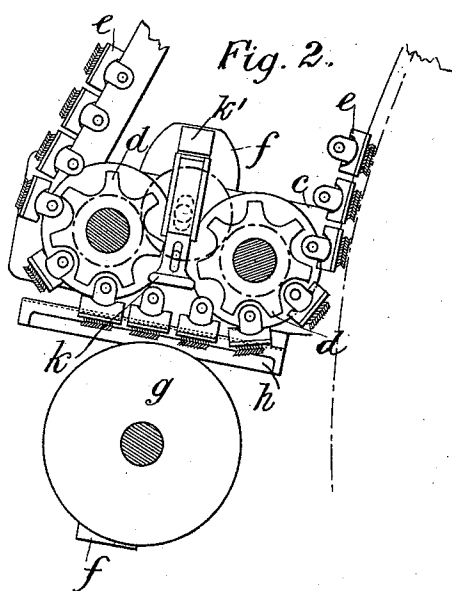
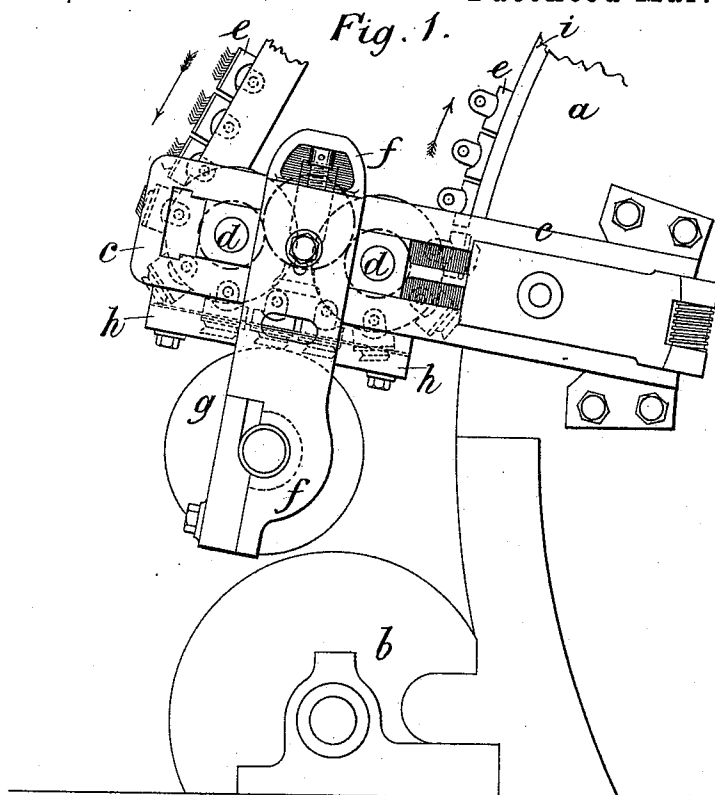
(No Model.)

2 Sheets—Sheet 1.

B. A. & W. DOBSON.
CARD GRINDING.

No. 536,375.

Patented Mar. 26, 1895.



Witnesses

H. van der Meel
E. H. Sturtevant

Inventors

Benjamin Alfred Dobson
William Dobson

by *Reinhardt* their Attorneys

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

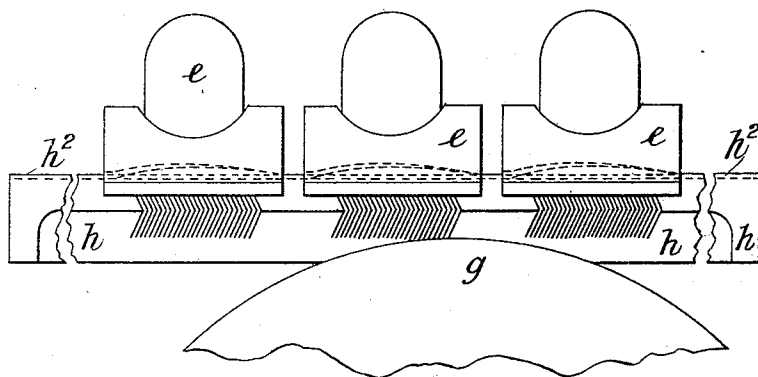


Fig. 5.

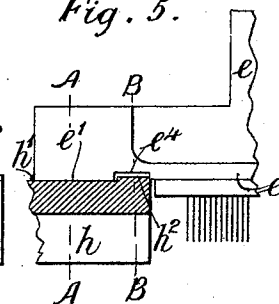


Fig. 6.

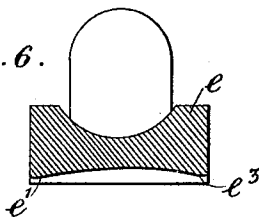


Fig. 7.

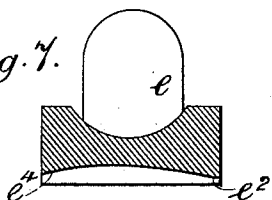


Fig. 8.

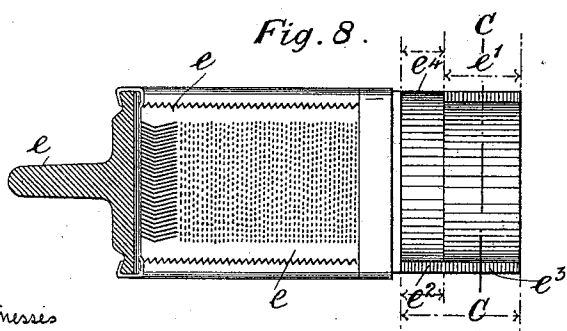
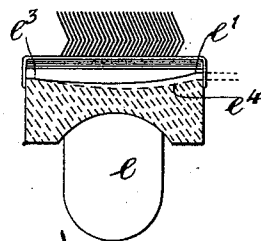


Fig. 9.



Witnesses

H. van Dusen
E. H. Shuckert

Inventors

Benjamin Alfred Dobson
William Dobson

by

Richard
their Attorney

UNITED STATES PATENT OFFICE.

BENJAMIN ALFRED DOBSON, OF BOLTON, AND WILLIAM DOBSON, OF NEWTON ABBOT, ASSIGNORS TO DOBSON & BARLOW, LIMITED, OF BOLTON, ENGLAND.

CARD-GRINDING.

SPECIFICATION forming part of Letters Patent No. 536,375, dated March 26, 1895.

Application filed November 14, 1894. Serial No. 528,732. (No model.) Patented in England January 16, 1894, No. 934.

To all whom it may concern:

Be it known that we, BENJAMIN ALFRED DOBSON, residing at Bolton, in the county of Lancaster, and WILLIAM DOBSON, residing at Treverbyn, Newton Abbot, in the county of Devon, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Revolving-Flat Carding-Engines, (for which we have obtained Letters Patent in Great Britain, numbered 934, bearing date January 16, 1894,) of which the following is a specification.

This invention relates to improvements in the grinding of revolving flats of carding engines and is principally for the purpose of accurately grinding the flats from their working surface; and in order that our invention may be fully understood and readily carried into effect we will describe the accompanying two sheets of drawings reference being had to the letters marked thereon.

Figure 1 is a side elevation of part of a revolving flat carding engine fitted with our improvements. Fig. 2 is a side and Fig. 3 a transverse sectional elevation of part of Fig. 1. Fig. 4 is a detail view of part of the grinding roller, supporting slide, and three flats thereon. Fig. 5 is a sectional end view of part of Fig. 4. Figs. 6 and 7 are transverse vertical sections of one of the flats taken respectively on the lines A A and B B, Fig. 5. Fig. 8 is a plan view, showing part of the card wire as well as the working and grinding surfaces at one end of a flat, and Fig. 9 is a transverse section on the line C C, Fig. 8.

In carrying out our invention we attach to the card bend or framing *a* on each side of the carding engine, and preferably above the licker-in *b*, a bracket *c* carrying two plain or as shown toothed bowls *d* which support the traveling flats *e*. Upon or attached to the bracket *c* is an adjustable piece or bracket *f* carrying the grinding roller *g* which is furnished as usual with suitable setting arrangements. Between the grinding roller *g* and the flat bowls *d* and attached to the bracket *c* is a faced slide *h* made with two prepared surfaces *h'* *h*² upon which the flats *e* travel between the bowls *d*. The flats *e* we employ are

made at the ends with the following sliding surfaces, namely, *e'* *e*² *e*³, which support the flat while carding, but while grinding the surfaces *e'* *e*² bear on the prepared surfaces *h'* *h*² of the slide, the flat being recessed at *e*⁴ to compensate for the difference in level of the two surfaces. When traveling on the fixed slide *h* one working surface, namely, *e'* of the flat *e*, is on the lowest prepared face, namely, *h'* of the slide *h*, while the other working surface *e*² of the flat is on the higher prepared face *h*² of the slide *h*. The difference in height between the two sliding surfaces *e'* *e*² of the flat, and the elevation of the prepared surface *h*² above the other surface *h'* on the fixed slide *h* takes out or neutralizes the bevel or heel of the flat when passing over the grinding roller *g* this being permitted by the recessed portion *e*⁴ of the flat. After grinding the flats leave the fixed slide *h* and guided by the second bowl *d* come on to the flexible bend *i* or other plain surface upon which they are supported on their working surfaces *e'* *e*² and *e*³ while carding and so regain their bevel or heel.

While being ground the back of each flat *e* is pressed downward upon the slide *h* and toward the grinding roller *g* by means of a slide *k* and spring *k'*.

It is obvious that this apparatus may be placed at any other suitable position on the card and may be so arranged as to enable the flats to be ground from their working surface by passing them under the grinding roller instead of passing them over the grinding roller as described.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with a grinding roller and at each side of the carding engine a fixed slide having two prepared surfaces at different levels and extending parallel with each other, of flats having at each end corresponding surfaces which during the grinding operation travel on the fixed slides and coact simultaneously to properly present the flat to the

grinding roller and so neutralize the bevel or heel of the card wire while it is being ground substantially as herein described with reference to the accompanying drawings.

- 5 2. In combination the grinding roller, the fixed slide having the two prepared surfaces h' h^2 at different levels and the flats having the surfaces e' and e^2 for the said surfaces h' h^2 respectively and the recessed part e^4 over
10 the surface h^2 of the slide and said flats having also the surfaces e^3 said surface coacting

simultaneously to present the flat in proper position to be ground substantially as described.

In witness whereof we have hereunto set 15 our hands in presence of two witnesses.

BENJAMIN ALFRED DOBSON.
WILLIAM DOBSON.

Witnesses:

WALTER HIGGINSON,
PERCY EDWARD HASLAM.