

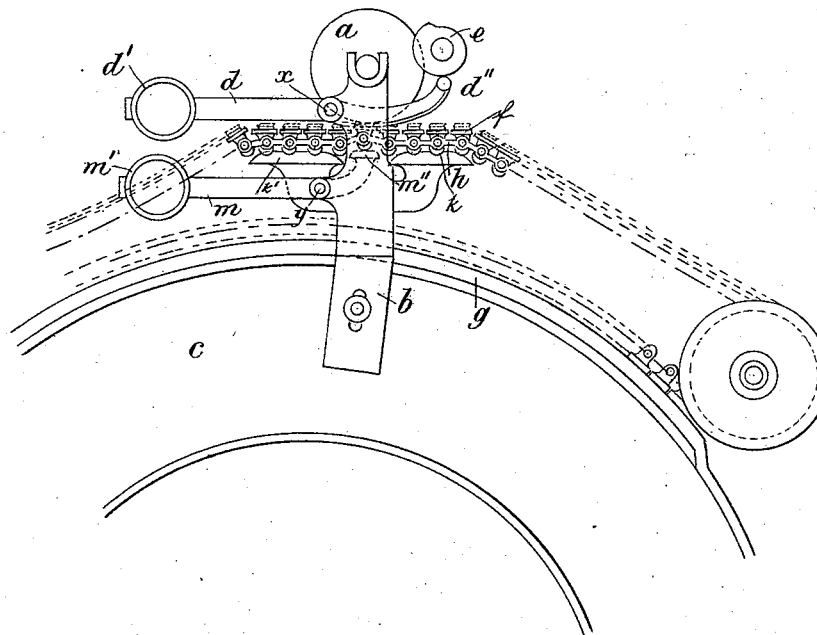
W. DOBSON.

GRINDING THE FLATS OF TRAVELING FLAT CARDING ENGINES.

No. 455,983.

Patented July 14, 1891.

FIG. 1.



*Inventor:*

*William Dobson*

*Witnesses:*

*E. R. Bolton*

*H. Huston*

*By*

*Richardson*

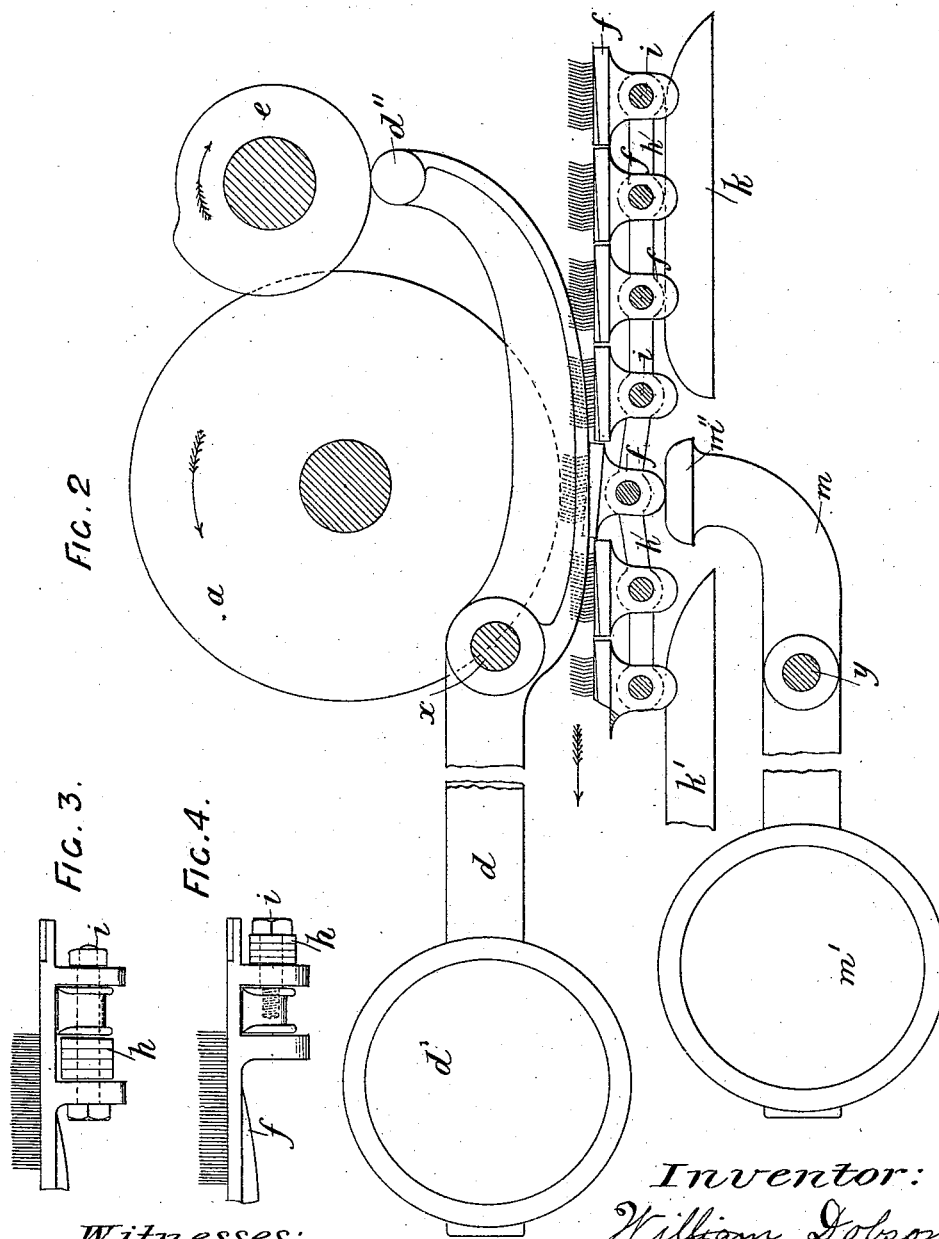
*his Attorneys.*

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E. R. Ralston

H. Huster

Inventor:

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his Attorneys.

# UNITED STATES PATENT OFFICE.

WILLIAM DOBSON, OF LONDON, ENGLAND.

## GRINDING THE FLATS OF TRAVELING-FLAT CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 455,983, dated July 14, 1891.

Application filed February 17, 1891. Serial No. 381,747. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DOBSON, a subject of the Queen of Great Britain, residing at 22 Belgrave Road, London, S. W., England, have invented certain new and useful improvements in Grinding the Flats of Traveling-Flat Carding-Engines and in Means Therefor, of which the following is a specification.

My invention relates to improvements in grinding the wire of the flats of traveling-flat carding-engines; and the object of my improvements is to enable the wire to be ground concave, convex, or straight, (the usual way,) as required, from the same working-surface—*i. e.*, that which travels on the flexible bend or equivalent supporting-surface; and in order that my invention may be fully understood and readily carried into effect I will describe the accompanying two sheets of drawings, reference being had to the letters marked thereon.

Figure 1 is an elevation of part of the side of a traveling-flat carding-engine; and Fig. 2 is a sectional elevation, on a larger scale, of part of the chain of traveling flats, illustrating the application of my improvements in grinding the same. Figs. 3 and 4 are views of two forms of flat ends.

Similar letters refer to similar parts throughout the several views.

In carrying my improvements into effect I mount a grinding-roller *a*, of any suitable diameter, in brackets *b*, secured to the engine bend or frame *c*, one on each side of the card, as usual. Near the grinding-roller *a* is fulcrumed to one of the aforesaid brackets *b* at *x* a lever *d*, one end of which is weighted at *d'*, whereby the other end *d''* is pressed against a cam *e*, which is supported in an arm or extension (not shown) of the brackets *b*, and is driven in any convenient manner and makes one rotation as each flat *f* passes the grinding-roller *a*. The under side of this lever *d* is curved to form a path for the flats *f*, such curve corresponding to the curve of the

flexible bend *g* or its equivalent supporting-surface, upon which the flats travel when at work. The flats are connected, as usual, to the links *h* of the chain by studs *i*, this connection allowing the flats to be raised or lowered, as hereinafter described. The idle flats as they return over the working flats are supported upon two guide-slides *k k'*, between which is fulcrumed at *y* a second lever *m*, weighted at *m'*. As each flat *f* leaves the first guide *k* it comes upon the end *m''* of the second weighted lever *m*, and is by it raised and its working-surface held against the curved surface of the first weighted lever *d*, which curved surface at the point of contact corresponds to the radius of the flexible bend or equivalent, as already described. While thus raised and guided the wire of the flat *f* is ground by the revolving grinding-roller *a*, and whether it is ground concave, convex, or straight (the usual way) is determined by the shape of the rotating cam *e*, which acts upon the end *d''* of the first lever *d*, and either depresses it or allows it to rise, or maintains it in its normal position, according to its form.

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

The combination, with a grinding-roller for grinding the wire of the traveling flats, of the weighted lever *d*, the rotating cam *e*, and means, such as the weighted lever *m*, for raising each flat in its turn into contact with the curved surface of the weighted lever *d*, all substantially as and for the purposes herein set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

WILLIAM DOBSON.

Witnesses:

R. M. DOBSON,  
E. STOREY.