(No Model.) 2 Sheets—Sheet 1.

J. JONES.

APPARATUS FOR GRINDING FLATS OF CARDING ENGINES.

No. 491,356. Patented Feb. 7, 1893.

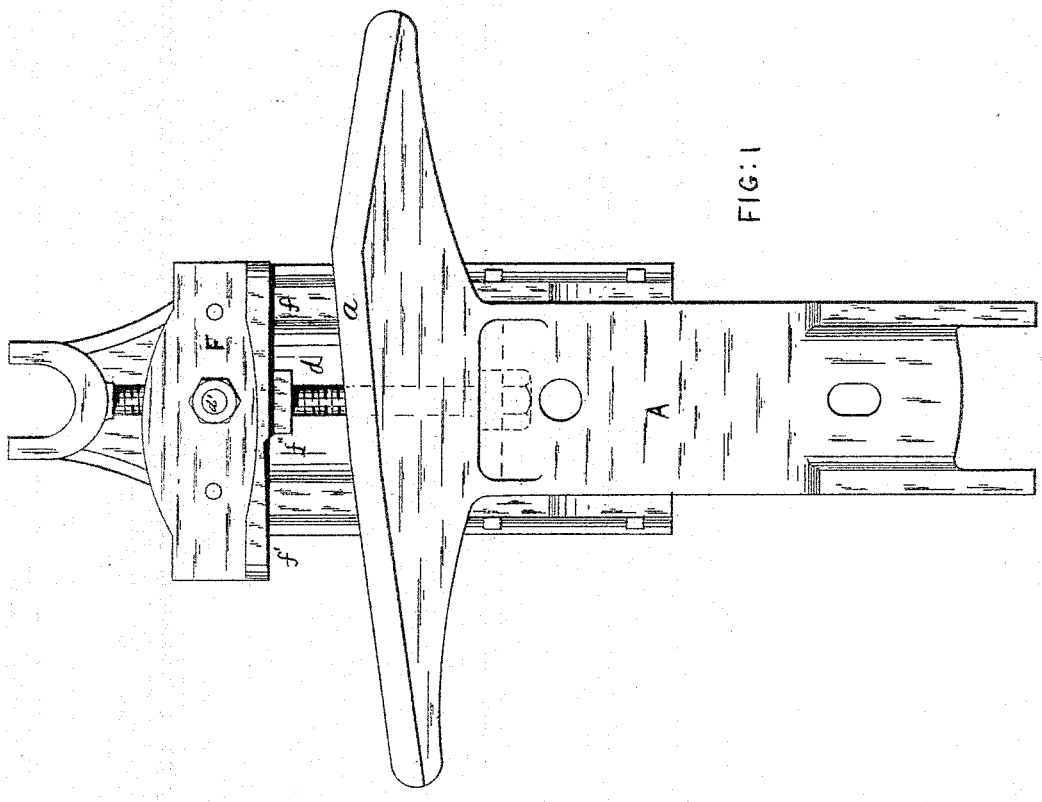

FIG: 1

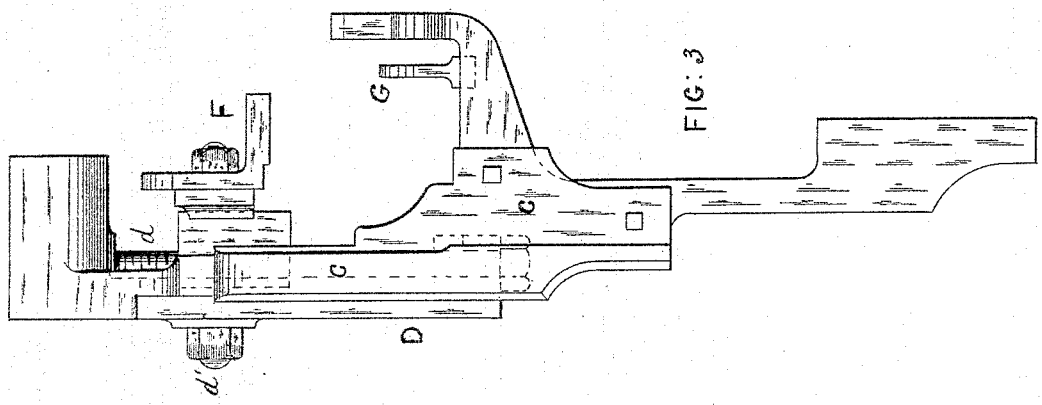

FIG: 3

WITNESSES

Chas. Wendale.

George Fox

INVENTOR

Joseph Jones

by Wm. Pierce Thompson & Co

attys.

(No Model.) 2 Sheets—Sheet 2.

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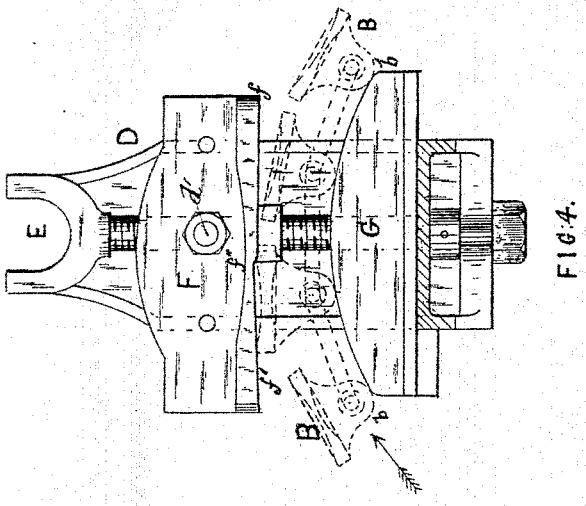

FIG: 4.

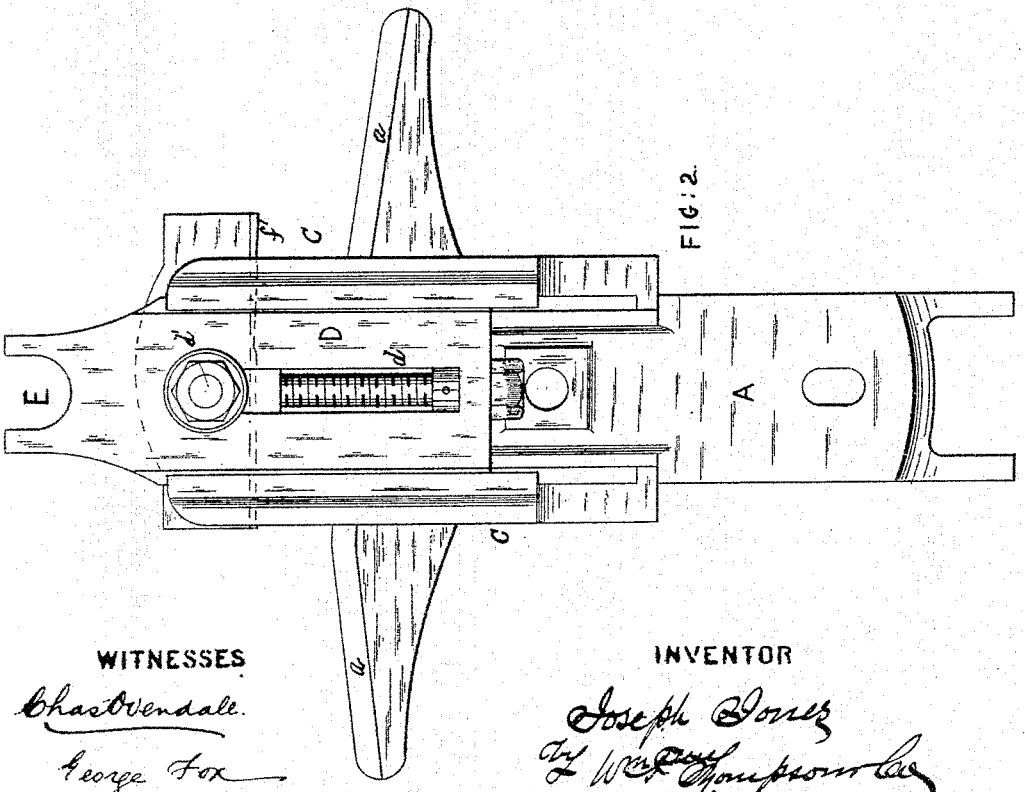

FIG: 2.

WITNESSES

Chas. B. Vendale.

George Fox

INVENTOR

Joseph Jones

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UNITED STATES PATENT OFFICE.

JOSEPH JONES, OF DUKINFIELD, ENGLAND.

APPARATUS FOR GRINDING FLATS OF CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 491,356, dated February 7, 1893.

Application filed June 2, 1892. Serial No. 435,296. (No model.) Patented in England April 18, 1889, No. 6,621.

To all whom it may concern:

Be it known that I, JOSEPH JONES, a subject of the Queen of England, residing at Dukinfield, in the county of Chester, England, have invented certain new and useful Improvements in Apparatus for Grinding the Flats of Carding-Engines, (for which I have obtained Letters Patent in Great Britain, No. 6,621, bearing date the 18th day of April, 1889,) of which the following is a specification.

This invention relates to that class of apparatus in which the revolving flats of carding engines are ground from their working surfaces to obtain a uniform grinding of the wire; or in which the weight of the journal of the grinding roller is sustained by the working end of the flat while the wires are being ground.

The invention will be fully described with reference to the accompanying drawings.

Figure 1. is a front elevation of apparatus. Fig. 2. a back elevation. Fig. 3. a side elevation. Fig. 4. a back elevation partly in section with the horn bracket removed.

The horn bracket A is of the usual construction with a horn or projecting piece *a* which raises and supports the several flats B as they are carried forward to the ground. It will be understood that there are two of these brackets one attached to each side of the card and that the other parts mentioned are also in duplicate one at each side of the card the grinding roller and flats passing across the top of the card the supports at both sides being alike. Hence for convenience of description I have only shown and described one invention.

The horn bracket A is bolted to the side of the card and remains firm and stationary. It is provided with a fixed bracket or slide C to which is fitted a sliding bracket D. The sliding bracket D is free to move to and fro in a vertical direction and at its upper end it carries the journal E for the grinding roller. I attach to this sliding bracket D by means of a screw *d* or other adjustable device a guide plate or bracket F against the under surface of which the flats B successively bear as they pass forward over the horn *a* of the horn bracket A. The under surface of the guide plate F is formed as shown with two surfaces *f f'* inclined to each other, the surface *f* being at right angles to the longitudinal axis or direction of movement of the sliding bracket D and the surface *f'* being inclined thereto a small step *f''* separating the junction of the two surfaces. The guide plate F is carried by the adjusting screw *d* which passes through a lug at the back and is secured in position by the bolt *d'* passing through it and the sliding bracket D. The flats are raised by and slide over the horn *a* of the horn bracket A in the usual way resting on a flat planed surface on the under side of each flat and when not desired to be ground pass beneath the grinding roller at a little distance from it. When it is desired to grind the flats a small removable lifting plate G is placed on the horn bracket A inside the horn *a* over which the curved under surface *b* of the flats slide and by which they are raised up into contact with the inclined guide plate F. The guide plate is adjusted and fixed relatively to the journal E of the grinding roller to give the amount of grinding required; the flats are lifted into position by the lifting plate G with their working surfaces against the guide plate F; and the inclined under surface of the guide plate F tilts or heels the flat to give the required inclination of the wires being ground, the flat being free to heel by reason of a curved surface bearing upon the lifting plate G.

What I claim and desire to secure by Letters Patent is:—

1. In apparatus for grinding the flats of carding engines the combination with the fixed horn bracket A provided with a slide C of the upright sliding bracket D carrying the journal E, the guide plate F affixed to the sliding bracket D and moving up and down with it and the adjusting screw *d* substantially as described.

2. In apparatus for grinding the flats of carding engines the combination with the fixed horn bracket A slide C and sliding bracket D which carries the journal E of the guide plate F the under side of which is pro-

vided with two surfaces one at right angles to and the other at an inclination to the axis of the sliding bracket D to heel or tilt the flats, the screw *d* by which the guide plate is adjusted, and the lifting plate G by which the flats are raised into contact with the guide plate D substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH JONES.

Witnesses:
J. OWDEN O'BRIEN,
CHAS. OVENDALE.