

(No Model.)

3 Sheets—Sheet 1.

L. W. PENNEY.
APPARATUS FOR GRINDING CARDS.

No. 547,226.

Patented Oct. 1, 1895.

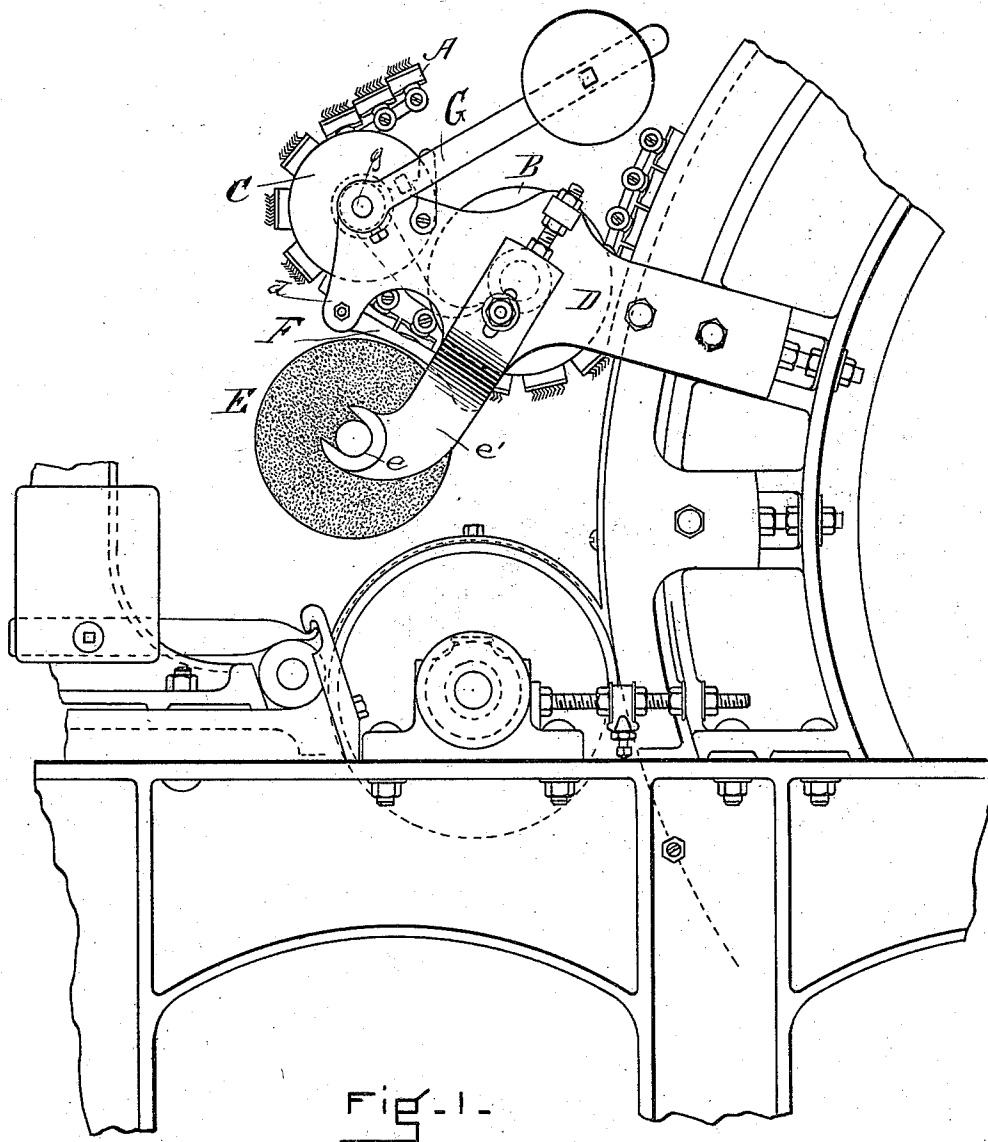


Fig. 1.

WITNESSES

J. M. Dolan.

E. L. Sherman

INVENTOR

Loren W. Penney

by his attys

Clarke & Raymond

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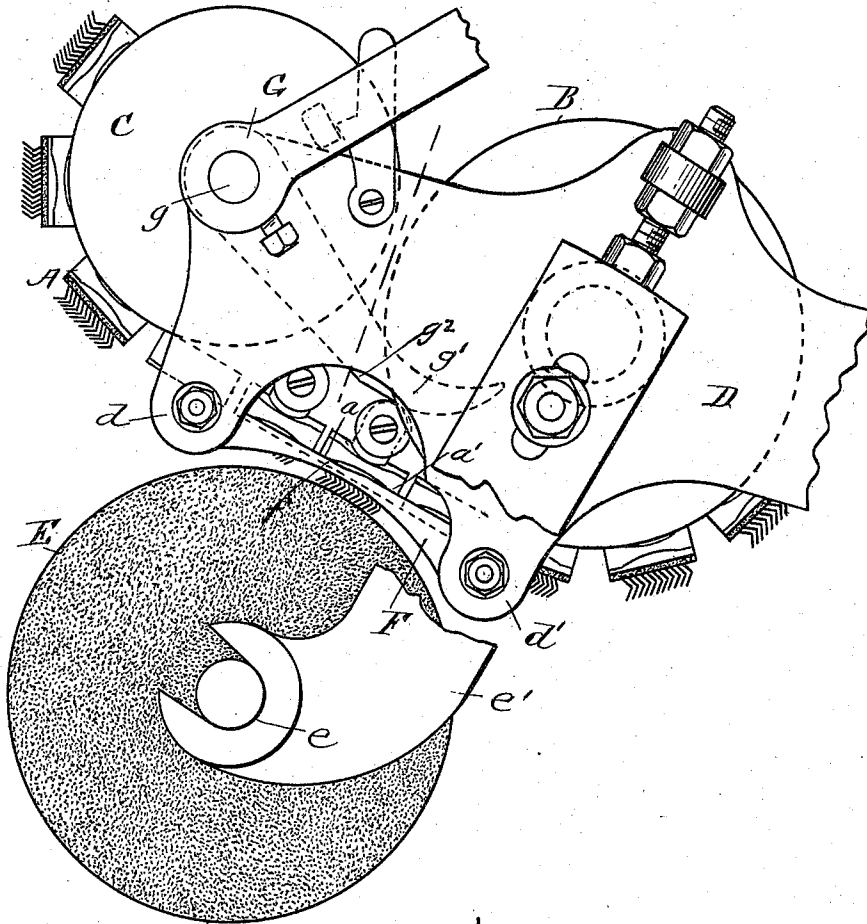


Fig. 2.

WITNESSES
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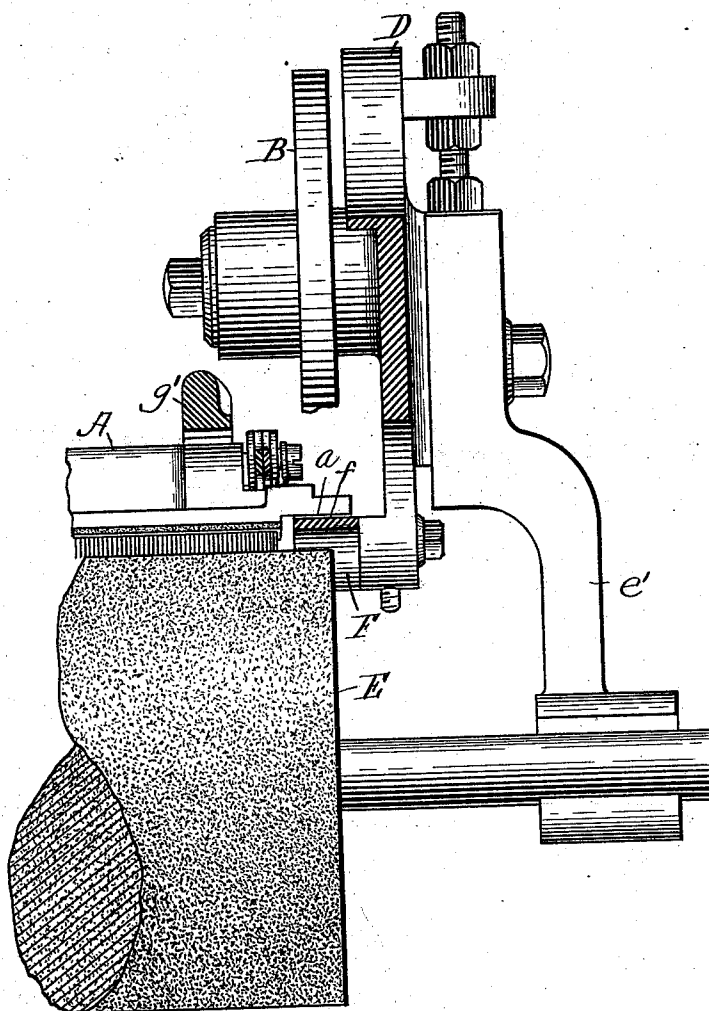


FIG. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

LOREN W. PENNEY, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE
PETTEE MACHINE WORKS, OF SAME PLACE.

APPARATUS FOR GRINDING CARDS.

SPECIFICATION forming part of Letters Patent No. 547,226, dated October 1, 1895.

Application filed July 21, 1894. Serial No. 518,257. (No model.)

To all whom it may concern:

Be it known that I, LOREN W. PENNEY, a citizen of the United States, residing at Newton Upper Falls, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Apparatus for Grinding Cards, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to the herein-described apparatus for grinding the flats of rotary carding-engines, and it comprises means whereby the flats are disposed at the place where they reach their lowest level preparatory to engaging the carding-cylinder of the machine in a manner to properly feed and present them to a suspended grinding-roll or to a grinding-roll located below them. This means comprises the use of an additional roll, over which end the roll ordinarily employed the flats are caused to travel, so that for a short distance between the two rolls they take very nearly a straight course. In conjunction with this flat-presenting mechanism there is used a grinding-roll and means for presenting or guiding each flat to the roll.

Referring to the drawings, Figure 1 is a view in end elevation of enough of a carding-engine to represent my invention. Fig. 2 is a view in elevation enlarged of the parts constituting the invention, a portion of the bracket being broken out to enable the parts behind it to be better shown. Fig. 3 is a view in elevation of one end of the grinding apparatus from the rear of the machine.

The flats A usually travel around the roll B. This makes them describe a short curve and one not adapted for their proper presentation to a grinding-roll, and I have therefore added to the customary roll B another roll C, over which and the roll B the flats run. The roll C is slightly above the roll B and they are both supported by the brackets D. It will be understood that only one side of the apparatus is shown. The other side is exactly like it, and we shall refer to the parts in the description as though both were illustrated.

By arranging the rolls C B, as specified, the flats are caused for a short distance, as they

are about turning and are in their lowest position, to take a path which is favorable for their proper presentation to the grinding-roll E. This grinding-roll is supported in bearings *e* in the suspended brackets *e'*, the brackets being attached at their upper ends to the brackets D. The bracket D has downward extensions *d d'*, which support the flat guides F, the flat guides having a guiding surface *f* of any desired shape and upon which the working surfaces *a a'* of the flats bear, (see Fig. 2,) and they not only bear by gravity upon these guiding-surfaces, but they are pressed with any desired pressure against them by the levers G, pivoted at *g* and having the inward and downward extending arms *g'*, curved at *g''*, and against which the sections *a''* of the flats come into contact as they approach the guides, the levers bearing upon the flats during the time that the flats are in contact with the guides and while the grinding operation is taking place. The levers are caused to exert stress either by a counterbalancing-weight or by spring-pressure. Counterbalancing-weights are shown. This organization, it will be seen, has advantages, in that the grinding-roll is conveniently located, in that the flats bear upon the roll with as little tendency to distortion or getting out of line as it is possible, because it is the most natural way for the flats to approach the grinding-roll and be held during the grinding operation, the flats bearing throughout their length upon the grinding-roll rather than being forced upward against the roll with gravity pulling the center of it downward, as with the ordinary construction.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a card grinding apparatus for carding engines, the combination with a supporting bracket secured to the engine frame, supporting rolls mounted substantially in line with each other in said bracket, ears depending from said bracket, flat guides supported by said ears, between which and the said supporting rolls the flats are held and travel, adjustable arms extending downward from said bracket, a grinding roll mounted in a bearing on said arm, and curved arms pivoted on said

brackets and which bear against the flats and force them downward during the grinding operation.

2. In a card grinding apparatus for carding
5 engines, the combination with a supporting
bracket secured to the frame of the engine, of
two supporting rolls mounted in said bracket,
a flat guide hung below said rolls and between
which and the rolls the flats travel, adjust-
10 able arms secured to said supporting bracket
a grinding roll supported in said adjustable

arms below and substantially centrally of
said supporting rolls, and weighted levers piv-
oted to said bracket and having curved por-
tions which press upon the flats successively 15
at a point midway the flat guide to insure the
contact of the working surface of each flat
with the grinding roll.

LOREN W. PENNEY.

Witnesses:

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J. M. DOLAN.