(No Model.)

D. BATEMAN.

CARD GRINDING ROLL.

No. 269,821. Patented Jan. 2, 1883.

Fig. 1.

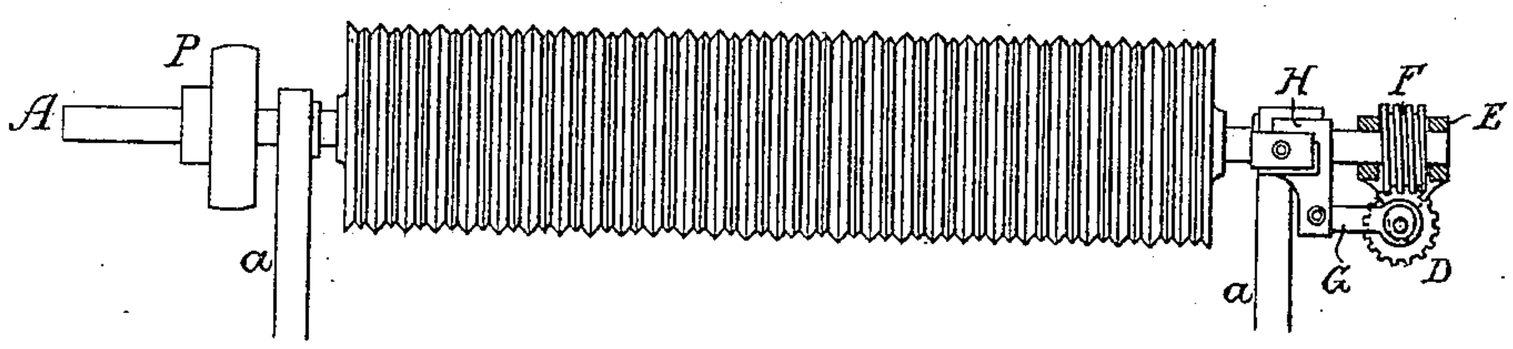
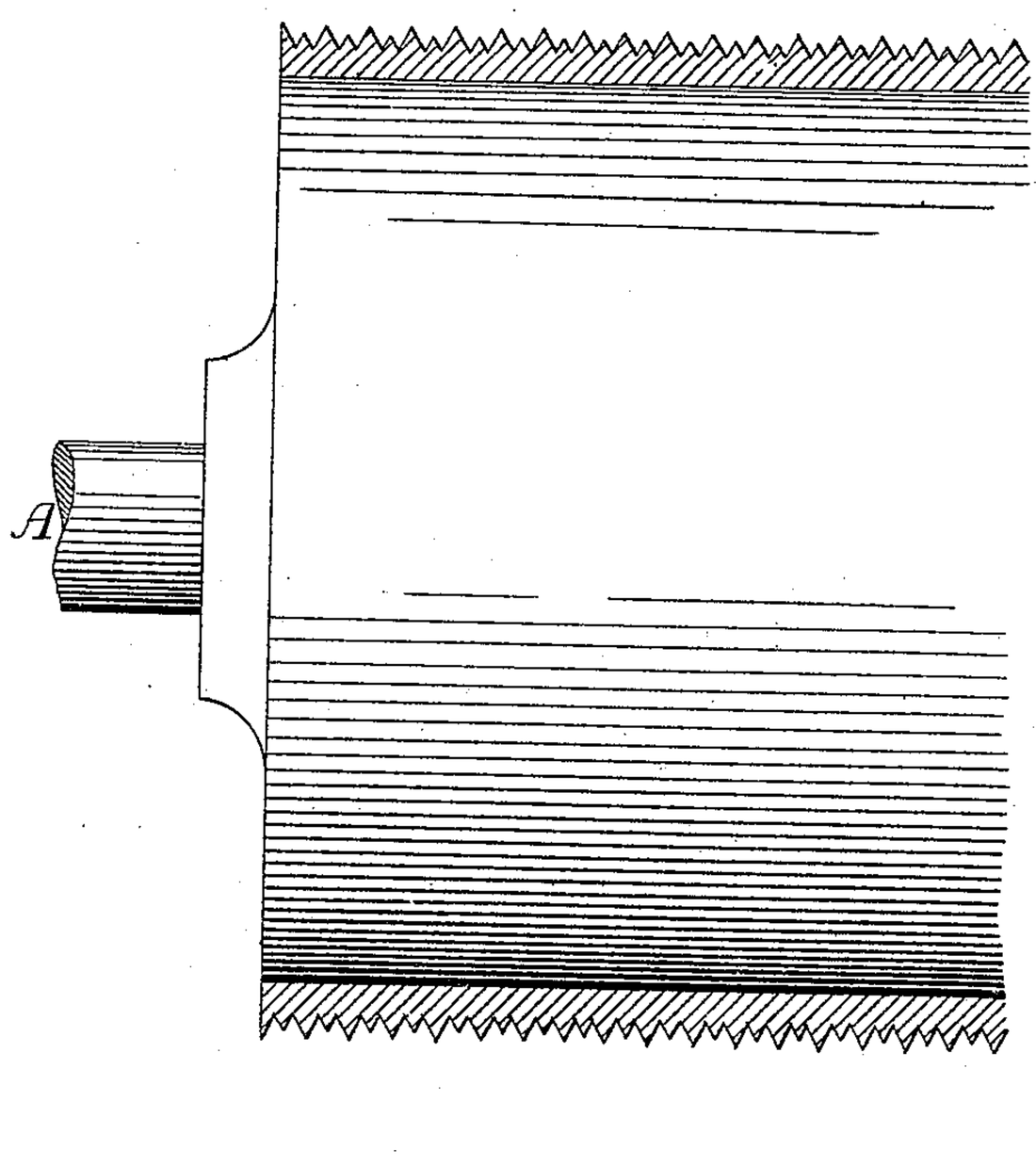


Fig. 2.



Witnesses.
Harry Drury
James J. Tobin.

Inventor.
Daniel Bateman
by his attorneys
Howson and Sons

UNITED STATES PATENT OFFICE.

DANIEL BATEMAN, OF PHILADELPHIA, PENNSYLVANIA.

CARD-GRINDING ROLL.

SPECIFICATION forming part of Letters Patent No. 269,821, dated January 2, 1883.

Application filed June 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL BATEMAN, a subject of the Queen of Great Britain and Ireland, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Card Grinding Rolls, of which the following is a specification.

The object of my invention is to construct a grinding-roll which will grind the teeth of card-fillets more effectually than those of the ordinary form. This object I attain by providing the roller with annular grooves and making the ridges thus formed of alternately different heights.

In the accompanying drawings, Figure 1 is a view of my improved grinding-roller with devices for imparting to it a traverse motion; Fig. 2, an enlarged view of a part of the roller.

My improved roller may be constructed of any of the well-known materials used in constructing card-grinding rolls; but I prefer to make it by applying a layer of plastic emery to the surface of a metal cylinder, and I then form on the surface of this emery, while still plastic, annular V-shaped grooves, whose depth will vary according to the character of the card-teeth to be ground. I prefer to make all the grooves of about the same depth; but the ridges I make of different heights, every alternate ridge being about one-sixteenth of an inch higher than the intermediate ones. Instead of forming these ridges in the plastic emery, they may be formed by turning, and of any suitable material.

My improved roller may be used in connection with the ordinary traverse motion, as illustrated in Fig. 1.

The shaft A of the roller is mounted in bearings *a* on the frame, and has a rotary motion imparted to it by a belt passing over a pulley, P, at one end of the shaft A, and on the other end is a worm, F, gearing into a worm-wheel, D, mounted in a bracket, E, in which the shaft A may turn. On the stud of this bracket is formed an eccentric acting on the yoke G, carried by the step H, which is fixed to the frame of the machine. As the shaft with its worm F rotates a slow longitudinal reciprocating motion will thus be imparted by the eccentric and yoke to the roller across the face of the cards. I find that by providing the grinding-surface with these alternately high and low V-shaped ridges the teeth of the card, as the roller traverses across the cylinder, will be more effectually ground than with a grooved roller whose ridges are all of about the same height.

I claim as my invention—

A card-grinding roller having annular V-shaped grooves, with ridges, of which every alternate one is slightly higher than those intermediate, substantially as described.

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

DANL. BATEMAN.

Witnesses:

HARRY DRURY,

HUBERT HOWSON.