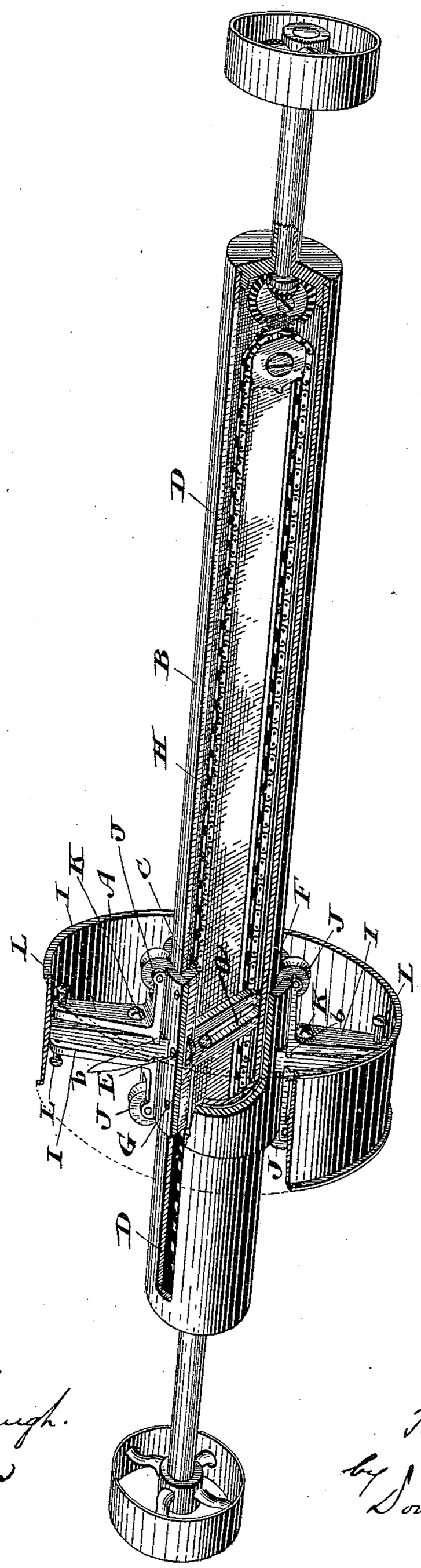
(No Model.)

R. SCHOFIELD.

CARD GRINDER.

No. 428,529. Patented May 20, 1890.



Witnesses.
F. B. Fethuslonhaugh.
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Inventor:
R. Schofield
by Donald C. Ridout & Co
Atty

UNITED STATES PATENT OFFICE.

RICHARD SCHOFIELD, OF PARIS, ONTARIO, CANADA, ASSIGNOR OF SEVEN-TWELFTHS TO JOHN PENMAN, OF SAME PLACE.

CARD-GRINDER.

SPECIFICATION forming part of Letters Patent No. 428,529, dated May 20, 1890.

Application filed August 30, 1889. Serial No. 322,447. (No model.)

To all whom it may concern:

Be it known that I, RICHARD SCHOFIELD, mechanic, of the town of Paris, in the county of Brant, in the Province of Ontario, Canada, have invented a certain new and useful Improvement in Card-Grinders, of which the following is a specification.

The invention relates to an improvement in that class of card-grinders in which an emery or other grinding wheel has a longitudinal reciprocating motion upon a revolving shaft; and the object of the invention is to so connect the grinding wheel or drum to the shaft that while held to revolve with the said shaft it will move longitudinally with the least possible friction, and at the same time it may be readily trued should its bearings be unevenly worn.

It consists, essentially, of a grinding wheel or drum loosely fitted onto a hollow shaft, and having an internal projection formed on its hub to fit into a longitudinal groove or slot made in the hollow shaft, a friction roller or rollers being journaled in the projection, so as to bear against the sides of the slot. Pivoted arms, with friction-rollers provided with adjusting-screws, are located on either side of the spokes of the said wheel or drum, the whole being arranged substantially as hereinafter more particularly explained.

The figure of the drawing represents a perspective view, partially in section, of a card-grinding machine embodying the features of my invention.

A represents the wheel or drum loosely fitted onto the hollow shaft B, and having a projection or key fixed to or forming part of its hub, as indicated, and designed to fit into a longitudinal slot D, formed in the hollow shaft B, as indicated.

E is a friction-roller suitably journaled in the projection or key C, and designed to be in contact with the sides of a slot D. I only show one roller E; but it will of course be understood that more of such rollers may be employed, if desired.

F is a lug fixed to and projecting from the projection or key C, and has a slot *a* made in it to receive the pin G, which is fixed to the endless chain H. This endless chain is carried round suitable sprocket-wheels, and is caused to travel so as to impart a longitudinal reciprocating motion to the wheel or drum A. This portion of the device I lay no claim to, as it is a common form, and there are other ways by which the grinding wheel or drum A may derive the necessary reciprocating motion to perform its duty.

On each side of each spoke of the wheel or drum A, I place a bell-crank I, on the end of which is journaled a friction-roller J, shaped to fit the periphery of the hollow shaft B, a slot being made in the hub of the wheel or drum A to permit the said roller J to reach the surface of the shaft B. Each bell-crank I is connected to its spoke by a screw-pin K, and a heel *b* is formed on each bell-crank I, and projects into a notch formed in its spoke to form a fulcrum or pivot-point for the said bell-crank. The outer arm of each bell-crank I has an adjusting-screw L, which pinches against the spoke. As each spoke has a bell-crank I pivoted on each side of it, and as each bell-crank is provided with an adjusting-screw L, and is otherwise held, as described, it will be understood that the wheel or drum A may be readily trued should it in any way become twisted or out of true.

I do not claim any particular number of friction-rollers J, nor do I confine myself to any particular number of friction-rollers E, nor do I limit myself in any way to the number of bell-cranks I, provided they are arranged so that their adjustment will readily true the wheel or drum A.

What I claim as my invention is—

1. In a card-grinder, the combination of a hollow shaft, a drum traveling on said shaft, bell-crank levers on said drum, and friction-rollers carried by said levers and riding on the periphery of the hollow shaft.

2. In a card-grinder, the combination of a hollow shaft provided with a longitudinal slot, a drum fitting loosely on the shaft and carrying a friction-roller engaging one of the walls of said slot, and bell-crank levers carried by the drum carrying friction-rollers traveling on the periphery of the hollow shaft.

Paris, August 8, 1889.

RICHARD SCHOFIELD.

In presence of—
GEO. F. COOK,
B. C. CUPRON.