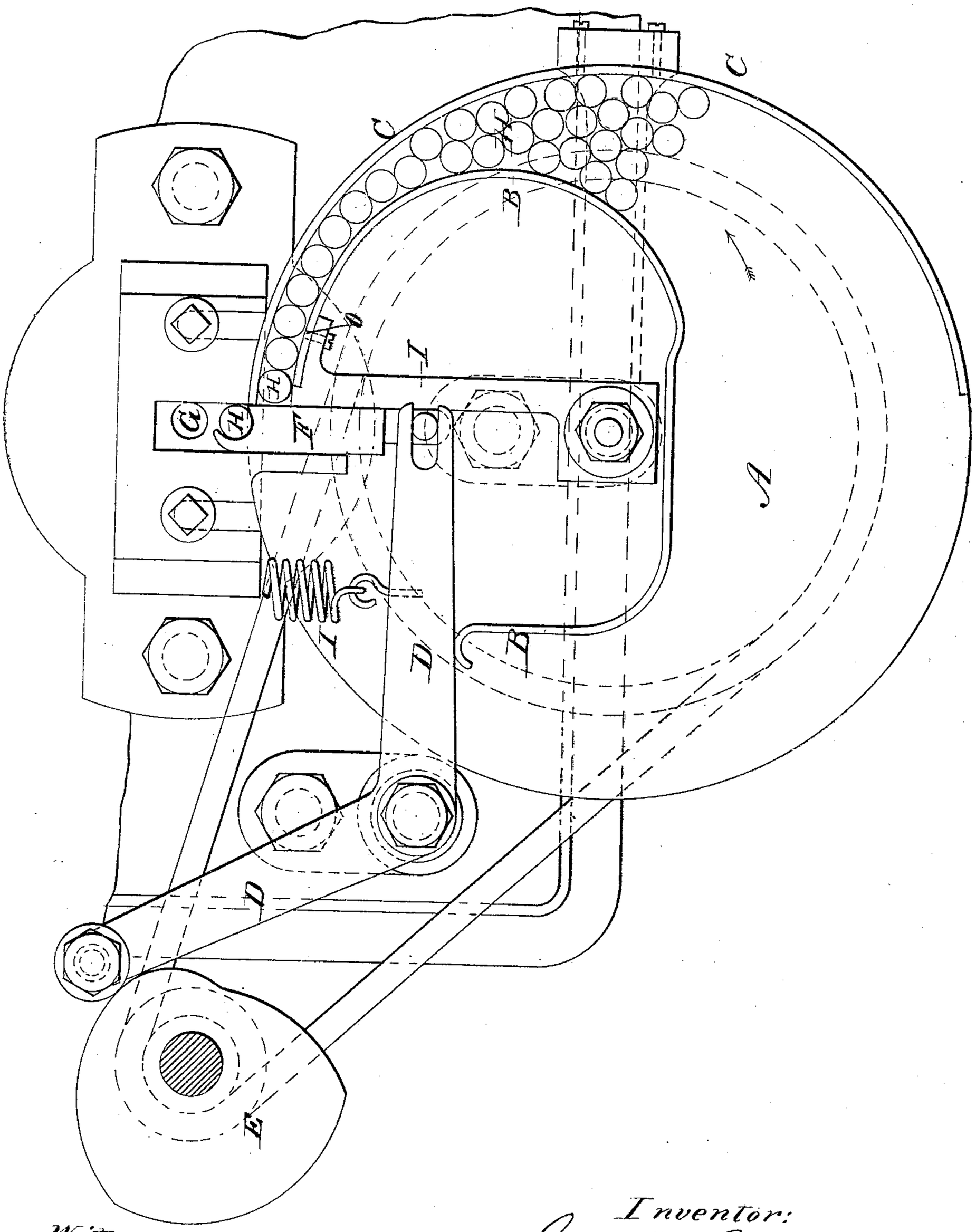
G. E. BRADLEY.

DIAL-FEEDS FOR CARTRIDGE MACHINES.

No. 180,746. Patented Aug. 8. 1876.



Witnesses:
Donn P. Twitchell.
Will A. Dodge.

Inventor:
Geo. E. Bradley.
by Dodger & Son.
Attys.

UNITED STATES PATENT OFFICE.

GEORGE E. BRADLEY, OF NEW HAVEN, CONN., ASSIGNOR TO WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

IMPROVEMENT IN DIAL-FEEDS FOR CARTRIDGE-MACHINES.

Specification forming part of Letters Patent No. **180,746**, dated August 8, 1876; application filed July 20, 1876.

To all whom it may concern:

Be it known that I, GEORGE E. BRADLEY, of New Haven, in the county of New Haven and State of Connecticut, have invented certain Improvements in Dial-Feed for Cartridge-Machines, of which the following is a specification:

My invention consists in an improved construction of device for feeding metallic cartridge-shells, whereby the same are prevented from clogging.

The drawing represents a top-plan view of my improved apparatus, the general construction of which is the same as that of the machines commonly in use.

The invention relates to the drawing, or otherwise treating, of metallic tubes, such as may be used for cartridge-cases.

In the drawing, A represents the revolving plate on which the tubes H are placed; and B and C the guides, between which they are fed or carried to the feed-bar F, which, in turn, carries them under the punch or tool at G, in position to be operated upon by the machine. It frequently occurs, however, that the tubes H take such position on the revolving plate A as to clog between the curved guides B and C when these are fixed in one position, and have the single function of guiding-pieces, and it is the object of my invention to obviate this difficulty. To this end the guides B and C, either or both, are so fashioned and attached to the machine as to receive automatically a slight reciprocating motion, causing the distance between them to be alternately enlarged and diminished at all points where the clogging of the tubes could occur, and thus serve not only as guides, but also as agitators, whereby any such group or combination of pieces as would clog the machine is broken up and prevented.

Such an arrangement of the guides is shown in the drawing. As shown, the guide B is attached to the machine at the point O only, and is simply a curved spring resting at its other extremity against the lever D, which operates the feed-bar F.

The motion of the lever D gives to the guide B the required reciprocating motion at the necessary points, and thus effectually prevents clogging.

It is obvious that either one or both of the guides B and C may be made to act on this principle, as may be deemed most desirable.

The lever D is operated by means of the cam E and spring I, or may be operated by any other suitable mechanism.

It will be understood that as the guides B and C must be held above the revolving dial, the arm I, to which the guide B is secured at O, is intended to be rigid or stationary, and that the motion is imparted to the spring-guide B by the lever D bearing against the free end of the guide B, which causes it to vibrate sufficiently to loosen any shells which may have become clogged between it and the guide C, a very slight movement being sufficient for this purpose. It is obvious, however, that the guide B may be moved by having the arm I loosened, so that as the lever D plays back and forth its end, moving in the arc of a circle, will, by striking against the side of the arm I, impart to it and the attached guide B a vibratory movement, and thus accomplish the desired result. If this be done, however, care must be taken to arrange the guide B so as not to interfere with the delivery of the shells at the required point for the slide F to receive them as they are fed around.

In this case the outer guide C is represented as stationary; but it is obvious that either it or the other one, or both, may be made to move slightly, as may be preferred, and also that other means may be used for imparting motion to them; but I find it amply sufficient to make the one guide, B, movable, and inasmuch as the lever D is necessary to work the slide F it is only necessary to extend the guide B around so its free end will bear against the lever D, as shown in the drawing, to make it work successfully and accomplish the desired result.

Having thus described my invention, what I claim is—

1. The improved feeding device, consisting of the rotating dial or plate A, with the guides B and C, one or both of which are made to

move substantially as described, to prevent the clogging of the shells or articles being fed, as set forth.

2. In combination with the feed plate or dial A and stationary guide C, the spring-guide B, arranged to operate substantially as described, whereby an intermittent vibratory motion is imparted to the latter, as and for the purpose set forth.

GEO. E. BRADLEY.

Witnesses:
DANIEL H. VEADER,
T. G. BENNETT.