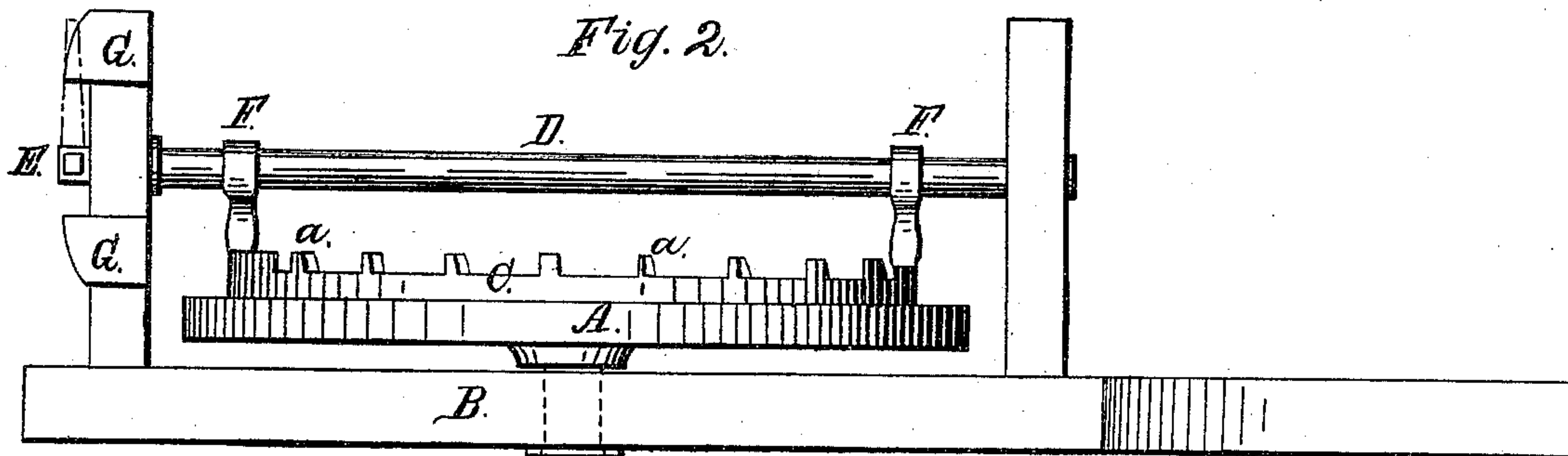
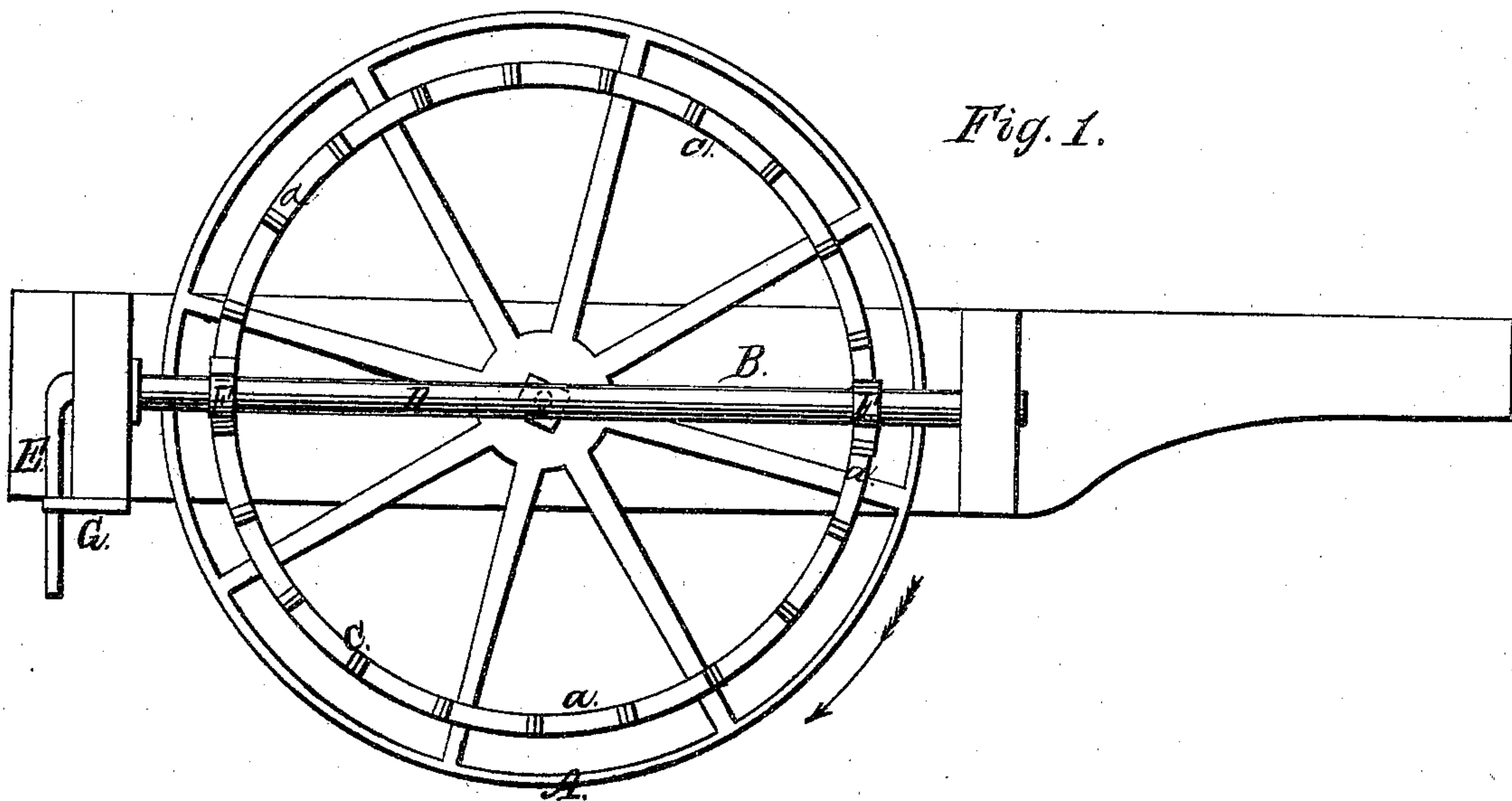


E. O. Rood.

Mechanical Movement.

N^o 86,692.

Patented Feb. 9, 1869.



Witnesses.

Phil J. Langer.
Geo. J. Rothwell

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UNITED STATES PATENT OFFICE.

EDWIN O. ROOD, OF LODI, ILLINOIS.

IMPROVEMENT IN MECHANICAL MOVEMENT.

Specification forming part of Letters Patent No. 86,692, dated February 9, 1869.

To all whom it may concern:

Be it known that I, EDWIN O. ROOD, of Lodi, in the county of Kane and State of Illinois, have invented a new and useful Improvement in Mechanical Movements; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view, and Fig. 2 a bottom view, of the device which illustrates my invention.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in the application of bumpers to the vibrating arm, which is operated through the medium of a rock-shaft, levers, and a toothed wheel, whereby the vibrating arm is so checked that no power is lost, and there is no strain on the working parts of the device, as will be hereinafter more fully described.

In the drawings, A represents a ground or carrying wheel of a moving or other machine, whose axle is mounted in the frame B.

C C is a ring or wheel, of somewhat smaller diameter than the wheel A, the same being fixed thereto concentrically, so as to turn therewith. This ring is provided with a circular series of teeth or projections, *a a*, which may be cast therewith, or formed separately and then secured thereto.

D is a rock-shaft, having its bearings in the frame B, and is arranged in line parallel to the plane of motion of the wheel A.

E is a vibrating arm attached to the rear end of the rock-shaft D, and connected, by a wrist-pin or otherwise, with a pitman or shaft, whereby motion is imparted to a cutter-bar or elsewhere.

F are two levers, made fast to the rock-shaft. Their extremities point above and below the longitudinal center of the rock-shaft, so that they will come in contact with the teeth on the rim or wheel.

An uneven number of teeth must be formed on said rim or wheel, and they may be placed on its face, periphery, or elsewhere.

It will be found that a line drawn from a tooth on one side through the center or axle of the rim and parallel with the rock-shaft will pass midway between the teeth, which are on opposite sides of the rim, so that when the ground-wheel revolves, and thereby carries the toothed rim with it, the teeth of the latter will act alternately upon both levers, thus moving said levers, and causing each tooth to move the rock-shaft, and consequently the vibrating arm E—that is, one of the levers on one side will be raised by the teeth of that side and turn the rock-shaft correspondingly. The other lever meanwhile plays between the teeth of its side until the next tooth strikes it, and thereby depresses or lowers the lever. The rock-shaft is thus turned in a contrary direction, and from the two operations is being continually reciprocated, and communicates its motion to the swinging arm E and to the cutter-bar whenever such motion is desired.

It must be noticed that the face of the back teeth are angular or sharp, so that the levers will be caught thereby; but its faces are beveled, to allow the levers to readily slip over them after they have been raised or lowered.

A lever may be secured to the rock-shaft at the same point where one of the others is placed, so that it will point in contrary direction to the lever previously placed there. In this case a tooth will raise one lever, then pass on and lower the other lever, whereby the reciprocating motion is imparted to the rock-shaft similar to that previously stated.

To the proper part of the frame-work, and at points which are described by the play of the vibrating arm E, I secure bumpers G, which are constructed of elastic or non-elastic substances, and secured to the frame in any suitable manner. These bumpers are thus on both sides of the vibrating arm, and occupy positions where the action of the teeth on the levers and rock-shaft cease to move the vibrating arm in either direction. They check the force of the arm in one direction at the instant before the teeth strike the other lever and turn the arm in the opposite direction. All jars, shocks, and strains are thereby avoided, and the device therefore operates in a steady and uniform manner.

I disclaim any of the parts the subject-matter of my former patent, dated September 1, 1868, No. 81,819.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The bumper G, in combination with the vibrating arm E, rock-shaft D, levers F, and

toothed wheel C, and operating substantially as and for the purpose described.

To the above I have signed my name this 5th day of November, 1868.

EDWIN O. ROOD.

Witnesses:

W. H. H. KENNEDY,
WM. F. YEOMAN.