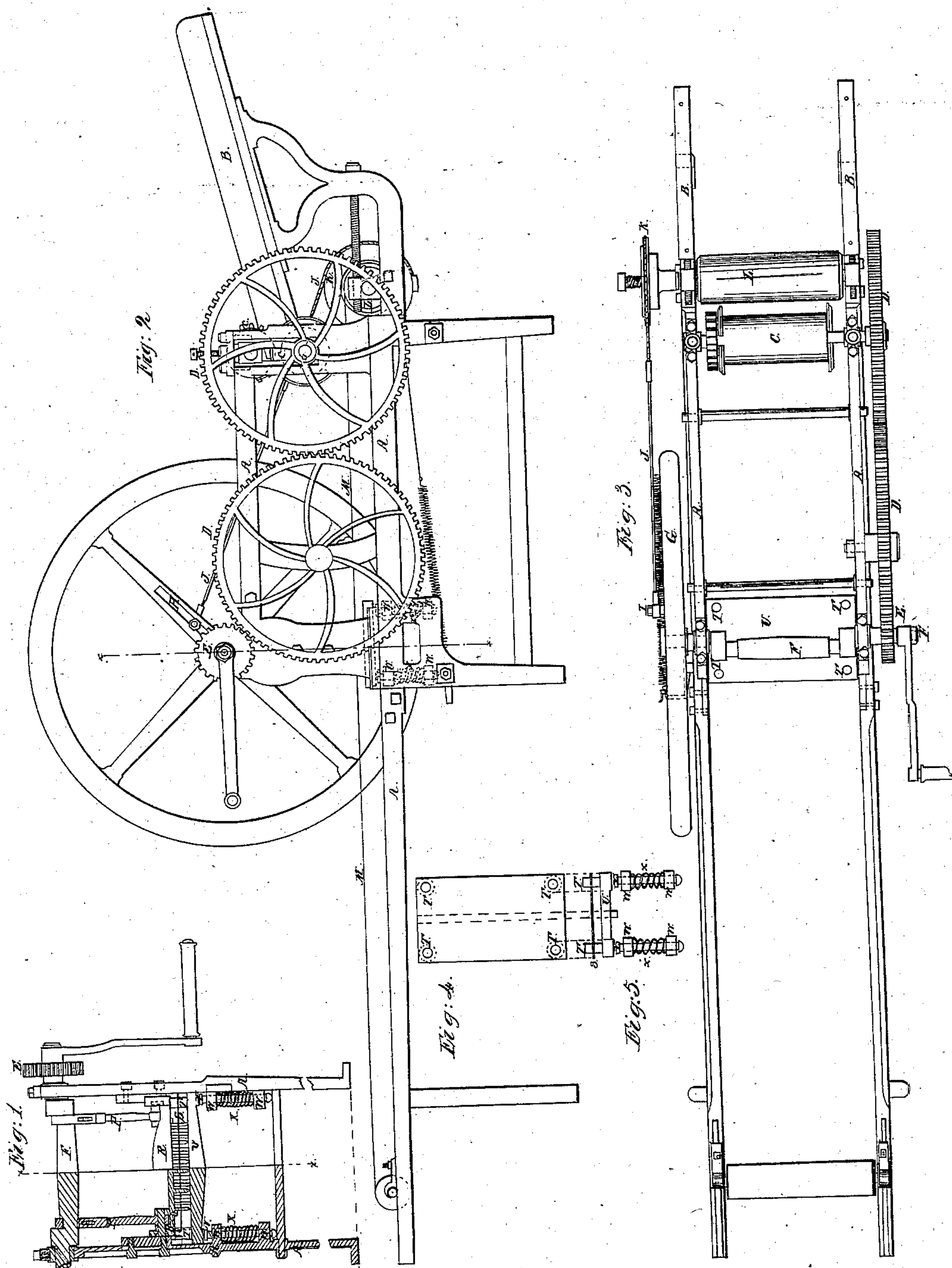


J. Mc. Collum,

Cracker Machine,

N^o 8828.

Patented Mar. 23 1852.



UNITED STATES PATENT OFFICE.

JOHN MCCOLLUM, OF NEW YORK, N. Y.

CRACKER-MACHINE.

Specification forming part of Letters Patent No. 8,828, dated March 23, 1852; Reissued May 31, 1859, No. 730.

To all whom it may concern:

Be it known that I, JOHN MCCOLLUM, of the city, county, and State of New York, have invented a new and useful Improvement in Cracker or Biscuit Cutting Machines; and I do hereby declare the following to be a full and clear description of the same.

The nature of my invention consists in attaching to the frame of the cracker machine a set of springs in such a manner as to let the bed plate rest upon them, and as the cutters are forced down to cut the dough, to yield or recede under the pressure and thereby prevent the sudden cut of the knives on the apron, and at the same time, keep them longer in contact with the apron to take the "scraps," than would be the case if the bed plate was made permanently fast to the frame, and the knives suddenly impinged upon it and then receded. But to describe my invention more particularly I will refer to the accompanying drawings forming a part of this schedule, the same letters in the several drawings referring to the same parts, wherever they occur.

Figure 1 is a front elevation of the machine through the plane x, x , Fig. 2, omitting the feed roller, feed board &c.; and showing through the plane x^2, x^2 Fig. 3, a cut section of the same. Fig. 2, is a side elevation of the machine. Fig. 3 is a plan view of the same omitting the feed board, feed apron and cutters; and feed roller and clearer. Fig. 4 is a plan view of the bed plate. Fig. 5 is an end view of the bed plate and pins and springs on which it rests.

Letter A, is the frame of the machine.

B, is the feed board, for introducing the dough to the machine.

Letters C, C, are the kneading rollers, geared together, and driven by the cog wheels D, D, at the side of the machine, and gearing into a cog wheel E, on the crank shaft F. On the opposite end of this shaft is a fly wheel G, having a slot H, cut in one of its arms, for the purpose of attaching the end of a rod I, which at its back end is connected to a cord J, winding about half way around a pulley K, on the end of the shaft of the back feed roller L, so that, by the adjusting of the rod I, in the slot, H, the feed (by means of the endless apron M, passing around the roller N. at the front end of the machine,) may be graduated to different

sizes of crackers, or biscuits required to be cut. Connected to the crank shaft are also two connecting rods P, P. These rods are, at their lower ends, attached to the upper side of the cutters R, which are made in the usual manner, with ovals, squares, or other devices for cutting the various kinds of crackers, and prickers in connection therewith.

Letter S, is the clearer, for the cutters. This clearer is a thin plate of metal and supported on posts T, T, secured into the upper side of the bed plate U, and through openings in which, the knives and prickers pass to act upon the dough, and prevent it from following or lifting as the knives draw back from the bed plate. This bed plate U is supported upon the heads of four pins V, V, &c., passing through shoulder pieces W, W, &c., at opposite sides of the frame, for holding them in a vertical position. Attached to these pins are spiral springs X, X. These springs are arranged on the pins between the upper and lower shoulder pieces, having one end secured to the pin, and the other resting upon one of the shoulder pieces, so that as the knives press down upon the apron and bed plate to cut the dough, they allow the bed plate and clearer attached thereto, to yield or give back to the pressure of the knives and follow them up as they are being drawn back, and thereby allow of a more gradual separation of the dough from the edges of the knives and prickers.

The operation of my machine is that when the dough is placed upon the feed board, and carried into the machine by the kneading rollers, the dough is fed up by means of the rod connecting with the fly wheel and apron roller. At the same time this is being done the knives are set in operation by the crank shaft, which at each revolution brings them down upon the apron having the dough upon it, and running over the surface of the bed plate, to cut the crackers. In doing this the pressure to cut the crackers cause the springs to give back, thereby preventing the apron from being cut by the sudden impingement of the edges of the knives upon it, and also, in following the knives up after the down stroke, allowing the dough more time to separate from their edges.

As there are many arrangements that may be adopted to effect this operation of making the bed plate, and clearer attached there-

to to give under the action of the knives, and
all simple and obvious to any practical man,
I do not intend to limit myself to the precise
plan herein described, though for simplicity
5 of arrangement, and applicability to old
cracker machines, where the improvement is
desired, I deem it among the best that can be
adopted.

10 Having now described my invention and
its operation, I will proceed to state what I
claim and desire to secure by Letters Pat-
ent of the United States.

What I claim therefore is the use of the

bed-plate resting upon or supported by
springs or other equivalent devices, so that 15
a yielding or receding action is obtained in
the bed plate while under the pressure of the
cutters, or while the cutters are pressing
down for the purposes and in principle of
construction and operation substantially as 20
set forth.

JOHN McCOLLUM.

Witnesses:

CHARLES S. BARRITZ,
WM. H. RIBLET.

[FIRST PRINTED 1912.]