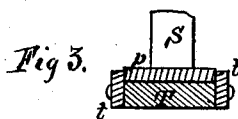
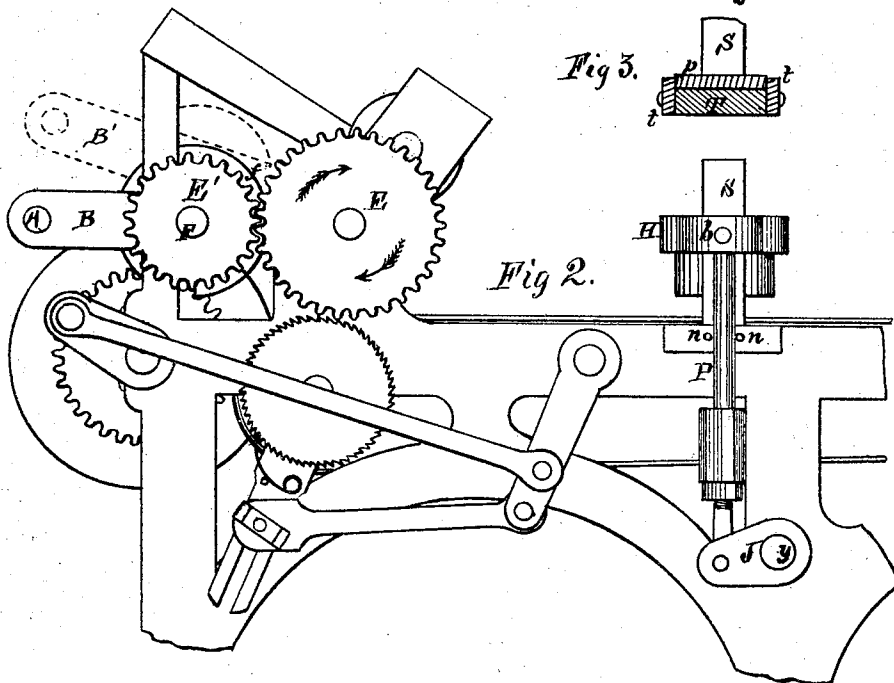
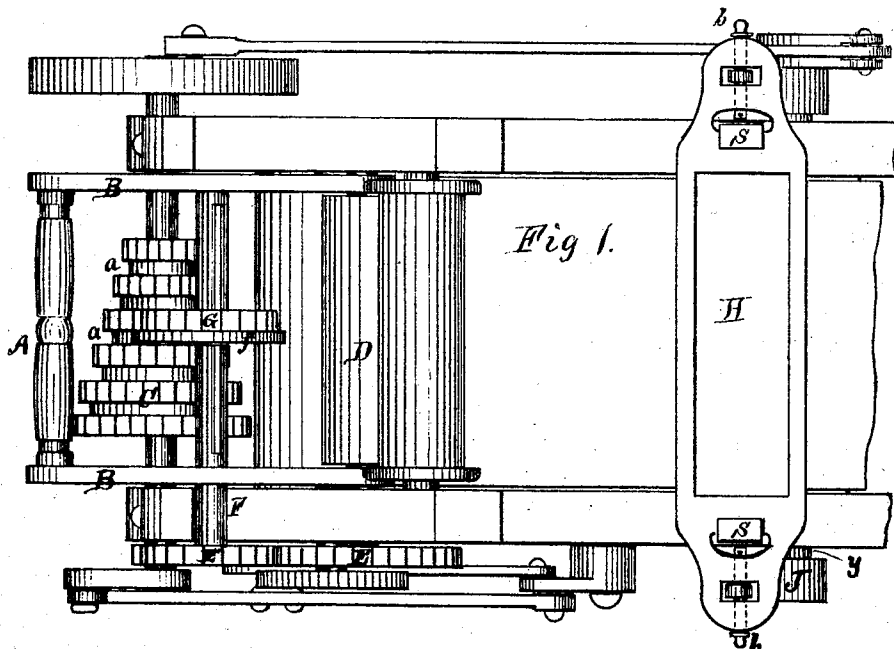


G. J. KINGSBURY.  
Cracker-Machines.

No. 149,134.

Patented March 31, 1874.



Witnesses.

E. B. Cuthbert  
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# UNITED STATES PATENT OFFICE.

GILBERT J. KINGSBURY, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN CRACKER-MACHINES.

Specification forming part of Letters Patent No. **149,134**, dated March 31, 1874; application filed April 3, 1874.

### CASE B.

*To all whom it may concern:*

Be it known that I, GILBERT J. KINGSBURY, of Rochester, in the county of Monroe and State of New York, have invented certain Improvements in Cracker-Machines, of which the following is a specification:

This invention consists in the employment of a peculiarly-constructed system of changeable or variable motion gearing in cracker-machines.

Figure 1 is a top or plan view of the working parts of an ordinary cracker-machine having my invention attached, the feed-board being omitted. Fig. 2 is a side-elevation of the same with the feed-board attached. Fig. 3 is a detached view.

This class of machines require frequent changes in the speed with which the cracker-belt is run relatively with the feed-rollers. To do this, in the ordinary machines, as heretofore constructed, it was necessary to stop the machine, remove one gear, and after changing the location of the axial pin or bearing, which was made adjustable, so as to receive the larger or smaller gear, it is substituted and secured in place. These changes required a good deal of time, and necessitated stopping the machine while they were being made.

The gear-wheels which were thus used separately in the machine, as heretofore constructed, I arrange upon a shaft and form the cone C, leaving spaces *a* between the gear-wheels. This cone is hung upon the main driving-shaft. I provide a frame, A B B, which is hung upon the journals of the feed-roller D, upon which the gear-wheel E is hung. The splined shaft F, carrying the gear E' and the sliding gear G, is hung in this swinging frame, and it may be changed from one section of the cone to another almost instantly by simply lifting the bar A up sufficiently to release the flange *f* from the groove it may be resting in, and sliding it to the grade desired, and the gravity of the parts will force it into position. The cutter-head H is fitted to, and suspended upon, a rectangular-shaped standard, S, at each end, by which it is made to preserve its parallelism during its vertical movements.

As formerly constructed, and connected to the pitman P, the connection was very liable to break while in use, and was very inconvenient to detach from, or put into, the machine, and such changes are, necessarily, frequent.

Each end of the head was formerly provided with a projecting wrist, to which the pitmen were hung; and such wrists, being of cast-iron, were quite frail.

I enlarge the ends of the head H, as shown in Fig. 1, so as to encircle the upper end of the pitmen, and a strong wrought-metal bolt, *b*, is inserted in the ends of the head and through the pitmen.

I find by actual practice that this form of standard S is much more firm and substantial than a round one, as formerly used by me.

I provide an elastic or yielding cushion or platen, *p*, Fig. 3, preferably made of rubber, below the canvas belt, as a bed for the cutters to work against. It is secured in a recess formed in the bed-plate T, where it may be secured by clamping-plates *t* on the sides, or by other suitable means. This insures a full bearing of the entire surface of the cutters at each stroke without injury to the canvas belt.

The pitmen or side arms P are retained in an upright position, when the head H is removed, by the steady-pins or guides *n*, the arms being prevented from dropping outward by means of their lateral bearing within the crank J on the rock-shaft *y*; or a staple or yoke might be substituted for the pins *n*, if desired. By thus securing the vertical position of the side arms P, when released from the head, in connection with the convenient mode of connecting and disconnecting these parts, as before described, one cutter-head can be removed and another one substituted in the shortest possible time, and the changes are of very frequent occurrence.

What I claim as my invention is—

1. In a cracker-machine, the mechanism, substantially as described, consisting of the sliding gear G and governing-flange *f*, in combination with the conical gears C, for the purpose of imparting to the belt a greater or less speed, as and for the purposes set forth.

2. The variable gearing G C, constructed as shown and described, in combination with the dough-belt, as and for the purposes specified.

G. J. KINGSBURY.

Witnesses:

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