

C. E. ZIMMERMAN.

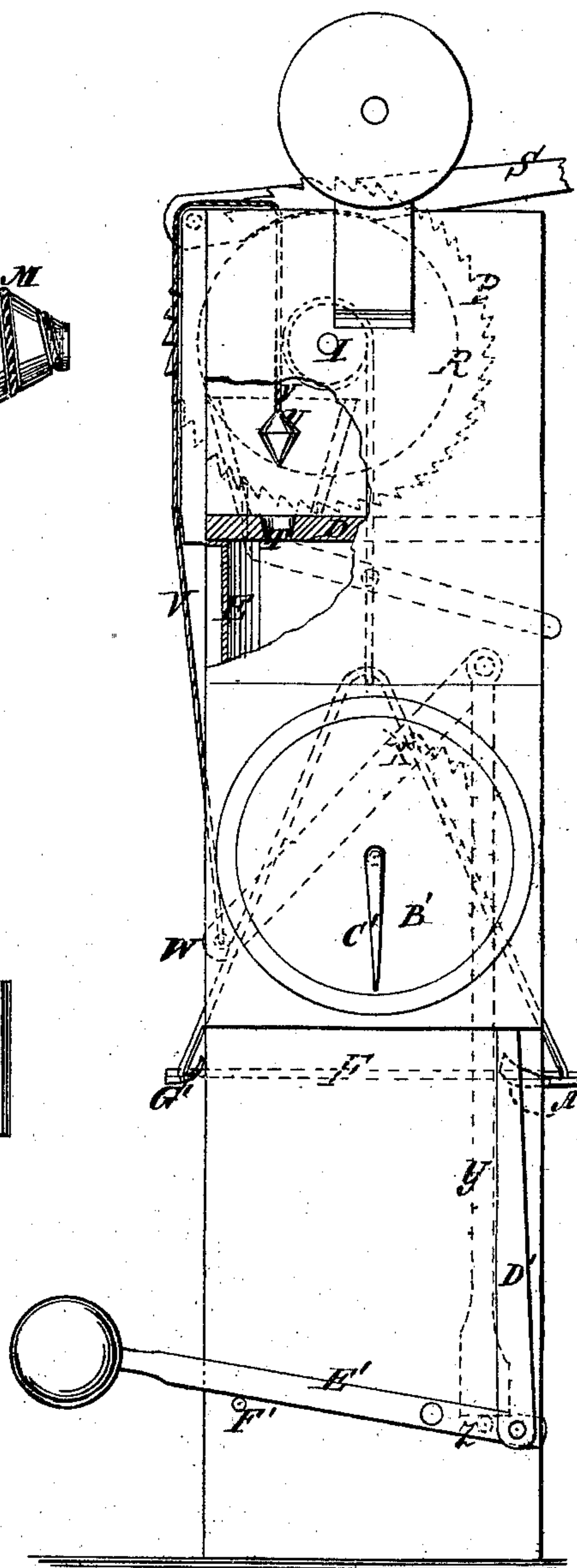
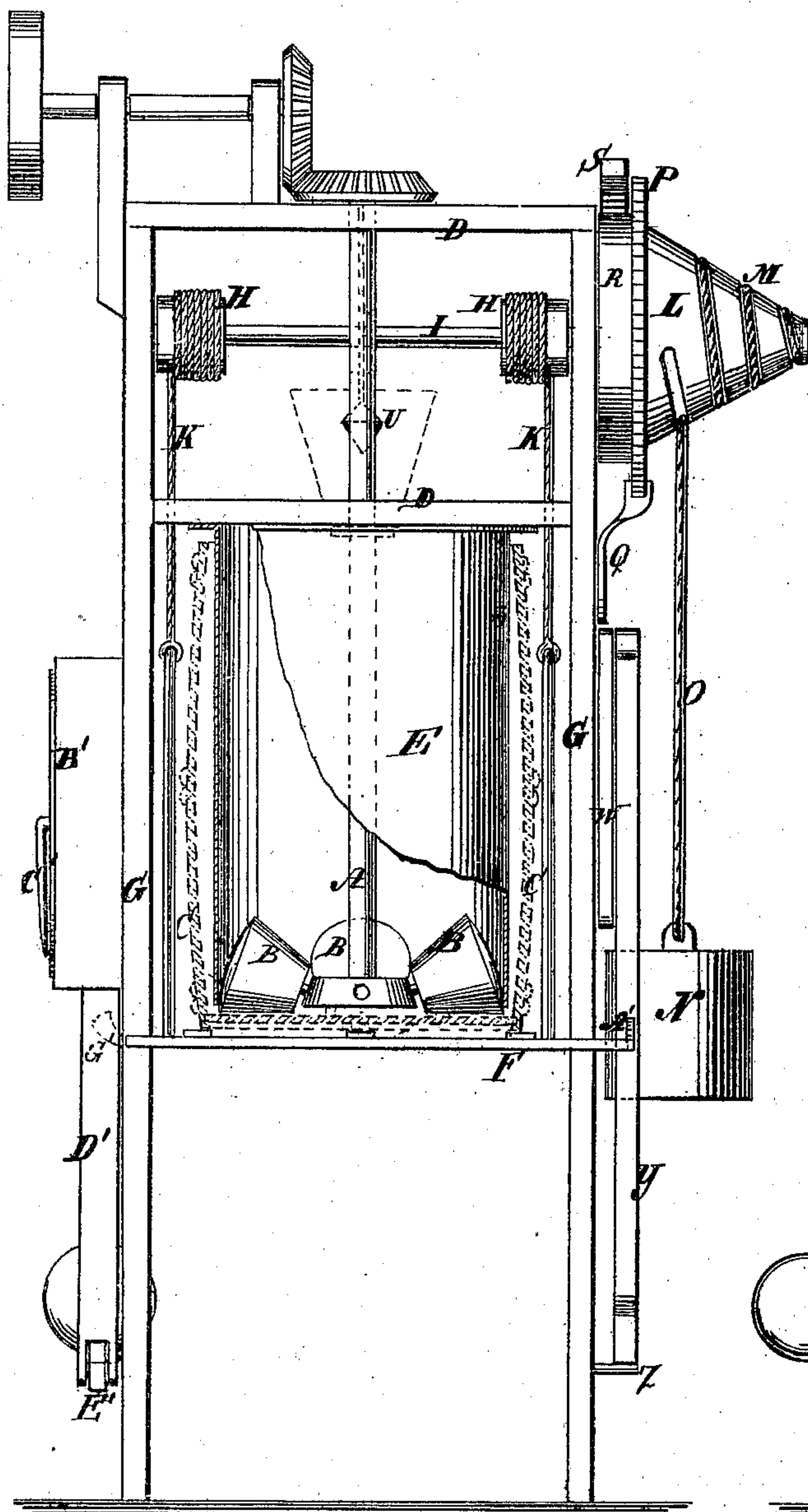
Improvement in Flour-Packers.

No. 130,461.

Patented Aug. 13, 1872.

Fig. 1.

Fig. 2.



Witnesses:

E. Woff
C. Sedgwick

Inventor:

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PER

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UNITED STATES PATENT OFFICE.

CHARLES E. ZIMMERMAN, OF FREDERICK, MARYLAND.

IMPROVEMENT IN FLOUR-PACKERS.

Specification forming part of Letters Patent No. 130,461, dated August 13, 1872.

Specification describing a new and Improved Flour-Packer, invented by CHARLES E. ZIMMERMAN, of Frederick City, in the county of Frederick and State of Maryland.

My invention is an improvement in flour-packers of the class in which an ascending and descending platform for carrying the barrel is operated by a counterpoise-weight and graduated conical roller, said platform acting in connection with a fixed curb that enters the barrel, and within which the packing devices proper are rotated. The invention consists of a drop-plug for cutting off the flour, and contrivances, to be let free by the descending platform, for dropping the plug at the proper time; and it also consists of a register arranged in connection with the apparatus, and having a weighted lever for actuating the pawl so arranged as to be tripped by the platform when it goes down, so as to register each time, all as hereinafter described.

Figure 1 is a front elevation of my improved machine with a part broken out of the curb surrounding the rollers, also with a section of the barrel in dotted lines; and Fig. 2 is another side elevation taken in a plane perpendicular to that of Fig. 1, also having a part broken out.

Similar letters of reference indicate corresponding parts.

A is the shaft, carrying the conical rollers B, which are extended about the length of a barrel, C, below the supporting-frame D, and surrounded by the curb E, which is received within the barrel C when it is raised on the platform F to bring said rollers to the bottom of the barrel at the beginning of the operation. Said platform is arranged between the posts G of the frame, to be guided by them in ascending and descending, and it is suspended from rollers H on the shaft I by cords K to be actuated. The said shaft has a graduated or differential pulley, L, at one end, outside of the frame, with a spiral groove, M, in which a counterpoise-weight, N, is suspended by a cord, O, to hold the barrel up to the rollers with sufficient force to insure the requisite density in packing. The differential form of the roller is employed to equalize the pressure throughout, which would otherwise be less-

ened as the barrel fills, owing to its increasing weight. A ratchet-wheel, P, and a pawl, Q, are combined with the shaft I for holding the platform down till it is required to go up, and a friction-wheel, R, and brake S are also combined with said shaft to prevent it from going up too rapidly when the pawl is disengaged from the ratchet-wheel. The flour to be packed enters the barrel through a hole, T, opening into the top of the curb from the converging bottom of a hopper of suitable kind above, the sides of which will guide a conically-pointed plug or gate, U, for closing said hole at the proper time, which said plug is suspended from above by a cord, V, which passes over suitable guides up over the top and down alongside of the frame to one end of a lever, W, which is pivoted to the frame at X, and connected by its other end to a pendent rod, Y, which is elevated and set on the rest Z to raise the plug and open the flour-passage when the barrel is ready to fill, and from which rest it is discharged or knocked off by a projection, A', of the platform when it arrives near the lower part of its movement, to let the plug fall and shut off the flour. B' represents the dial, and C' the pointer of a register attached to one side of the frame so as to be operated by a pawl, D', and weighted lever E' each time a barrel is filled, the said lever being knocked off a rest, F', by a projection, G', on the platform, suitably arranged for the purpose.

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

1. The combination, with the flour-passage T from the hopper above and the platform, of the suspended plug or stopper U, lever W, connecting-rod Y, rest Z, and extension A' on the platform, all substantially as specified.

2. The combination, with the packing devices described, of the register-pawl D', weighted lever E', rest F', and the projection G' of the platform, all being arranged substantially as specified.

CHARLES E. ZIMMERMAN.

Witnesses:

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ROBERT SMITH.