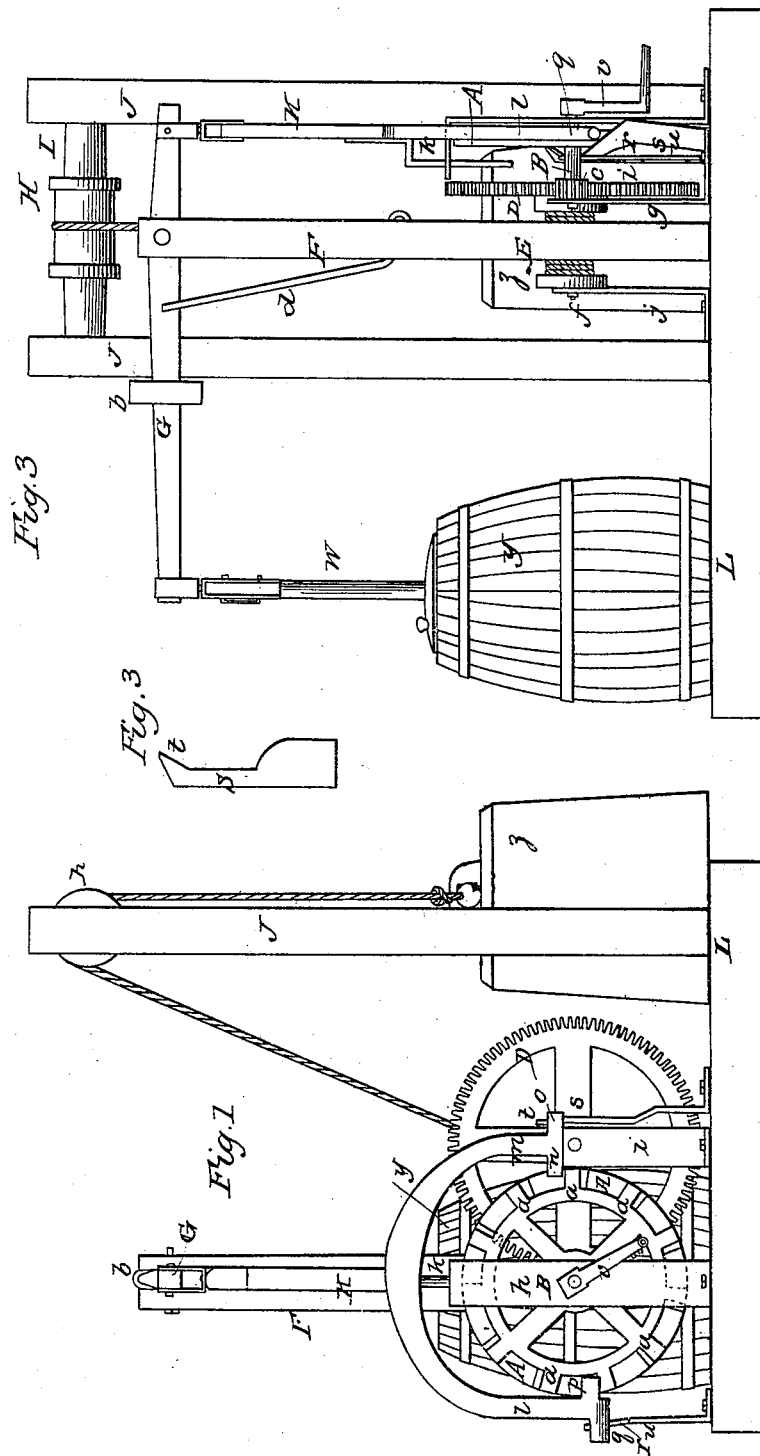


I. D. GARLICK.

Churn Driver.

No. 7,577.

Patented Aug. 20, 1850.



UNITED STATES PATENT OFFICE.

ISAAC D. GARLICK, OF LYONS, NEW YORK.

CHANGING ROTARY MOTION INTO RECIPROCATING MOTION.

Specification of Letters Patent No. 7,577, dated August 20, 1850.

To all whom it may concern:

Be it known that I, ISAAC D. GARLICK, of Lyons, in the county of Wayne and State of New York, have invented a new and Improved Power-Machine for Operating Churns; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1, is an end elevation of the said machine, Fig. 2, a side elevation of the same, and Fig. 3, a view of a portion of the machine detached.

Similar letters indicate like parts in all the figures.

The churn Y, and the machinery for driving the same, are placed upon the platform L. The standard F, rising from the said platform, has a mortise in its upper end that receives the vibrating beam G, which works therein upon a fulcrum pin. The end of the beam G, farthest from its fulcrum support, is swiveled to the upper end of the dasher rod W, rising from the churn; and to the opposite end of G, there is connected by a swivel joint, the shank K, of the forked rocker K, *l, m*. The curved arms *l, m*, which branch from the lower end of the shank K, are of unequal lengths and have wrists or lugs *n, o, p, q*, projecting laterally from their extremities—as shown in Fig. 1. A vibratory movement is imparted to the beam G, and a reciprocating vertical movement to the dasher rod W, connected thereto, by means of the weight Z, acting upon the cog wheel D, the pinion C, the wheel A, and the forked rocker K, *l, m*, through the medium of the cord *x*, in the manner represented in the drawings and hereinafter set forth.

J, J, are standards rising from the platform L, which support between them the shaft I, on which is placed the pulley H. The cord *x* passes from the weight Z, over the pulley H, and thence to the drum E, on the shaft *f*; the cog wheel D, on the shaft *f*, meshes into and drives the pinion C, on the shaft B, and thereby imparts motion to the wheel A, upon the same shaft. The shaft *f*, is supported by the standards *i*, and *j*; the shaft B, is supported by the standards *g* and *h*. The top of the standard *h*, is bent rearward, and has a hole

formed therein that receives the pivot *k*, which descends from the shank K, of the forked rocker,—as shown in Fig. 2.

Immediately under the wrist *q*, of the arm *l*, of the rocker K, *l, m*, there rises from the platform the standard *u*,—which terminates in an inclined plane *r*, of the form represented in Fig. 2; and immediately under the wrist *o*, on the arm *m*, of the said rocker, there rises from the platform the standard *s*, which has an inclined plane *t*, of the form represented in Fig. 3.

The wheel A, has a series of lugs *a, a*, projecting from the front side of its periphery; the front radial edges of the said lugs project at right angles from the face of the wheel, and their rear edges are inclined. The forked rocker K, *l, m*, is suspended in the position in relation to the wheel A, represented in Fig. 2; so that when the shaft B, is turned by the crank V, to elevate the weight Z, the wrists *p, n*, will be struck alternately by the rear inclined edges of the lugs *a, a*, and glide over them, which will impart a rocking movement to the shank K, upon its pivot *k*; and when the weight is permitted to descend, the motion that will thereby be given to the wheel A, will cause a vibratory and a reciprocating movement to be imparted to shank K, and a vibratory motion to the beam G, in the following described manner; to wit: The front edge of one of the lugs *a, a*, will take hold of the wrist *n*, and carry the rocker upward until the wrist *o*, is brought in contact with the inclined plane *t*, on the standard *s*, which will force the arm *m*, outward and detach the wrist *n*, from the lug, and the next moment a lug *a*, on the opposite side of the wheel, will be thrown in contact with the wrist *p*, and draw down the rocker until the wrist *q*, is brought in contact with and is forced outward by the inclined plane *r*, on the standard *u*, until the wrist *p*, is detached from the lug *a*; when another of the lugs *a*, will take hold of and carry upward the wrist *n*. And thus the operation is continued until the weight has descended to the platform. The vibratory motion of the beam G, will impart a reciprocating movement to the churn dasher rod W, as before described.

A guard hook *d*, is jointed to the post *F*, which is thrown into a hole in the side of

the beam G, to retain the beam in a horizontal position until all things are in readiness for operating the churn.

What I claim as my invention and desire to secure by Letters Patent is—

The mechanical arrangement and combination of parts by which I convert the rotary motion of the wheel A, into a reciprocating movement of the churn dasher rod W, to wit, by means of the action of the lugs *a, a*, that project from the face of the

said wheel A, upon the forked rocker K, *l, m*, and the vibrating beam G, when aided by the inclined planes *t*, and *r*, substantially in the manner herein set forth.

The above specification of my improved churn driver signed and witnessed this 6th day of April, 1850.

ISAAC D. GARLICK.

Witnesses:

CHARLES H. SWIFT,
HENRY WILCOX.