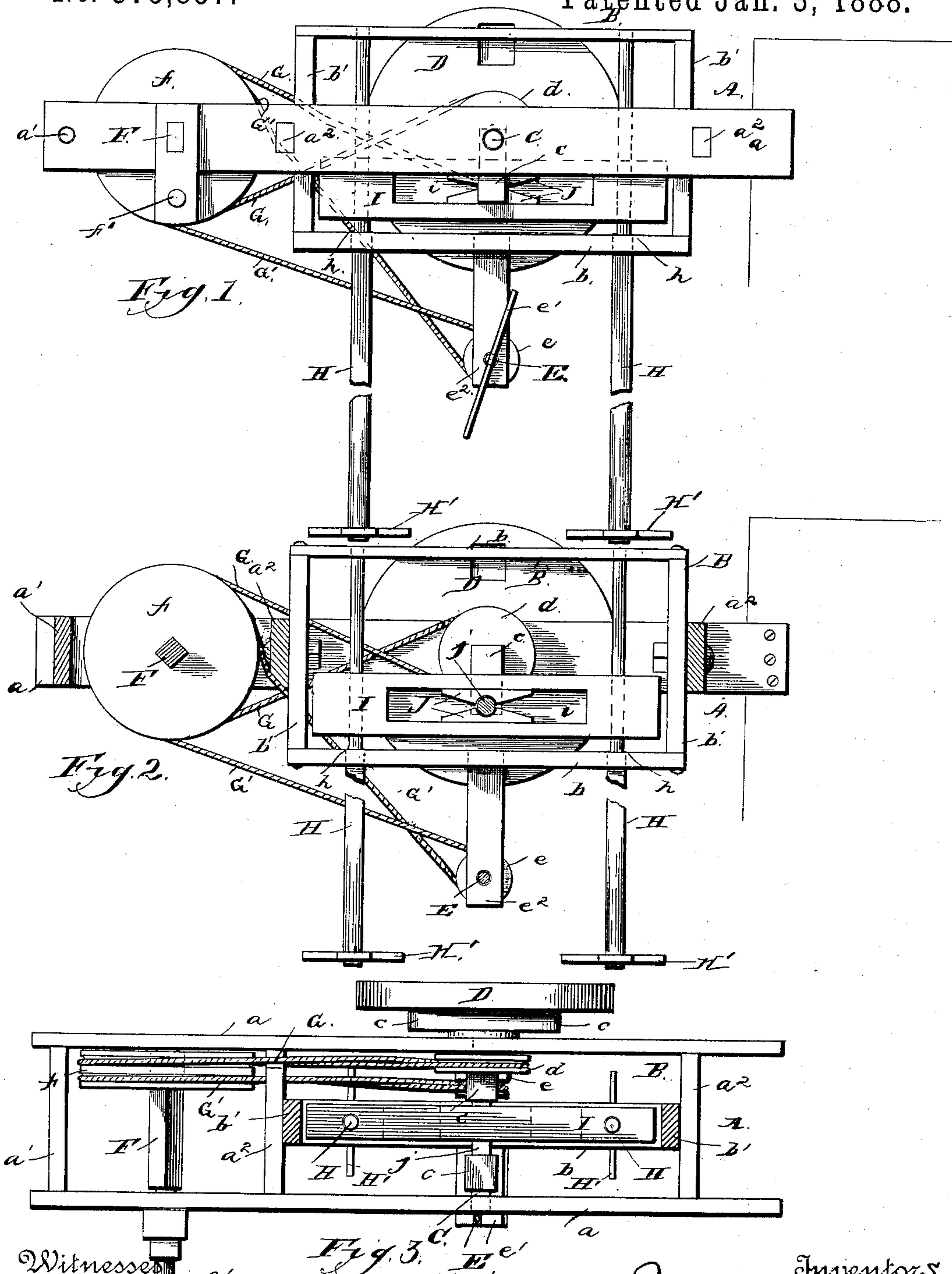


3 Sheets—Sheet 1.

No. 375,857.

Patented Jan. 3, 1888.



Witnesses  
Geo. Thompson  
John H. Diggers

James H. Wilcox  
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By their Attorneys  
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(No Model.)

3 Sheets—Sheet 2.

J. H. WILMOUTH & B. McNAIRY.  
CHURN.

No. 375,857.

Patented Jan. 3, 1888.

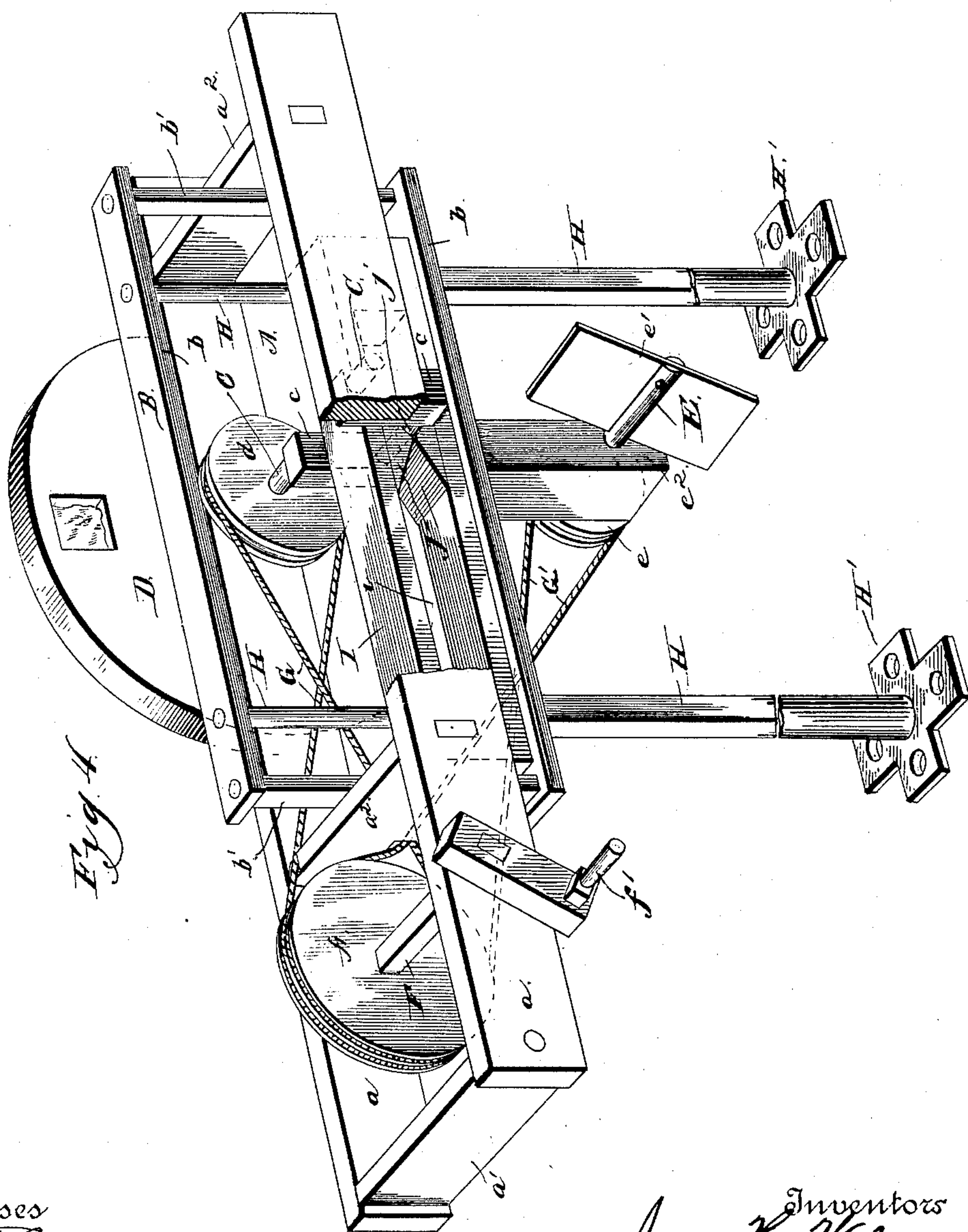


Fig. 4

Witnesses  
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(No Model.)

3 Sheets—Sheet 3.

J. H. WILMOUTH & B. McNAIRY.  
CHURN.

No. 375,857.

Patented Jan. 3, 1888.

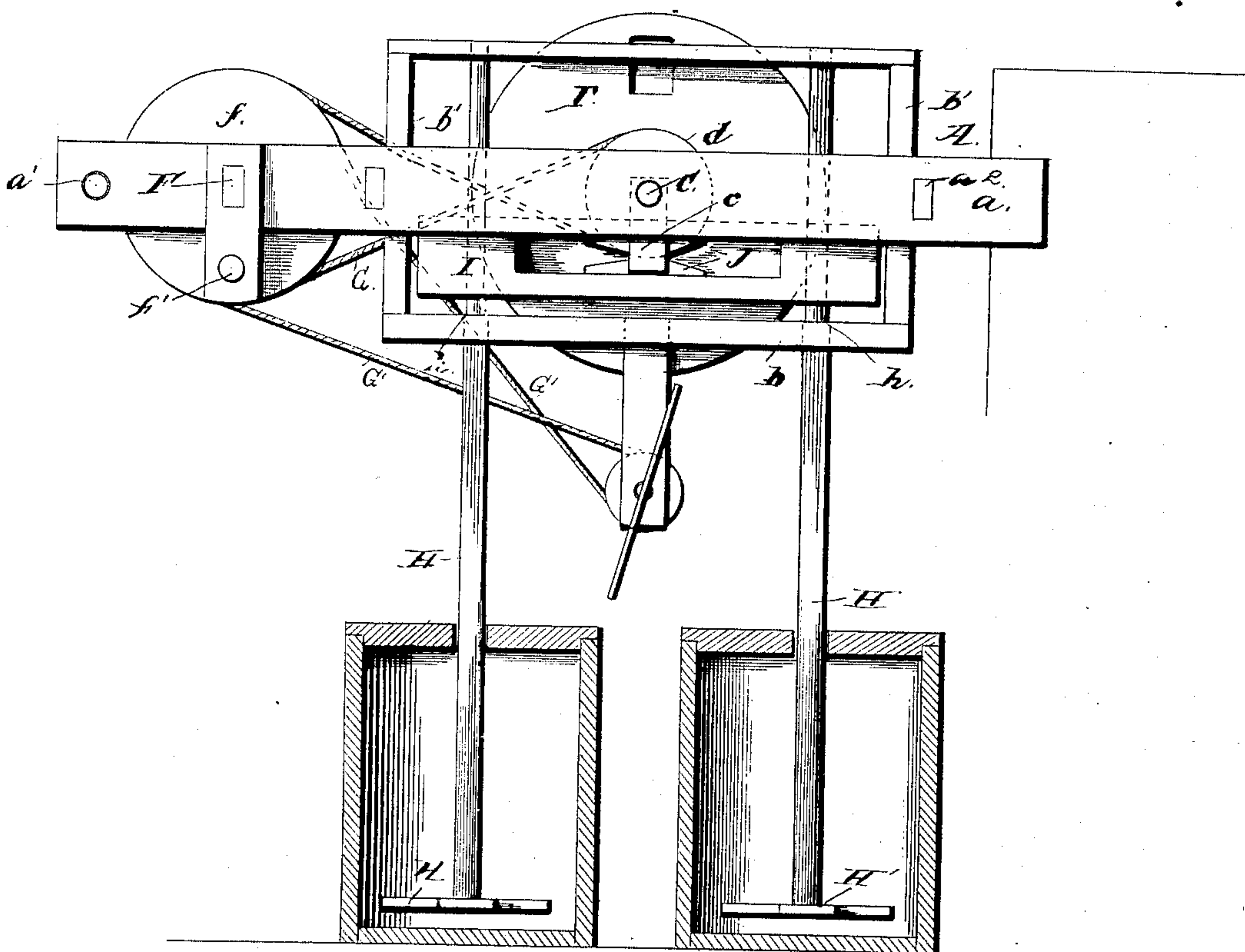


Fig. 5.

Witnesses.  
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Brandon W. Nairy  
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# UNITED STATES PATENT OFFICE.

JAMES HIRBERT WILMOUTH AND BRANDON McNAIRY, OF ABERDEEN,  
MISSISSIPPI.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 375,857, dated January 3, 1888.

Application filed February 10, 1887. Serial No. 227,184. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES HIRBERT WILMOUTH and BRANDON McNAIRY, citizens of the United States, residing at Aberdeen, in the county of Monroe and State of Mississippi, have invented a new and useful Improvement in Churns, of which the following is a specification.

The invention relates to improvements in churns, especially that class in which the dashers are attached to reciprocating dasher-rods; and its object is to provide a device whereby several churns may be actuated simultaneously at the same rate of speed, and by means of a fan, forming part of the device, dust and other impurities may be prevented from entering the churn and flies and other insects be kept away from the mouth thereof.

The invention consists in the construction and arrangement of the mechanism by means of which two or more similar churn-dasher rods are simultaneously reciprocated at the same rate of speed, and, furthermore, in the construction and arrangement of the fan-rotating mechanism, whereby the same is actuated simultaneously with the dasher-rod mechanism and only while the latter is in action, as hereinafter described.

In the drawings, Figure 1 represents a side view of the device secured to a proper support, actuating the dasher-rods of two similar churns and rotating a fan between the two equally distant from each. Fig. 2 represents a vertical longitudinal section of the same, to more clearly show the actuating mechanism. Fig. 3 represents a plan view of the device, with the upper part of the frame that guides the dasher-rods cut away. Fig. 4 is a perspective view of the churn. Fig. 5 is a side elevation showing the operating mechanism in position over two churn-bodies.

Referring to the drawings by letter, A designates the main or supporting frame of the device, composed of two similar parallel side rails,  $a a$ , the transverse rail  $a'$ , connecting the front ends thereof, and the two similar transverse rails  $a^2 a^2$ , situated to the rear of the rail  $a'$  and a convenient distance apart from each other, as shown in the drawings.

B is the guide frame for the dasher rods,

rectangular in shape and composed of the upper and lower longitudinal rails,  $b b$ , and the vertical end rails,  $b' b'$ . The said frame is of proper size to fit snugly between the rails  $a^2 a^2$ , to which the rails  $b' b'$  are centrally secured by bolts or other well-known means.

C is the main shaft of the device, journaled in bearings made in the rails  $a a$  of the main frame centrally between the transverse rails  $a^2 a^2$ , and having formed centrally upon it a crank,  $c$ , to serve a purpose hereinafter explained. The said shaft carries upon it a pulley,  $d$ , internally adjacent to one of the side rails,  $a$ , and on its end, externally adjacent to the same rail,  $a$ , the fly-wheel D, which is weighted at or near a point of its periphery diametrically opposite the bend of the crank to aid the latter in passing dead points.

$e$  is a pulley vertically below the pulley  $d$  and secured on one end of a shaft, E, which carries on the opposite end the fan  $e'$  of rectangular blades. The part of the shaft between the pulley and fan is journaled in a bearing made in the lower part of a bar,  $e^2$ , depending from the central part of the lower rail of the dasher-rod guide-frame.

F is a shaft journaled in bearings in the rails  $a a$  between the end rail,  $a'$ , and the frontward rail,  $a^2$ . The said shaft carries upon it, between the rails  $a a$ , the doubly-grooved pulley  $f$ , which is situated in the same vertical plane as the pulleys  $d$  and  $e$ , and on its end extended outside of the bearing, on the same side as the fan  $e'$ , has the crank-handle  $f'$ .

G is a band, belt, or cord running around the pulley  $f$  in the outside groove thereof and around the pulley  $d$ , and G' is a band or belt running in the inside groove of the pulley  $f$  and around the pulley  $e$ . The said belts are preferably crossed to increase the friction on the pulleys.

It is evident that when the crank-handle  $f'$  is turned the pulley  $f$  will, by means of the belts, rotate the pulleys  $d$  and  $e$ , consequently rotating the crank  $c$  and fan  $e'$ .

H H are two similar dasher-rods, having dashers H' H', of any desired construction, secured to their lower ends. The upper portions of the dasher-rods are cylindrical and pass through corresponding guide-openings in



the upper rail of the guide-frame at equal distances from the ends thereof, and their lower portions are rectangular in section, passing through corresponding guide-openings in the lower rail of the guide-frame vertically below the upper guide-openings. The two portions of the dasher-rods form between them the shoulders *h h*, upon which rests the lower edge of the longitudinal bar *I*, the cylindrical portions of the rods passing up through suitable openings in the bar, and are secured thereto by pins or other suitable means.

*i* is a long longitudinal rectangular slot on the bar *I* between the dasher-rods, and *J J* are similar blocks or shoes, having flat bearing-surfaces, which respectively slide on the upper and lower surfaces of the said slot, the meeting edges of the said blocks being provided with similar semicircular opposite notches, which together form a bearing for the cylindrical transverse bar *j* of the crank *c*. It is evident that as the crank rotates the blocks *J J* will slide to and fro in the slot *i* and the bar *I* will be moved up and down, reciprocating the dasher-rods *H H*.

In practice the device is secured to a suitable support—such as a post—at a proper height for the churns, and the dasher-rods are attached to the bar *I*. The crank-handle *f'* being then turned, the dashers will be reciprocated within the churns and the fan will be rotated in the manner described between the churns on a line with the tops of the same, driving away the dust and flies and other insects.

It is evident that more than two dasher-rods could be attached to the bar *I*, and that more than one fan could be used by redupli-

cating the pulley *e* and passing the band *G'* around it also.

Having thus described our invention, we claim—

1. The combination, with the main frame of the device and the dasher-rod guide-frame, of the reciprocating dasher-rods, the longitudinal bar connecting said rods, the fan-shaft journaled on a bar depending from the guide-frame, the fan secured to said shaft, and mechanism, substantially as described, for simultaneously rotating the fan-shaft and moving the longitudinal bar up and down to reciprocate the dasher-rods, substantially as specified.

2. The herein-described device for simultaneously reciprocating two churn-dasher rods and rotating a fan between the same, which device consists of the main frame *A*, the dasher-rod guide-frame *B*, the crank-shaft *C*, the pulley *d* and fly-wheel *D* on said shaft, the fan-shaft *E*, journaled in the bar *e'*, the pulley *e* and fan *e'* on the shaft *E*, the shaft *F*, the doubly-grooved pulley *f* and crank-handle *f'* on the shaft *F*, the belts *G G'*, the bar *I*, provided with the slot *i*, and the blocks *J J*, forming a bearing at their meeting edges for the transverse cylindrical part *j* of the crank, all constructed and arranged substantially as and for the purpose specified.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JAMES HIRBERT WILMOUTH.  
BRANDON MCNAIRY.

Witnesses:

CHORLEY POWAL,  
FIELDS MOORE.