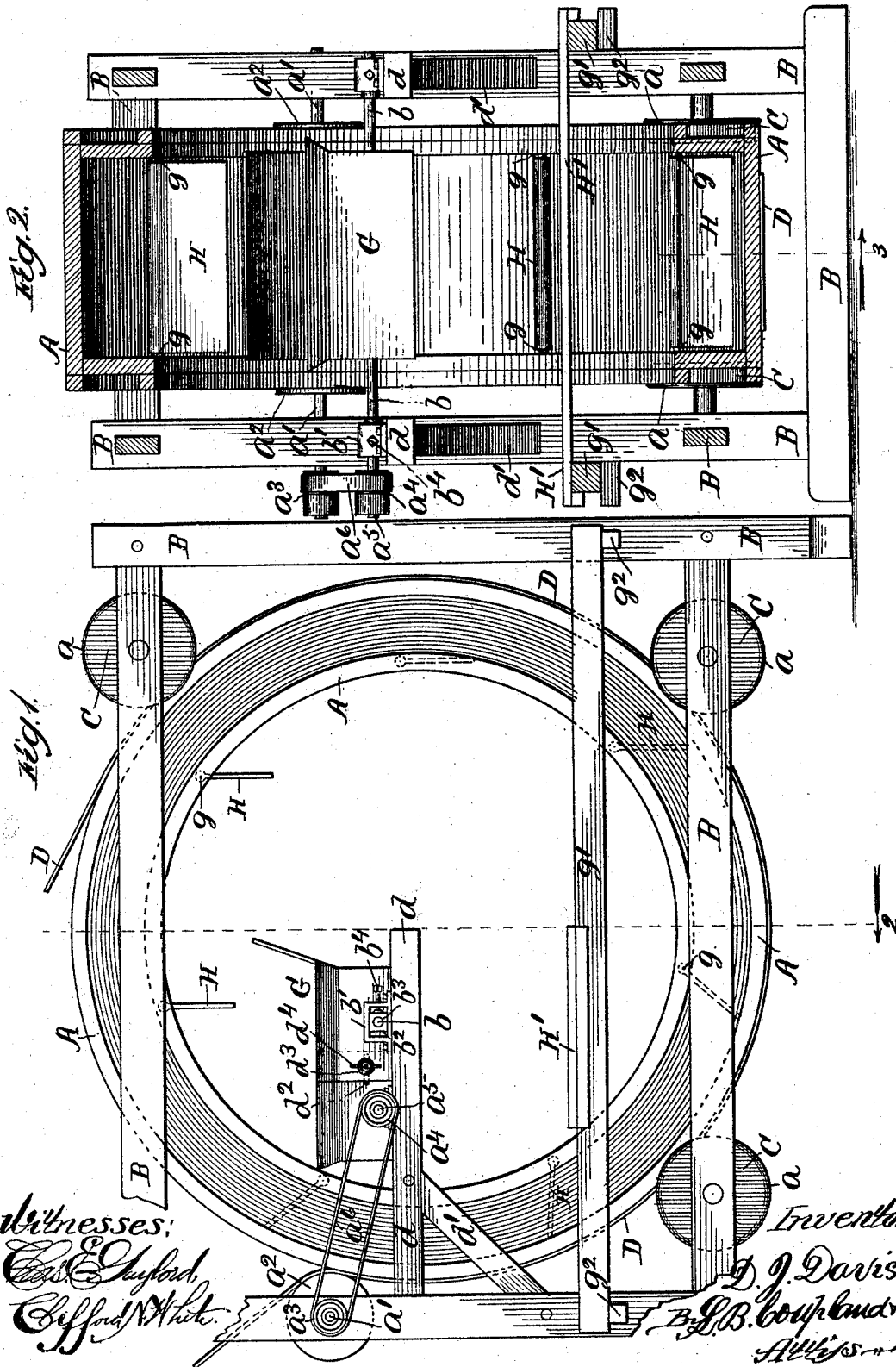


D. J. DAVIS.  
BUTTER WORKER.

No. 518,588.

Patented Apr. 24, 1894.



Witnesses:  
E. J. Clifford.  
Clifford White.

Inventor:  
D. J. Davis.  
B. J. B. Coupland & Co.  
Attorneys.

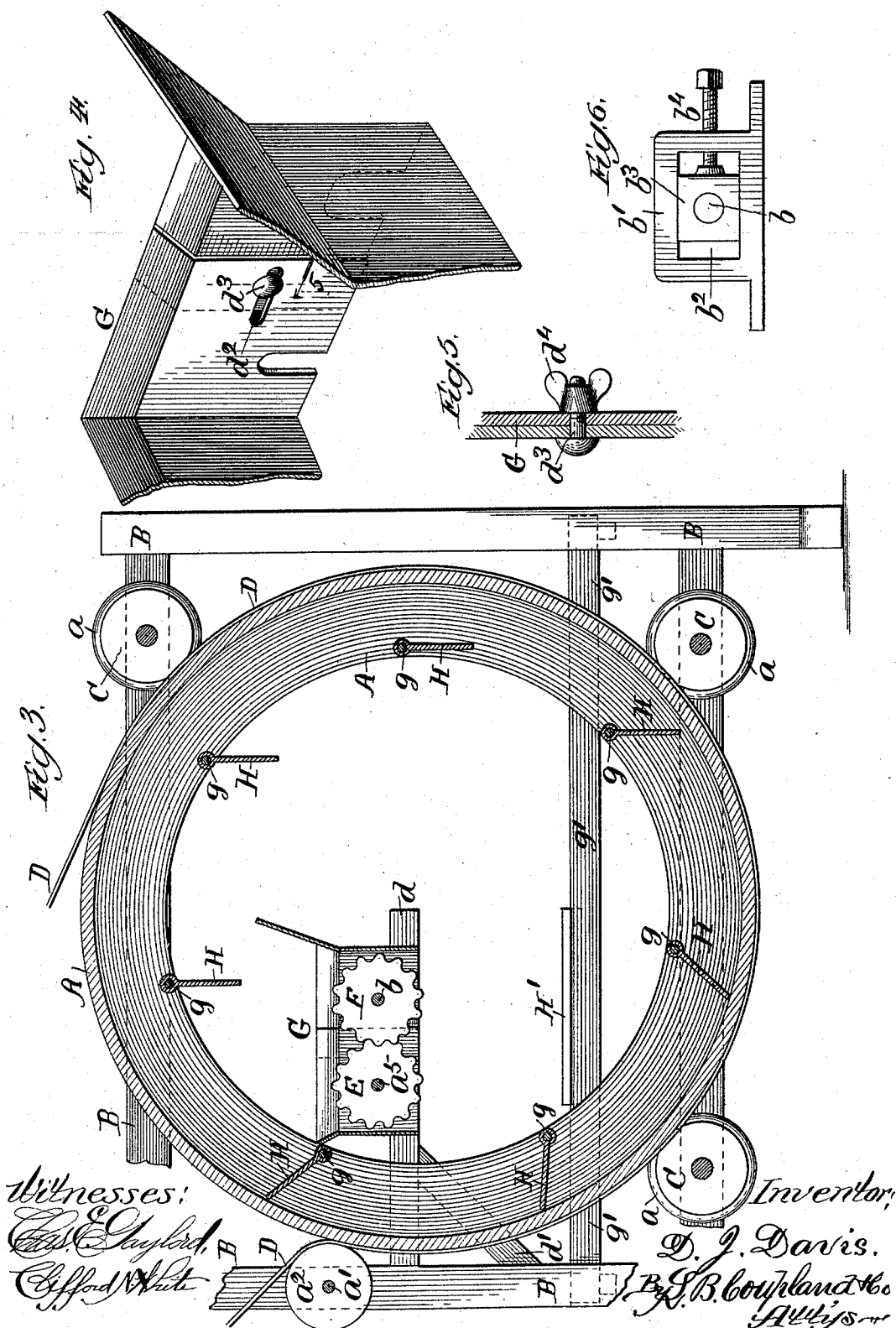
(No Model.)

2 Sheets—Sheet 2.

D. J. DAVIS.  
BUTTER WORKER.

No. 518,588.

Patented Apr. 24, 1894.



Witnesses:

*Edw. C. Chyford,*  
*Clifford White*

Inventor,

*D. J. Davis.*  
*By J. B. Coupland & Co.*  
*Attys.*

# UNITED STATES PATENT OFFICE.

DANIEL J. DAVIS, OF CHICAGO, ILLINOIS.

## BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 518,588, dated April 24, 1894.

Application filed December 22, 1892. Serial No. 455,981. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL J. DAVIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Butter-Workers, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in power butter-workers; the same consisting of certain novel features in the construction, combination and arrangement of the several parts, whereby a simple, convenient and efficient machine of this character is provided.

Figure 1 is an elevation; a part of the frame being broken away; Fig. 2, a vertical transverse section on line 2, Fig. 1, looking in the direction indicated by the arrow; Fig. 3, a vertical section on line 3, Fig. 2; Fig. 4, a broken-away perspective of the receiving-hopper; Fig. 5, a broken-away section on line 5, Fig. 4; and Fig. 6, a detached detail of construction.

Referring to the drawings, A is a revoluble cylindrical receptacle open at both ends and provided at each of said ends with an inwardly projecting annular flange A'.

B represents the different parts of the supporting frame.

The cylindrical receptacle is loosely supported in position by frictional contact with a number of rollers C journaled in the frame and disposed at intervals in the pathway of, and bearing against, the periphery of said cylinder. The supporting-rollers C are provided with a flange a at each end which overlaps the end edges of the cylinder for the purpose of keeping the same in line, and also to prevent a tendency to wobble when in motion.

Motion is transmitted direct to the cylinder-receptacle by means of a belt D running around the periphery, as shown. A shaft a' is journaled in the frame and has the driving-pulley a<sup>2</sup> mounted thereon, from which motion is transmitted to the butter-working rolls by the following arrangement. A driving pulley a<sup>3</sup> is mounted on shaft a' and is connected with pulley a<sup>4</sup>, mounted on roll-shaft a<sup>5</sup>, carrying the fluted roll E, by belt a<sup>6</sup>. Mo-

tion is communicated to the companion fluted roll F by the frictional contact of roll E. The roll F is mounted on shaft b which is provided at each end with an adjustable journal-box (Fig. 6) consisting of the bearing-block b' provided with the elongated opening b<sup>2</sup>, the slide journal-box b<sup>3</sup>, and the adjusting-screw b<sup>4</sup>. By this means the roll F may be set so as to have a heavy or light contact with the driving-roll E, as the work may require. The fluted rolls are supported on bars d d' secured to the main frame, and braced by diagonal braces d' d'. 55

The respective sides of the hopper G, inclosing the fluted rolls, are in two parts, and overlap (Figs. 4 and 5) the inside part being provided with a slot d<sup>2</sup> for the insertion of the bolt d<sup>3</sup> passing through an aperture in the outside part, and threaded to receive the wing-nut d<sup>4</sup>. By this means the hopper may be lengthened or shortened in accordance with the adjustment of the rolls. 60

A number of butter carrier-boards H are arranged at intervals around the inside of the receptacle or drum A. The inner ends of these carrier-boards are mounted on the pivot or hinge-rods g which have their respective bearing-ends inserted in the inner edges of the flanges A' of the drum. The opposite ends of the carrier-boards are not fastened, so they swing loosely on their pivot-rods and are of such a length that the loose ends come in contact with the inner circumferential surface (Fig. 3) of the cylindrical receptacle or drum at an oblique angle on the up-going side and carry along the butter product until directly over the hopper, when the carriers swing downwardly by force of gravity and discharge their load into the hopper and onto the rollers. Thus the carriers are always sure to free themselves at the proper time, which is not the case when the carriers are held in a rigid or fixed position, as the mass of butter will often adhere to, and be carried beyond, the hopper. 65 70 75 80 85 90 95

The bars g' g' are located at opposite sides of the machine and rest loosely on the projections g<sup>2</sup>. These bars provide supports for the removable tray or table H', which is placed in position to receive the butter when the process of working is finished. During the time of working, the tray and bars are re-

moved out of the way; giving free access to the receptacle at either end.

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

1. In a butter-worker the combination with, the fluted roll F, of the bearing-block, the journal-box, adjustably inserted therein, the adjusting-screw, the hopper, having overlapping edges on its respective sides, and the bolt, adjustably connecting the overlapping edges, whereby the relative position of the rolls may be varied with reference to each other and the hopper adjusted to conform therewith, substantially as set forth.

2. In a butter-worker, the combination with a revoluble cylindrical drum open at both ends and provided with inwardly projecting

flanges, of a number of carrier-boards, arranged at intervals around the inner side of said drum, the inner ends of said boards being mounted on pivot-rods having their respective ends inserted in the edge of said flanges, whereby the opposite or loose ends of said boards are adapted to be brought in contact with the inner circumferential surface of said drum at an oblique angle on the up-going side and swing downwardly and discharge their load when over the butter-hopper, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL J. DAVIS.

Witnesses:

L. M. FREEMAN,  
J. B. DONALSON.