J. G. Black,

Cheese Turner.

No. 112,112. Patented Feb. 28. 1871.

Fig. 1.

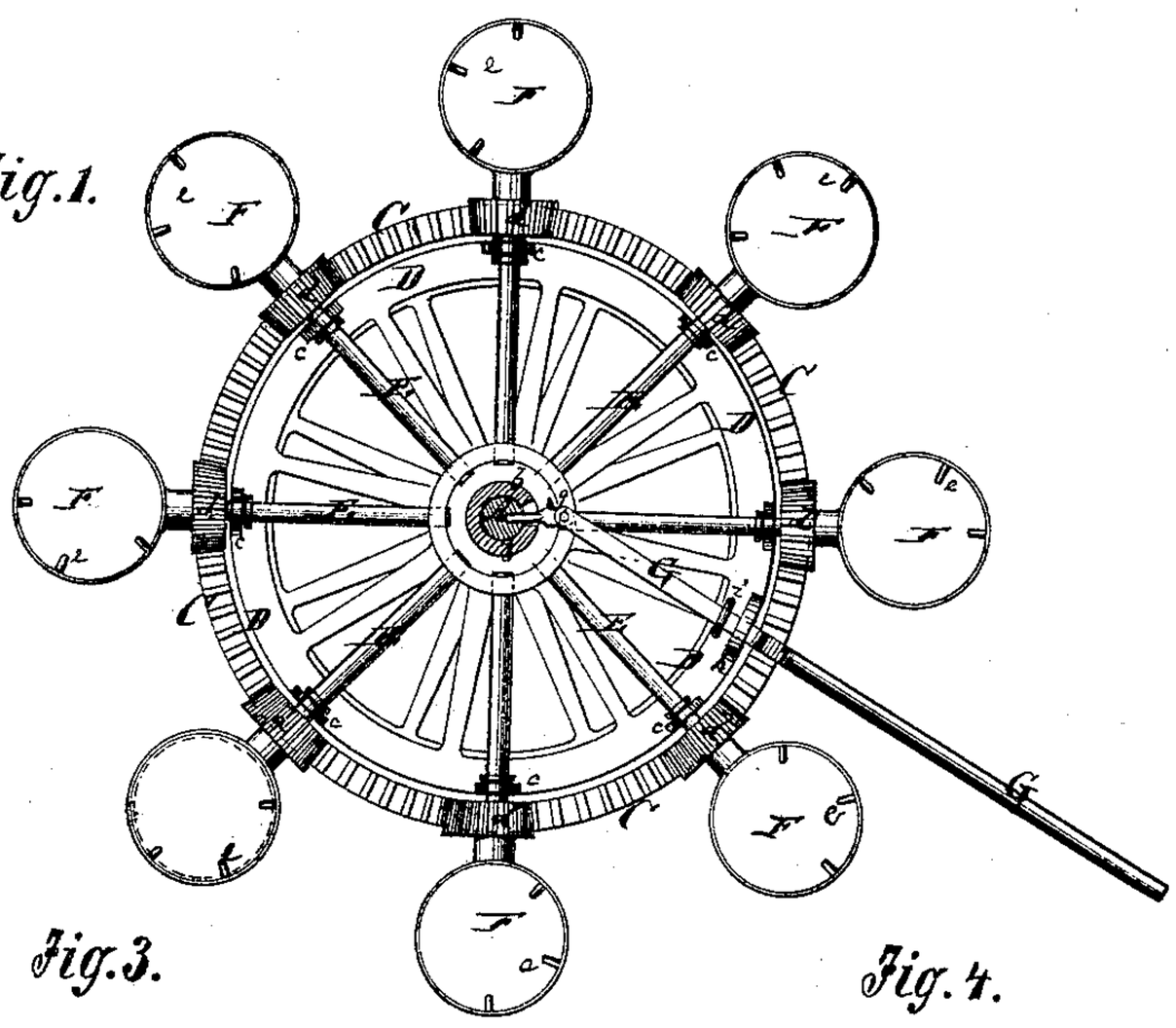


Fig. 3.

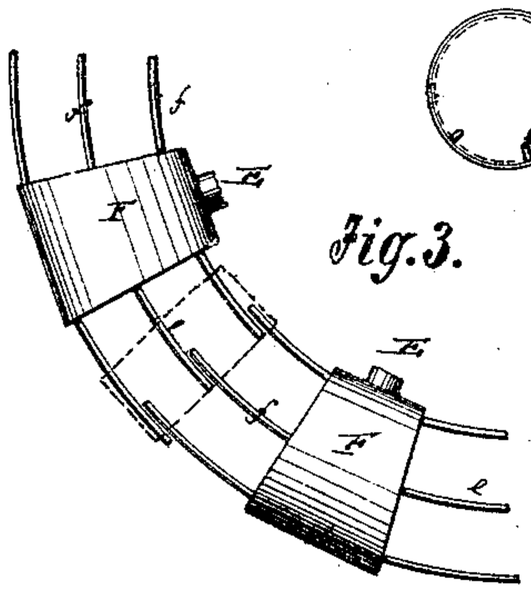


Fig. 4.

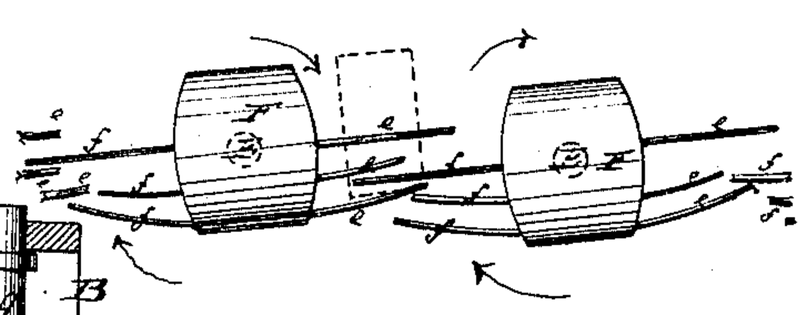
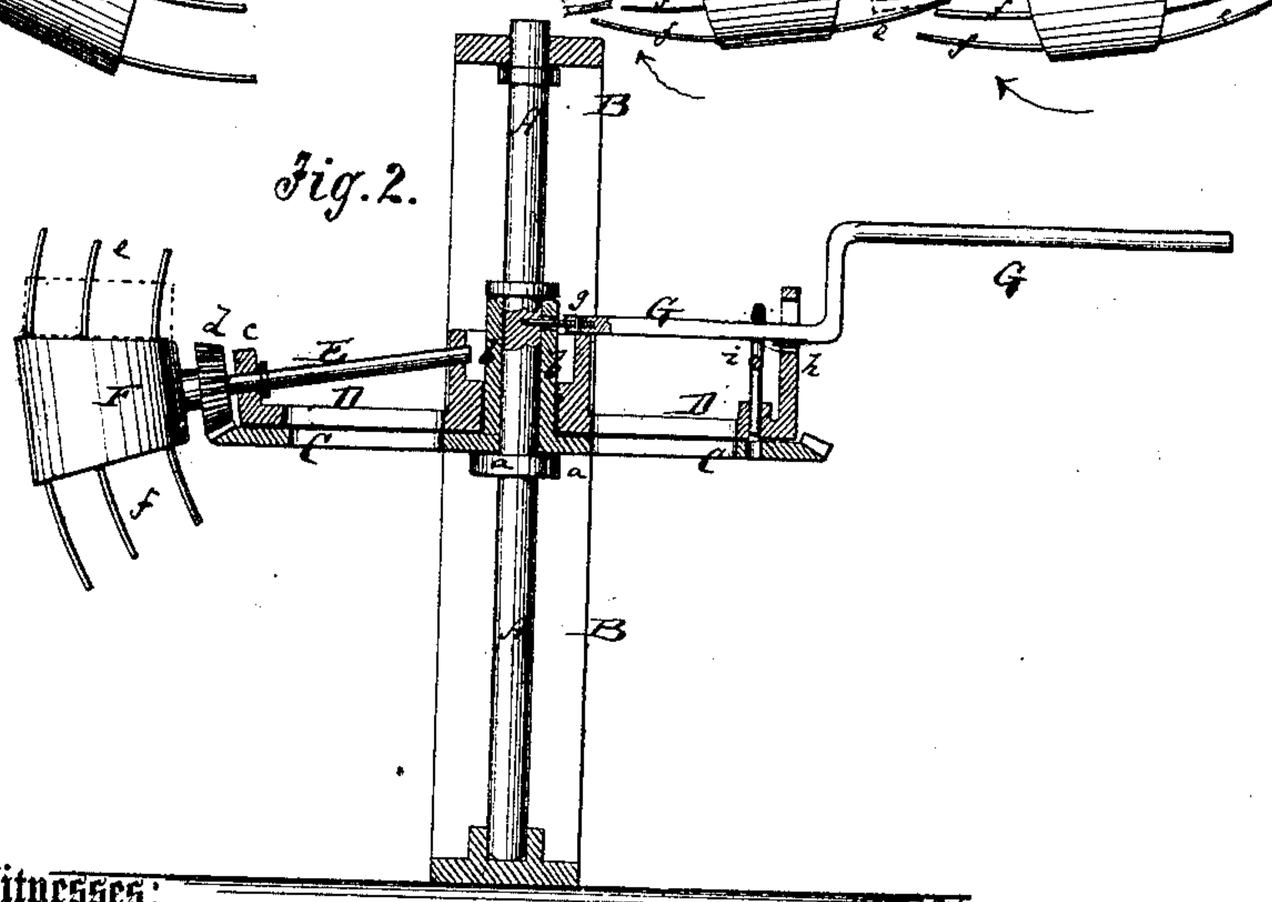


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN Q. BLACK, OF RICHLAND CENTRE, WISCONSIN.

IMPROVEMENT IN CHEESE-TURNING APPARATUS.

Specification forming part of Letters Patent No. **112,112,** dated February 28, 1871.

To all whom it may concern:

Be it known that I, JOHN Q. BLACK, of Richland Centre, in the county of Richland and State of Wisconsin, have invented a new and useful Improvement in Cheese-Set; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a plan or top view, partly in section, of my improved cheese-set. Fig. 2 is a vertical central section of the same. Fig. 3 is a detail top view of two cheese-blocks, turned aside. Fig. 4 is a detail side view of the same, showing the cheese, in dotted lines, as being passed from one block to the other.

Similar letters of reference indicate corresponding parts.

This invention relates to a new cheese-set, which is so constructed that a suitable number of cakes can be held and simultaneously turned on the same.

The invention consists, chiefly, in the application of a number of blocks, for holding the cheese, to one single turn-table and shaft, so that thereby all blocks may be turned at once.

The invention also consists in providing the said blocks with projecting fingers, whereby they are made to transfer the cakes of cheese from one to another whenever they are oscillated by means of the turn-table.

The invention also consists in the use of a removable handling-lever and lock-pin, whereby the apparatus can be moved and secured, as desired.

A in the drawing represents a vertical shaft, secured in a suitable frame, B, so that it cannot be turned therein. The shaft A carries a large toothed wheel, C, which rests upon a shoulder, *a*, of the shaft, and can turn loose on the same, a sleeve, *b*, on said wheel fitting around part of the shaft, as shown. D is a turn-table, resting on the wheel C, but clear of the toothed portion of the same. The turn-table is also loose on the shaft A. In ears *c c*, which project from the face of the turn-table, is hung a series of shafts, E E, which are radial to the main shaft A and carry pinions *d d*, or toothed segments, that mesh into the teeth of the wheel C. The outer end of each shaft E carries a cylindrical block, F, large enough to support a cake of cheese on one of its ends. The blocks F F are, preferably, made of wood and lined with metal, but may be of other suitable construction. From the respective ends of each block F project two or more wire fingers, *e e* and *f f*, which are entirely disposed on one side of that diameter of the same which is drawn as a continuation of the axis E. This distribution of the fingers *e* and *f* is, furthermore, such that the fingers *e* at one end are on the same side of the said diameter on which the fingers *f* are applied to the other end.

The shafts E are set so far apart, and the fingers *e f* of such length, that when the blocks F are turned, as in Fig. 3, to bring the finger into horizontal positions, those of two adjoining blocks will cross each other, as shown. When the blocks are all so placed that the fingers *e* project upwardly and the fingers *f* downwardly, the cakes of cheese are placed upon the same. When the cakes of cheese are to be reversed the turn-table is moved on the shaft A, while the wheel C remains stationary. By the motion of the turn-table all the shafts E, rolling on C, will be turned toward that side from which the fingers *e* project, and will thereby gradually transfer the weight of the cheese to said fingers *e* until the same are in a horizontal position, as in Fig. 4. In this position the fingers *f* of the adjoining blocks have arrived in line with *e*, and as, during a continuance of the said movement, the fingers *f* move upwardly and *e* downwardly, the cheese will be transferred to *f*, and elevated by the same to the adjoining block and gradually placed upon the end of the same. In this new position the cheese has been reversed—that is to say, the face on which it rested before is brought to the top and exposed to the air. The direction of movement just described is indicated by arrows in Fig. 4.

To transfer the cheese again to the first position, and thereby turn it over, the motion is reversed to lower the cakes on the fingers *f*, and then re-elevate them on the fingers *e* of the adjoining blocks. Thus a simultaneous reversion of all the cakes of cheese by a single

movement of the turn-table is effected. Considerable labor is thereby saved, in comparison with the method now in use, and still more room for keeping the cheese, as by my plan about one thousand cakes can be set in a space no larger than that hitherto required for three hundred.

For moving the turn-table I prefer to use a lever, G, having a joint, *g*, near its inner end. This lever is fitted through a slotted ear, *h*, of the turn-table, and its jointed inner part through an aperture of the sleeve *b* into a socket provided in the shaft A. When the lever is turned it swings on its joint and carries the turn-table along, holding, at the same time, by means of its inner part in the sleeve, the gear-wheel C stationary.

When the cheese has been set, a pin, *i*, is fitted through turn-table and gear-wheel to lock the parts in the desired position. The wheel can now, together with the turn-table, be revolved on the shaft to let each cheese come within view and reach of the operator.

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

1. The turn-table D, carrying the radial shafts E E and cheese-blocks F, said shafts being simultaneously rotated by means of the toothed wheel C and pinions *d*, in the manner described, so as to effect the turning of the cheese, substantially as specified.

2. The cheese-blocks F F, provided with the fingers *e e* and *f f* at opposite ends, for holding and reversing the cheese and transferring it from one to another, as specified.

3. The jointed lever G, combined with the turn-table D, gear-wheel C, and shaft A, to operate substantially as herein shown and described.

4. The locking-pin *i*, arranged in combination with the disks C D and shaft A, substantially as and for the purpose herein shown and described.

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Witnesses:

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