

(No Model.)

3 Sheets—Sheet 1.

C. A. BURT.  
FREEZING APPARATUS.

No. 477,626.

Patented June 21, 1892.

Fig 1.

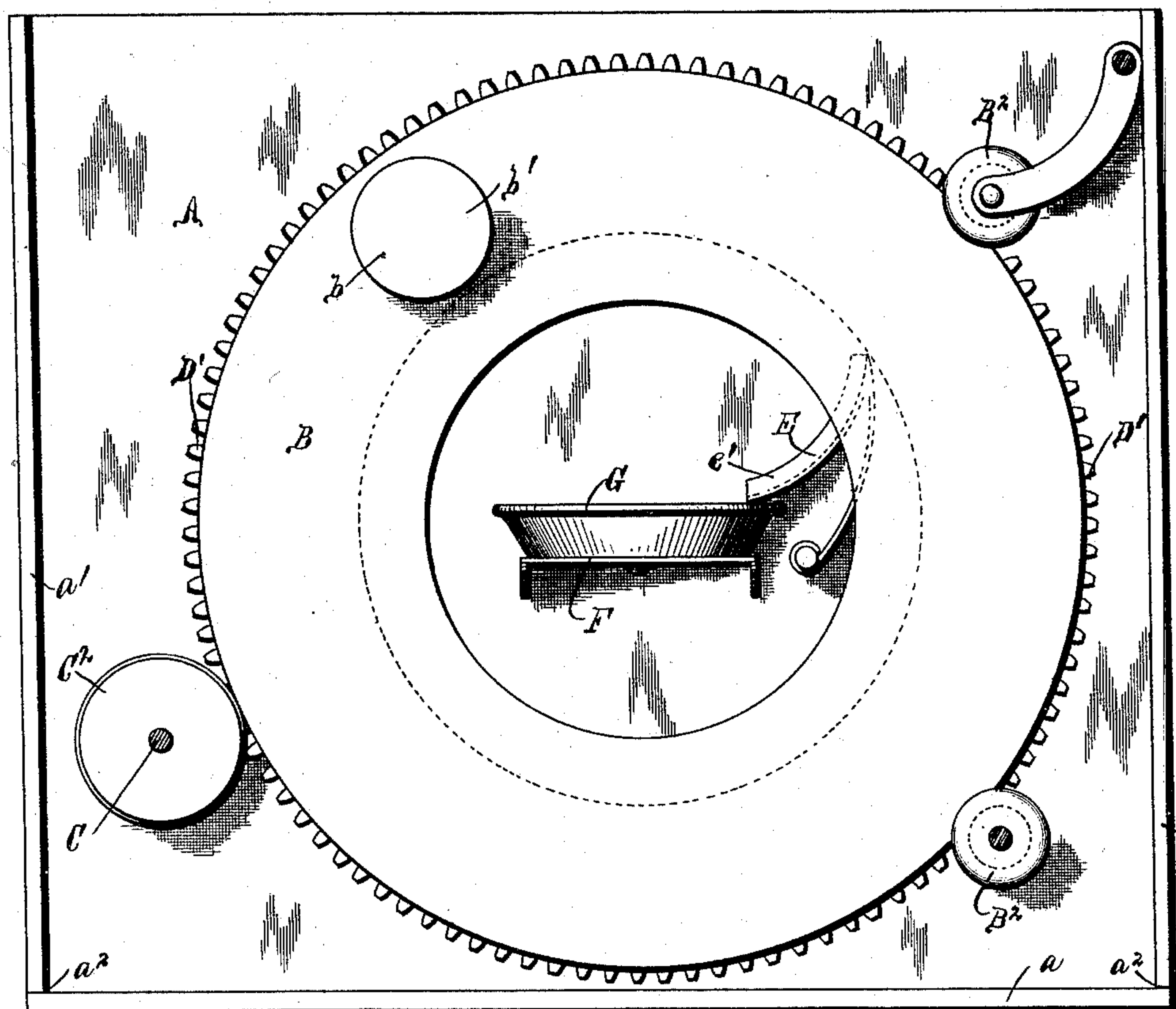
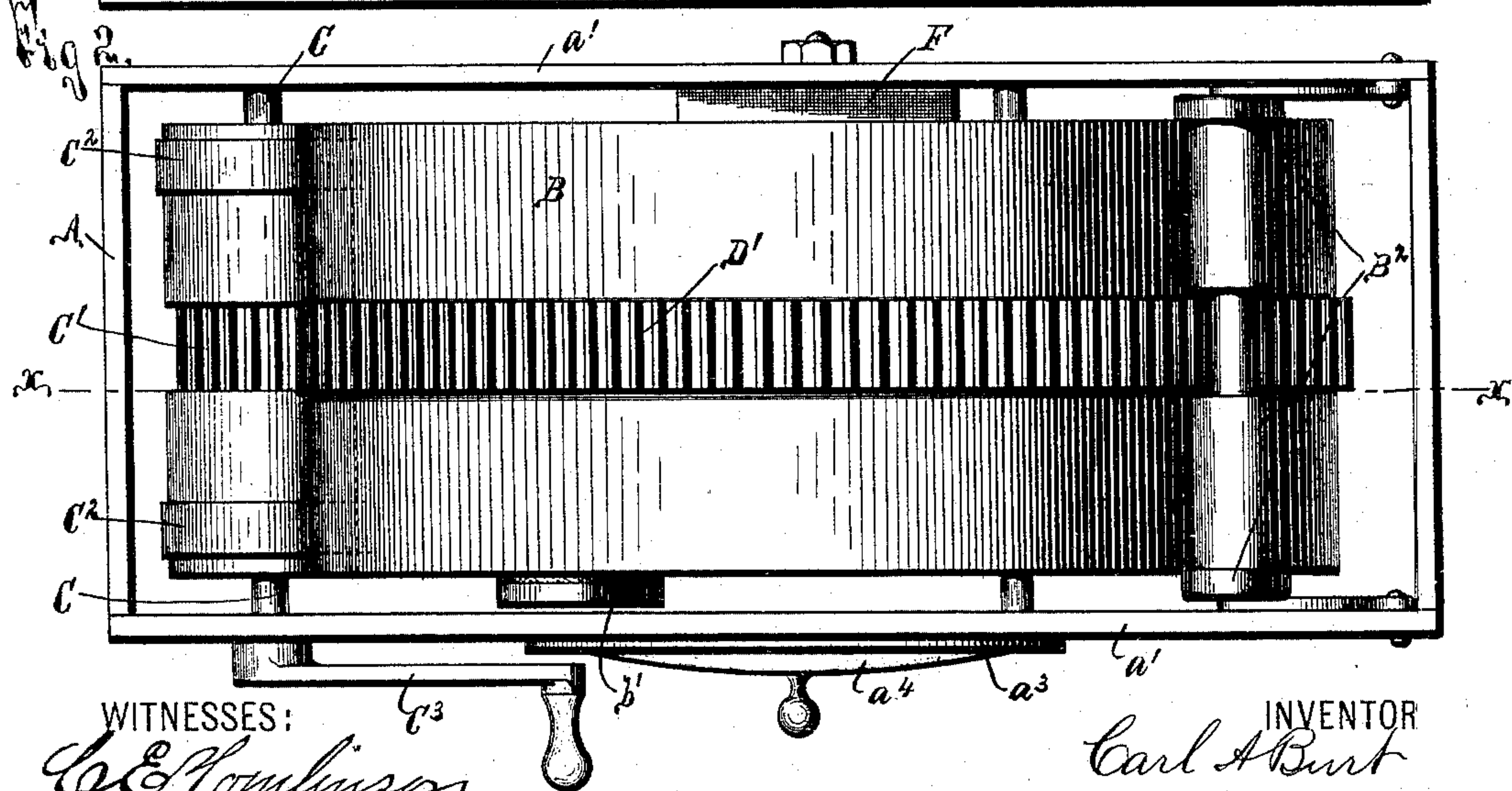


Fig 2.



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Hey, Wilkinson & Parsons

ATTORNEYS



(No Model.)

3 Sheets—Sheet 2.

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Fig. 3.

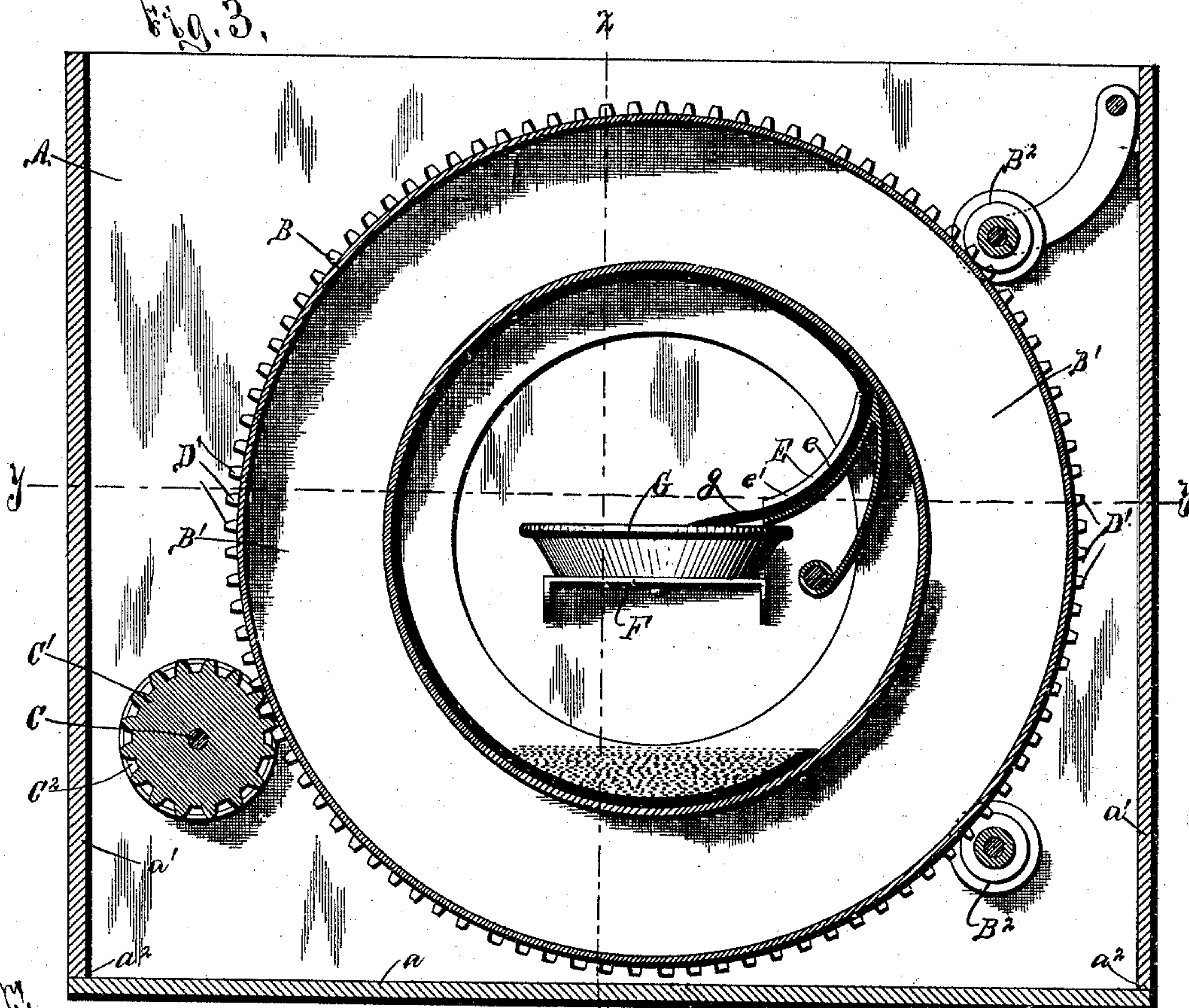
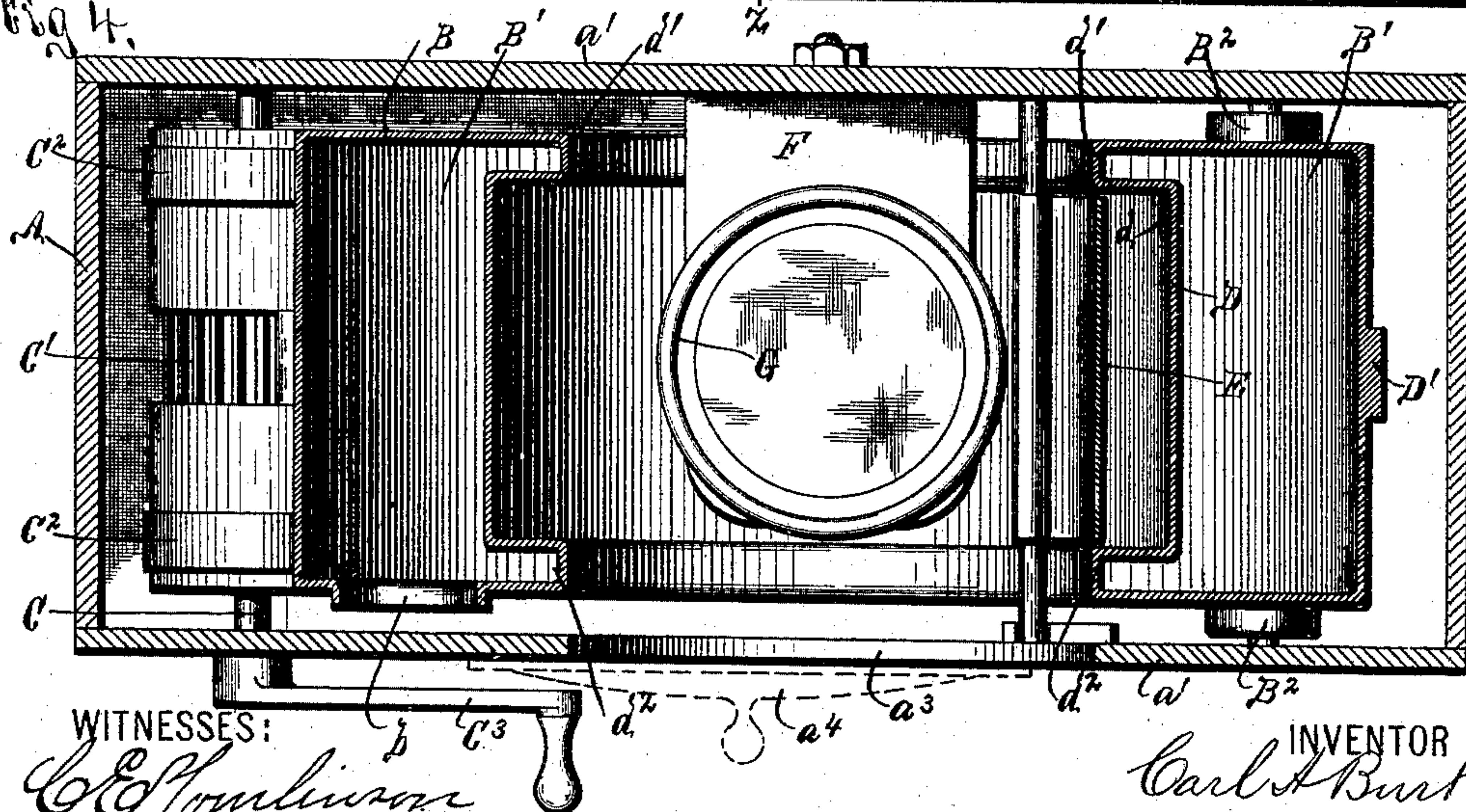


Fig. 4.



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*Hay, Wilkinson & Parsons*  
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(No Model.)

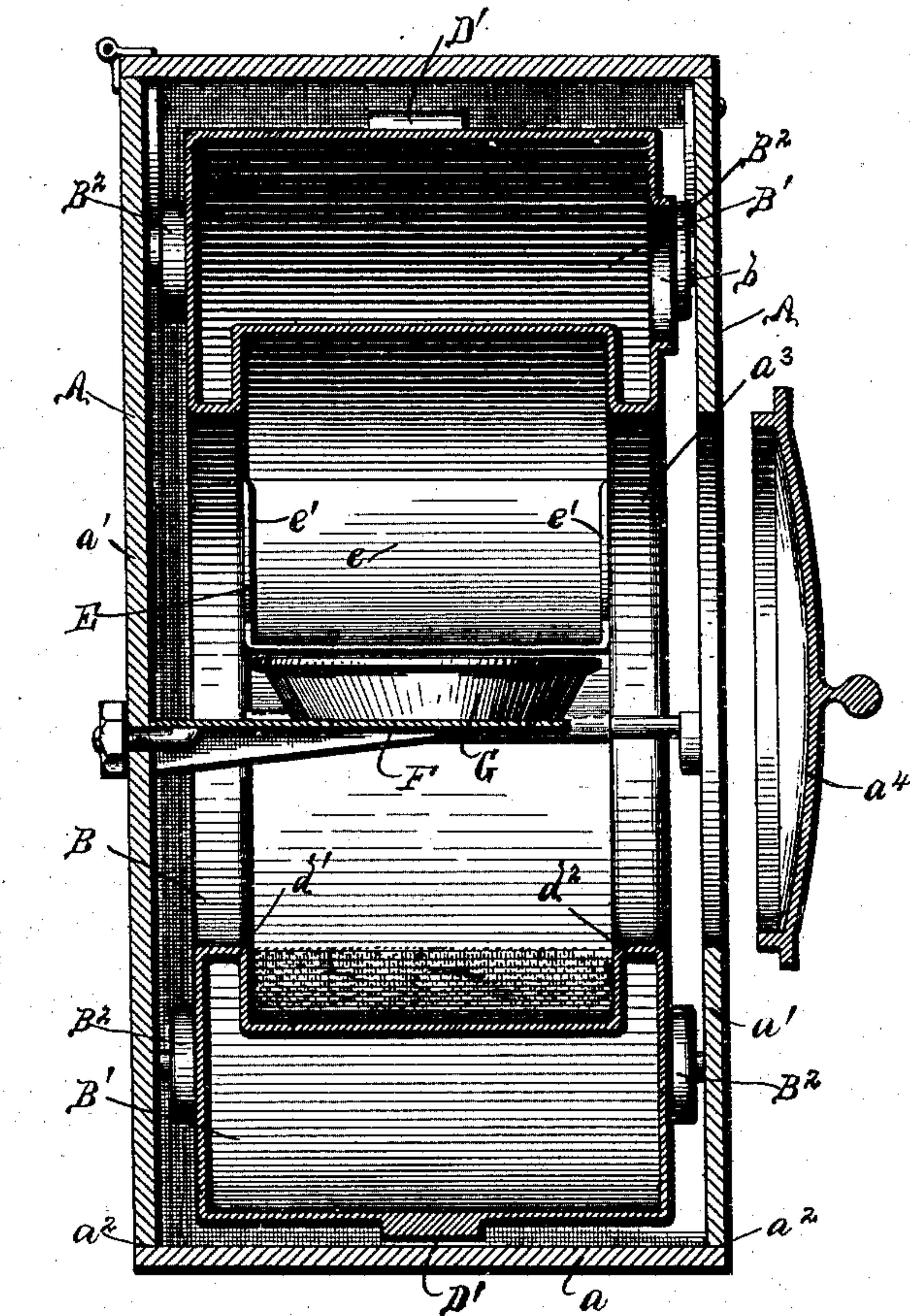
3 Sheets—Sheet 3.

C. A. BURT.  
FREEZING APPARATUS.

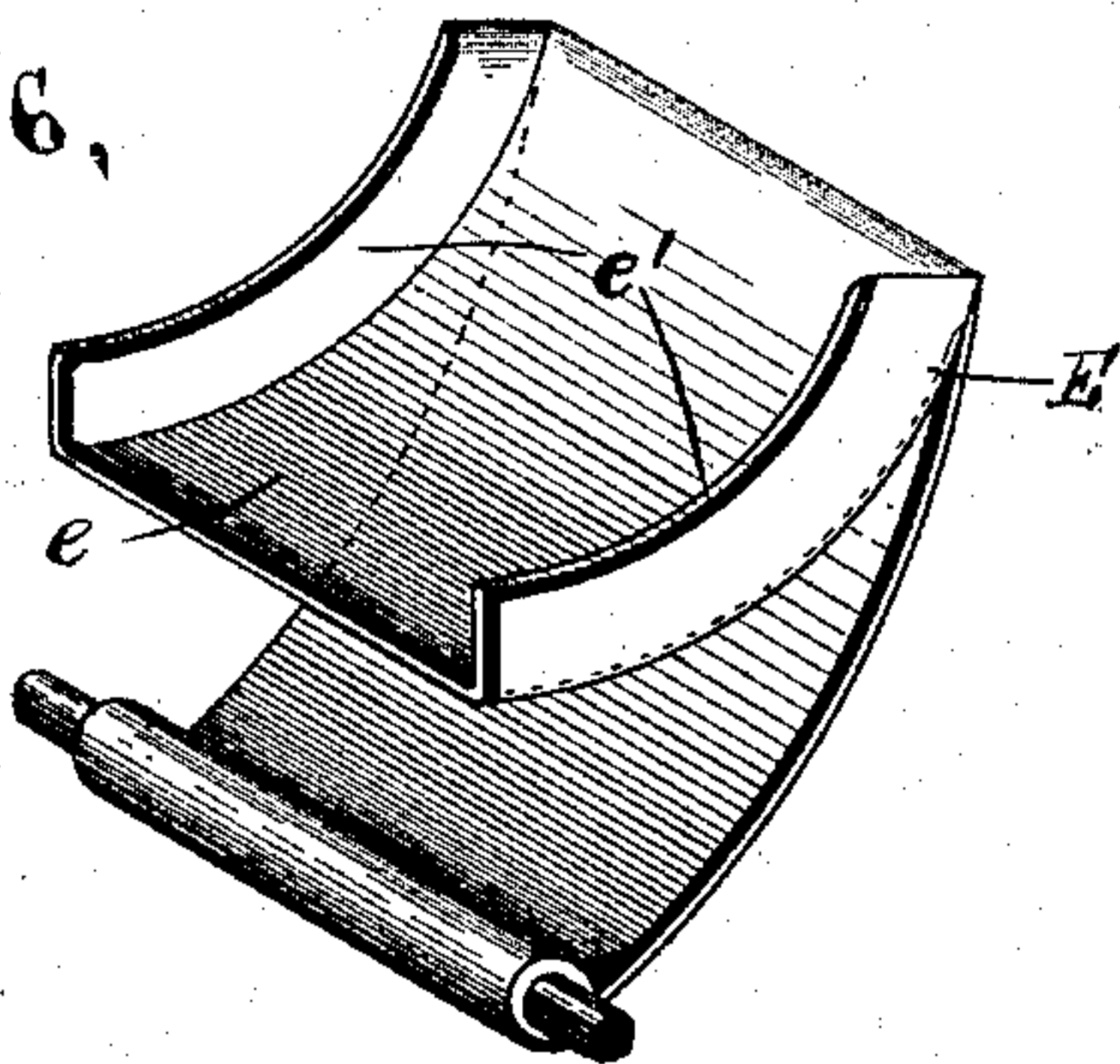
No. 477,626.

Patented June 21, 1892.

*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

CARL A. BURT, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE MAGIC FREEZER COMPANY, OF CHICAGO, ILLINOIS.

## FREEZING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 477,626, dated June 21, 1892.

Application filed November 17, 1890. Renewed November 23, 1891. Serial No. 412,708. (No model.)

*To all whom it may concern:*

Be it known that I, CARL A. BURT, of Rochester, in the county of Monroe, in the State of New York, have invented new and useful Improvements in a Freezing Apparatus, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in freezing apparatus, and has for its object the production of a simple and effective device for quickly and readily freezing any desired material, as ice-cream and ices; and to this end it consists, essentially, of a freezing-surface and a scraper for removing the frozen material, and constantly presenting a clean surface to the material to be frozen.

The invention also consists in an annular ice-containing ring having a freezing-surface on its inner periphery, a gear-wheel for rotating said ring, guide-rollers for supporting the ring in its rotation, a scraper having an upper concaving face for facilitating removal of the frozen material, and a bracket within the annular ring in proximity to the scraper for supporting a saucer or other dish adapted to receive the frozen material.

The invention still furthermore consists in the detail construction and arrangement of the parts, all as hereinafter more particularly described, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, forming a part thereof, in which like letters indicate corresponding parts in all the views.

Figure 1 represents an elevation of my improved apparatus with one face of the inclosing case or shell removed in order to illustrate its general construction and arrangement. Fig. 2 is a top plan view of the parts as illustrated in Fig. 1. Fig. 3 is a vertical sectional view taken on line  $x x$ , Fig. 2, further illustrating the general construction and arrangement of my improved freezing apparatus. Fig. 4 is a horizontal sectional view taken on line  $y y$ , Fig. 3, for illustrating the cross-section of the freezing-drum and its freezing-surface. Fig. 5 is a transverse vertical sectional view taken on line  $z z$ , Fig. 3, and Fig. 6 is an isometric perspective of the detached scraper.

It is well known that a freezing apparatus has long been required for freezing cream, ices, and like material very quickly and economically, in order that at short notice these most desirable deserts can be readily procured. It is equally well known that there is also a great want for a freezing apparatus of such a simple construction and operation as to enable the housewife, servant, or other person to provide ice-cream, ices, &c., of various flavors to suit the taste and desire of the guest or other person for whom the desert is required. My improved apparatus is designed to effect these desirable results and to supply the want at present existing.

A represents the outer shell, which may be of any desirable form, size, and construction. As here illustrated, this shell consists of an oblong box formed with its upper face open and with its lower wall  $a$  preferably secured to the side walls  $a'$  by a waxed or other water-proof joint  $a^2$  to prevent leakage of water and moisture.

Removably mounted within the case or outer shell A is the movable freezer B, composed of desirable material and, as here illustrated, consisting of a revoluble hollow drum having its inner cavity  $B'$  adapted to be filled with ice and salt for producing the desired freezing-temperature. To permit the entrance of the ice, I provide a suitable inlet-opening  $b$ , which is closed by any desirable construction of cap  $b'$ .

C represents a shaft, upon which are wheels for frictionally engaging and revolving the freezer. The freeze-drum B is held in position by these actuating-rollers, the construction of which will be presently described, and by suitable guide-rollers  $B^2 B^2$ , the upper one being movable for allowing the removal of the freezer B from the case A. As preferably constructed, the freezing ring or drum B is provided with a series of gear-teeth  $D'$ , which, although they may be formed of desirable material, are for the purpose of economy composed of a piece of tin or other sheet metal bent to the desired form and soldered or otherwise secured to the periphery of said wheel.

C' represents a gear on the shaft C for engaging the gear-teeth  $D'$  and effecting a posi-



tive rotation of the drum B. This rotation is augmented by the smooth-faced or frictionally-engaging wheels C<sup>2</sup>, which are mounted on the shaft C on opposite sides of the gear C' and, when desired, are provided with rubber or other yielding faces. A crank C<sup>3</sup> transmits motion to the shaft C and produces the revolution of the freezing-ring B.

The freezing-surface D of the freezer B may be of desirable form and construction; but preferably consists of its inner periphery *d*, which is provided with the hollow annular flanges or ribs *d'*, that hold both the material to be frozen and present additional freezing-surface and form a smooth edge on the frozen ribbon of cream.

E represents the scraper having its inner extremity in contact with the freezing-periphery *d* for removing the material frozen thereon by the rotation of the wheel. This removal of the frozen material is greatly facilitated by the upper face *e* of the scraper, which is concave in form and provided, preferably, with the ribs *e'*.

F represents a suitable bracket or support mounted on the side wall *a'* and projecting within the central chamber of the freezing-ring B. Upon this support is placed a suitable dish or other receptacle G for receiving the frozen material as it escapes from the scraper E.

To permit entrance and removal of the dish G, one of the side walls *a'* is provided with an opening *a<sup>3</sup>*, closed by a cover *a<sup>4</sup>*.

As best seen in Fig. 3 of the drawings, an amount of cream or other material to be frozen is inserted in the base of the space formed between the flanges *d'* and *d<sup>2</sup>*, and by the revolution of the wheel D' this cream adheres to the inner periphery *d* of the drum B, and is removed therefrom by the scraper E, being thereby formed into a thin ribbon *g* of very pleasing and beautiful appearance. The height of these flanges *d'* and *d<sup>2</sup>* is so proportioned that when the material is filled within the base of the space intervened between them to the point of overflow, as shown in Fig. 3, there is then a sufficient amount thereof to produce an ordinary dish full of cream, which, as before stated, consists of a very thin and even ribbon folded upon itself. Should it be desired to make the next dish of a different flavor, it is only necessary to fill into the space between the flanges *d'* and *d<sup>2</sup>*, as before, and then insert a few drops of the required flavor, whereupon, after further rotation of the freezing-wheel B, an additional amount of material may be inserted and a different flavor added. It will thus be understood that at a very short notice a housewife or servant may provide for the guests as many different flavors of ice-cream as their number, fancy, and taste shall require.

With the proportion of parts illustrated in the drawings, it requires about half a turn of the freezer B and about half a minute's time

to produce an ordinary dishfull of cream; but it will be understood that by varying the size of the flanges *d'* and *d<sup>2</sup>* and the relative proportion of the parts of my improved apparatus may be adapted to suit any desired requirements as to capacity.

By placing the freezing-surface at the lower part of the wheel B great effectiveness and economy is afforded, since, as the ice melts, it must necessarily settle to the bottom, and consequently as long as there is any ice within said drum its operation is assured.

After the desired operation, the freezing-wheel is readily removed by swinging upward the upper roller B', and, owing to its regularity of outline and simplicity of construction, is easily cleaned for further use.

The operation of my invention will be readily perceived from the foregoing description, and upon reference to the drawings, and it will be understood that I do not herein limit myself to its precise form and detail construction, since the same may be somewhat varied from that described and shown without departing from the spirit of my invention.

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

1. A freezing apparatus, the same consisting of a movable hollow ring adapted to receive the refrigerating material and formed with a freezing-surface on its inner periphery, and a scraper having one extremity bearing against said inner periphery for removing the frozen material, substantially as described.

2. A freezing apparatus, the same consisting of a revoluble hollow ring having centrally-projecting flanges on the opposite edges of its inner periphery for forming a chamber to receive the material to be frozen, and a scraper having one extremity bearing against said inner periphery for removing the frozen material, substantially as specified.

3. A freezing apparatus, the same consisting of a movable hollow ring adapted to receive the refrigerating material and formed with a freezing-surface on its inner periphery, a scraper having one extremity bearing against said inner periphery for removing the frozen material, and a receptacle within the ring for receiving the frozen material removed by the scraper, substantially as described.

4. In a freezing apparatus, the combination of a revoluble hollow ring for receiving the refrigerating material, centrally-projecting flanges on the inner periphery of the ring for forming the chamber to receive the material to be frozen, a scraper having one extremity bearing against said inner periphery for removing the frozen material, and a shoulder projecting within the ring for supporting the receptacle, adapted to receive the frozen material removed by the scraper, substantially as set forth.

5. A freezing apparatus consisting of a movable hollow annular ring for receiving the re-



frigerating material, annular hollow shoulders projecting from the periphery of said ring for presenting additional freezing-surface, and a scraper for removing the frozen material from said surface, substantially as and for the purpose set forth.

6. A freezing apparatus consisting of a shell, a hollow ring revoluble within the shell and adapted to receive the refrigerating material, a freezing-surface on said ring, gear-teeth provided on the periphery of said ring, and a gear-wheel journaled in said shell for engaging the gear-teeth and rotating said ring, substantially as and for the purpose set forth.

7. In a freezing apparatus, the combination of a casing, a revoluble ring within the casing, a guide roller or rollers for supporting said ring in its revolution, a chamber in the ring for receiving the refrigerating material, a freezing-surface on said ring, and a scraper having one extremity bearing against said

freezing-surface for removing the frozen material, substantially as and for the purpose specified.

8. In a freezing apparatus, the combination of an outer casing, a hollow freezing-ring revoluble within the casing and adapted to receive the refrigerating material, gear-teeth formed of a fluted plate secured to one periphery of said ring, an annular freezing-surface on the opposite periphery, and a scraper having one extremity bearing against said inner periphery for removing the frozen material, substantially as set forth.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Rochester, in the county of Monroe, in the State of New York.

CARL A. BURT.

Witnesses:

HENRY A. SPENCER,  
CHARLES E. TOMLINSON.