

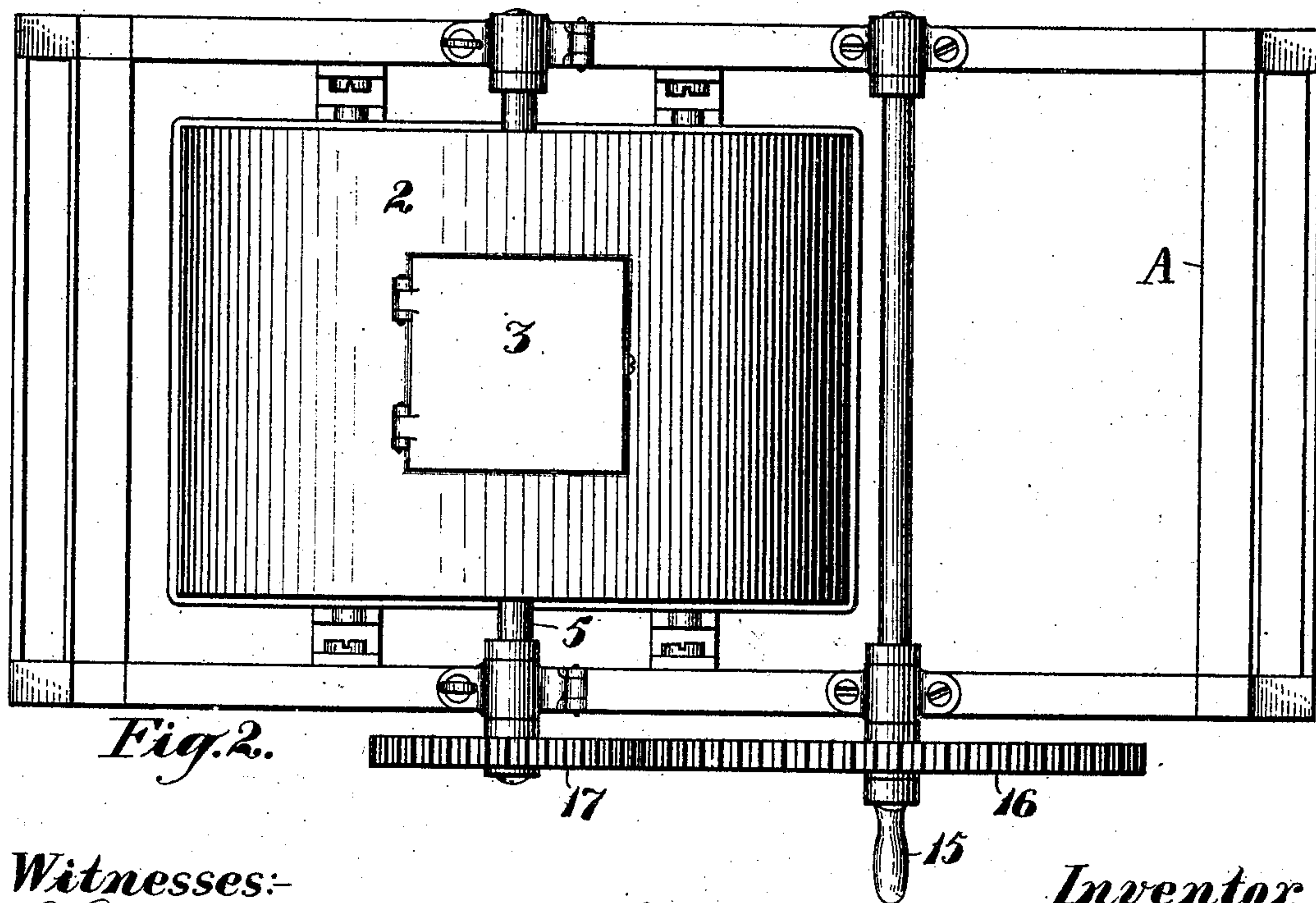
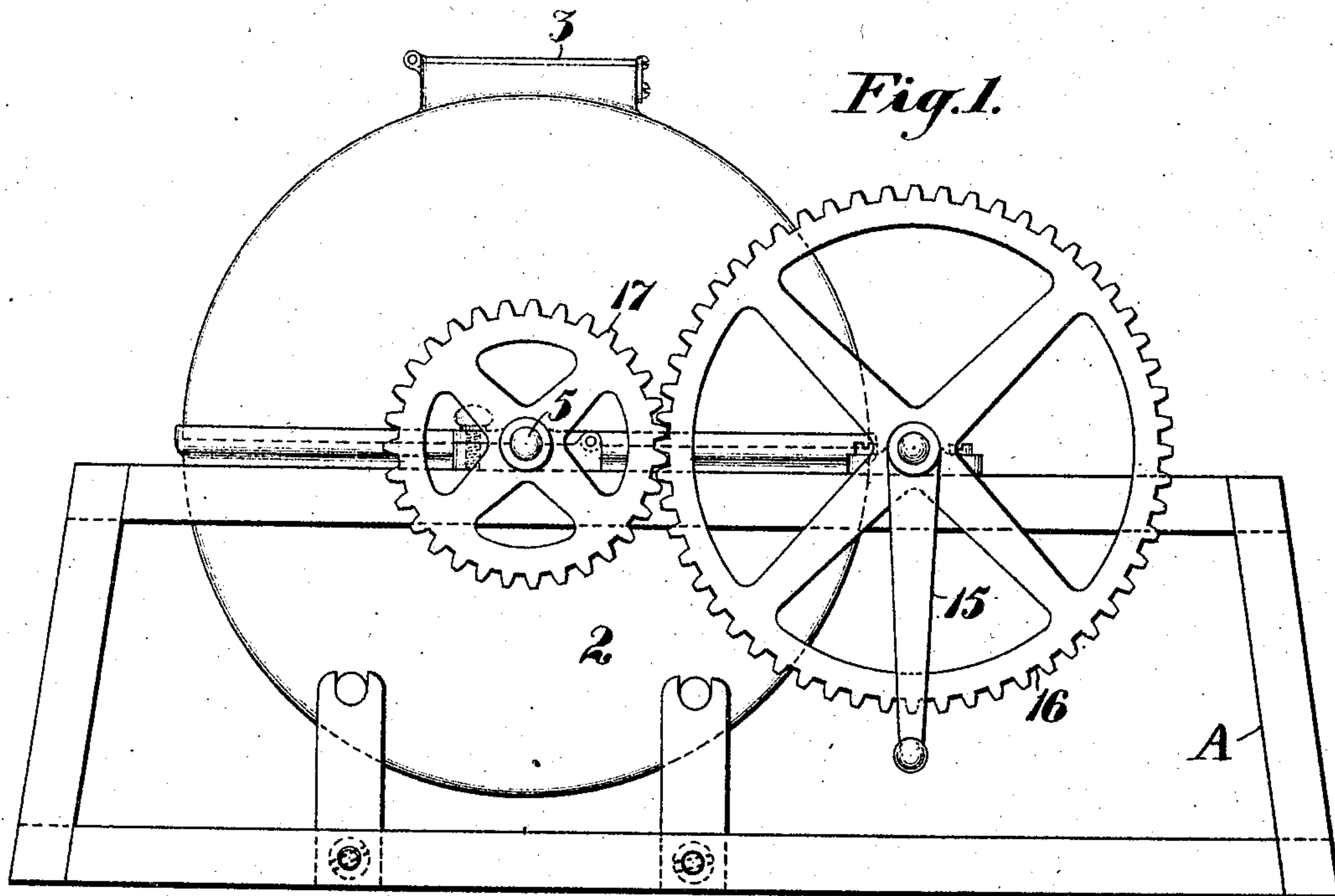
No. 785,332.

PATENTED MAR. 21, 1905.

F. R. SCHMIDT.
CAKE MIXER.

APPLICATION FILED JULY 5, 1904.

2 SHEETS—SHEET 1.



Witnesses:-

J. C. Fiedner
J. H. Mace

Inventor,
Fredrick R. Schmidt
By Geo. H. Strong atty

No. 785,332.

PATENTED MAR. 21, 1905.

F. R. SCHMIDT.
CAKE MIXER.

APPLICATION FILED JULY 5, 1904.

2 SHEETS—SHEET 2.

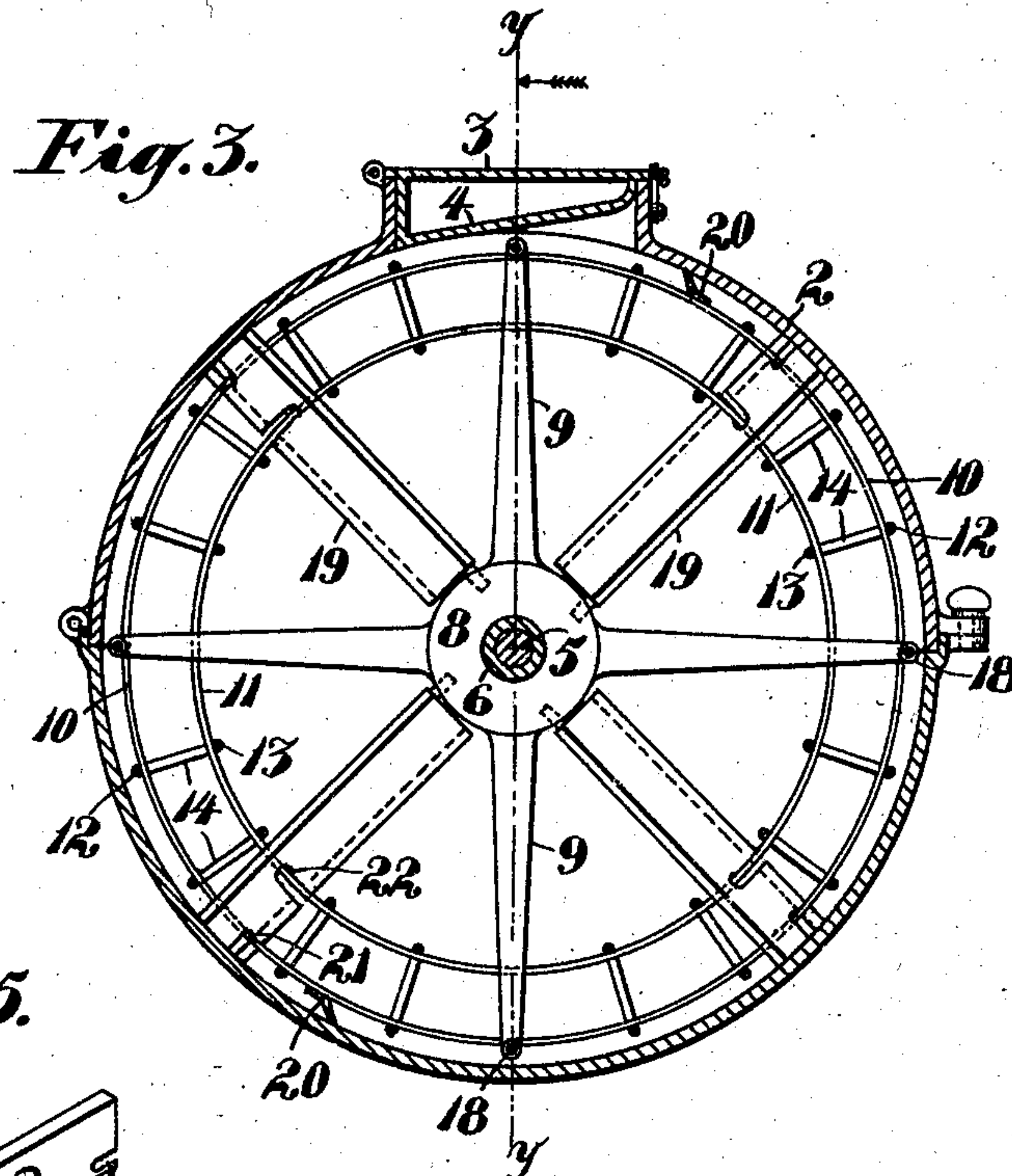
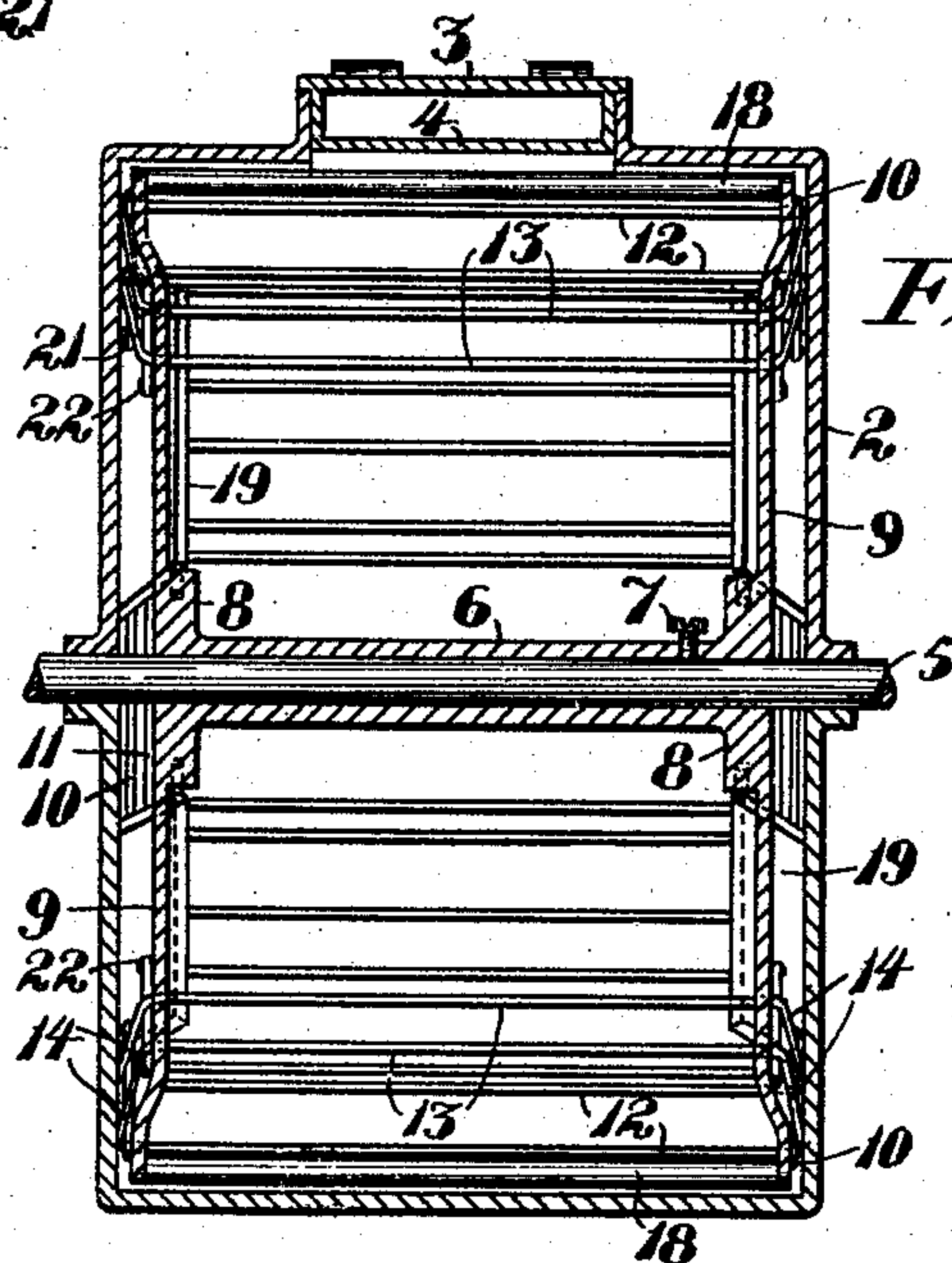
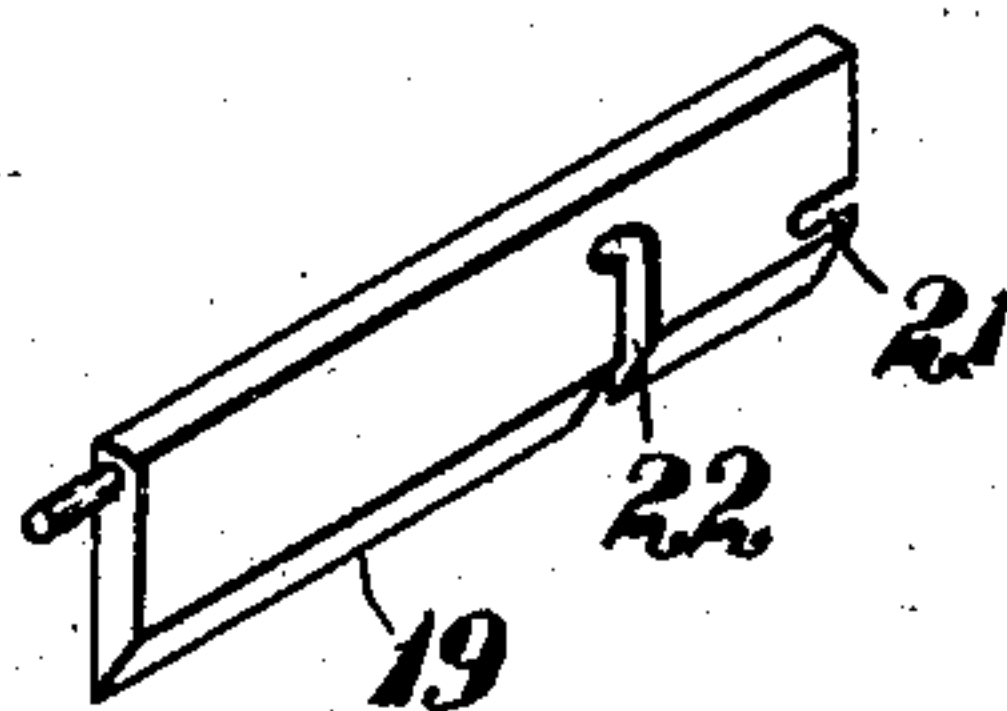


Fig. 5.



Witnesses:
F. C. Fiedner
G. H. Strong

Inventor,
Fredrick R. Schmidt
By G. H. Strong. atty

UNITED STATES PATENT OFFICE.

FREDRICK R. SCHMIDT, OF SAN FRANCISCO, CALIFORNIA.

CAKE-MIXER.

SPECIFICATION forming part of Letters Patent No. 785,332, dated March 21, 1905.

Application filed July 5, 1904. Serial No. 215,316.

To all whom it may concern:

Be it known that I, FREDRICK R. SCHMIDT, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Cake-Mixers, of which the following is a specification.

My invention relates to an improved machine for mixing material preparatory to baking into cake.

In cake-mixing, some kinds of cakes are known as "beaten" cakes and others as "rubbed" cakes. To the first class belong such cakes as "sponge-cake," "creams," "charlotte russe" and those generally made from the whites of eggs. On the other hand, "pound-cake," "fruit-cake," "wine-cake," and like heavier mixtures are essentially rubbed cakes. While there are devices by which cakes of the first class can be prepared, generally those of the second class have to be mixed and rubbed in a separate apparatus or worked by hand.

The object of my invention is to provide a simple machine for mechanically beating, rubbing, and finishing cakes of any sort.

It consists of the parts and the construction and combination of parts, as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a plan view of same. Fig. 3 is a transverse section through the drum. Fig. 4 is a section on line *y y* of Fig. 3. Fig. 5 is a detail of a side-scraper.

A represents a suitable framework supporting a drum 2, disposed with its axis horizontal and formed of two separable sections, as shown. The upper section is provided with an opening for the admission of the cake ingredients, and this opening is closed by a suitable cover 3, having an inclined bottom portion 4, arranged to lie, when the cover is closed, in a plane continuous with the inner periphery of the drum toward the direction of rotation of the dasher or mixer, which is mounted on the horizontal shaft 5, arranged concentric with the drum. The object of the part 4 is to prevent the lodgment of the sticky mixture in

the recess of the cover, as would otherwise occur by the rotary action of the mixer. This dasher or mixer comprises a sleeve 6, embracing and protecting the axle and adapted to be secured thereto by suitable means; as the screw 7, and having the hub portions 8 at each end, from which extend four or more radial arms or spokes 9. The transverse width between the outer ends of the spokes is substantially that of the inside width of the drum. The spokes on each hub support two concentric rings 10 11, preferably arranged in different vertical planes. The outer rings 10 are connected by a series of cross-wires or small rods 12, and the inner rings 11 are connected by similar wires or rods 13, while the outer and inner rings on each side are connected by the radial wires or rods 14. In fact, it may be preferred that each set of wires 12 13 14 be in one piece suitably wrapped around and secured in place on the rings. These outer and inner sets of wires 12 13 moving in different planes concentric with the inner periphery of the drum, together with the radial inclined wires 14, serve as beaters and whippers to thoroughly mix and agitate the contents of the mixing-chamber. Any suitable means may be employed to rotate the dasher. In the present instance I have shown hand-operated means, consisting of a crank 15, with a large gear 16 engaging a smaller gear 17 on shaft 5.

To produce the desired "rubbing" effect sometimes needed, I have shown a series of rollers 18, supported between the outer ends of the spokes and disposed in an arc in close proximity to, but not quite coincident with, the inside of the drum.

In cake-mixing it is essential that all parts of the ingredients contained in the dish or receptacle in which stirring or mixing goes on should be gotten at and stirred, so as to result in an entirely homogeneous mass. Consequently there should be no angles or pockets in which any portion of the mass may lodge. Hence the preferred round receptacle 2. Furthermore, I have shown scrapers 19 20, which respectively scrape the sides and circular walls of the mixing-chamber and tend to turn the

contents, which are thrown outward by centrifugal action, back again toward the center of the chamber. The transverse scrapers 20 may be fixed rigidly to the rings 10; but the scrapers 19 (shown in detail in Fig. 5) are preferably supported pivotally in hubs 8 and are slotted, as at 21 22, to receive the respective rings 10 11. The object of thus supporting the scrapers 19 is that it permits them to swing more nearly into a plane parallel with the sides of the drum in case the direction of motion of the dasher is reversed and more particularly enables the scraper to be easily removed and cleaned.

15 In operation the butter and sugar and flavoring matter are introduced into the drum, the cover 3, closed and the dasher set in rapid motion. A few turns of crank 15 serves to whip the butter and sugar into a light foam. 20 The eggs are then added as needed and the agitation continued until they are whipped into proper condition. Flour, fruit, anything may be added as desired and the entire composition beaten, rubbed, and rolled to produce a finished mixture. It is this feature of the practicability of the machine for any and all sorts of cake that constitutes its main claim for novelty. It makes no difference what the resultant mixture is to be. It effects the desired beating and whipping, and if rolling or rubbing is needed and there is anything to rub it does this also. An absolutely homogeneous mixture is assured. The entire work up to the actual placing of the composition in the baking-pans is done in one apparatus and in one operation. The sectional and separable character of the apparatus allows it to be taken apart quickly and thoroughly cleaned and as quickly reassembled ready for use.

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

1. In a cake-mixer, the combination with a container of a rotary mixer having a plurality of annular series of transversely-extending wires or rods and provided with rollers arranged exterior to the wires or rods and contiguous to the inner surface of the container.

2. In a cake-mixer, the combination with a container of a rotary mixer having a plurality of annular series of transversely-extending wires or rods and provided with rollers arranged contiguous to the inner surface of the container, and lateral radial and transverse scrapers carried by said mixer.

3. In a cake-mixer, the combination of a container inclosing a circular chamber, a rotary mixer concentric with said chamber, said mixer comprising plural series of transversely-extending rods disposed in arcs concentric with the chamber, the latter having an ingress-passage and a closure for said passage, said closure having an inclined bottom with its lower edge substantially continuous with the inner

periphery of the chamber, and scrapers carried by said mixer and operating against the inner wall of the chamber.

4. In a cake-mixer, the combination of a circular sectional container and an inclosed rotary concentric dasher or mixer, said dasher comprising a hollow hub portion, radially-extending arms from opposite ends of said hub portion, concentric rings supported by said arms, a series of cross-wires connecting opposite rings, and radial scrapers carried by said arms and operating against the ends of the container.

5. In a cake-mixer, the combination of a circular sectional container and an inclosed rotary concentric dasher or mixer, said dasher comprising a hollow hub portion, radially-extending arms from opposite ends of said hub portion, concentric rings supported by said arms, a series of cross-wires connecting opposite rings, rollers supported between the several arms and arranged in close proximity to the inner periphery of the container.

6. In a cake-mixer, the combination of a circular sectional container and an inclosed rotary concentric dasher or mixer, said dasher comprising a hollow hub portion, radially-extending arms from opposite ends of said hub portion, concentric rings supported by said arms, a series of cross-wires connecting opposite rings, rollers supported between the several arms and arranged in close proximity to the inner periphery of the container, and pivotally-supported radially-disposed removable scrapers carried by the dasher and adapted to engage the sides of the container.

7. In a cake-mixer, the combination of a circular sectional container and an inclosed rotary concentric dasher or mixer, said dasher comprising a hollow hub portion, radially-extending arms from opposite ends of said hub portion, concentric rings supported by said arms, a series of cross-wires connecting opposite rings and pivotally-supported radially-disposed removable scrapers carried by the dasher and adapted to engage the sides of the container.

8. In a cake-mixer, the combination of a container inclosing a circular chamber, a rotary dasher or mixer concentric with said chamber and mounted on a horizontal axis, said dasher including a plurality of radially-supported rings and cross-wires connecting said rings, and scrapers carried by the mixer exterior to the rings and wires.

9. In a cake-mixer, the combination of a container inclosing a circular chamber, a rotary dasher or mixer concentric with said chamber and mounted on a horizontal axis, said dasher including a plurality of radially-supported rings, cross-wires connecting said rings, cross-rollers supported between said rings and movable in close proximity to the interior of the chamber.

10. In a cake-mixer, the combination of a

container inclosing a circular chamber, a rotary dasher or mixer concentric with said chamber and mounted on a horizontal axis, said dasher including a plurality of radially-supported rings, cross-wires connecting said rings, cross-rollers supported between said rings and movable in close proximity to the interior of the chamber, and radially-disposed removable scrapers carried by the dasher and adapted to engage the sides of the container. container.

11. In a cake-mixer, the combination of a container inclosing a circular chamber, a rotary dasher or mixer concentric with said chamber and mounted on a horizontal axis, said dasher including a plurality of radially-supported rings, cross-wires connecting said rings, cross-rollers supported between said rings and movable in close proximity to the

interior of the chamber, radially-disposed removable scrapers carried by the dasher and adapted to engage the sides of the container, said container having an ingress-passage and a closure for said passage, said closure having a bottom inclined downwardly in the direction of rotation of the dasher, the lower edge of said inclined bottom being substantially continuous with the inner periphery of the mixing-chamber and means for rotating the dasher.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDRICK R. SCHMIDT.

Witnesses:

B. GRAVES,
VERNON P. IRVIN.