

No. 667,635.

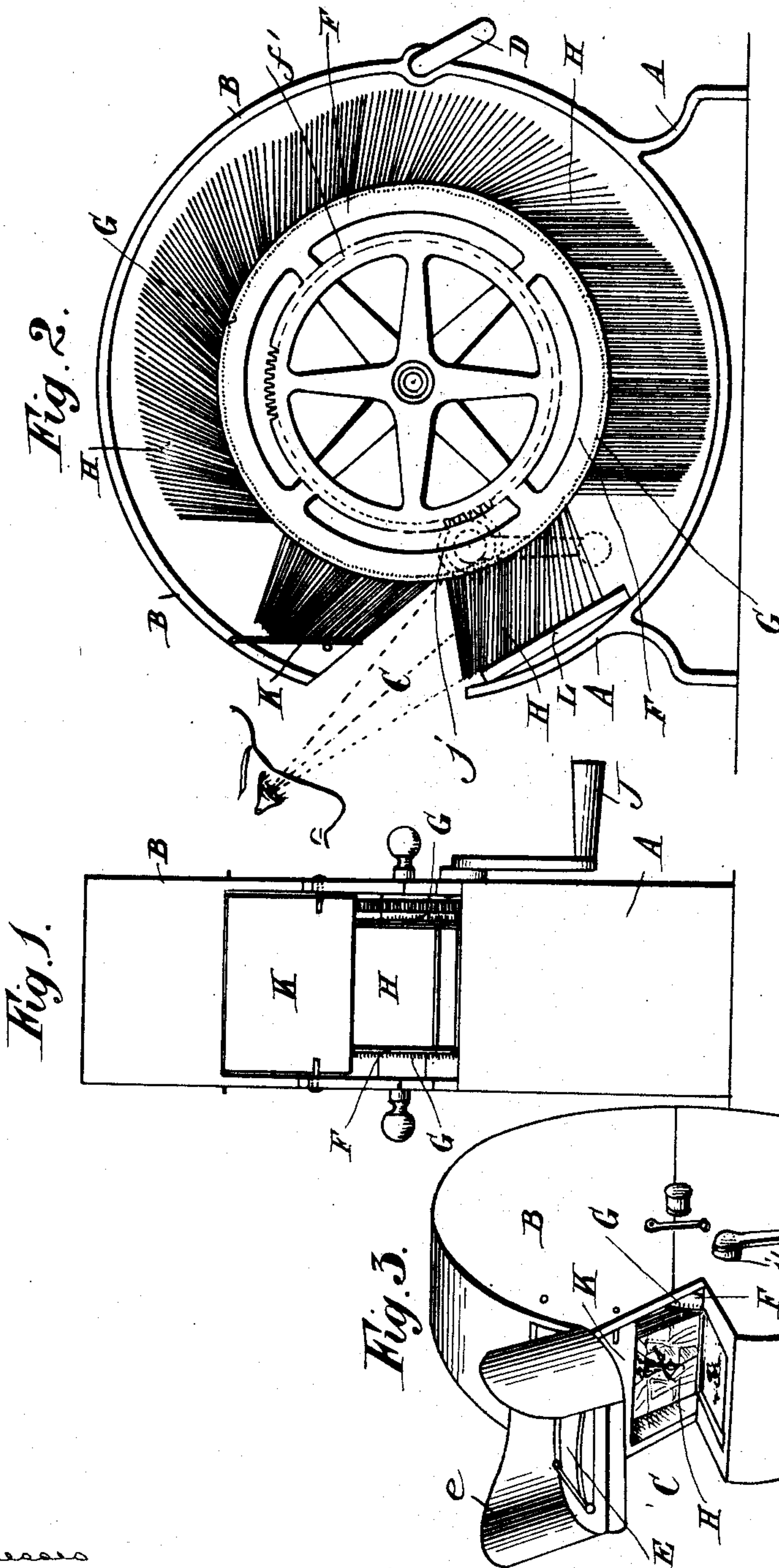
Patented Feb. 5, 1901.

W. S. SIMPSON.
KINETOSCOPE.

(Application filed Oct. 2, 1900.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses
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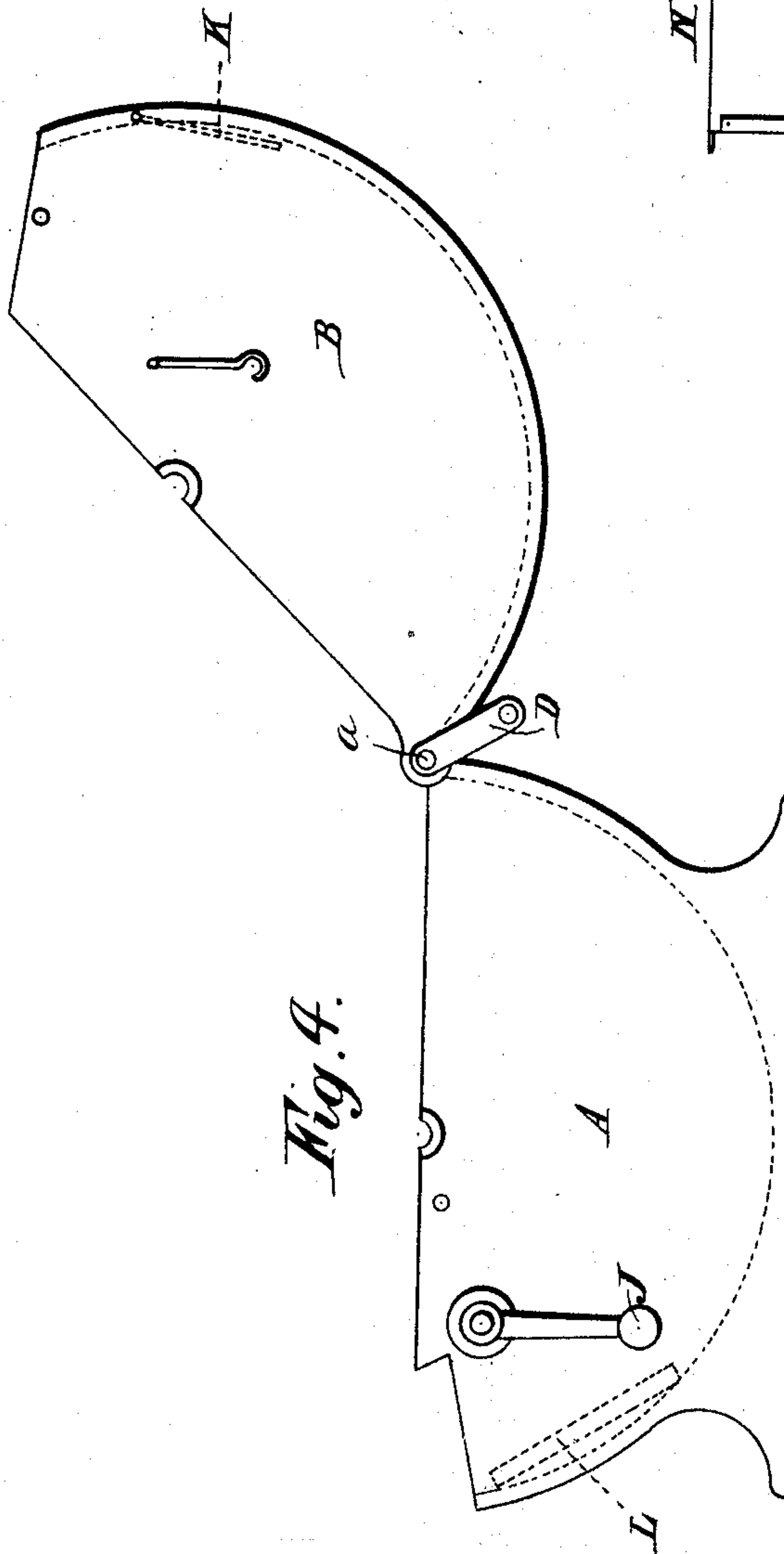


Fig. 4.

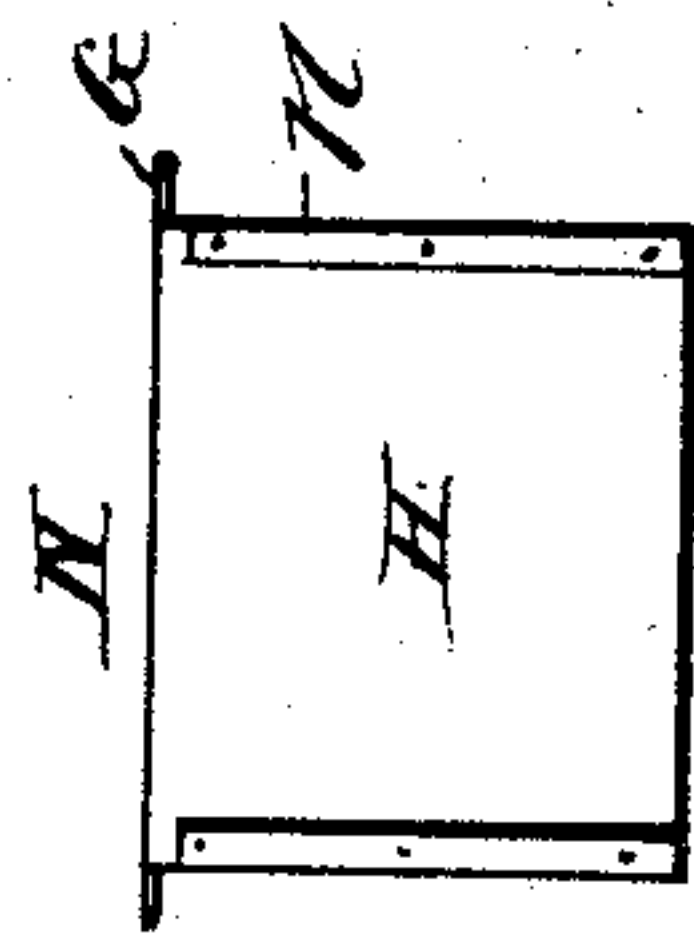
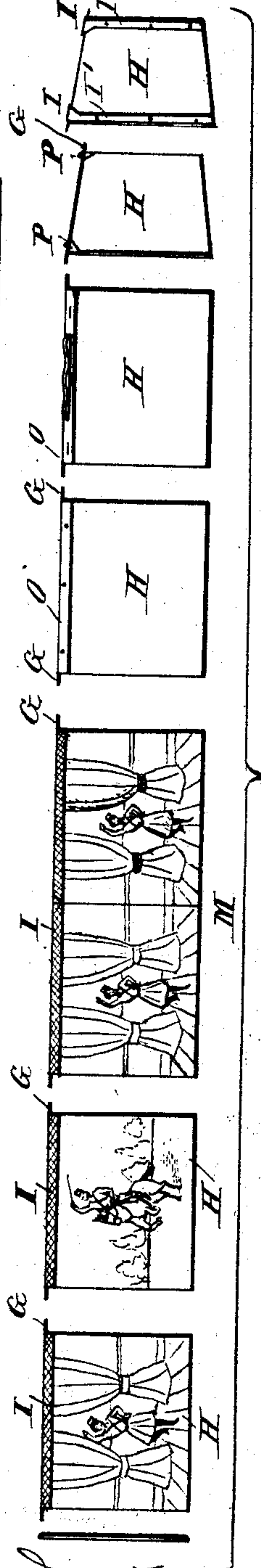


Fig. 5.



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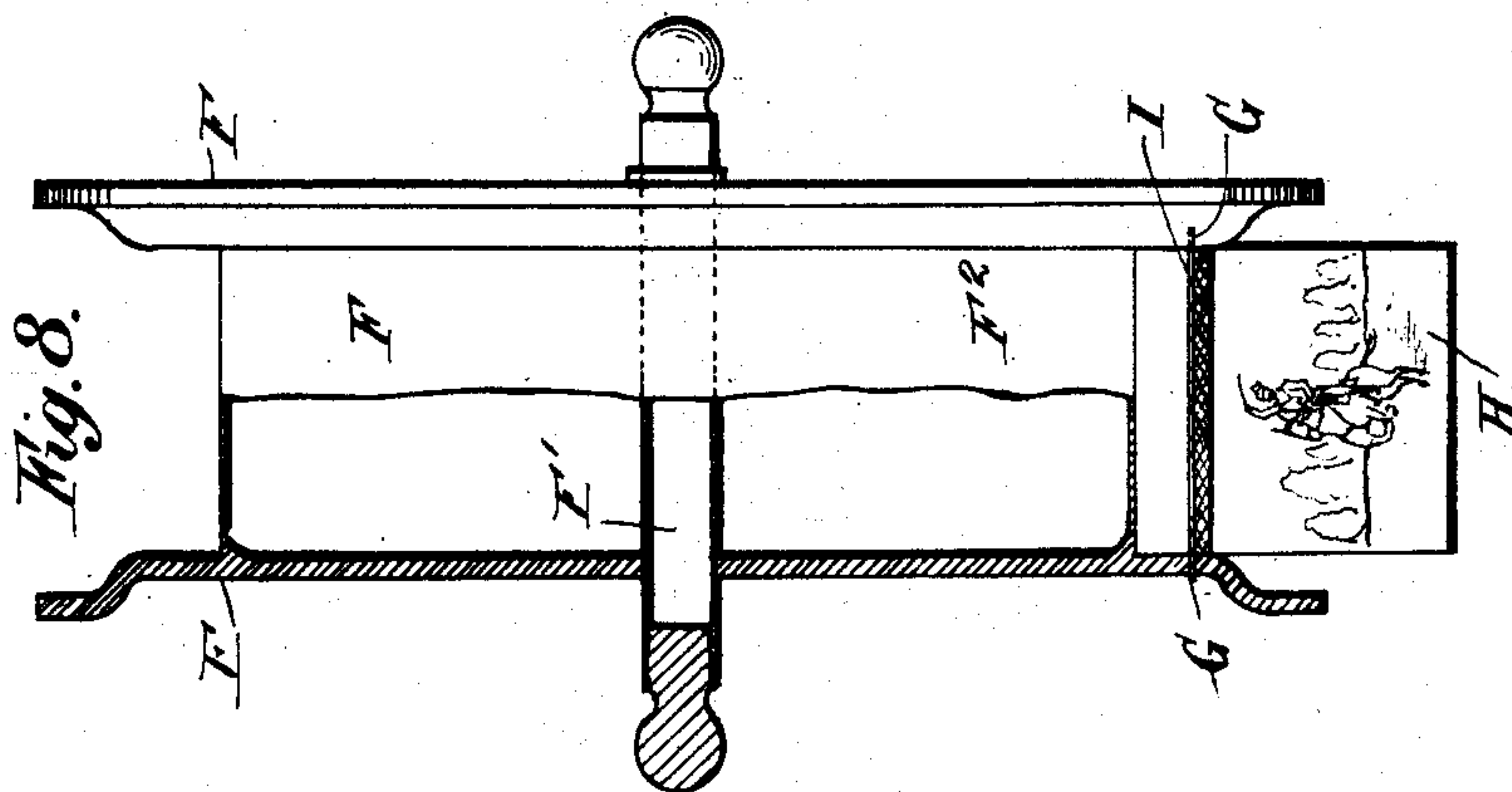
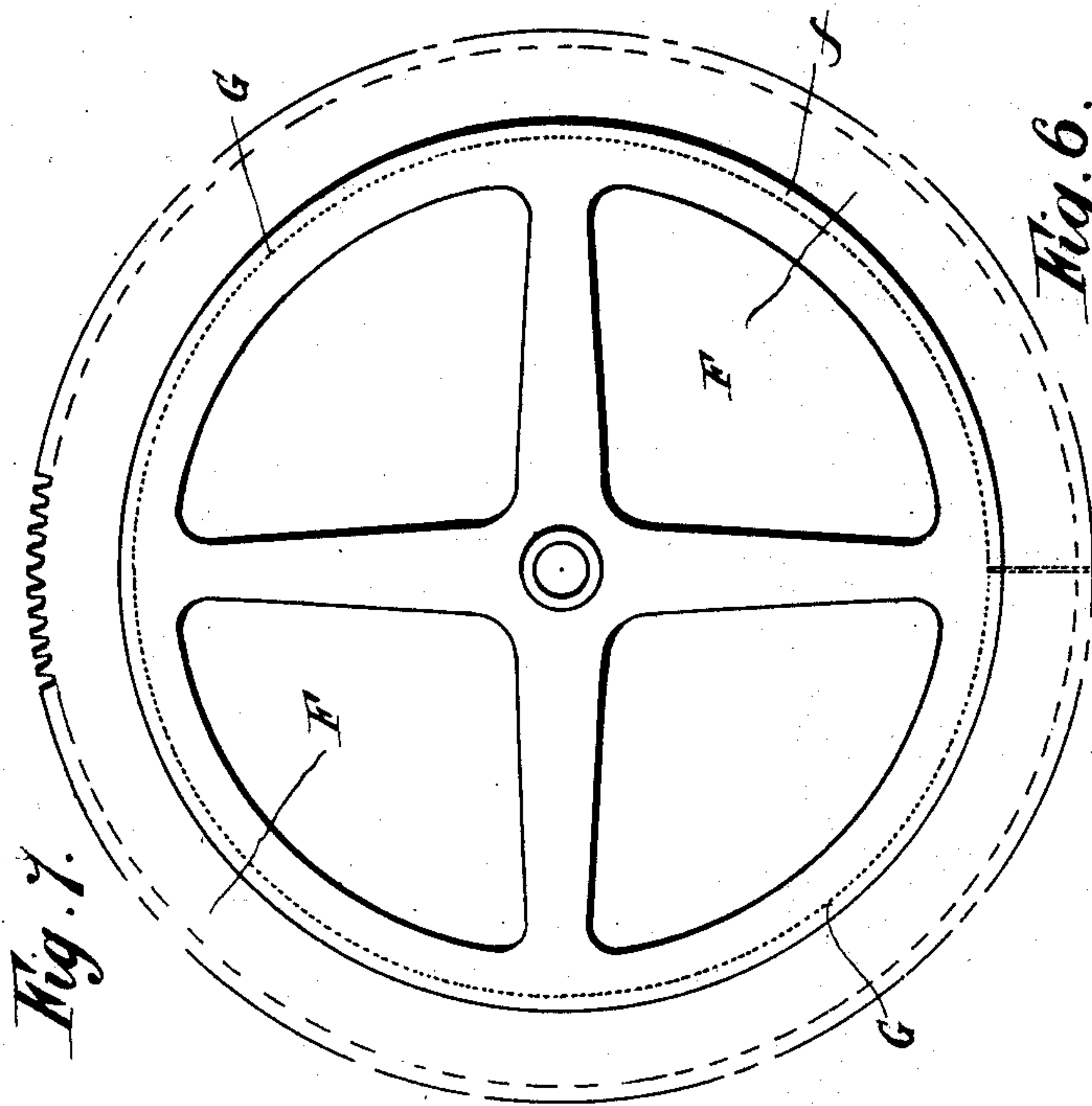
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UNITED STATES PATENT OFFICE.

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KINETOSCOPE.

SPECIFICATION forming part of Letters Patent No. 667,635, dated February 5, 1901.

Application filed October 2, 1900. Serial No. 31,773. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SPEIRS SIMPSON, a subject of the Queen of Great Britain, residing at 49 Battersea Park road, London, England, have invented certain new and useful Improvements in Kinetoscopes, of which the following is a specification.

This invention relates to kinetoscopes, and has for its object to provide an extremely simple, efficient, and inexpensive device for successively exhibiting a number of pictures in a convenient and expeditious manner; and to this end the invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a view in front elevation of my improved device. Fig. 2 is a side elevation of the same, a part of the casing being removed. Fig. 3 is a perspective view of the complete device in readiness for operation. Fig. 4 is a side view of the casing, the top being shown thrown back. Fig. 5 is a view illustrating several different methods of mounting the pictures. Fig. 6 is a view of the parts constituting the drum separated from one another. Fig. 7 is a side view of the drum complete and showing one of the pictures in place thereon; and Fig. 8 is a view, partly in front elevation and partly in section, of the drum.

Referring to the drawings, the letters A and B indicate a two-part casing, preferably of approximately cylindrical shape, the letter A indicating the lower section or base of the casing and B the upper section or movable portion thereof. The top or upper portion B is hinged at its rear end to the rear end of the base A, as at *a*, whereby the top B may be thrown back into the position shown in Fig. 4 of the drawings to expose or furnish access to the interior of the casing, and is held in such position by a rest or stop D of any suitable or preferred construction.

The letter C indicates a view-aperture through which the pictures may be viewed,

said aperture being formed partly in both the base A and top or upper portion B, as shown. 50

E is a lens fitted in a suitable frame or eyepiece *e*, which is fixed or movably arranged over the view-aperture in any suitable manner, as indicated in Fig. 3 of the drawings.

In the casing is rotatably arranged a drum 55 comprising a shaft F' and two circular disks F, fixed on said shaft at a suitable distance apart, an annular or cylindrical partition F² being preferably fixed between the disks, as most clearly shown in Fig. 8. Formed in each 60 disk is an annular series of small perforations *f*, the perforations being arranged close together, as shown, and forming bearings in which are loosely journaled the opposite ends of small steel rods G, from which the pictures 65 are loosely suspended, as hereinafter described. The shaft F is removably journaled in half-bearings formed in the respective meeting edges of the lower and upper sections A and B of the casing, and on said shaft is 70 fixed a gear-wheel *f'*, which gears with a pinion *j*, fixed on the shaft *j'*, journaled in the side of the lower half A of the casing. A crank-handle J is fixed on the outer end of the shaft *j'*, by means of which the pinion may 75 be rotated to turn the drum.

The flaps carrying the pictures may be formed of cardboard or the like or of metal or cardboard stiffened with metal, and the pictures may be photographed, printed, painted, or otherwise fixed thereon, as may be preferred. The flaps or cards may be conveniently mounted on the drum by folding a linen strip or narrow tape I (see Fig. 5) longitudinally along its center and attaching the 85 same to the opposite sides of the upper edge of the card or flap, said folded strip or tape loosely embracing the rod or wire G. If the pictures are to be exhibited stereoscopically, two cards or flaps may be suspended from the 90 wire in pairs or side by side, as indicated at M, Fig. 5 of the drawings, or the cards may be loosely suspended from the rods or wires G by narrow strips of sheet metal folded about the rods or wires and embracing the 95 opposite sides of the upper edges of the cards

or flaps and secured to the latter by rivets or by punching the sheet metal in a well-known manner, as indicated at O, Fig. 5; or, again, the cards may be mounted on a flat piece of sheet metal N, the edges *n* of which are bent over and secured to the card, the upper edge of the sheet metal N being loosely bent around the rod or wire G, or the cards may be suspended from the rods merely at their corners, as at P, or sheet-metal strips I' may be folded over the opposite edges of the cards and at their tops bent around the rod. Many other means for suspending the cards from the rods will suggest themselves, and the particular manner of accomplishing the result forms no part of the invention.

Arranged in the upper part B of the casing, directly above the view-aperture, is a transverse vertical partition K, and arranged in the lower part A of the casing, directly beneath the view-aperture, is a transverse inclined partition L, the partitions K and L being so disposed that as the drum is rotated the free ends of the flaps or cards will engage the partitions in the manner and for the purpose presently to be explained.

The operation of my improved device is as follows: The observer places his eyes to the eyepiece *e* and by means of the handle J turns the drum. During the rotation of the drum as the cards approach the view-aperture they drop down by gravity until their outer edges rest against the partition K, which latter operates to collect a number of the cards in a group and hold the latter temporarily supported above the view-aperture. As the drum continues to rotate the cards are successively and almost vertically drawn downward, and as each card becomes disengaged from the partition K it falls by gravity into an approximately horizontal position and at its outer edge engages and is supported by the partition L. As the drum continues to rotate the card is lowered almost imperceptibly, each succeeding card falling upon the preceding one, thus again collecting the cards in a group or cluster on the partition L before they are released to travel freely with the drum. By temporarily arresting the free travel of the cards in the manner described the groups of cards are separated opposite the view-aperture, as most clearly shown in Fig. 2, thus permitting the light to fully illuminate the card which for the time being is under observation and also temporarily holding such card practically motionless to afford sufficient time for its proper examination.

The rods G, from which the cards are suspended, are preferably of steel, whereby said

rods may be readily removed and replaced in the drum by slightly bending them, so that the cards can be changed when desired.

Having described my invention, what I claim is—

1. In a kinetoscope, the combination with an inclosing casing provided with a view-aperture, of a drum rotatably mounted in the casing, a plurality of cards each pivotally connected at one end to said drum, means for rotating the drum, a vertical partition arranged in the drum above the view-aperture, said partition being arranged in a plane substantially parallel to the vertical tangent of the drum and operating to temporarily retard the travel of the cards and drop them one by one, and a partition disposed below the view-aperture and arranged to lower the cards in a substantially horizontal position away from said view-aperture, substantially as described.

2. In a kinetoscope, the combination with an inclosing casing provided with a view-aperture, of a drum rotatably mounted in the casing, a plurality of cards freely suspended at their inner edges from said drum, means for separating and temporarily retarding said cards opposite the view-aperture, and an inclined support arranged beneath the view-aperture and in front of the drum, said support being arranged to engage the free edges of the cards as they drop beneath the view-aperture and permit them to uninterruptedly slide down thereon away from the view-aperture in the line of vision and in approximately a horizontal position, substantially as described.

3. In a kinetoscope, the combination with a sectional or divided casing comprising an upper and a lower portion hinged together and provided with a view-aperture, of a rotatable drum removably mounted in the casing, a plurality of cards each pivotally connected at one end to said drum, means for temporarily holding said cards above the view-aperture and dropping them one by one by gravity as the drum is rotated, and means for temporarily holding said cards substantially stationary beneath the view-aperture as they successively drop from above said aperture, substantially as described.

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

WILLIAM SPEIRS SIMPSON.

Witnesses:

WM. O. BROWN,
C. M. ROWSELL.