

Oct. 24, 1944.

F. H. BROMM

2,361,258

REELING DEVICE

Filed April 18, 1944

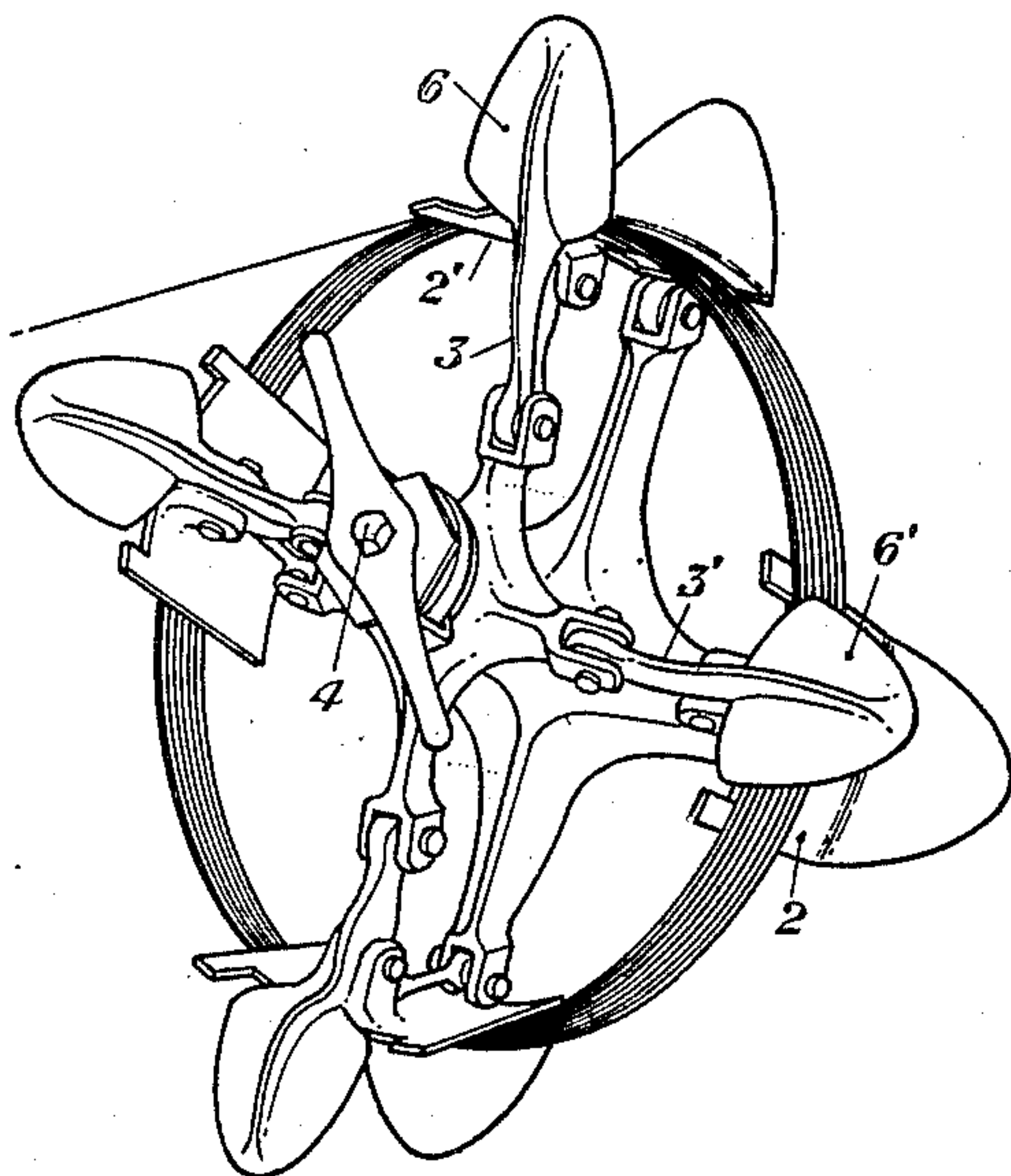


Fig. 1

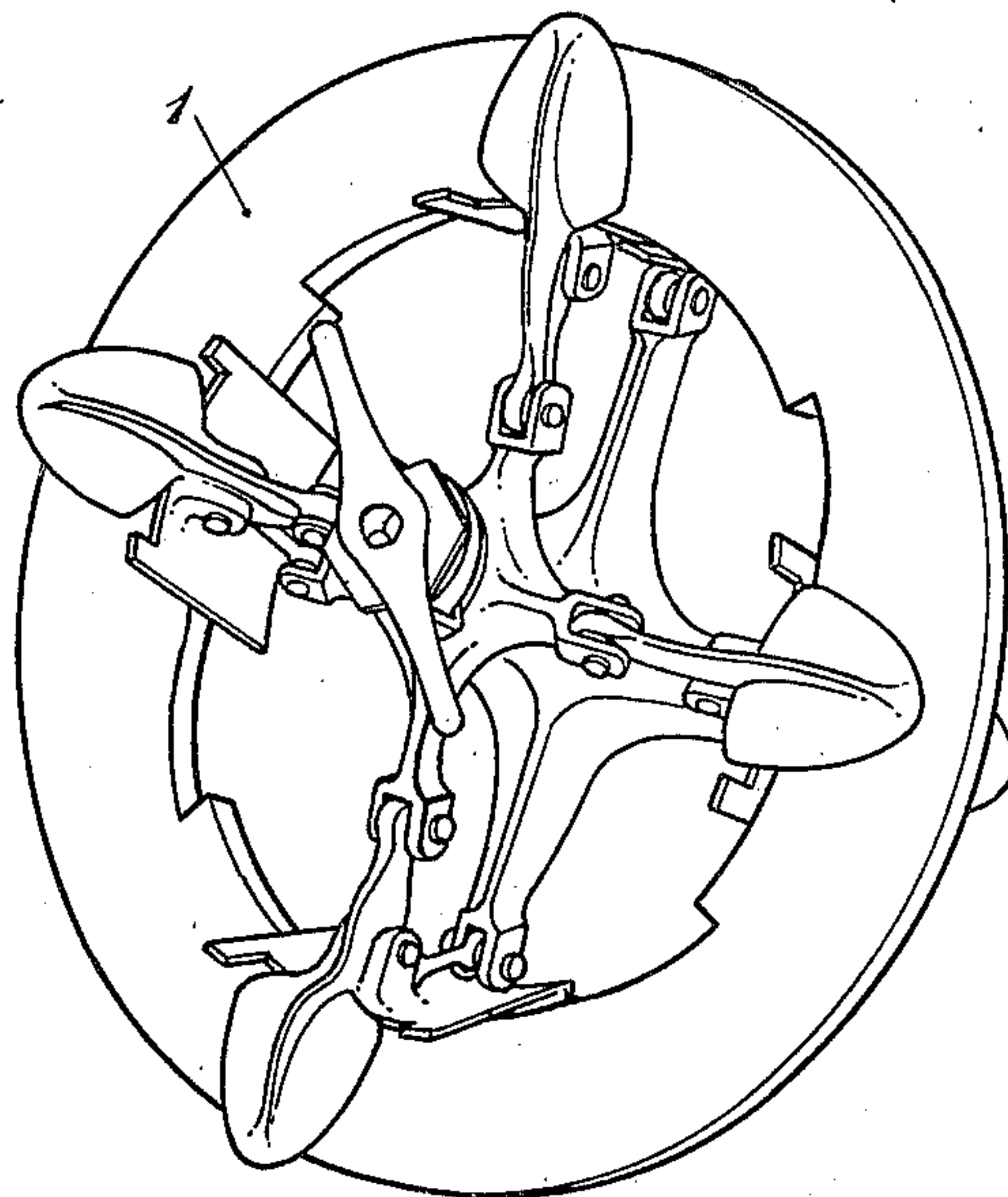


Fig. 2

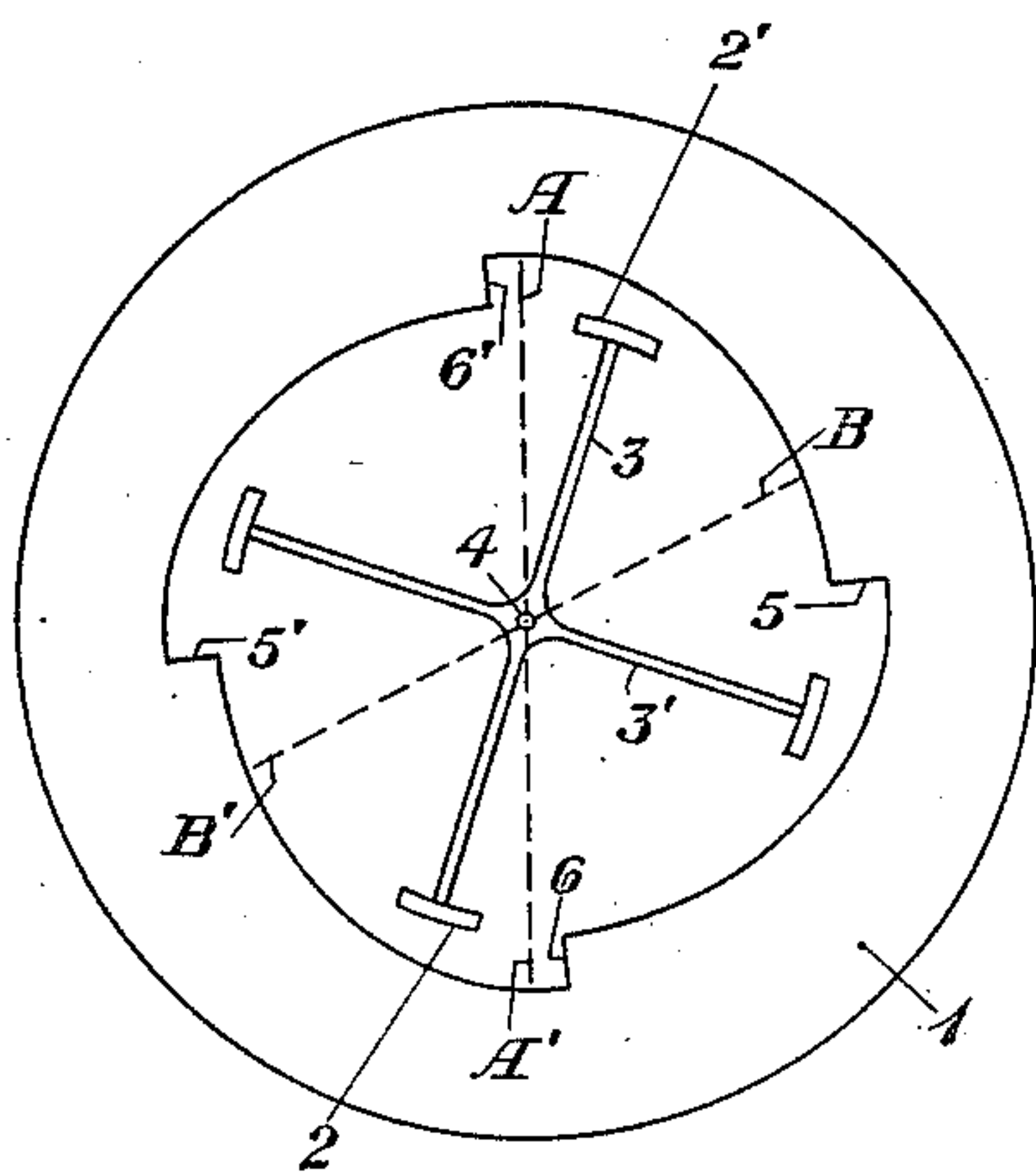


Fig. 3

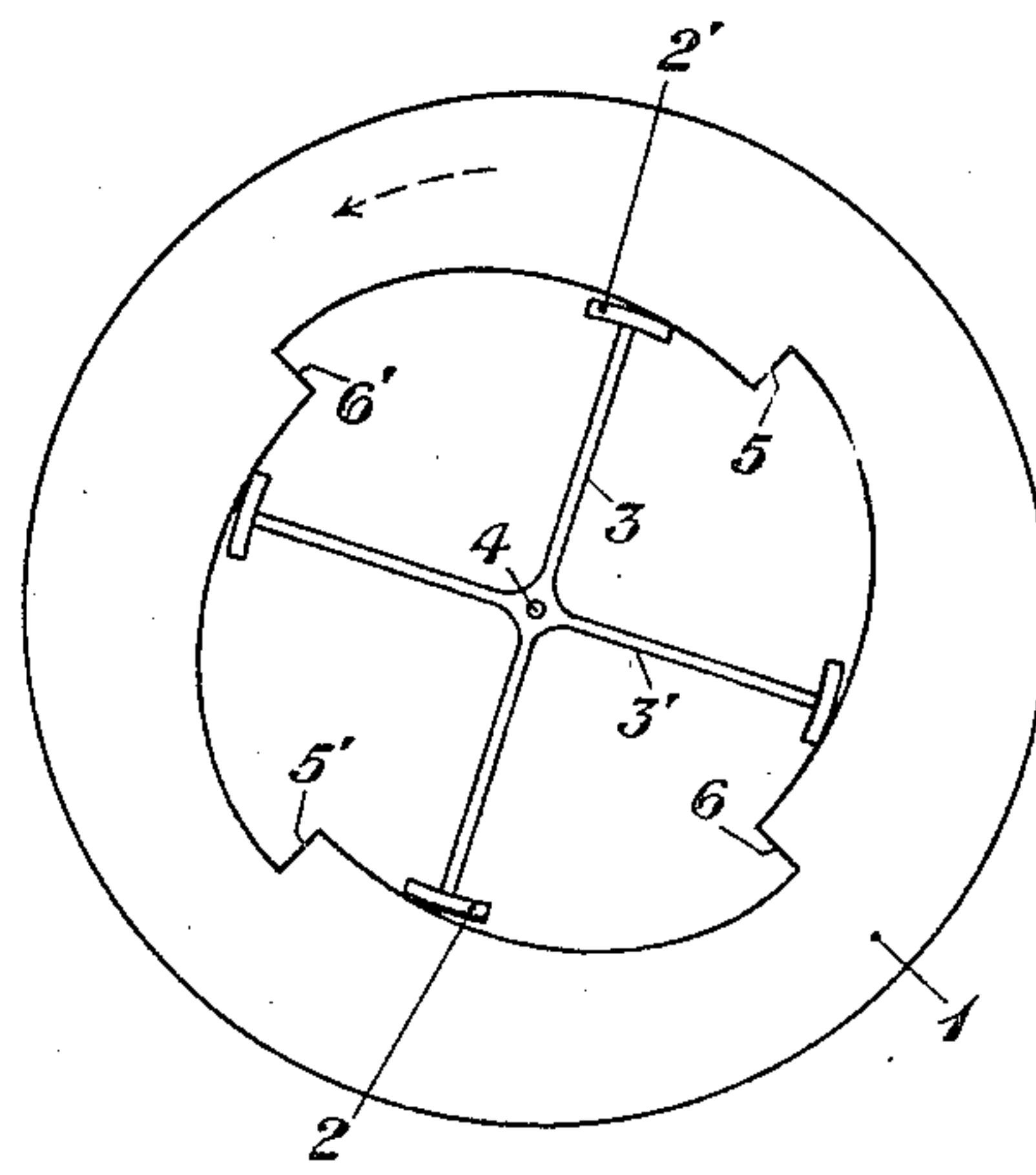


Fig. 4

BY

INVENTOR
F. H. Bromm
Ralph W. Wolf.
ATTORNEY

UNITED STATES PATENT OFFICE

2,361,258

REELING DEVICE

Fred Henry Bromm, West Hempstead, N. Y., assignor to American Telephone and Telegraph Company, a corporation of New York

Application April 18, 1944, Serial No. 531,548

4 Claims. (Cl. 242-111)

This invention relates to reeling devices utilized to support a coil of wire, or like material, and more particularly to arrangements adapted to be utilized with such reeling devices to enable one reel to separately support and wind several different coils of wire.

It is often desirable to use a single reel to wind and support several different coils of wire at the same time. To do this one or more ring shaped discs may be placed about the periphery formed by the wire supporting plates or segments of the reel. Such discs would have to be carefully tailored so that they would fit tightly around the periphery of the segments of the particular reel with which they were to be used or some special means would have to be provided to lock them in place. It is one of the primary objects of this invention to provide a disc which is readily adapted to be placed on the periphery formed by the segments of a reel and which by simply being rotated a short distance will become firmly clamped or wedged on such segments. In the arrangements of the invention this is accomplished by having the inner circumference of the ring-shaped disc of this invention fitted with a number of wedge-shaped protrusions so spaced that the disc may be slipped over the segments and when rotated slightly will be firmly locked or wedged to such segments. This obviates any careful tailoring of the disc to make it exactly fit a particular reel, allows one disc to be used on any of a number of reels which might differ slightly in size and allows the disc to be locked and unlocked to the reel on which it is being used with a minimum of effort. Other objects and features of the invention will appear more fully from the detailed description thereof hereinafter given.

The invention may be more fully understood from the following description together with the accompanying drawing in the Figures 1 to 4 of which the invention is illustrated. Fig. 1 shows one of the types of reels on which the separator disc of this invention might be used. Fig. 2 shows the disc as used on such a reel. Figs. 3 and 4 are side views of the disc showing the way in which its inner circumference is shaped and how it is locked or wedged on to the segments of the reel. Similar reference characters have been used to denote like parts in all of the figures.

In Fig. 1 is shown one of the types of reels on which the separator disc of the invention might be used. This type of reel is illustrated in United States Patent 1,862,598, issued June 14, 1932, to W. T. Livermore. This type of reel

would have a series of spokes, such as 3 and 3', adapted to be rotated by the shaft 4. At the end of the spokes there would be provided plates or segments, such as 2 and 2', for supporting the coil of wire. The segments are shown with flanges, such as 6 and 6'. This type of reel is known as a collapsible reel as the segments and flanges may be tilted, as shown in said Patent 1,862,598, to allow a coil of wire to be easily removed from the reel. When the segments or flanges are tilted the separator disc of this invention could be slipped over or removed from the segments. A reel of this type with the separator disc of the invention is shown in Fig. 2. Obviously the separator disc of this invention is not limited to use within a reel of this type, which has been shown only to illustrate the invention in use, but might be used with other types of reels.

In Figs. 3 and 4 are shown side views of the separator disc 1 of the invention. These views show the configuration of the inner circumference of the ring-shaped disc. It is pointed out that the inner circumference of the disc is provided with a number of wedge-shaped protrusions, such as 5, 5' and 6, 6'. These protrusions would be equally spaced from each other and would cause certain indentations to exist in the inner side of the disc, which indentations due to their sloping characteristic would gradually decrease in depth. With such an arrangement the diameter of the hole in the disc along the dotted line A A' would be greater than the distance between two opposite segments or greater than the periphery formed by the segments. Accordingly when the disc is in a position so that line A A' is approximately aligned with two opposite segments the disc may be slipped over the segments and on to the reel. Due to the sloping characteristic of the wedge shaped protrusions the diameter of the hole at other positions would decrease in size. For example along the dotted line B B' the diameter of the hole would be smaller than the distance between two opposite segments. Accordingly after the disc is slipped over the segments, as shown in Fig. 3, it is then rotated slightly, as shown in Fig. 4, to cause the inner surface of the disc to become wedged against the segments and thus lock the disc in position.

In illustrating the invention a reel having only four segments and a disc having only four wedge shaped protrusions has been shown. However, the reel obviously might have other numbers of segments and the disc might have more or less

protrusions than those shown. Accordingly, while the arrangements of the invention have been disclosed as embodied in certain specific forms which are deemed desirable, it is understood that it is capable of embodiment in many and other widely varied forms without departing from the spirit of the invention as defined by the appended claims.

What is claimed is:

1. A device adapted to be fitted around the segments of a reel to divide the space between the flanges of said segments into two parts whereby said reel may be utilized to support two separate coils of wire, said device comprising a circular disc having a hole in the central part thereof to allow it to be slipped over the segments of the reel, the inner circumference of said disc being of irregular form whereby the diameters of the hole at certain points will be greater than the distance between opposite segments and the diameter of the hole at other points will become progressively smaller until some are less than the distance between opposite segments whereby the rotation of said disc will cause it to engage said segments in close contact.

2. A device adapted to be fitted around the segments of a reel to divide the space between the flanges of said segments into two parts whereby said reel may be utilized to support two separate coils of wire, said device comprising a circular disc having a hole in the central part thereof, the inner circumference of said disc having indentations therein equally spaced from each other which gradually decrease in depth between the point of maximum depth of one indentation and the point of maximum depth of the next indentation whereby when the points of

maximum depth of the indentations are aligned with the segments the disc may be slipped over said segments and when the disc is subsequently rotated it will engage said segments in close contact.

3. A device adapted to be fitted around the segments of a reel to divide the space between the flanges of said segments into two parts whereby said reel may be utilized to support two separate coils of wire, said device comprising a circular disc having a hole in the central part thereof, the inner circumference of said disc having indentations equally spaced from each other therein each of which gradually increases in depth from a point where the diameter of the hole would be less than the distance between opposite segments to a point where the diameter of the hole would be greater than the distance between opposite segments whereby the disc may be slipped over the segments and when subsequently rotated will be locked by wedging against the segments.

4. A device adapted to be fitted around the segments of a reel to divide the space between the flanges of said segments into two parts whereby said reel may be utilized to support two separate coils of wire, said device comprising a circular disc having a hole in the central part thereof, the inner circumference of said disc having a plurality of tapered wedge-shaped protrusions thereon equally spaced from each other whereby when said disc is slipped over the segments and rotated it will become locked by the binding of said wedge-shaped protrusions against the segments.

FRED HENRY BROMM.