

No. 708,047.

Patented Sept. 2, 1902.

E. S. JENNINGS.

CAR WHEEL.

(Application filed May 5, 1902.)

(No Model.)

FIG. 1.

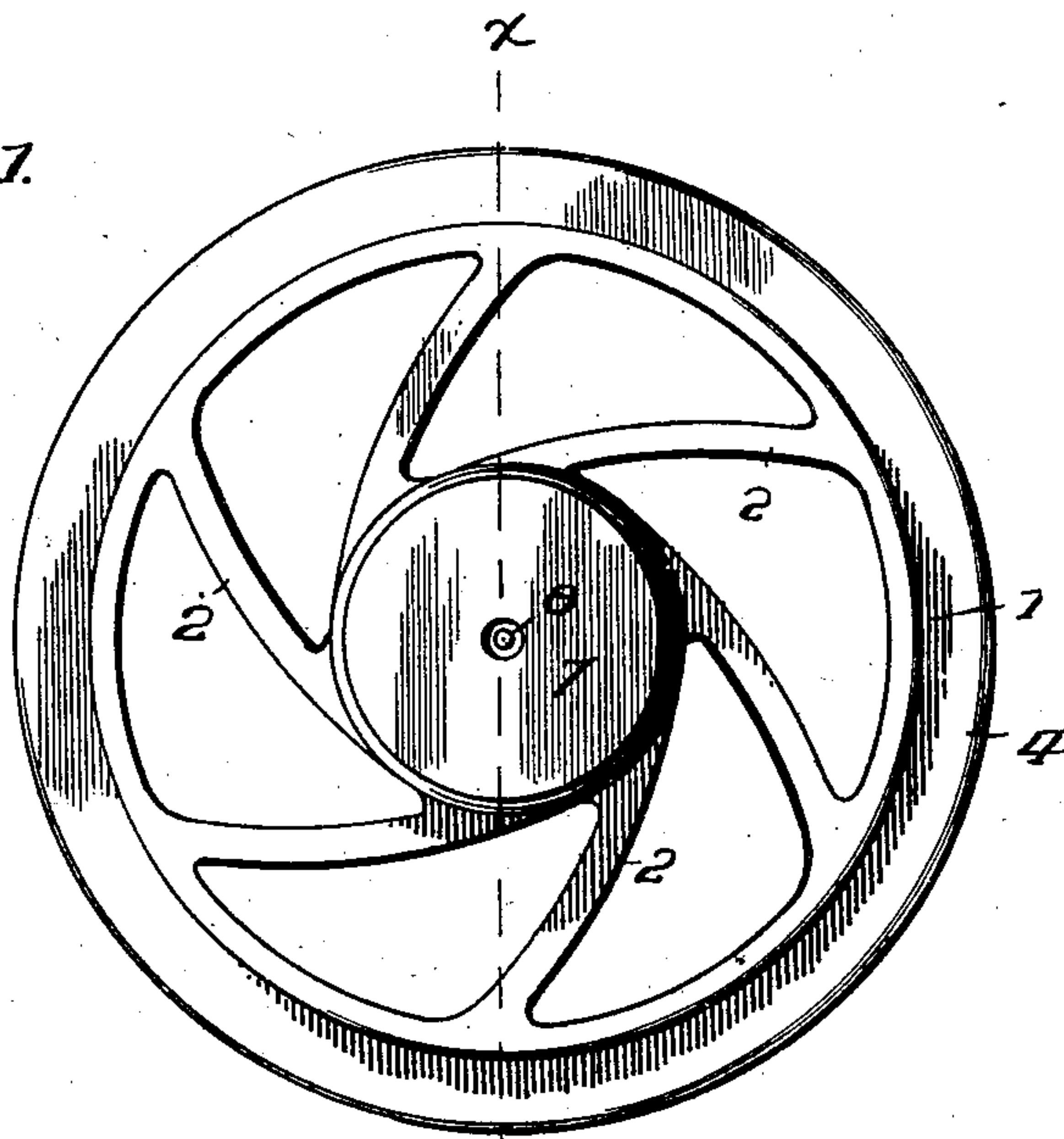


FIG. 3.

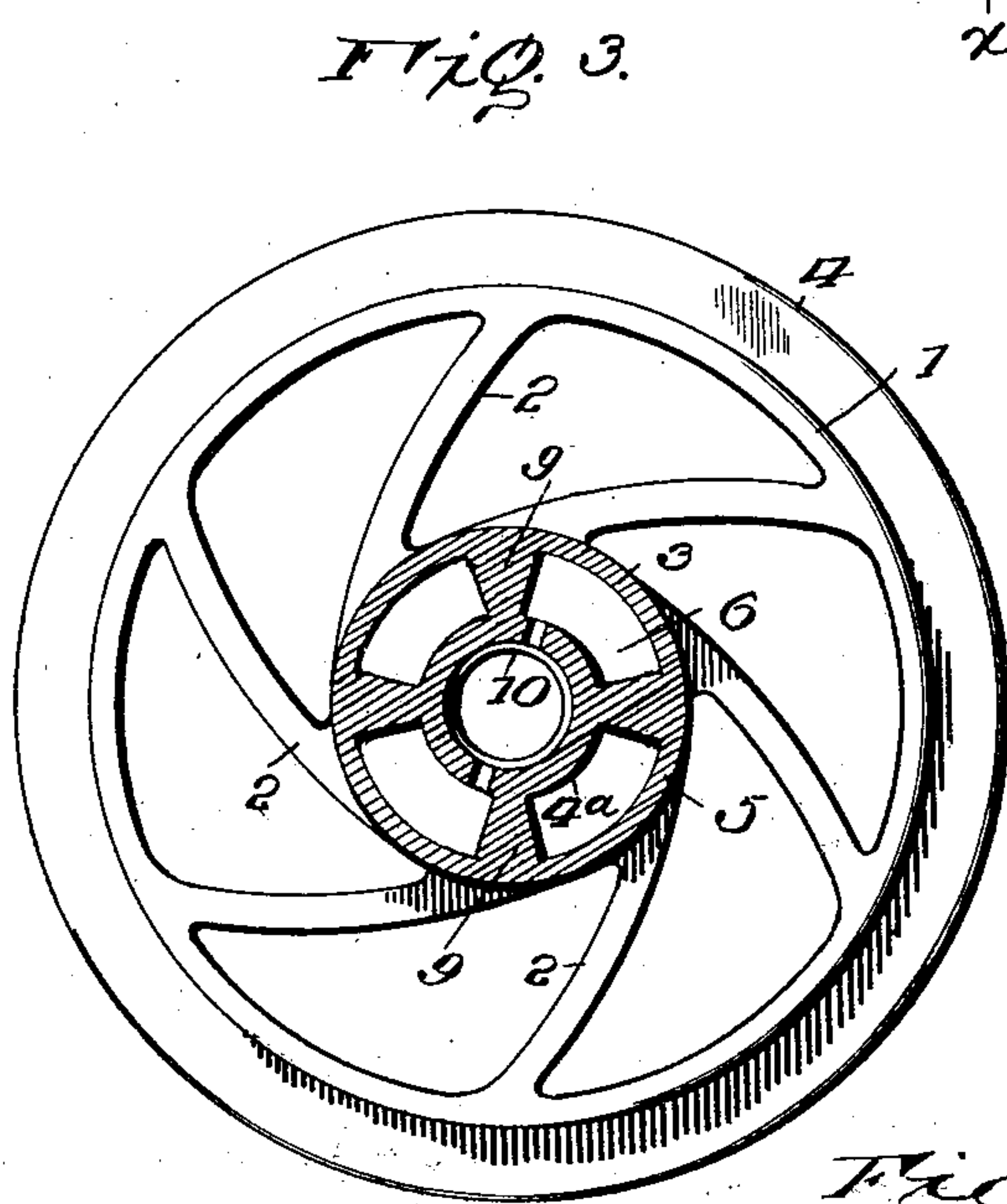


FIG. 2.

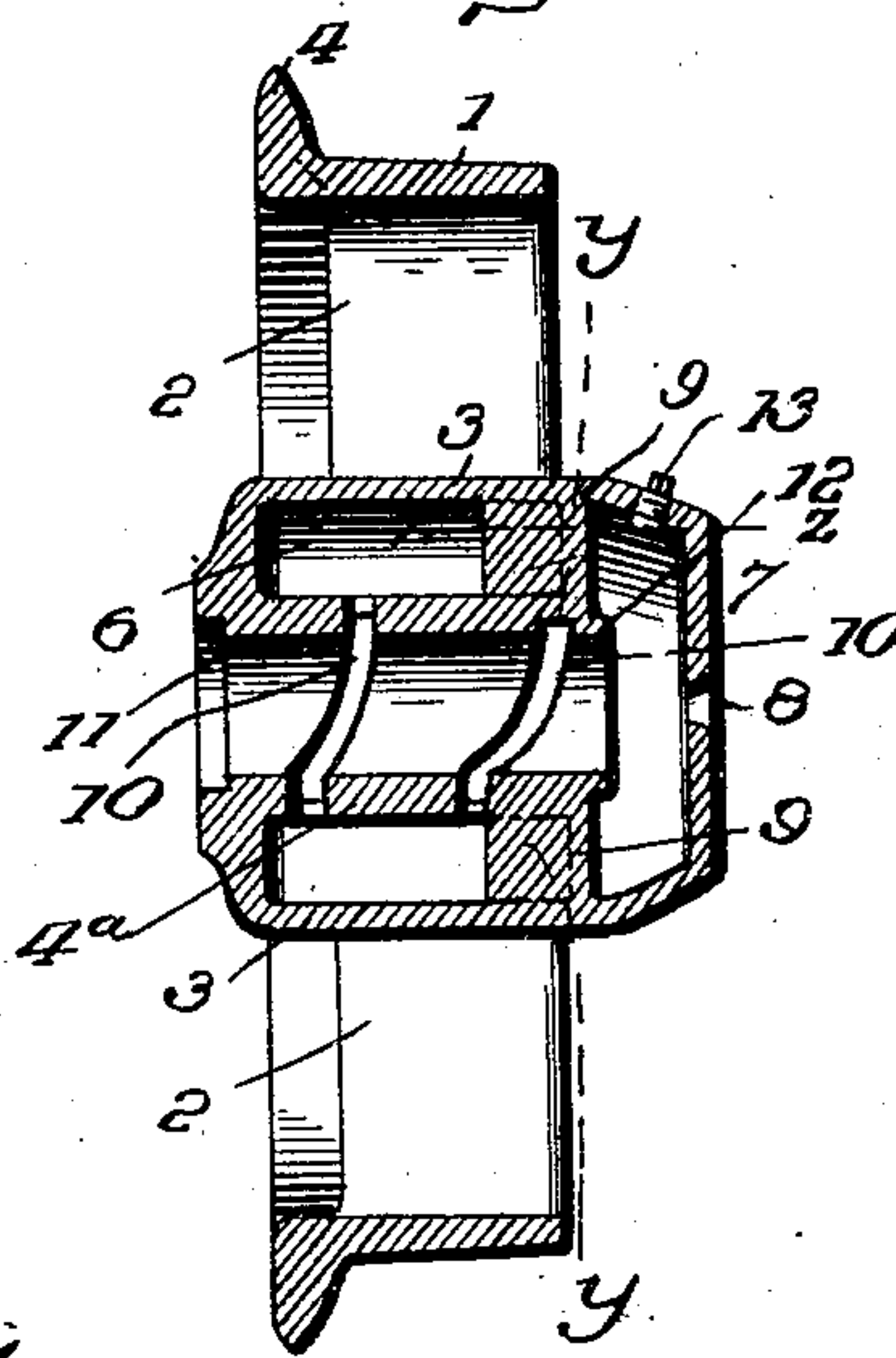
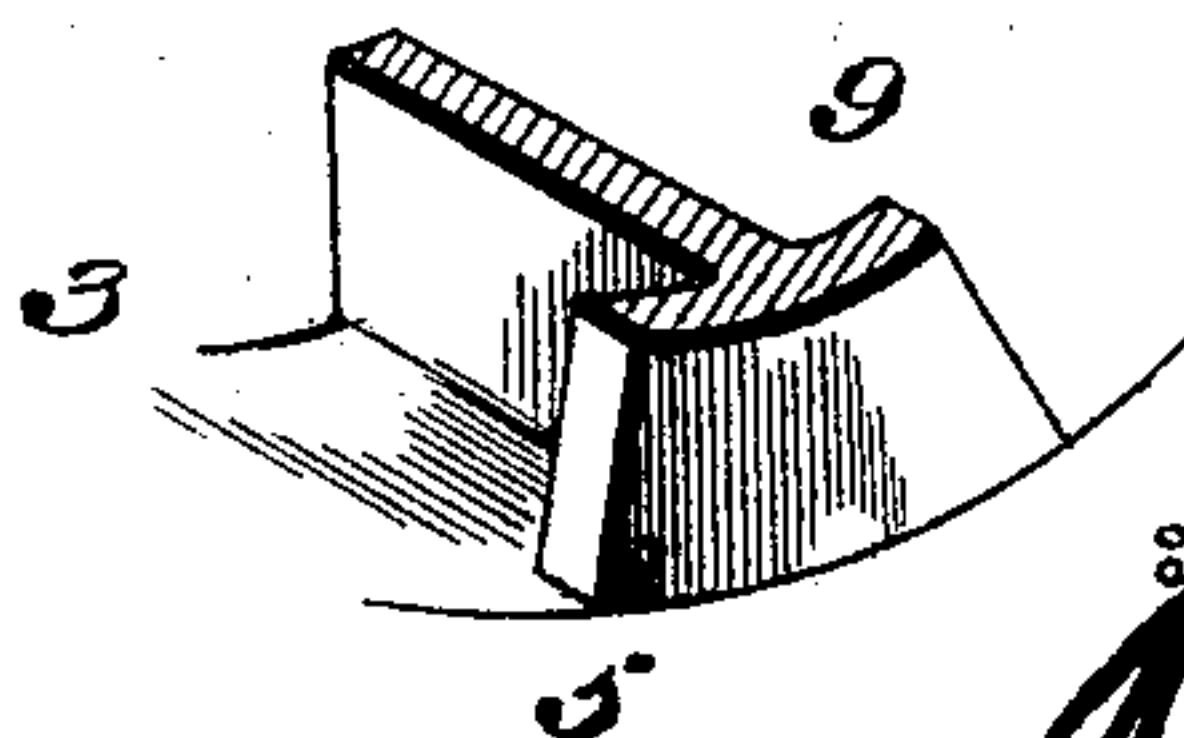


FIG. 4.



Witnesses

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CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 708,047, dated September 2, 1902.

Application filed May 5, 1902. Serial No. 106,051. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER S. JENNINGS, a citizen of the United States, residing at Athens, in the county of Athens and State of Ohio, have invented certain new and useful Improvements in Car-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in metal wheels for cars and the like and aims to provide novel features of construction, which will be hereinafter more fully set forth and finally claimed.

The wheel is of such form that it may be made in one casting and obviates the necessity of using many objectionable parts which must be manufactured separately, thereby causing heavy additional expense, as will be readily understood by those versed in the art to which said invention appertains.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a car-wheel embodying the essential features of the invention. Fig. 2 is a sectional view on the line X X of Fig. 1. Fig. 3 is a section on the line Y Y of Fig. 2. Fig. 4 is a detail perspective view showing more particularly the construction of the brace.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

As hereinbefore stated, the wheel is constructed or cast at a single operation and consists, essentially, of the rim 1, the spokes 2, and the hub 3. The rim is of common construction, being flanged, as at 4, after the usual manner to prevent the wheel from climbing the track and consequent derailing

of the car. The spokes 2 are disposed tangentially between the rim and hub and are preferably curved, so that upon removing the wheel from the mold and upon cooling the spokes will contract in the same direction, thereby relieving the rim or tread from the strain usually resulting during the aforesaid cooling. Upon contraction of the spokes the hub is given an approximately rotatory movement, the pressure being in a uniform direction, as will be readily comprehended.

The hub 3 is of peculiar formation, consisting of the inner and outer shells 4^a and 5, the outer end of the outer shell 5 extending somewhat beyond the corresponding end of the inner shell. The inner end portions of the said shells are joined, and the annular space 6 between the shells is utilized as an oil-chamber, the oil being retained within the chamber by having the outer end portion thereof inclosed by the wall 7, cast onto the outer shell of the said chamber. The wall 7 has the oil-hole 8 centrally disposed therein, this hole being outwardly flared to prevent injury to the nozzle of the oil-can upon introduction of the same therein and to facilitate the oiling.

Disposed between the shells 4 and 5 of the hub and preferably at the outer end of the inner shell are the braces 9, which are adapted to support the walls of the shells. These braces 9 may be of any number desired and are also cast with the wheel. They are of special construction, however, being of approximately T shape to lend strength and at the same time lightness, no unnecessary amount of metal being employed. This construction also allows of an increased space within the above-mentioned oil-chamber, this being of much advantage, since it obviates constant replenishing of the oil-supply within the chamber.

To supply the oil to the axle, the inner or wearing surface of the inner shell 4 is spirally grooved, the terminations of the said groove (designated at 10 in the drawings) leading into the oil-chamber through openings through the shell. This oil-groove is formed spirally to prevent the wearing of a shoulder upon the axle, thus allowing equal and proper distribution of the oil over the wearing-sur-

face of the axle. The inner side of the hub portion is counterbored at 11 to enable the collar upon the axle to fit snugly against the hub, affording an accurate gage of the wheel and also rendering the same practically dust-proof. A collar 12 is also formed upon the outer end of the inner shell 4 to receive the wear of the usual cotter-pin, (not shown,) which is introduced into the oil-chamber through the hole or opening 13, the latter normally closed by a plug or like means. This plug is flush with the inside of the oil-chamber, so that there may be no interference with the cotter-pin.

15 The wheel embodies a simplicity of construction which enables it to be easily and cheaply manufactured and possesses many and varied advantages of construction, which will be appreciated by those conversant with this class of inventions.

20 Having thus described the invention, what is claimed as new is—

In a car-wheel, a rim, a hub, tangentially disposed and curved spokes between the hub and rim, the hub comprising inner and outer

shells joined at their inner end portions, said shells forming an oil-chamber, braces of approximately T form interposed between the inner and outer shells and having their head portions disposed at the outer end portion of the inner shell and their shank portions extending horizontally and longitudinally bracing the shells, a wall closing the outer and open end of the oil-chamber, said wall being integral with the outer shell and having a tapering oil-hole centrally therethrough, an opening in the outer shell for insertion and extraction of the cotter-pin, said opening being normally closed, there being spirally-formed grooves or channels provided upon the wear-surface of the inner shell for the purpose set forth, the whole structure being of integral formation, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EBENEZER S. JENNINGS. [L. s.]

Witnesses:

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