(No Model.)

P. GELIN.

METAL WHEEL.

No. 484,586. Patented Oct. 18, 1892.

Fig. 1.

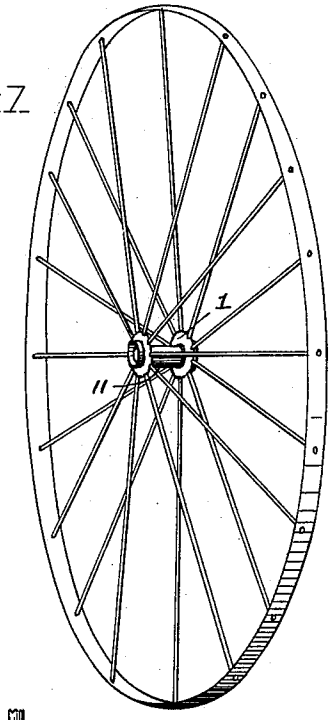
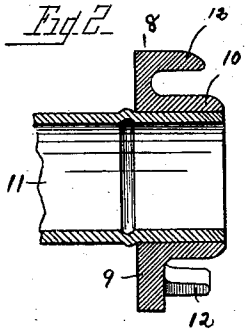


Fig. 2.



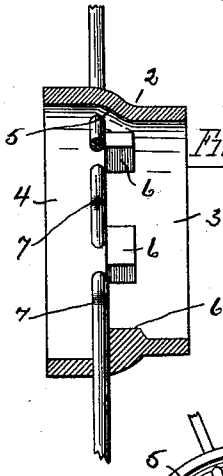
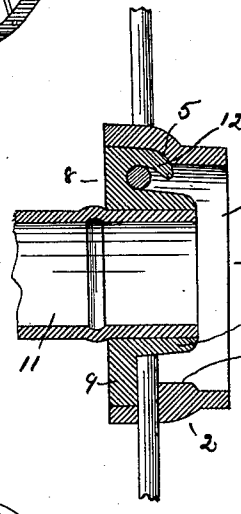


Fig. 3.

Fig. 4.



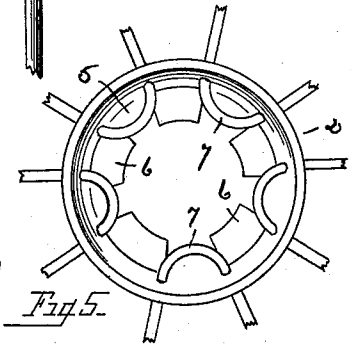


Fig. 5.

WITNESSES.

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Atty

UNITED STATES PATENT OFFICE.

PETER GELIN, OF TOLEDO, OHIO, ASSIGNOR OF ONE-HALF TO BARNEY R. BAKER, OF SAME PLACE.

METAL WHEEL.

SPECIFICATION forming part of Letters Patent No. 484,586, dated October 18, 1892.

Application filed July 5, 1892. Serial No. 438,887. (No model.)

To all whom it may concern:

Be it known that I, PETER GELIN, of Toledo, county of Lucas, State of Ohio, have invented certain new and useful Improvements in Metal Wheels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to metal wheels, and has for its object to construct a neat, inexpensive, and durable wheel, which shall be adaptable for use upon children's carriages, velocipedes, bicycles, and agricultural implements, such as cultivators, drills, horse hay-rakes, &c.

The invention consists in the novel features of the hub and the connection of the spokes therewith, as will more fully appear.

In the drawings, Figure 1 is an elevation of a complete wheel. Fig. 2 is a longitudinal vertical section of the filling-piece, shown secured upon the thimble. Fig. 3 is a longitudinal vertical section of the shell of the hub, showing the spokes in position. Fig. 4 is a longitudinal vertical section of the hub, with all parts assembled. Fig. 5 is a plan view of the shell, looking from the rear side, the spokes being in position and the filling-piece omitted.

1 designates the hub, which is composed of two like sections comprising a shell 2, having a straight annular portion 3, forming a sand-band, and an annular portion 4, of greater diameter, the shell being reduced from the greater to the less diameters by an intermediate curved portion 5. Upon the interior of the shell are formed lugs or projections 6, and immediately in rear of the same is a circumferential row of perforations, through which the ends of what are termed "return bend spokes" are inserted and the spokes drawn through until the bend 7 is close to the shell and contacting upon the forward side with two of the legs 6.

8 designates a filling-piece formed with an annular body portion 9 of a diameter to closely fit within the annular portion 4 of the shell, and having an extension 10 of a length to project slightly into the rear portion of the sand-band, and serves as a receptacle for the thimble 11.

12 designates a series of tangs, projecting from the forward side of the body portion 9 of the filling-piece, there being one tang for each return bend of the spoke, and of a length to contact with the curved portion 5 when inserted into the shell. The upper side of the extreme point of each tang is slightly curved, to guide the same downward when contacting with the curved portion of the shell.

In operation the spokes are passed through the perforations in the shell and the filling-piece is inserted, the tangs entering the space between the curved portion 7 of the spoke and the shell, the ends of the tangs contacting with the curved portion 5 of the shell, and are bent inwardly toward the axis of the hub, thereby embracing the spoke firmly, as shown in Fig. 4, and holding the same firmly in place. When the thimble is inserted in each filling-piece, the outer ends of the spokes are riveted into the rim of the wheel, and the wheel is completed.

It will be seen that all of the parts may be cast and that the act of assembling the parts requires but the employment of ordinarily-skilled labor.

The hub formed as described presents a finished appearance and is strong and durable.

What I claim is—

1. In a wheel, a hub comprising a shell, perforations circumferentially thereof, spokes passed through the perforations and having a bend within the shell, and a filling-piece formed with tangs to enter the bend of the spokes when inserted in the shell.

2. In a wheel, a shell formed of two diameters and perforated circumferentially, return-bend spokes passed through the perforations with the return bend within the shell, lugs formed upon the inner shell upon the outer side of the row perforations, a filling-piece of a diameter to fit within the largest diameter of the shell having tangs to enter the curve of the spokes, and an annular extension to receive the spindle.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

PETER GELIN.

Witnesses:
WILLIAM WEBSTER,
CARROLL J. WEBSTER.