(No Model.)

F. DENTLER.

WHEEL.

No. 435,581. Patented Sept. 2, 1890.

Fig. 1.

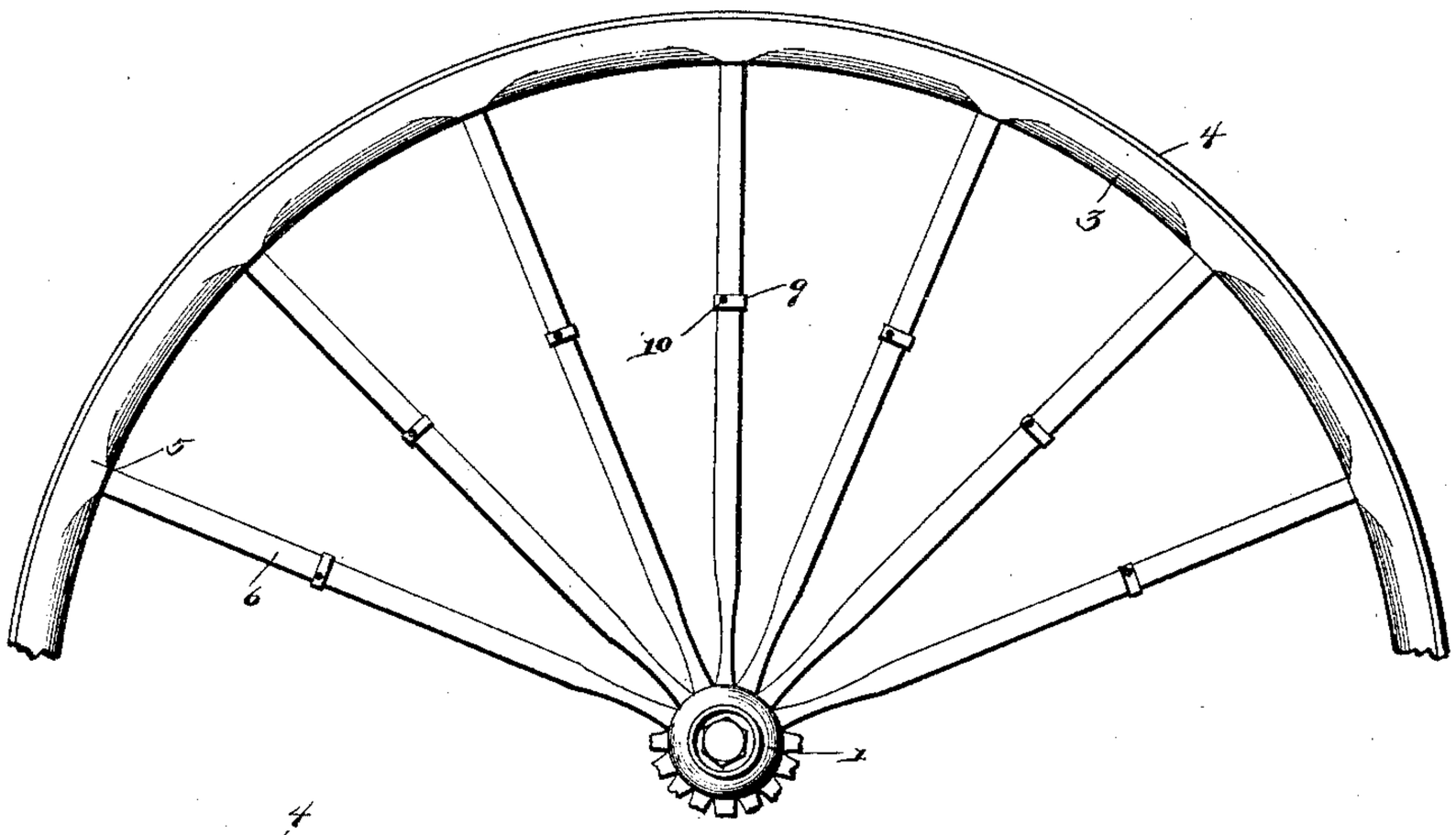


Fig. 2.

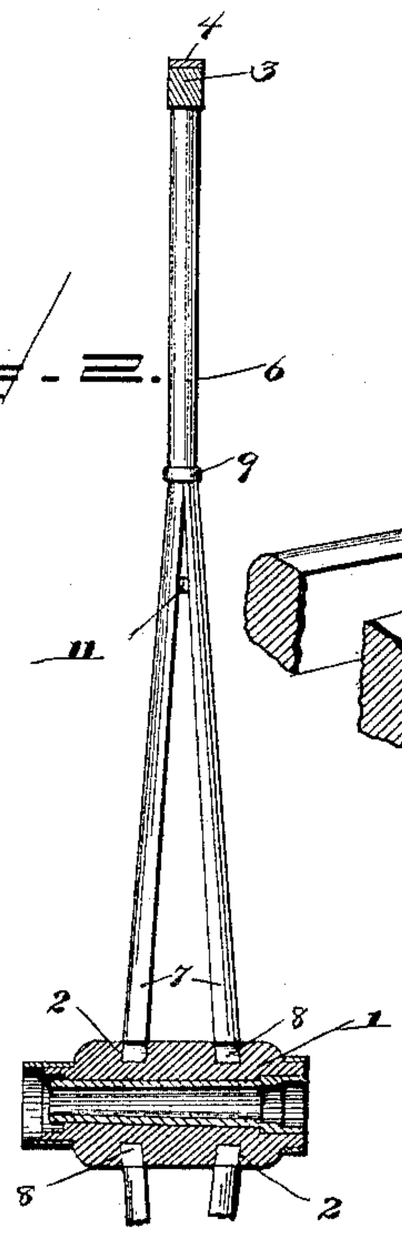


Fig. 3.

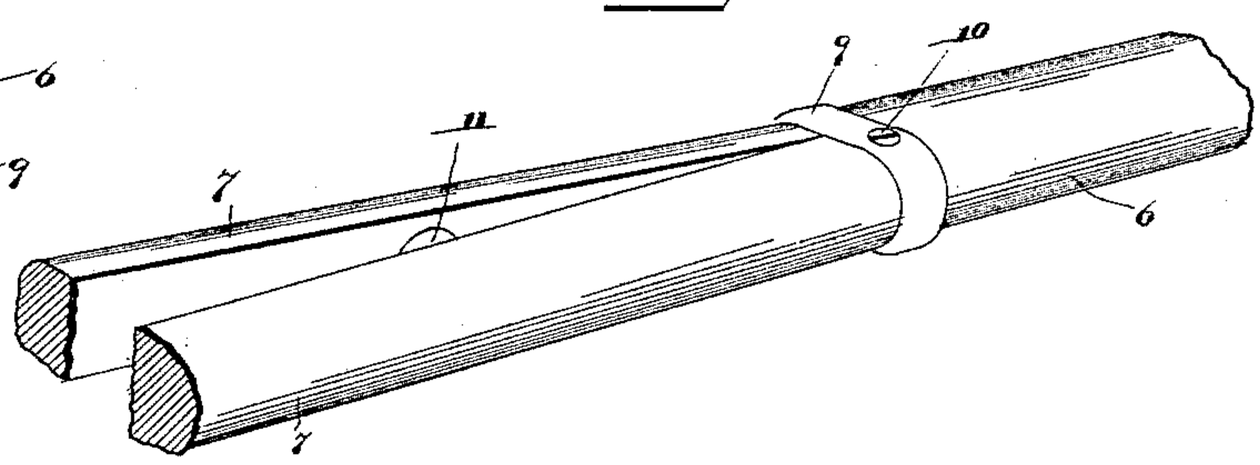
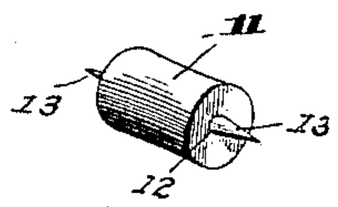


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK DENTLER, OF PARKVILLE, MICHIGAN.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 435,581, dated September 2, 1890.

Application filed May 17, 1890. Serial No. 352,120. (No model.)

To all whom it may concern:

Be it known that I, FRANK DENTLER, a citizen of the United States, residing at Parkville, in the county of St. Joseph and State of Michigan, have invented a new and useful Wheel, of which the following is a specification.

This invention has relation to improvements in wheels, the objects in view being to provide an extremely rigid light wheel and one not liable to buckle or dish, and this without sacrifice to the strength of the wheel or without in any way adding to its weight.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a wheel constructed in accordance with my invention. Fig. 2 is a central vertical section. Fig. 3 is a detail of the central portion of one of the spokes. Fig. 4 is a detail of one of the trusses.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the hub provided with the usual bands, and at each side of its center with an annular series of sockets or mortises 2, arranged at a suitable distance apart. These mortises or sockets may be located at a greater or less distance apart, at the option of the builder, and in accordance with the proposed use of the wheel.

3 represents the rim, which is of the usual construction, and is encircled by the usual tire 4, and provided upon its inner periphery with the outer spoke sockets or mortises 5.

The spokes 6 of the wheel, of which there may be any number, are split or bifurcated from their inner ends to any point beyond the same, forming the opposite bifurcations or branches 7, each of which terminates in a tenon 8, adapted to enter a mortise of each of the annular series formed in the hub. In this instance the bifurcations extend to near the center of the spokes, and in order to prevent them from further splitting a rivet may be passed through the bifurcations, or, as herein shown, a metallic ring may be driven snugly upon the same.

9 represents the metallic ring, and to further aid in its retention I insert through the same and into the bifurcations a screw or rivet 10.

A wheel thus constructed, it will be observed, is extremely strong and rigid, for the reason that each of the spokes is thoroughly braced at each side of the center of the hub, and any dishing or buckling of the wheel is almost impossible. The bifurcations, it will be observed, are each one-half the thickness of the spoke, and therefore do not add any weight over an ordinary solid spoke.

In order to brace the bifurcations and strengthen the same throughout their lengths and thus enable me to employ extremely light spokes, short truss-rods are wedged between the same near their inner extremities or at the fork of the spoke. 11 designates the aforesaid truss-rods, and the same may be of wood or metal, leather, &c. In this instance I form them of leather and pass through them metal pins 12, terminating at their ends in points 13 for taking into the spokes.

Having thus described my invention, what I claim is—

1. The herein-described wheel, the same consisting of the hub provided at each side of its center with the circumferential series of sockets 2, the rim 3, having sockets 4, the spokes 6, bifurcated at their longitudinal centers from their inner ends to about their middles, said bifurcations terminating in tenons 8, fitting the sockets 2, and the outer ends terminating in tenons fitting the sockets of the rim, and the trusses 11, wedged between the bifurcations, and each provided with a metal pin 12, passed longitudinally therethrough and terminating beyond the ends of the trusses in points 13, entering the bifurcations, substantially as specified.

2. The herein-described wheel, the same consisting of the hub provided at each side of its center with the circumferential series of sockets 2, the rim 3, having sockets 4, the spokes 6, bifurcated at their longitudinal centers from their inner ends to about their middles, said bifurcations terminating in tenons 8, fitting the sockets 2, and the outer ends terminating in tenons fitting the sockets of the rim, the trusses 11, wedged between the bifurcations, and each provided with a

metal pin 12, passed longitudinally therethrough and terminating beyond the ends of the trusses in points 13, entering the bifurcations, metal bands 9, driven to position upon the spokes and snugly fitting the same at the upper ends of the bifurcations, and the rivets 10, passed through the bands and into the spokes, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANK DENTLER.

Witnesses:
DAVID BENFER,
FRANK E. MCELRATH.