

(No Model.)

B. H. GEDGE.
WHEEL.

No. 444,430.

Patented Jan. 13, 1891.

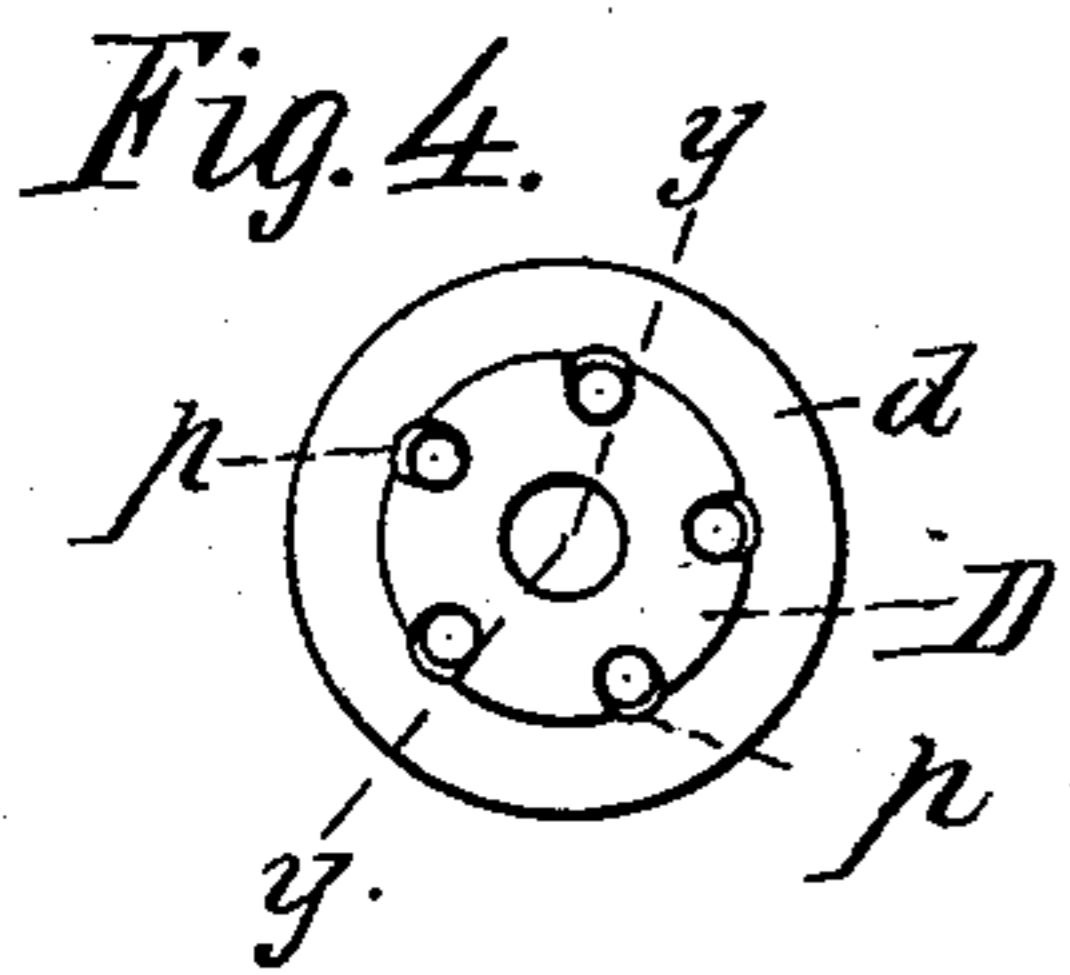
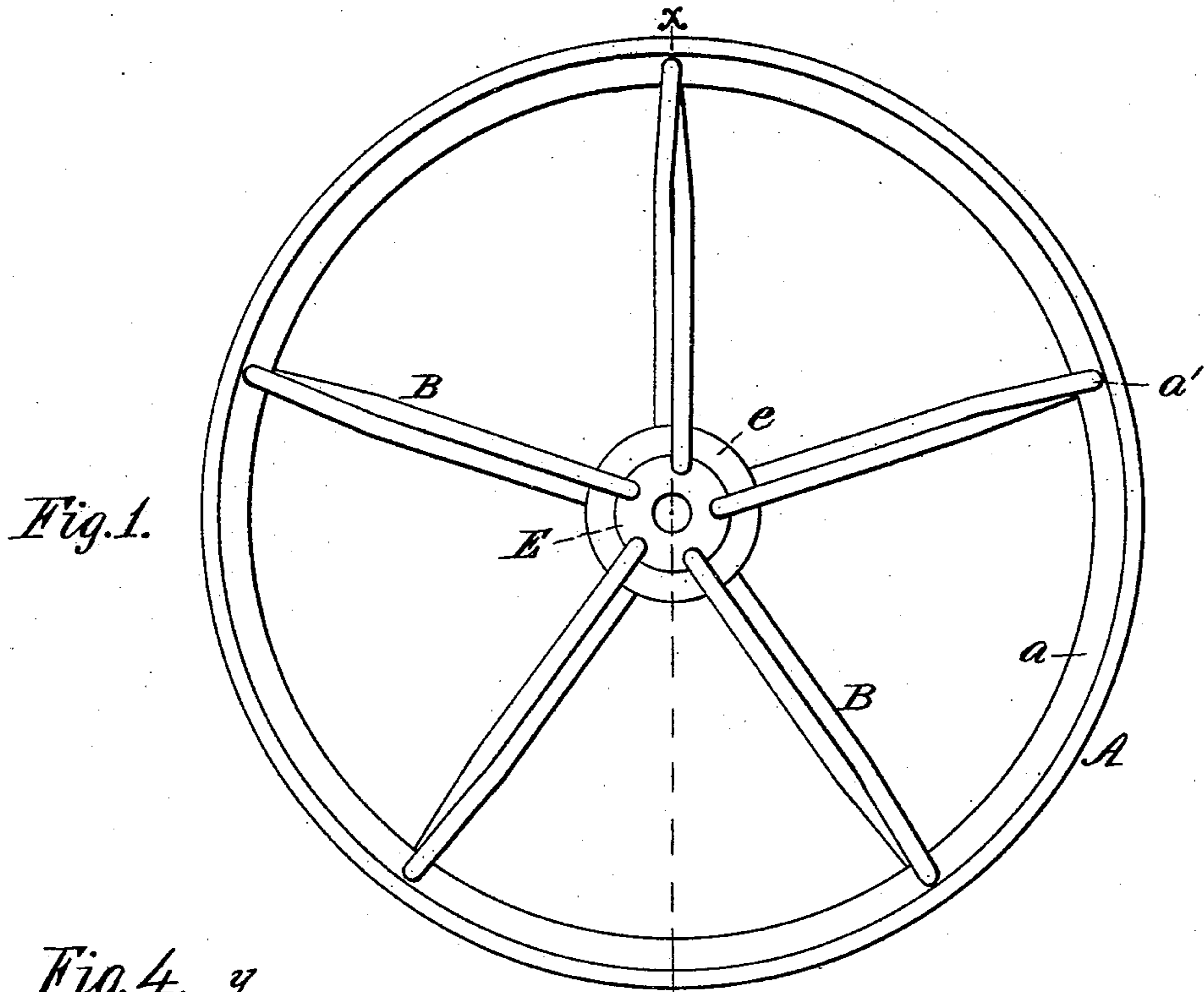


Fig. 2.

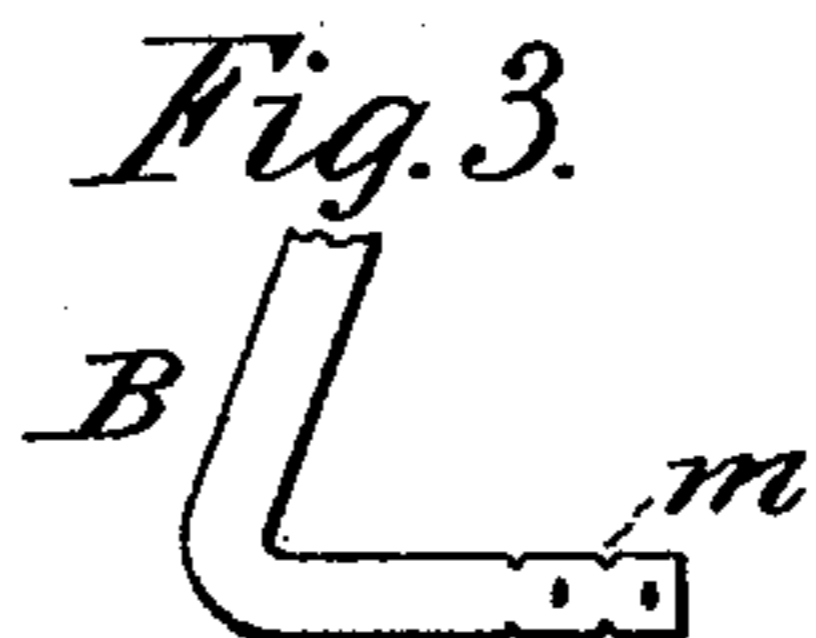
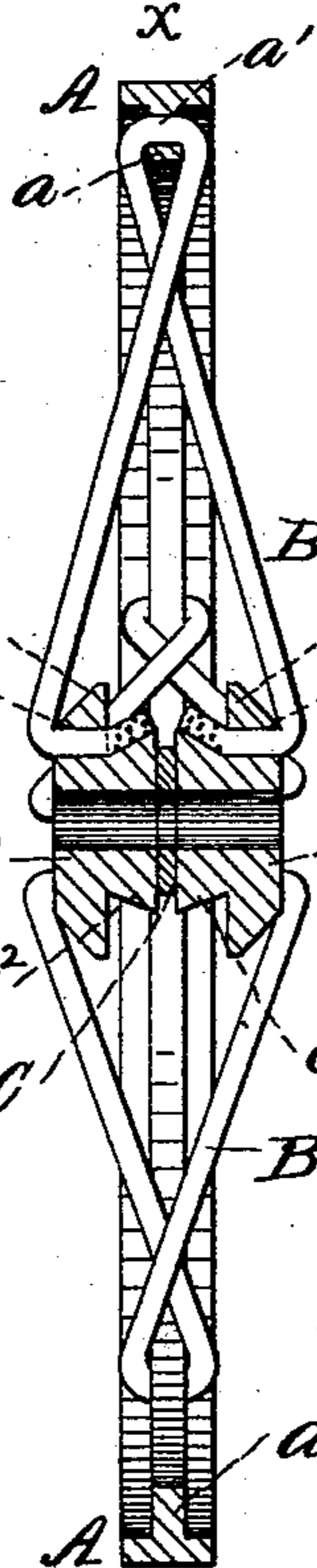
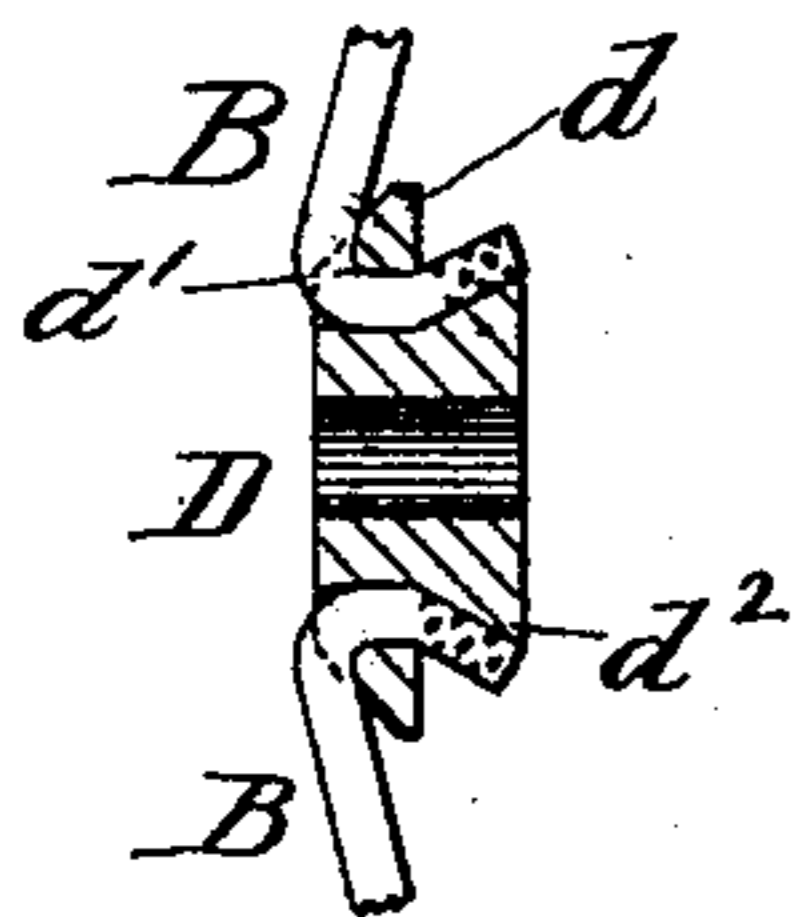


Fig. 5.



Witnesses:

H. Smith.

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Inventor:

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UNITED STATES PATENT OFFICE.

BURTON H. GEDGE, OF COVINGTON, KENTUCKY.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 444,430, dated January 13, 1891.

Application filed January 3, 1889. Serial No. 295,335. (No model.)

To all whom it may concern:

Be it known that I, BURTON H. GEDGE, a citizen of the United States, and a resident of the city of Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Wheels, of which the following is a specification.

The several features of my invention and the advantages arising from their use, conjointly or otherwise, will be apparent from the following description.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a wheel embodying my improvements. Fig. 2 is a central cross-section of the same, taken at the line xx of Fig. 1. Fig. 3 is a side elevation of the end of a spoke in position in the hub, the latter being shown in section, and showing how the end of each spoke is preferably nicked or channeled. Fig. 4 is an end elevation of the hub, showing radial channels for the reception of the spokes. Fig. 5 is a diametrical section of this hub, taken at the dotted line yy of Fig. 4, and also showing how the spokes are set in their respective channels.

The rim or tire A is provided with an inwardly-projecting web a , which is pierced at suitable intervals by the openings a' for the transmission of the wire spokes B.

The hub is made in three parts, two similar outer pieces D E and a central separating-piece C. The piece D is provided with the flange d , which is pierced with holes d' , corresponding in number to the holes a' . Behind or within the flange d the piece D is provided with the flange d^2 , whose face is beveled and inclines toward the central plane of the wheel and toward the rim, as shown in Fig. 2. The piece E, like piece D, is provided with the flange e , having perforations e' and beveled flange e^2 , the beveled face of this flange inclining toward the rim and the central plane of the wheel. Each spoke B is made of a wire, which is passed through one of the holes a' in the web a , then bent to pass to opposite sides of the hub, where the ends of the wire are attached, one end of the wire passing through an opening d' in the flange d and the other through an opening e' in the flange e . On each side the wire, after being

passed through the opening in the flange, meets the beveled face of the second flange, as $d^2 e^2$, which latter bends the wire on itself, as shown in Fig. 2. The bend thus formed in the wire serves to hold it in place by forcing an obstacle to its withdrawal. After the spokes have all been inserted in this way the center piece C is placed between the pieces D and E to complete the hub. This separation of the pieces D and E tightens the spokes and stiffens the whole wheel. The wheel when thus complete is preferably dipped in a bath of tin or zinc, (galvanic preferred,) or the like, and the wheel is thus completely coated with a non-rusting material suitable for preventing the wheel from being injured by the action of the weather. All of the interstices are filled with this metallic coating, and all of the parts are soldered or firmly secured together. Thus there are no loose parts, and the wheel is strengthened.

For the purpose of effectually soldering or securing the ends of the spokes to their respective portions of the hub, these ends may be provided with dents, nicks, or cross-channels m , substantially as shown in Fig. 3. When the wheel is coated as aforementioned, the soldering metal enters said nicks, and thereby the better connects the end of the spoke to its respective hub. In this connection it may be remarked that each outer face of the hub is preferably provided with radial channels p . Each of these channels receives its respective spoke, substantially as shown in Fig. 4. The advantage of such a construction is that it seams the hub and spokes more firmly together and prevents any motion of the hub independently of the rim of the wheel. The spokes are thereby more securely soldered to the hub by the material with which the wheel is coated. The general appearance of the wheel is also improved by thus sinking the spokes into the hub.

The crossing of the spokes near the rim or felly of the wheel enables me to give the spokes a great or wide stagger, and at the same time keep the hub comparatively narrow—that is to say, in its axial length.

While the various features of my invention are preferably employed together, one or more of said features may be used without the remainder, and in so far as applicable one or

more of said features may be used in connection with wheels varying in construction from the wheel herein specifically mentioned.

What I claim as new, and desire to secure
5 by Letters Patent, is—

1. The combination of the rim, spokes attached to the rim and having dents or channels *m*, and the hub having perforated flanges and inner beveled flanges, the wheel being
10 coated with a coat of metal, substantially as and for the purposes specified.

2. The combination of the rim and central hub having external perforated flanges and sunken channel *p*, and inner beveled flanges,
15 the spokes attached to the rim and having dents or channels *m* at or near one end and received into their respective channels *p*, substantially as and for the purposes specified.

3. In a wheel, a rim, metallic spokes attached thereto, a hub divided at right angles 20 to its axis, each division of the hub having internal beveled flange *d*², and in the exterior flange the perforations *p*, which latter, if extended inwardly, would strike the bevel of the internal flange, the inner end of the spoke 25 being passed through the perforation *p* and bent upward and lying on the beveled face of the inner flange and securely interlocked between said inner flange and the upper inner edge of the perforation *p*, substantially as and 30 for the purposes specified.

BURTON H. GEDGE.

Attest:

WM. E. JONES,
G. A. W. PAVER.