B. F. SEYMOUR.

VEHICLE WHEEL, &c.

APPLICATION FILED JULY 20, 1918.

1,384,783. **Patented July 19, 1921.**

2 SHEETS—SHEET 1.

Fig. 1.

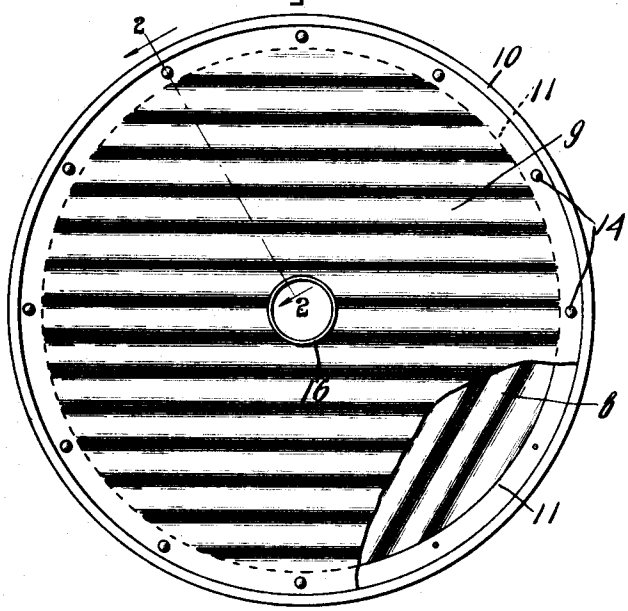


Fig. 2.

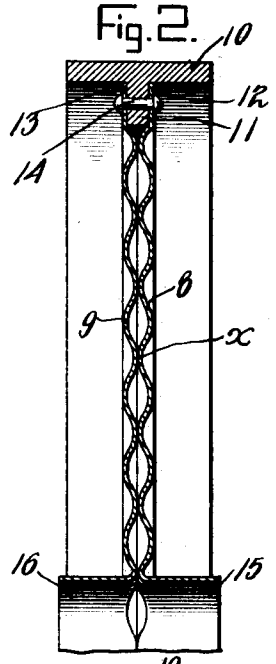


Fig. 3.

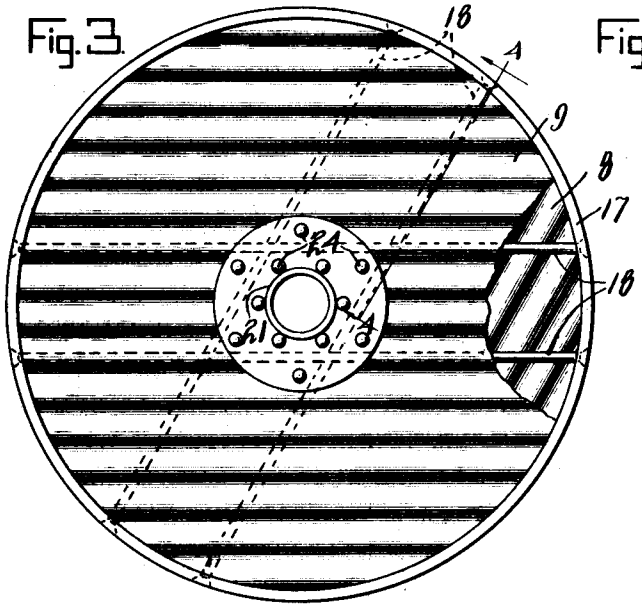
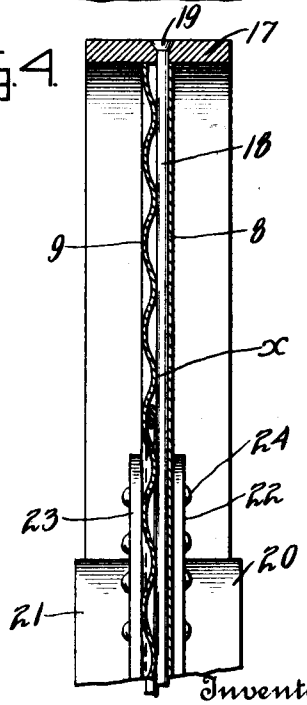


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

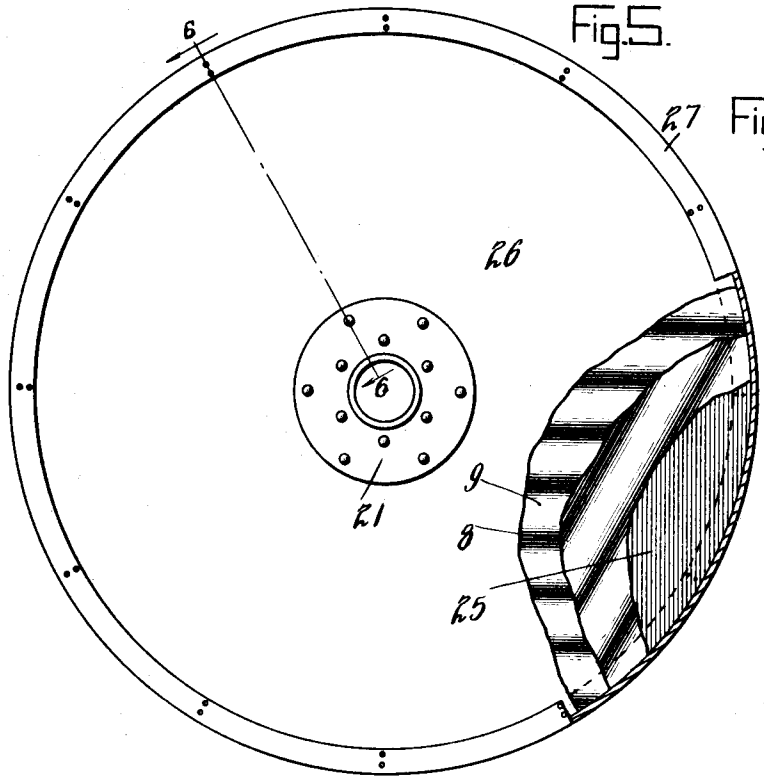


Fig. 6.

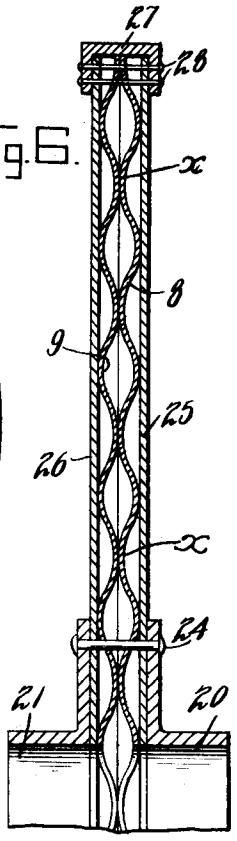
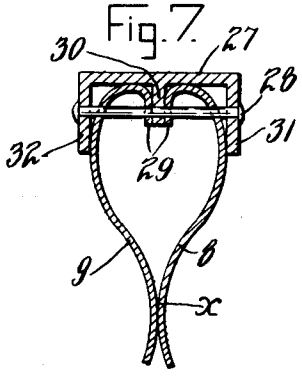


Fig. 7.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. SEYMOUR, OF WASHINGTON, DISTRICT OF COLUMBIA.

VEHICLE-WHEEL, &c.

1,384,783. Specification of Letters Patent. Patented July 19, 1921.

Application filed July 20, 1918. Serial No. 245,857.

To all whom it may concern:

Be it known that I, BENJAMIN F. SEYMOUR, a citizen of the United States, residing at Rutland Courts, Washington, District of Columbia, have invented certain new and useful Improvements in Vehicle-Wheels, &c., of which the following is a specification.

The present invention relates to corrugated metal structures and consists in the combinations and arrangements of elements hereinafter described and particularly set forth in the accompanying claims.

The purpose of the invention is to provide a structure of corrugated metal sheets arranged and secured in a manner adapted to give maximum strength with the minimum of material and lightness of structure. The principle is particularly adapted to the construction of vehicle wheels, and especially truck wheels, by reason of its ability to withstand heavy and rough usage and extremely light weight.

To these ends the invention is shown by way of illustration in the accompanying drawings, wherein—

Figure 1 is a side elevational view of the wheel;

Fig. 2, a central sectional view thereof taken on the line 2—2 thereof looking in the direction of the arrows, partly broken away for clearness;

Fig. 3, a side elevational view of a modified form of the wheel;

Fig. 4, a sectional view thereof taken on the line 4—4 of Fig. 3 and looking in the direction of the arrows;

Fig. 5, an elevational view disclosing a further modification;

Fig. 6, a sectional view taken on the line 6—6 and looking in the direction of the arrows, and

Fig. 7, a modified arrangement for securing the wheel rim.

Referring to the construction in further detail wherein like reference characters designate corresponding parts in the different views shown, the wheel is formed from a pair of circular or disk-like sheets 8 and 9 of suitable corrugated metal and disposed face to face or in contact after the manner shown in Fig. 2. Said sheets 8 and 9 have their corrugations disposed in preferably the angular relation shown in Fig. 1 as it is believed that this arrangement gives a more sturdy and durable structure than with the corrugations at true right angles to each other. It will be understood of course that the angular relation between the plates may be selected at will.

The rim 10 is of metal and has a central ridge or flange portion 11 to which the peripheral side edges 12 and 13 of the plates 8 and 9 respectively are secured. The securing means consists preferably of bolts 14 as shown or any other suitable fastening devices may be employed. The hub portion of the wheel is formed by having the inner peripheral edges 15 and 16 of each plate turned at right angles after the manner shown.

In the construction disclosed in Figs. 3 and 4, the plates or sheets 8 and 9 are disposed with their surfaces in contact as above described, and the rim 17 is secured by means of a number of pairs of tie rods 18 that extend for substantially the full diameter of the wheel and are made secure by having their ends 19 upset and counter-sunk in the wheel rim 17. (See Fig. 4.) The hub portion of the wheel in this instance consists of a pair of tubular members 20 and 21 having flange portions 22 and 23 secured by the several bolts 24.

The arrangement shown in Figs. 5 and 6 contemplates the employment of an inclosing structure with the corrugated plates 8 and 9, and said structure consists of a pair of flat metal sheets or plates 25 and 26 that are secured to the corrugated sheets by the fastening bolts 24 of the hub members 20 and 21 as shown. The rim member 27 forms an annular trough that receives the peripheral portions of the corrugated plates 8 and 9, and the said plates 25 and 26, and is secured thereto by a suitable number of equally spaced pairs of bolts or pins 28.

In lieu of the arrangements for securing the wheel rim as shown in Figs. 2, 4 and 6, that illustrated in Fig. 7 may be used. In this instance the corrugated members 8 and 9 have inturned peripheral portions 29, and the wheel rim 27 has a middle flange 30 in addition to the side flanges 31 and 32. The inturned edge of each corrugated plate fits within one of the two channel ways, and the securing pin or bolt 28 passes through the several parts, as shown. The intersecting corrugated plates are secured together preferably by spot welding at a plurality of the intersecting points, and in the structure shown in Figs. 5 and 6 the corrugated plates are additionally secured by spot welding to the side plates 25 and 26. Any other suit-

able manner of securing the plates may of course be used.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of my invention, and therefore I do not wish to be limited to such features except as may be required by the claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. A wheel of the character described constructed of metal plates having parallel corrugations, and having the corrugations of the respective plates crossing, substantially as set forth.

2. A wheel of the character described constructed of metal plates having parallel corrugations, said plates secured together in surface contact and having the corrugations of the respective plates crossing, substantially as set forth.

3. A vehicle wheel comprising a plurality of plates having parallel corrugations, means securing said plates together with their corrugations crossing, members providing a wheel rim, and members providing a hub, substantially as set forth.

4. A vehicle wheel comprising a plurality of plates having parallel corrugations, means securing said plates together with their corrugations crossing, a plurality of rods secured to said plates, a wheel rim secured by said rods, and members providing a hub, substantially as set forth.

5. A wheel of the character described constructed of corrugated metal plates, having the corrugations of the respective plates crossing; and said plates secured together by spot welding at points of crossing, substantially as set forth.

6. A wheel of the character described constructed of metal plates having parallel corrugations, the corrugations of the respective plates disposed in relatively angular relation and crossing; and said plates secured together by spot welding at points of crossing, substantially as set forth.

In testimony whereof I affix my signature.

BENJAMIN F. SEYMOUR.