

H. J. GILBERT.
PULLEY.

APPLICATION FILED MAR. 8, 1904.

1,026,795.

Patented May 21, 1912.

2 SHEETS-SHEET 1.

Fig. 1.

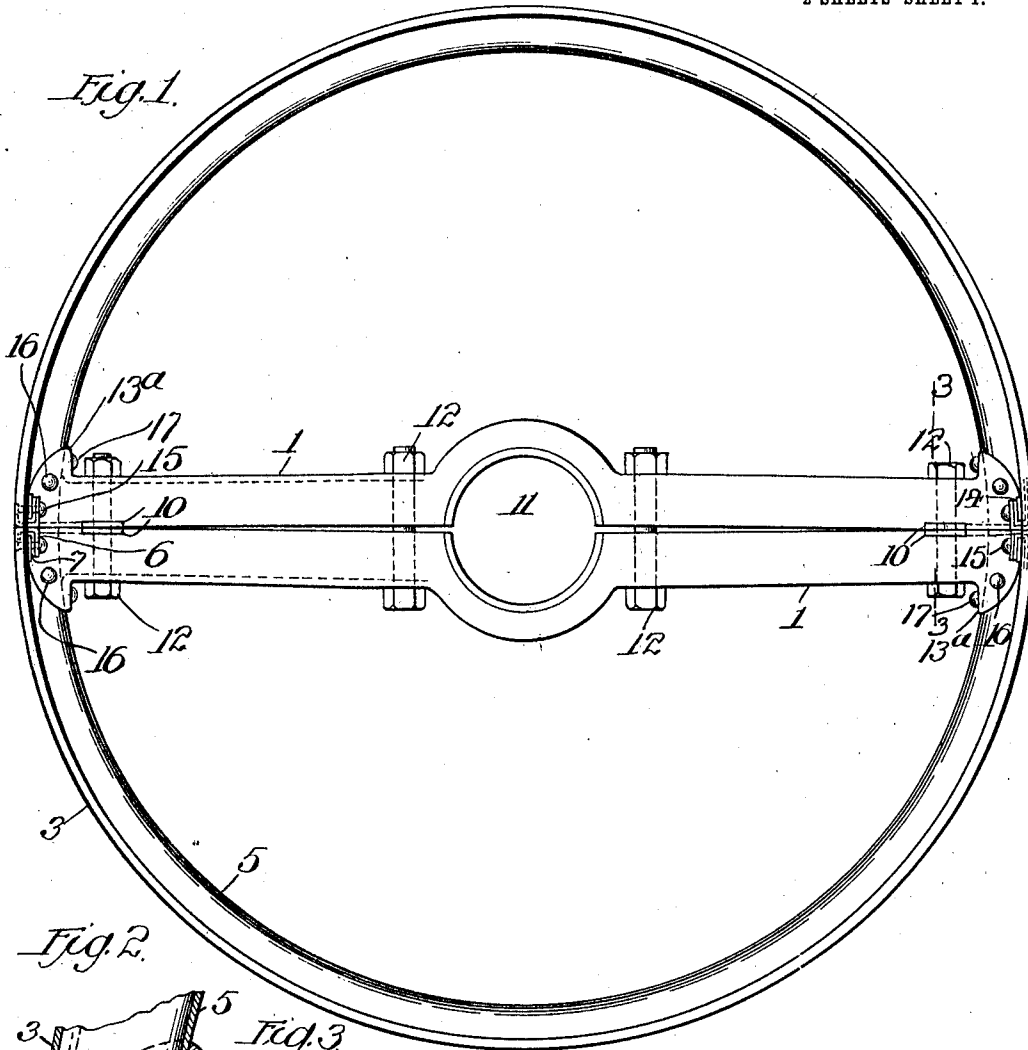


Fig. 2.

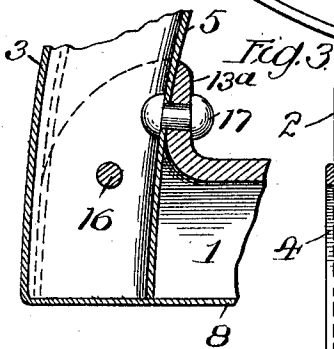
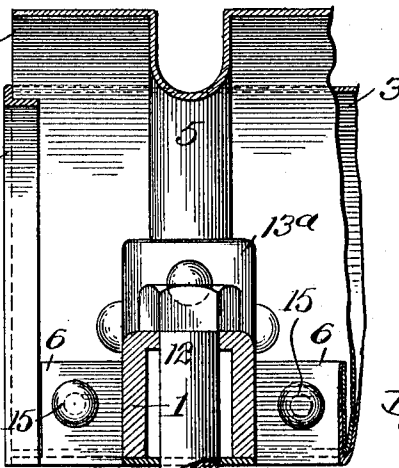


Fig. 3.



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2 SHEETS—SHEET 2.

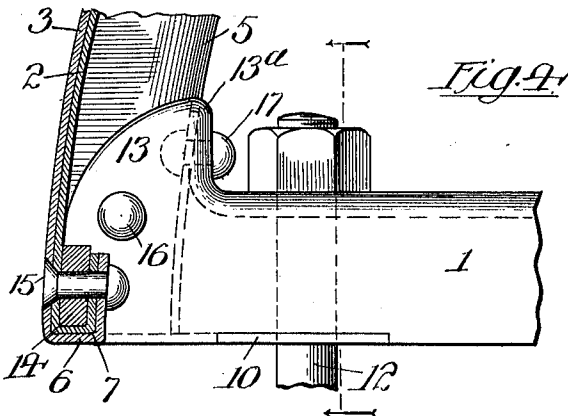


Fig. 4

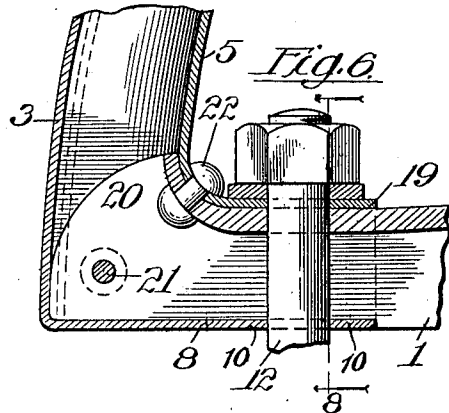


Fig. 6

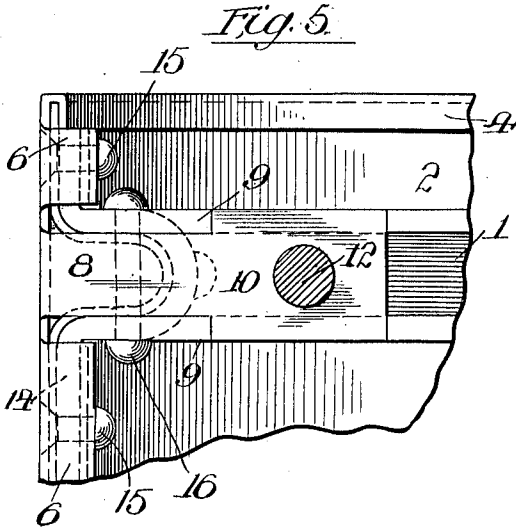


Fig. 5

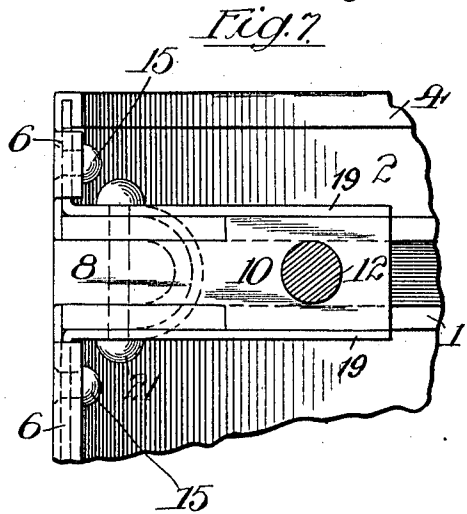


Fig. 7

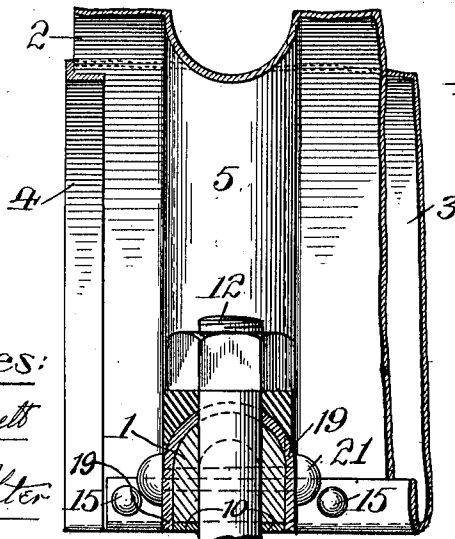


Fig. 8

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PULLEY.

1,026,795.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY J. GILBERT, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Pulleys, of which the following is a specification.

My invention has relation to pulleys and the like, more particularly pulleys formed from sheet metal, and the object thereof is to produce a pulley of this character which shall be simple and comparatively inexpensive of manufacture and efficient and durable in use.

The features of advantage and utility of my new and improved construction of pulley will be apparent from the description hereinafter given.

In the drawings, Figure 1 is a side elevation of a pulley embodying my invention; Fig. 2 an enlarged section of one of the joints of my pulley; Fig. 3 a sectional elevation on line 3—3 of Fig. 1 but on a larger scale; Fig. 4 an enlarged elevation of one of the meeting ends and associated parts of the pulley; Fig. 5 a bottom plan of the parts shown in Fig. 4; Figs. 6 and 7 views corresponding to Figs. 4 and 5 but illustrating a modified form of construction; and Fig. 8 a section on line 8 of Fig. 6.

The same reference characters refer to corresponding parts in the several views of the drawings.

My improved pulley herein illustrated is of the split type and comprises two similar halves, each pulley half consisting of a spoke arm 1 and the rim segment comprising, as shown, the two parts or rims 2 and 3. Each rim is substantially semi-circular (except as hereinafter explained), the outer one 3 having its edges 4 infolded over the edges of the inner rim 2, as clearly shown in Fig. 3, whereby the rim parts are interlocked. The inner rim is provided with a circumferentially expanded portion or corrugation 5, which serves to strengthen such inner rim as well as the outer one.

The meeting ends of the outer and inner rim segments are provided with tongues 6 and 7 respectively. The middle portion of the inner rim is left to terminate at the meeting line or joint between the pulley halves, but the corresponding portion of the outer rim is provided with a long tongue or extended end 8 arranged to be folded in-

wardly and to be interlocked with its spoke arm. For this latter purpose each of these extended ends is made T-shape by reason of two opposite recesses 9 forming an end head 10.

As clearly illustrated in Figs. 4 and 5, the tongues 6 and 7, on the ends of the rim segments, are folded inwardly and backwardly substantially parallel with the rims, thereby forming sockets to engage the spoke arms in a manner now to be described. The spoke arms are approximately U-shape in cross-section, with their central portion radially expanded to form the hub portion or shaft opening 11. These spoke arms, and consequently the pulley halves, are held or secured together to form the complete pulley by means of the sets of clamping bolts 12 passed through the spoke arms as shown. The ends 13 of the spoke arms are upwardly flanged and also folded around the lower ends of the corrugation 5 of the inner rim 2 so as to fit and embrace the contour or outer surface thereof, as indicated in Figs. 4 and 5. The extreme lower ends or corners of the spoke arms are outwardly and laterally flanged (substantially at right angles to the line of the spoke arms), so as to form lateral flanges or tongues 14 which fit into and are engaged by the sockets hereinbefore described as formed by the inturned tongues 6 and 7 of the meeting ends of the rim structure. Rivets 15 are passed through the tongues 6, 7 and 14 and through the rim to hold such interlocked parts securely together. Also rivets 16 are passed transversely through the ends 13 and the corrugation 5 of the inner rim, and by preference a rivet 17 is arranged to secure the upwardly flanged portion 13^a to such corrugation.

As clearly shown in Fig. 4, the corrugation at each end extends down as far as the infolded extended end 8 of the outer rim against which it may abut. Each of the extended ends 8, formed as hereinbefore explained, is inlaid in the parallel sides or flanges of the U-shaped spoke arms, which are recessed to receive the head 10 of the extended ends 8 whose portion between the recesses 9 lies between the flanges of the spoke arms and therefore flush with the edges thereof. The clamping bolts 12, by preference, though not of necessity, pass through the extended ends of the outer rim

(through holes in the head 10), as well as through the spoke arms, as already explained.

In Figs. 6, 7 and 8, I have shown a modified form of construction, in which each end 19 of the corrugation 5 is flanged inwardly toward the center of the pulley and arranged to receive the somewhat upwardly curved or flanged end 20 of its spoke arm, whose extreme end extends as far as the outer rim, as seen in Figs. 6 and 7. As in the other form of construction the outer rim has middle tongues or extended ends 8 which are inlaid in the spoke arms, and also shorter tongues 6 which are infolded to form sockets to engage simply the lower ends of the inner rim, inasmuch as the spoke arms, in this instance, are not provided with lateral tongues or flanges. Rivets 21 and 22 serve to secure the spoke ends and corrugations together, and the clamping bolts 12 are passed through the end 19 of the corrugation, the spoke arms and the infolded end 8 of the outer rim. The rim may be of any width desired, and likewise any desired number of sets of spoke arms and rim corrugations may be employed according to width of pulley face or as necessity may require.

I claim:

1. A pulley comprising rim segments each composed of two parts 2 and 3, the part 3 having its edges inturned and bent around the edges of the part 2, and spoke arms interlocked with both parts of the rim; substantially as described.

2. A pulley comprising rim segments each composed of two parts 2 and 3, the part 3 having its edges inturned and bent around the edges of the part 2 and the part 2 having an inwardly directed portion or corrugation 5, and spoke arms interlocked with both parts of the rim and formed at their ends to embrace said corrugation; substantially as described.

3. A pulley comprising a two-part rim, the inner one of which parts has a hollow circumferential corrugation, and spoke arms whose ends are fitted to such corrugation and secured thereto by rivets passing through said corrugation and ends of the spoke arms; substantially as described.

4. A pulley comprising spoke arms, and two-part rim segments, the meeting ends of one of which parts have infolded tongues bent to form sockets and secured to the spoke arms; substantially as described.

5. A pulley comprising spoke arms, and two-part rim segments, the outer one of which parts has two separate infolded tongues secured to the spoke arms; substantially as described.

6. A pulley comprising spoke arms, and two-part rim segments, the central portions of the meeting ends of the outer one of

which parts are extended as tongues and infolded to engage the spoke arms and also the ends of the inner rim; substantially as described.

7. A pulley comprising spoke arms, and two-part rim segments, the meeting ends of the outer one of which parts are extended and formed as three tongues, the inner one of the tongues being infolded and connected with the spoke arms and the other two tongues being folded inwardly and backwardly to engage the ends of the inner rim; substantially as described.

8. A pulley comprising a two-part rim, the inner one of which parts has a circumferential and curved corrugation and spoke arms whose ends are fitted to conform to and embrace the said corrugation and riveted thereto; substantially as described.

9. A pulley comprising a two-part rim, the inner one of which parts has a circumferential and curved corrugation, spoke arms whose ends are fitted to conform to and embrace said corrugation, and rivets passed through said corrugation and spoke ends; substantially as described.

10. A pulley comprising two-part interlocking rim segments whose meeting ends are infolded substantially parallel with the rim to form sockets, and spoke arms having end tongues engaged by said sockets; substantially as described.

11. A pulley comprising two-part rim segments whose meeting ends are infolded substantially parallel with the rim to form sockets, spoke arms having end tongues engaged by said sockets, and rivets passed through such infolded ends and said tongues; substantially as described.

12. A pulley comprising two-part rim segments, the inner one of which parts has a circumferential and curved corrugation, and spoke arms whose ends are shaped to conform to and embrace the corrugation and are interlocked with the meeting ends of the rim; substantially as described.

13. A pulley comprising two-part rim segments, the inner one of which parts has a circumferential and curved corrugation, and spoke arms whose ends embrace the end of such corrugation and are connected with the meeting ends of the rim; substantially as described.

14. A pulley comprising two-part rim segments, the inner one of which parts has a circumferential corrugation, and spoke arms whose ends embrace the end of such corrugation and which are provided with laterally directed end tongues and arranged to interlock with the meeting ends of the rim; substantially as described.

15. A pulley comprising two-part rim segments whose meeting ends are infolded to form sockets, the inner rim having a circumferential corrugation, and spoke arms

whose ends embrace the end of such corrugation, and, which are provided with laterally directed end tongues arranged to be engaged by such sockets; substantially as described.

16. A pulley comprising two-part rim segments whose meeting ends are infolded to form sockets, the inner rim having a circumferential corrugation, and spoke arms whose ends are upwardly flanged and shaped to embrace such corrugation and arranged to be connected with said sockets; substantially as described.

17. A pulley comprising two-part rim segments whose meeting ends are infolded to form sockets, the inner rim having a circumferential corrugation, and spoke arms whose ends are upwardly flanged and shaped to embrace such corrugation and provided with lateral end tongues engaged by such sockets; substantially as described.

18. A pulley comprising two-part rim segments whose meeting ends are infolded to form sockets, the inner rim having a circumferential corrugation, spoke arms whose ends are shaped to embrace such corrugation and provided with lateral end tongues engaged by such sockets, and rivets passed through said tongues, infolded ends and rims; substantially as described.

19. A pulley comprising two-part rim segments whose meeting ends are infolded to form sockets, the inner rim having a circumferential corrugation, spoke arms whose ends are shaped to embrace such corrugation and provided with lateral end tongues engaged by such sockets, rivets passed through said tongues, infolded ends and rims, and rivets passed through said ends of the spoke arms and the ends of said corrugations; substantially as described.

20. A pulley comprising two-part rim segments, whose meeting ends are infolded

to form sockets, the outer rim having also inturned tongues 8, and the inner rim having a circumferential corrugation 5, and spoke arms whose ends 13 are shaped to embrace said corrugation and are provided with lateral tongues 14 engaged by said sockets, said tongues 8 being interlocked with the spokes; substantially as described.

21. A pulley comprising rim segments, each consisting of two parts interlocked as to their edges and ends, and spoke arms interlocked with such rim segments; substantially as described.

22. A pulley comprising rim segments, each consisting of two parts interlocked as to their edges, the inner one of such parts having a hollow circumferential corrugation, and spoke arms whose ends are fitted and secured to such corrugation and are extended at one side in the direction of the corrugation; substantially as described.

23. A pulley comprising two-part inner and outer rim segments, the inner one of which is circumferentially corrugated, the meeting ends of both the outer and inner rim segments being provided with pairs of tongues, the members of which pairs are separated by the cut-away portion of the middle of the rim segments on the division line of the pulley, and spoke arms adapted to engage said tongues and said corrugation; substantially as described.

24. A pulley comprising two-part rim segments having inturned tongues at the division line of the pulley, and spoke arms adapted to interlock with the tongues of both parts of the rim segments; substantially as described.

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