(No Model.) 2 Sheets—Sheet 1.

T. CORSCADEN.

PULLEY.

No. 575,106. Patented Jan. 12, 1897.

Fig. 1.

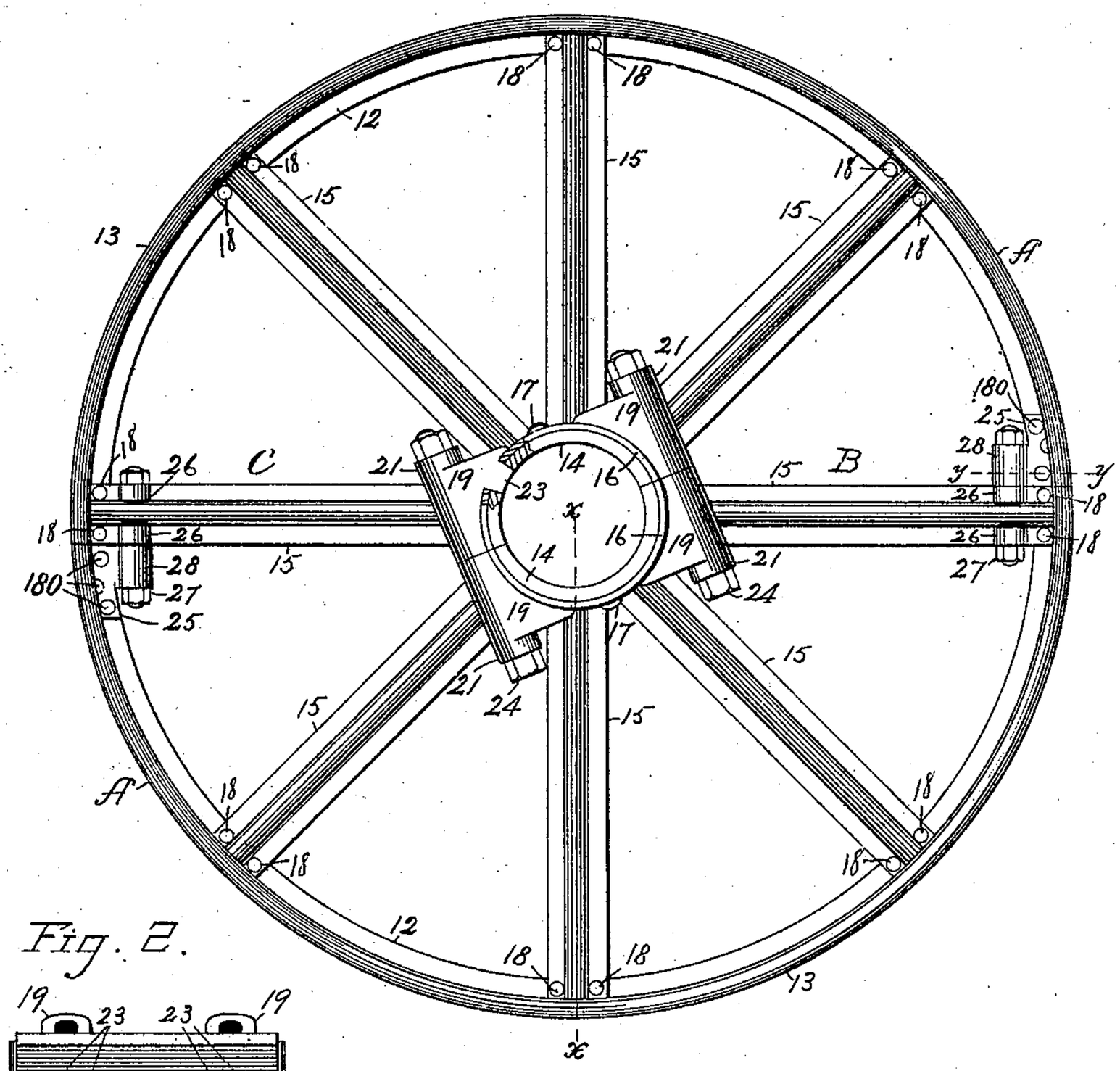


Fig. 2.

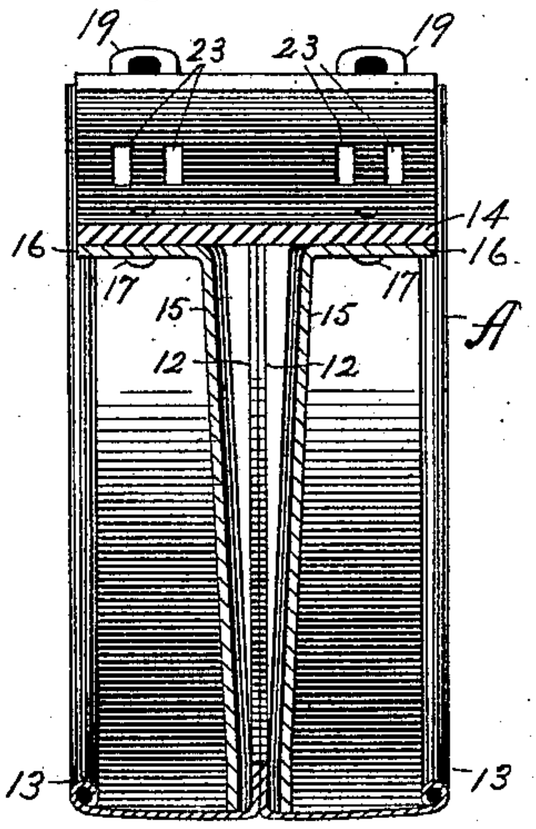


Fig. 3.

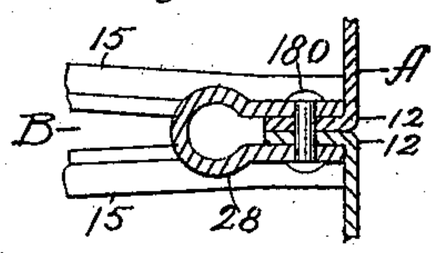
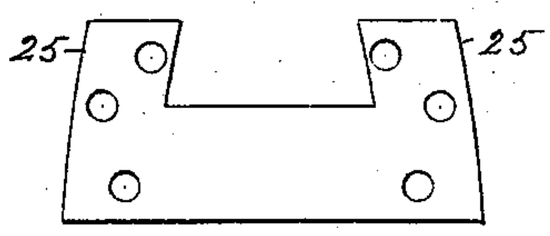


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

T. CORSCADEN.

PULLEY.

No. 575,106. Patented Jan. 12, 1897.

Fig. 5

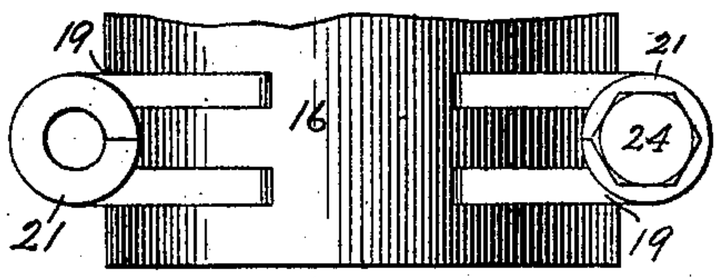


Fig. 6.

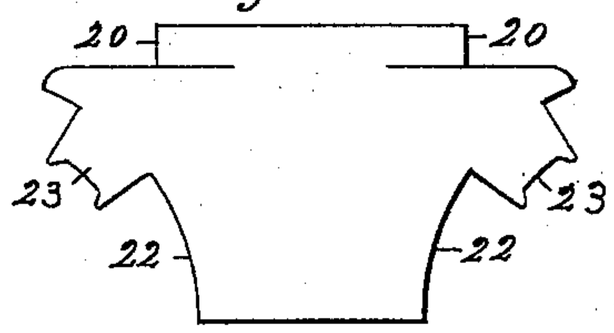


Fig. 7.

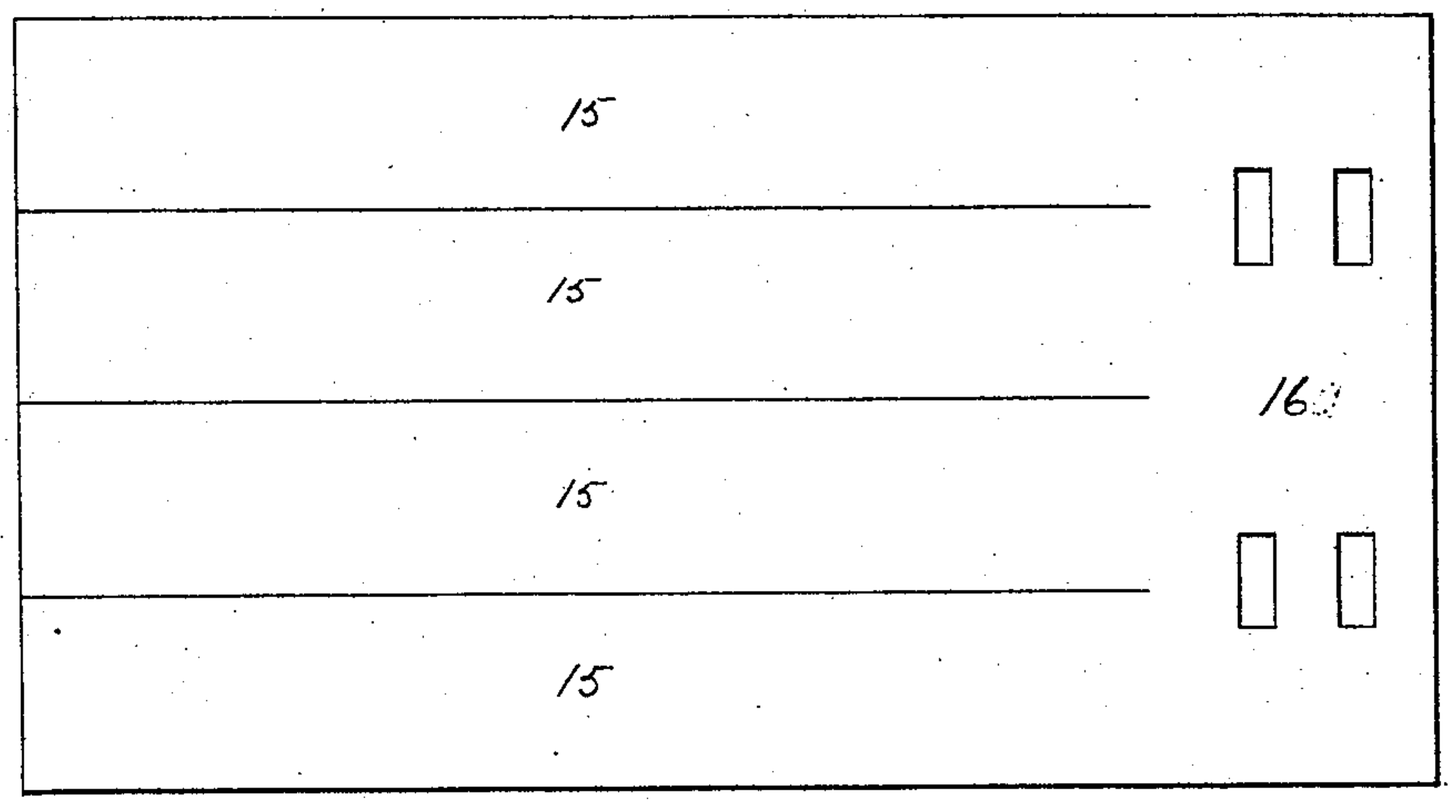
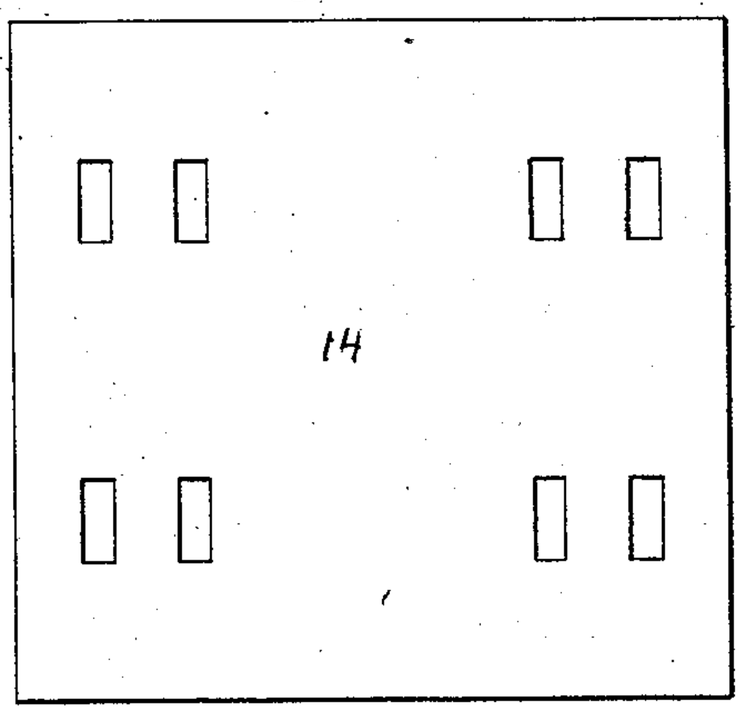


Fig. 8.



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UNITED STATES PATENT OFFICE.

THOMAS CORSCADEN, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE AMERICAN PULLEY COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 575,106, dated January 12, 1897.

Application filed November 24, 1894. Serial No. 529,850. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CORSCADEN, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Pulleys, of which the following is a specification.

My invention relates to improvements in pulleys; and the objects of my improvements are simplicity and economy in construction and general efficiency of the pulley.

In the accompanying drawings, Figure 1 is a side elevation of my pulley with a small portion of the hub in section. Fig. 2 is a sectional view of one-half of my pulley on the line *x x* of Fig. 1, looking to the right. Fig. 3 is an enlarged sectional view of a portion of said wheel on the line *y y* of Fig. 1, looking downwardly. Fig. 4 is a plan view of the blank for one of the bolt-lugs for the rim. Fig. 5 is a plan view of a portion of my wheel-hub and two bolt-lugs for said hub with a bolt in the right-hand bolt-lug. Fig. 6 is a plan view of the blank from which the hub bolt-lugs are made. Fig. 7 is a plan view of a blank from which the spoke-arms and their connecting-webs are formed. Fig. 8 is a plan view from which the hub-shells are formed.

My present invention is mainly in the nature of an improvement upon the pulley of my prior patents, Nos. 474,546 and 474,547, dated May 10, 1892, although some features thereof are applicable to an undivided pulley.

In the preferred form I make the rim or half-rim A of two strips of metal with a flange 12 at one edge and a bead or roll 13 at the opposite edge, while said strips are curved to conform to the desired circumference of the pulley. These two strips are placed side by side, with their flanges 12 abutting against each other, so that the rolls 13 come on opposite edges of the completed rim or half-rim. Although the strips are curved slightly, as shown, they have on their outer side a somewhat-flattened face, that is to say, a face which is specially adapted to a flat belt in contradistinction to a grooved face for a cord or round belt. I also leave the outer corners of each piece at the junction with the abutting flanges 12 slightly rounded, as shown, whereby a circumferential groove is formed at the middle portion of the rim and for its entire circumference, which will always permit the air under the belt to escape, as the belt never wholly encircles the pulley. The flanges form a strengthening-rib immediately inside the groove, so that forming the groove at this point does not in any way weaken the pulley-rim. I prefer to divide the half-rims by one edge of one spoke on one side and by the opposite edge of another spoke on the opposite side. For example, I divide the rim on a line with the upper edge of the spoke B on the right-hand side of Fig. 1 and on a line with the lower edge of the spoke C on the left-hand side of Fig. 1, but the seam or joint between the two half-rims may, if desired, be at a point about midway between two spokes.

The two flanges 12 in the completed rim or half-rim form a central inwardly-projecting strengthening-rib, which also serves as a spoke-attaching rib and means for connecting the rim bolt-lugs.

The hub-shells 14 are formed into semicylindrical form from blanks like Fig. 8, in which the width from side to side represents the length of the hub. The spoke-arms 15 and their semicylindrical connecting-webs 16 are formed from the blank, Fig. 7, by rolling the flat connecting-web 16, Fig. 7, into the semicylindrical form of Figs. 1, 2, and 5, while the spoke-arms are bent at an angle thereto, so as to radiate from said web, as in my former patent, No. 474,547. The difference in the vertical width of the blanks, Figs. 7 and 8, is such as to be equalized when said blanks are formed up and the hub-shells placed inside of the connecting-webs, as shown in Figs. 1 and 2. This forming up will also make the lug mortises or holes in said blanks register with each other when formed. As a sort of preliminary fastening for convenience in assembling I first secure each connecting-web 16 in position on the hub-shells 14 by means of a rivet, as at 17, Figs. 1 and 2. The spoke-arms, if desired, may be strengthened by any suitable beads or corrugations. The spoke-arms are of the proper length to abut against the inner surface of the pulley-rim, and their outer ends are secured to the central rib by rivets or screws, as at 18, on the spoke-arms in Fig. 1.

I form the hub bolt-lugs 19 from blanks like Fig. 6 by bending the same along the vertical middle portion into a U-shape, while the narrow slit ends 20 are bent around and meet, thus forming a short tubular portion 21 at the outer end of each lug, but said tubular portion may be omitted and the bolt-head or nut, or a washer under it, rest directly on the U-shaped end of said lug. The curved edges 22 of said blank in the formed-up hub bolt-lugs fit the periphery of the connecting-webs 16, as shown in Fig. 1, while the wings 23 serve as lugs or tenons, which, passing through the holes in the connecting-web and into the holes in the hub-shells inside said web, as shown at the portion sectioned in Fig. 1, may be riveted or headed down to firmly secure said hub bolt-lugs in place and at the same time fasten together said hub-shells and connecting-webs. Bolts 24 are passed through the hub bolt-lugs, as in other two-part pulleys.

The rim bolt-lugs 28 are formed from blanks like that shown in Fig. 4, the same being bent along its middle vertical line into a partial tubular form, with the broad sides of its ends lying parallel and open sufficiently to receive the two flanges 12, that form the central inner rib of the pulley-rim, as best shown in Fig. 3, when it is secured to said rib by rivets 180. The wings 25 are merely to make room for more rivets than could be used if said wings were omitted.

In the spoke-arms, adjacent to the rim bolt-lugs, I form transverse swells or bolt-sockets 26, Fig. 1, the space between which substantially coincides with the hole through the said lugs, so that the rim-bolts 27, passing through said lugs and between the adjacent spoke-arms, serve to firmly secure the abutting ends of the two half-rims together. In case, however, the dividing-line of the half-rims should be in the middle of the space between two spokes, as hereinbefore suggested, then it is only necessary to put a rim bolt-lug like the lug 28 at each end of each half-rim. The rivets by which the rim and spoke-arms are secured together and the rivets that secure the rim bolt-lugs serve also to fasten together the two parts of each rim or half-rim, but, if desired, additional rivets may be inserted through the two flanges 12.

While I have described the best construction known to me of the several parts, I wish it distinctly understood that I do not limit myself to the particular details of construction thus described, but I intend to claim all such variations as mechanical skill and judgment may suggest, as well as all changes that come fairly within the spirit and scope of my invention, and it is evident that any desired change may be made in any of the parts, provided the same does not also materially change the particular features relied on for novelty in any one claim.

I claim as my invention—

1. A pulley having a circumferentially-divided rim with flattened face for a flat belt, the parts of which rim meet in an inwardly-projecting flange in the inside of said rim and in a circumferential groove on the outer side of said rim, a hub and a series of separate spoke-arms radiating from said hub and having their outer ends lapped upon and secured to the said inwardly-projecting flange of the two-part rim substantially as described and for the purpose specified.

2. A divided pulley, having at one end of each half of the rim a spoke with a transverse bolt-socket 26, and at the other end of each half-rim the rim-bolt lug 28, which registers with said bolt-socket, substantially as described and for the purpose specified.

3. A divided pulley the hub of which is provided with bolt-lugs, the main body of said lugs being U shape in cross-section while the outer end of each lug is provided with a short tubular portion 21, substantially as described and for the purpose specified.

4. A pulley having a transversely-divided and internally-flanged rim, and rim-bolt lugs with the sockets of said lugs inside of said rim and with portions of each lug embracing opposite sides of the central rib or flange to which said rim-bolt lugs are secured, substantially as described and for the purpose specified.

5. In a sheet-metal pulley, a circumferentially-divided internally-flanged rim, in combination with spokes whose hub-terminals 16 encircle hub-shells 14 and are secured thereto substantially as described.

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