

No. 680,691.

Patented Aug. 20, 1901.

A. E. BRION.
SHEET STEEL PULLEY.

(Application filed Nov. 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

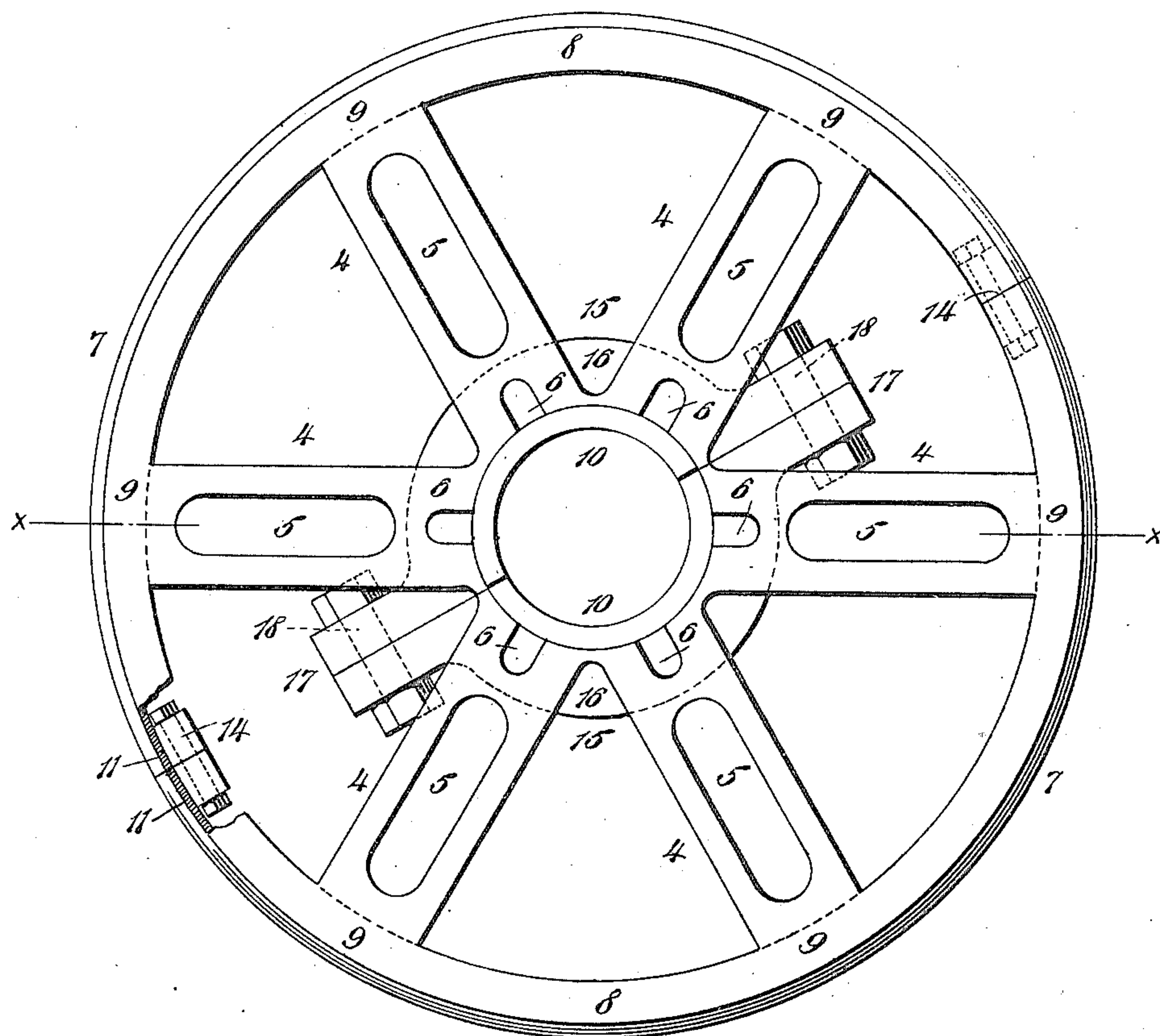
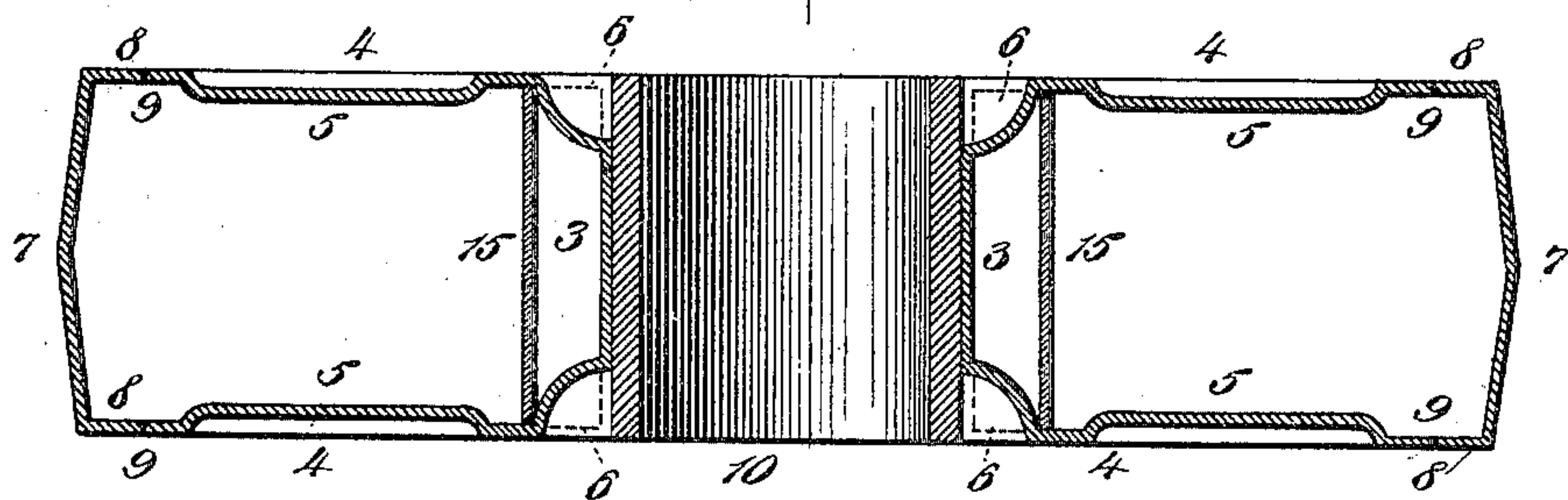


FIG. 2.



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2 Sheets—Sheet 2.

FIG. 2.

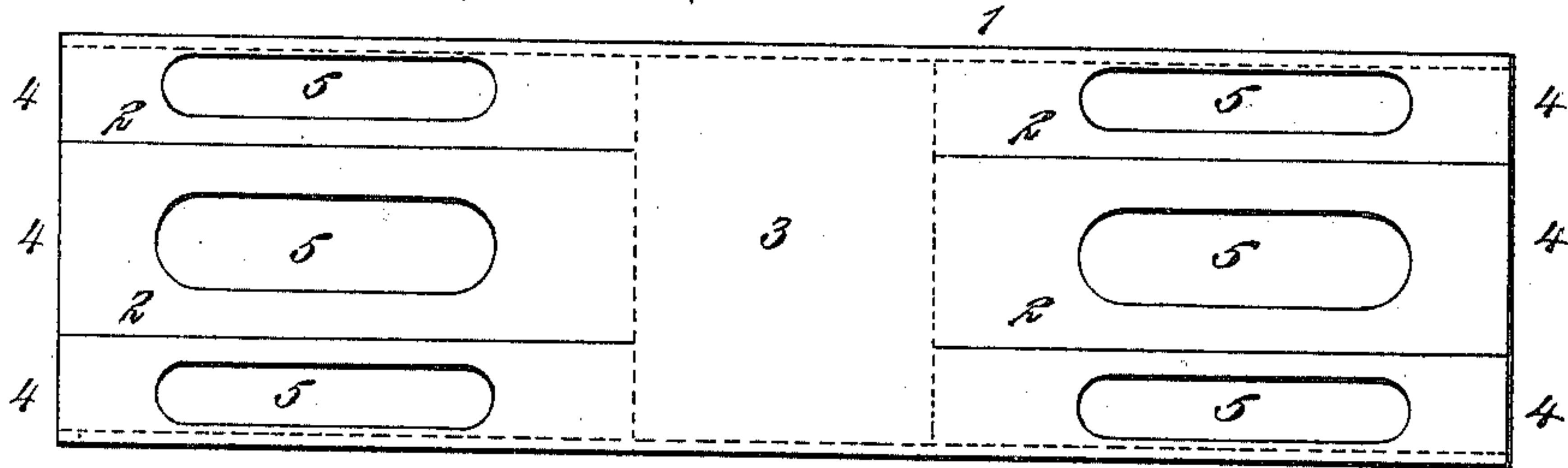


FIG. 3.

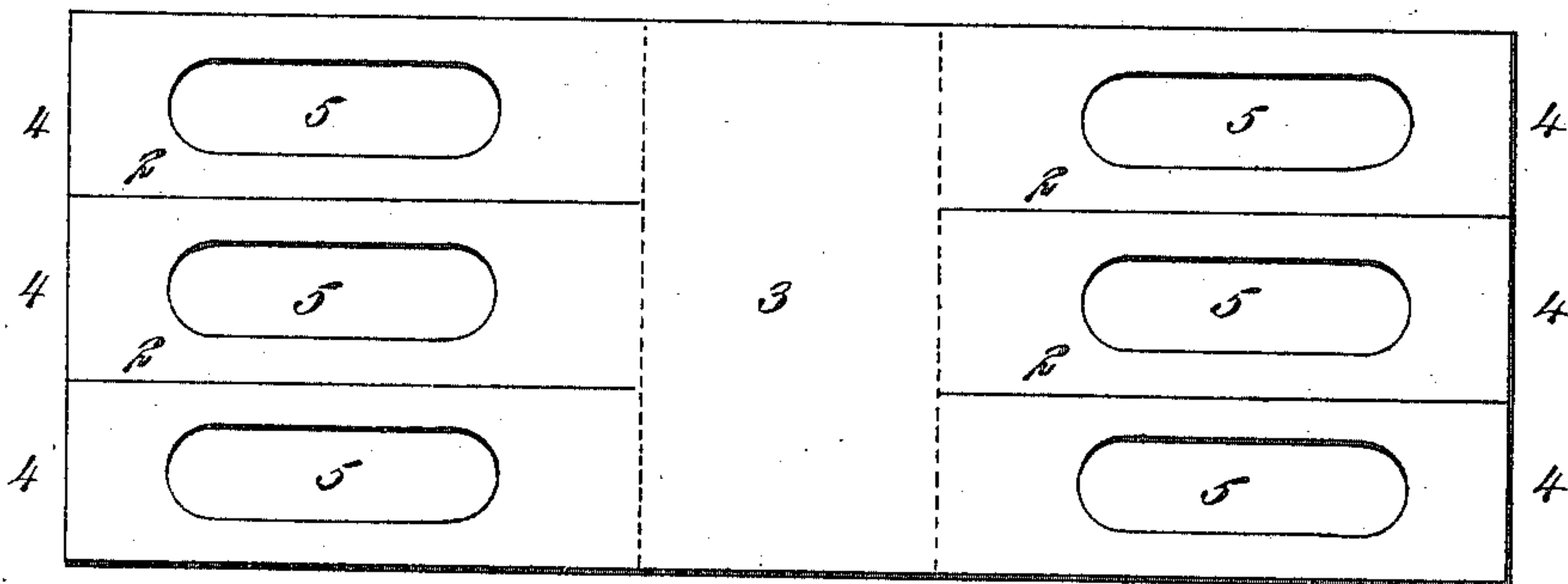


FIG. 4.

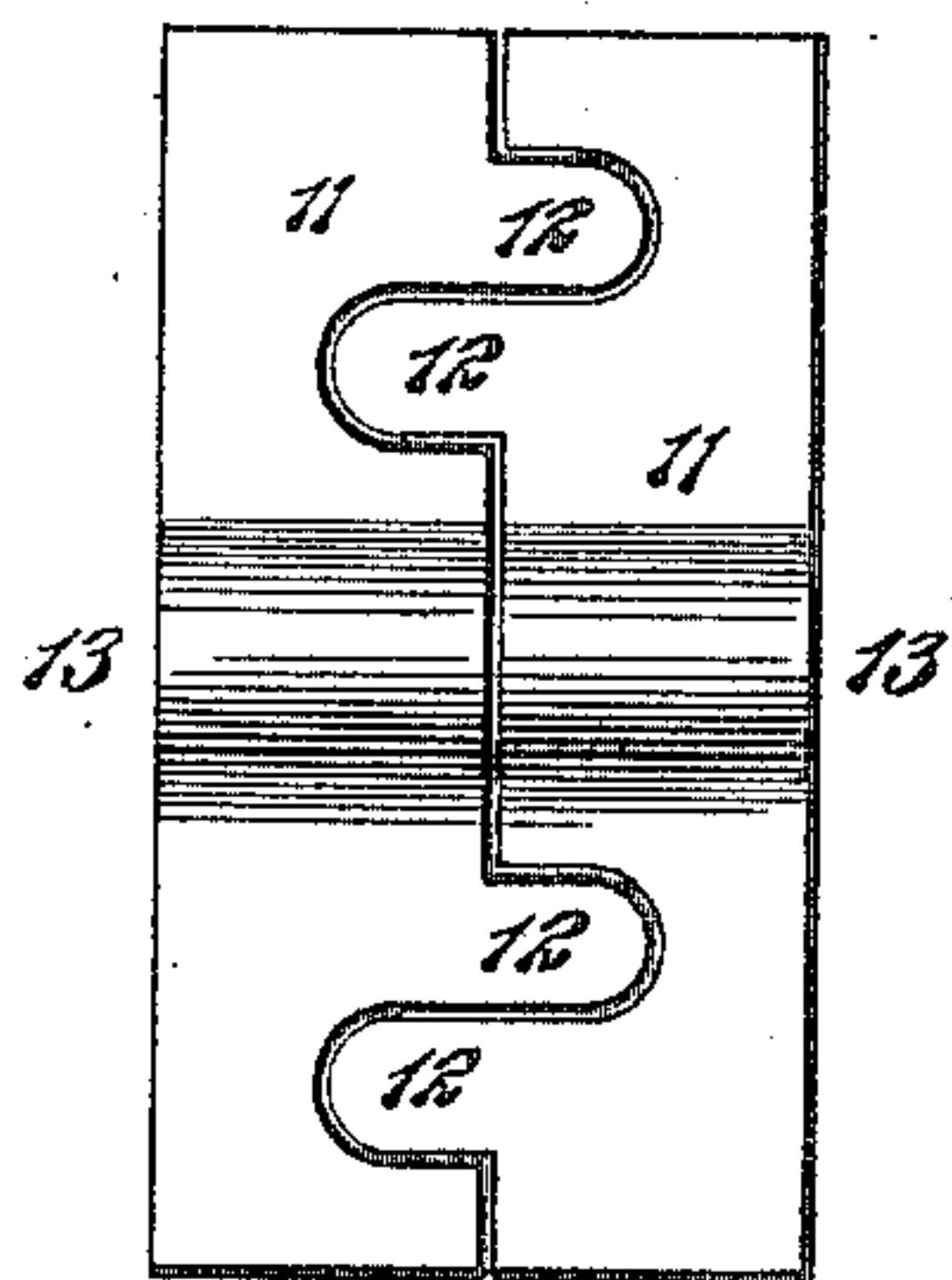
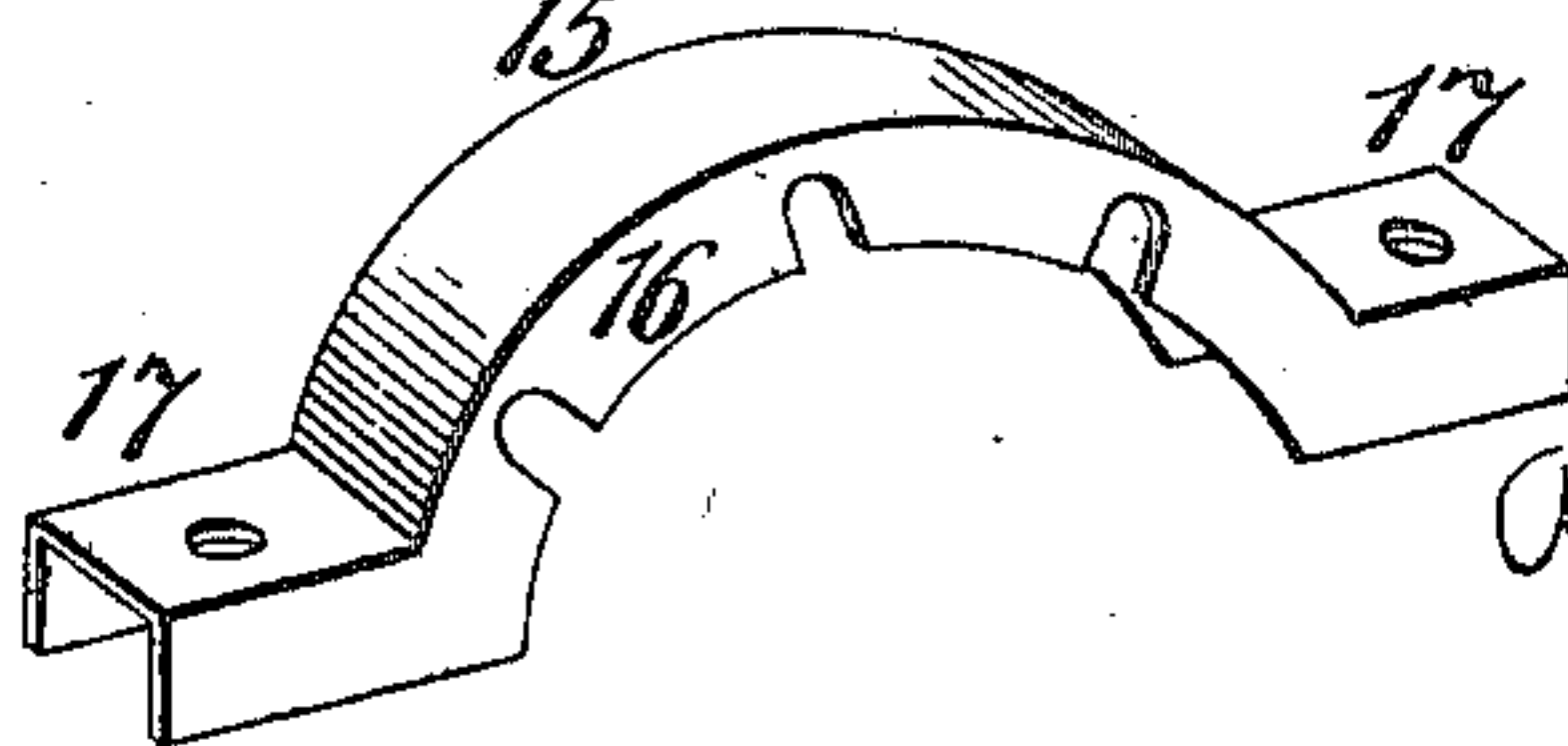


FIG. 5.



Fig. 7.



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ADOLPH E. BRION, OF NEW YORK, N. Y.

SHEET-STEEL PULLEY.

SPECIFICATION forming part of Letters Patent No. 680,691, dated August 20, 1901.

Application filed November 5, 1900. Serial No. 35,461. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH E. BRION, a citizen of the United States, residing in the city, county, and State of New York, have
5 invented a new and useful Improvement in Sheet-Steel Pulleys, of which the following is a specification.

My invention relates especially to the manufacture of pulleys out of sheet-steel, and has
10 for its object the provision of a simple, light, and strong pulley, either solid or split.

To attain the desired end my invention consists, essentially, in certain novel and useful combinations and arrangements of parts and
15 peculiarities of construction, all of which will be hereinafter first fully described and then pointed out in the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a side elevation of a
20 completed pulley made in accordance with my invention. Fig. 2 is a cross-sectional view at line *xx* of Fig. 1. Fig. 3 is a plan view of a tube, illustrating the method of forming the spokes of the pulley, particularly when the
25 same is of the solid variety or has a solid rim. Fig. 4 is a plan view of a flat blank when the pulley is to have the hub split. Fig. 5 is a plan view, and Fig. 6 a side view, of the plates employed for connecting the meeting portions
30 of the rim of a split pulley. Fig. 7 is a perspective view of one of the clips employed for holding the wheel in place upon a shaft.

Similar numerals of reference indicate corresponding parts in all the figures.

35 In forming the spokes of the pulley and a portion of the hub, 1 is a tube of the requisite diameter and length. This tube is sawed or divided at each end, as at 2, for a portion of its length to form the spokes 4, leaving a
40 central portion 3 of the hub. Indentations 5 are formed in the center of each spoke in order to brace the same, and when the spokes are bent at right angles to the hub-piece 3 they radiate therefrom. In order to further
45 strengthen the spokes where they join the hub-piece, indentations 6 are formed therein. If this construction is to be used as a split pulley, the hub-piece 3 is divided in two places opposite to each other, or the spokes and hub-
50 piece may be formed up from two flat blanks, (illustrated in Fig. 4 of the drawings,) the

shape of the parts when completed being the same as above described.

The rim of the pulley is of channel or U shape, having a face 7, straight or crowned, 55 and inwardly-projecting flanges 8. These flanges and the outer ends of the spokes abut and are electrically welded at 9.

10 is a split bushing placed within the hub-piece 3. When the rim is continuous or solid 60 and it is desired to adapt the pulley to a universal bushing, the hub-piece is divided into two parts, as in the split pulley, permitting the requisite expansion and contraction of the hub and connected parts to accommodate the
65 wheel to slight variations in the diameter of the shaft whereon it is desired to secure it. In solid pulleys the meeting ends of the rim-piece are electrically welded; but in a split pulley the meeting parts of the rim are con- 70 nected together by means of plates 11, secured to the inner surface of the rim by riveting or welding. These plates 11 are each provided with tongues 12, arranged to enter corresponding indentations in the opposite plate, 75 thus preventing any lateral movement of the meeting parts of the rim and at the same time making the two parts of the pulley interchangeable or reversible.

13 is a U-shaped recess formed in each plate 80 11, arranged to receive a connecting-bolt 14, by means of which the two parts of the pulley may be easily and effectually united or disconnected.

In order to secure the pulley to a shaft, two 85 sheet-metal clips 15 are provided. These clips are semicircular and provided with inwardly-projecting flanges 16, which are bent or cut away in order to accommodate the indentations 6 in the spokes, the inner edges 90 of the flanges 16 resting upon and embracing the hub-piece 3. Bolt-holes are formed in ears 17 at each end of the clips 15 for the reception of uniting and holding bolts 18.

Having now fully described my invention, 95 what I claim as new therein, and desire to secure by Letters Patent, is—

1. A sheet-steel pulley having a hub-piece and spokes formed integrally, as set forth and described, in combination with a U- 100 shaped rim the inwardly-projecting flanges whereof and the ends of the spokes abut and

are united together, substantially as shown and described.

2. In a sheet-steel pulley, spokes formed integral with a hub-piece and radiating from each end thereof, in combination with a rim to which said spokes extend, and to which they are united at each edge of the rim.

3. In a sheet-steel pulley, a hub-piece and spokes formed integral therewith, the hub-piece from which the spokes radiate being divided, in combination with a rim against the edges of which the ends of said spokes abut and to which they are united, substantially as shown and described.

4. In a sheet-steel pulley, U-shaped rim-

sections; means for separably connecting the rim-sections; spokes formed integral with hub-pieces, and united to the inwardly-projecting flanges of the rim at each edge thereof, as set forth; a bushing, and means for holding the pulley upon a shaft, the whole combined and arranged substantially as shown and described.

Signed by me at New York this 24th day of September, 1900.

ADOLPH E. BRION.

Witnesses:

JAMES RIDGWAY;

A. M. PIERCE.