

No. 785,897.

PATENTED MAR. 28, 1905.

L. S. LACHMAN.
PULLEY OR WHEEL.

APPLICATION FILED APR. 28, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

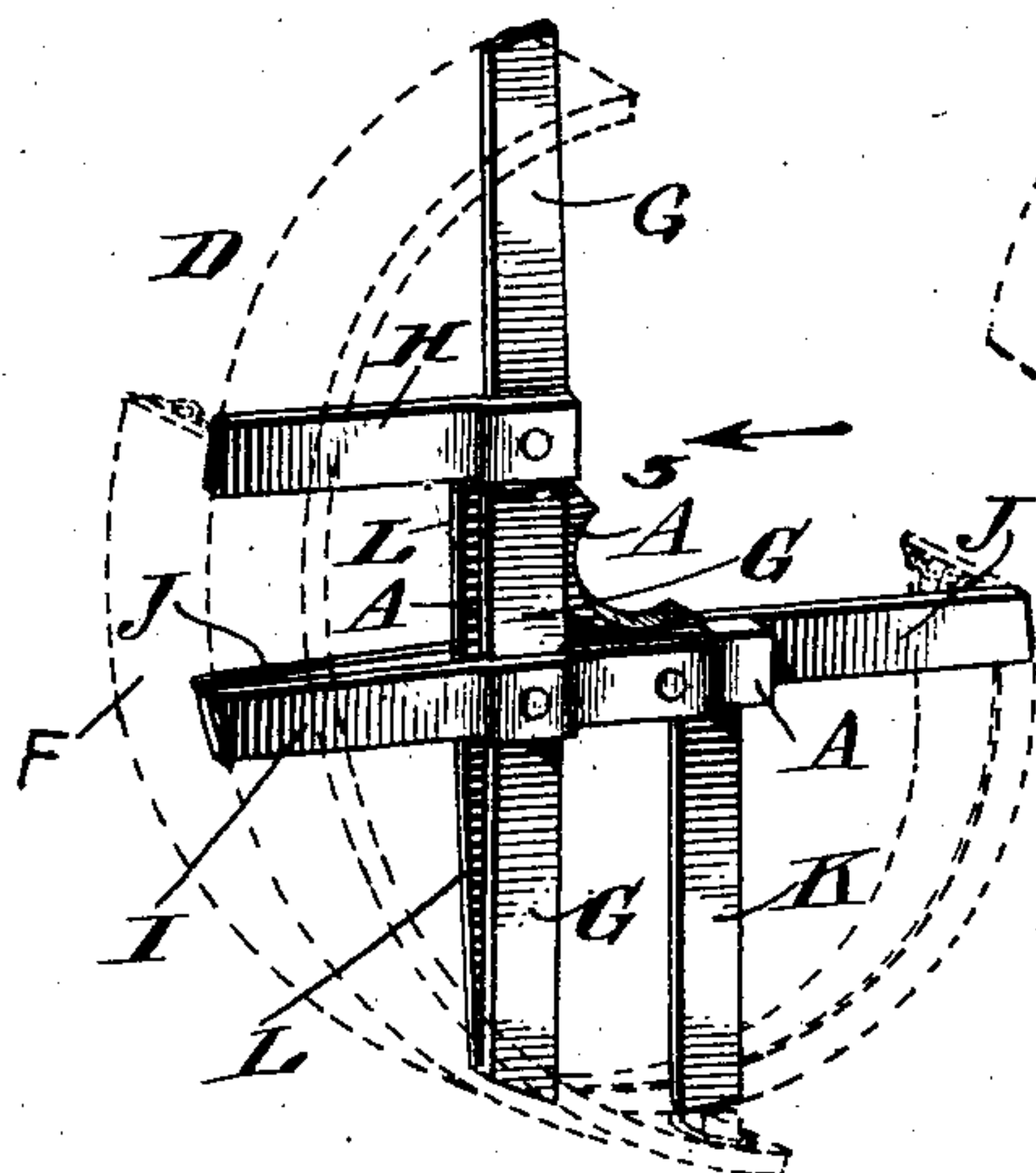


Fig. 2.

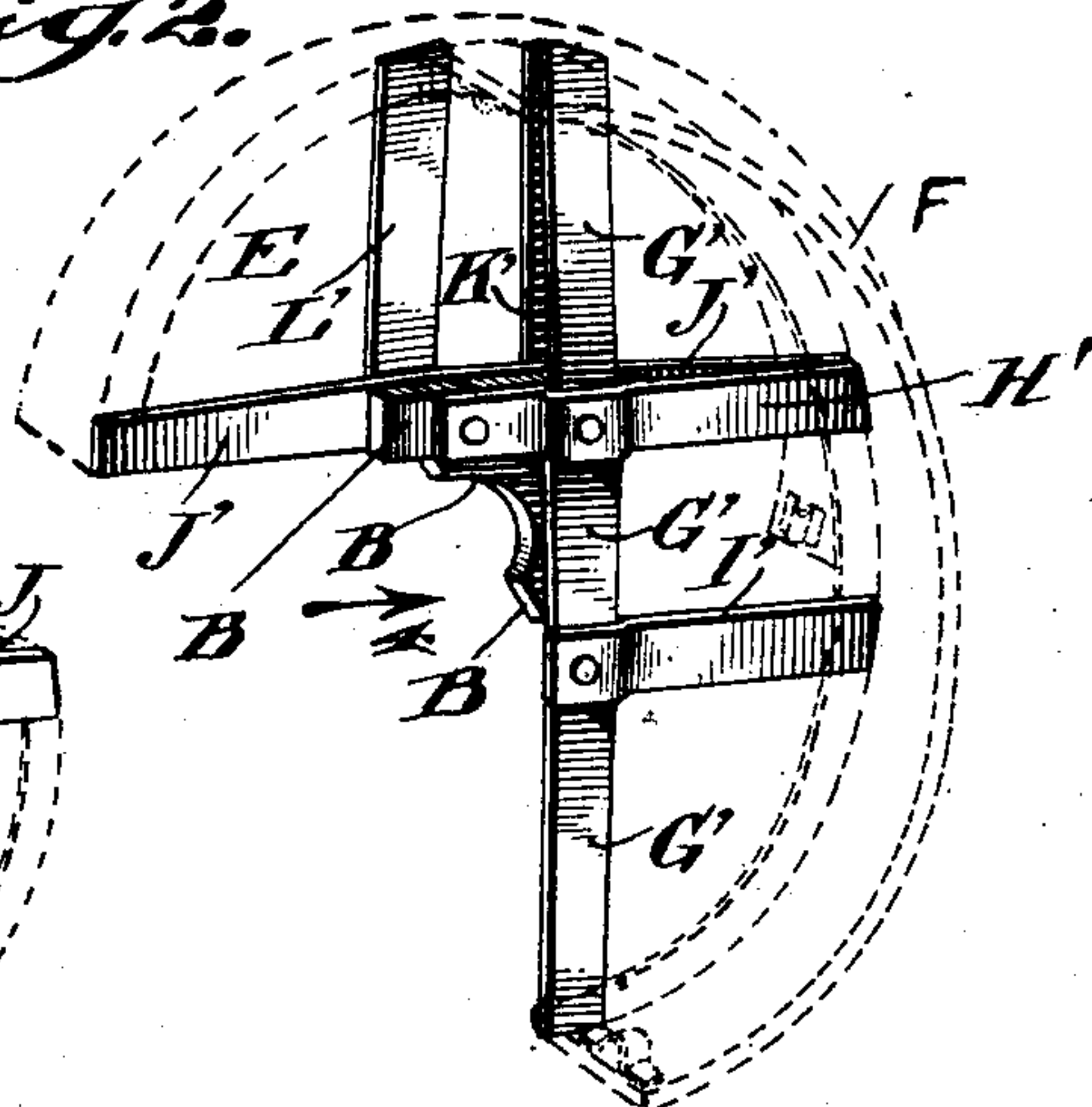


Fig. 6.

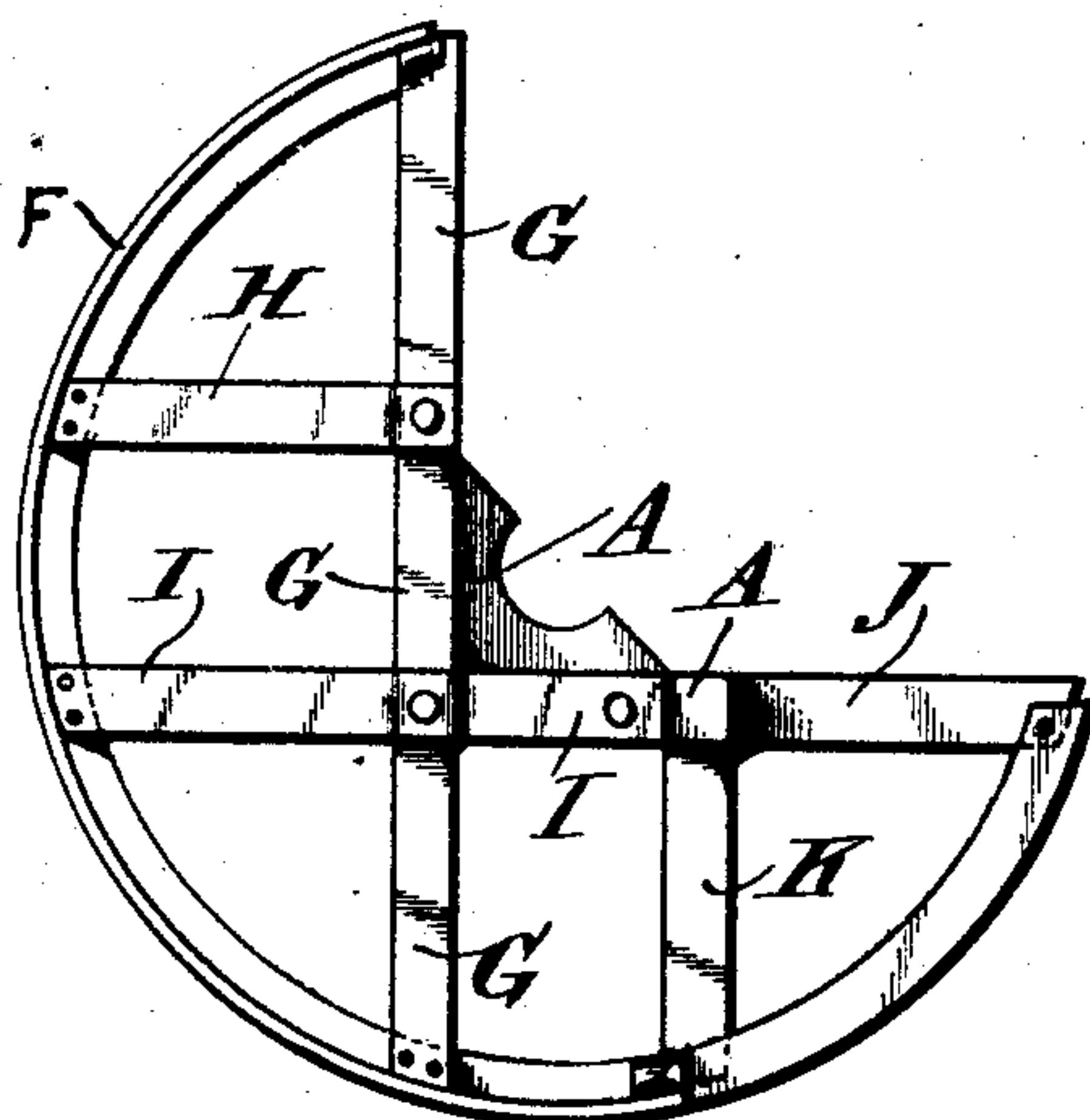
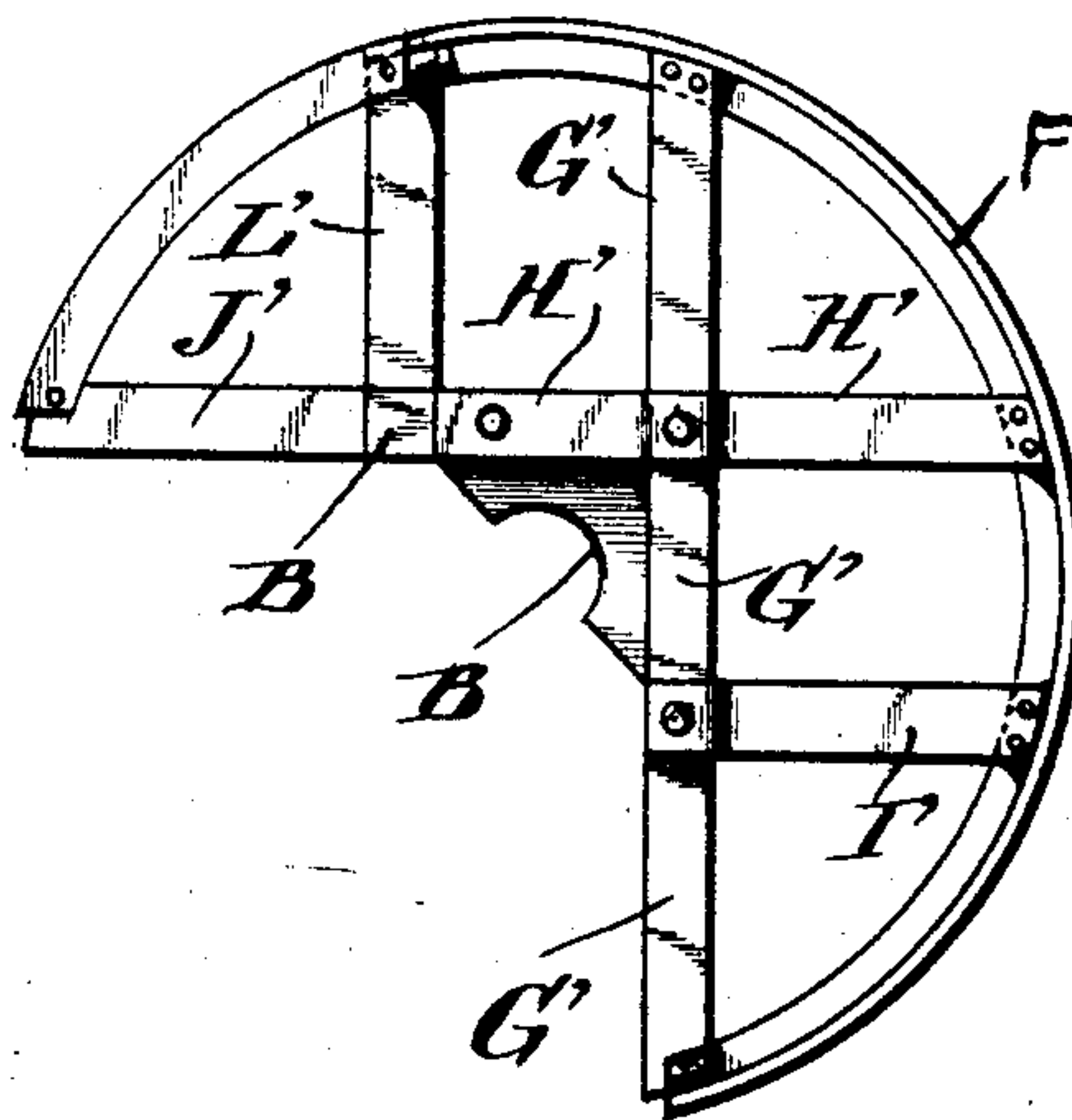


Fig. 7.



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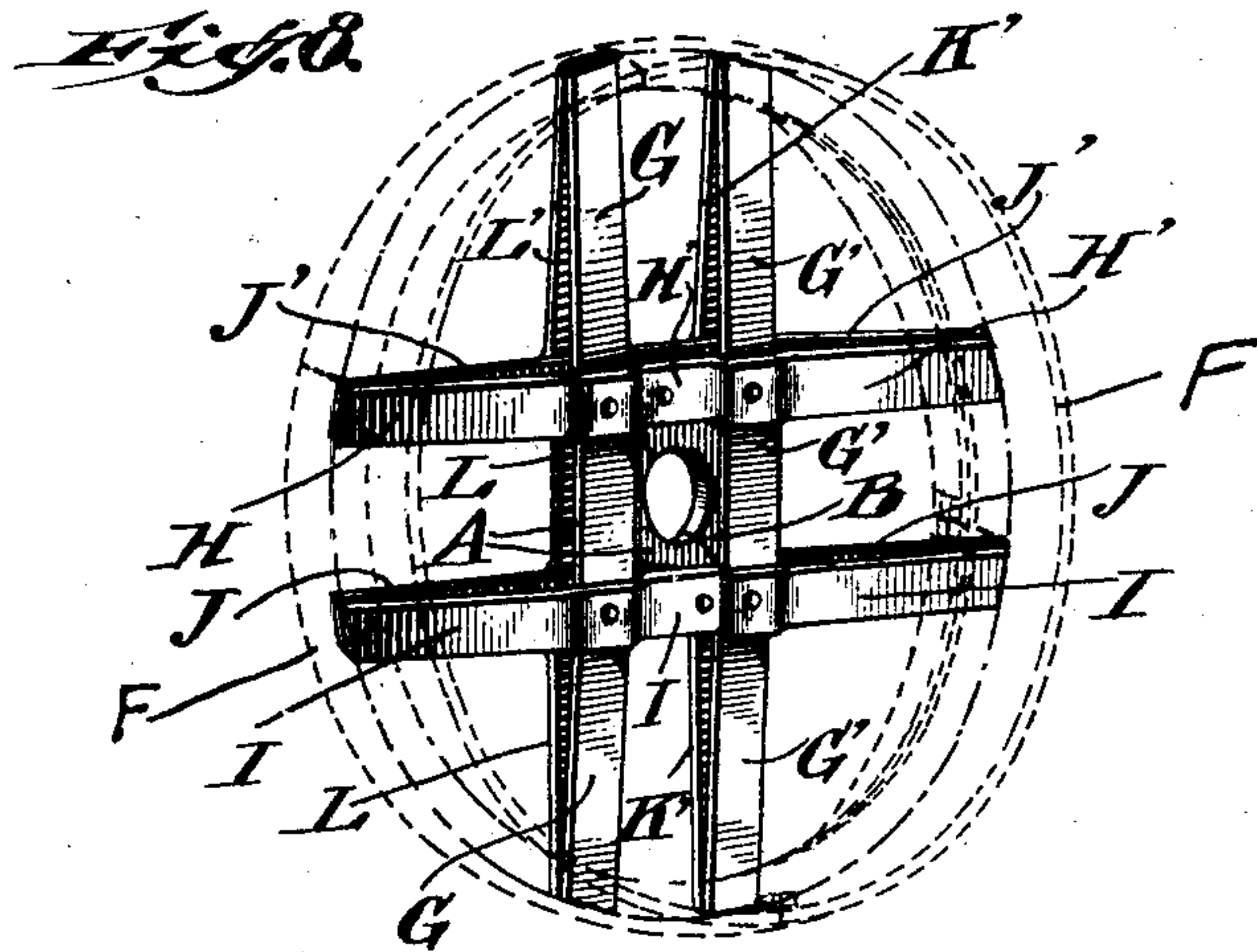
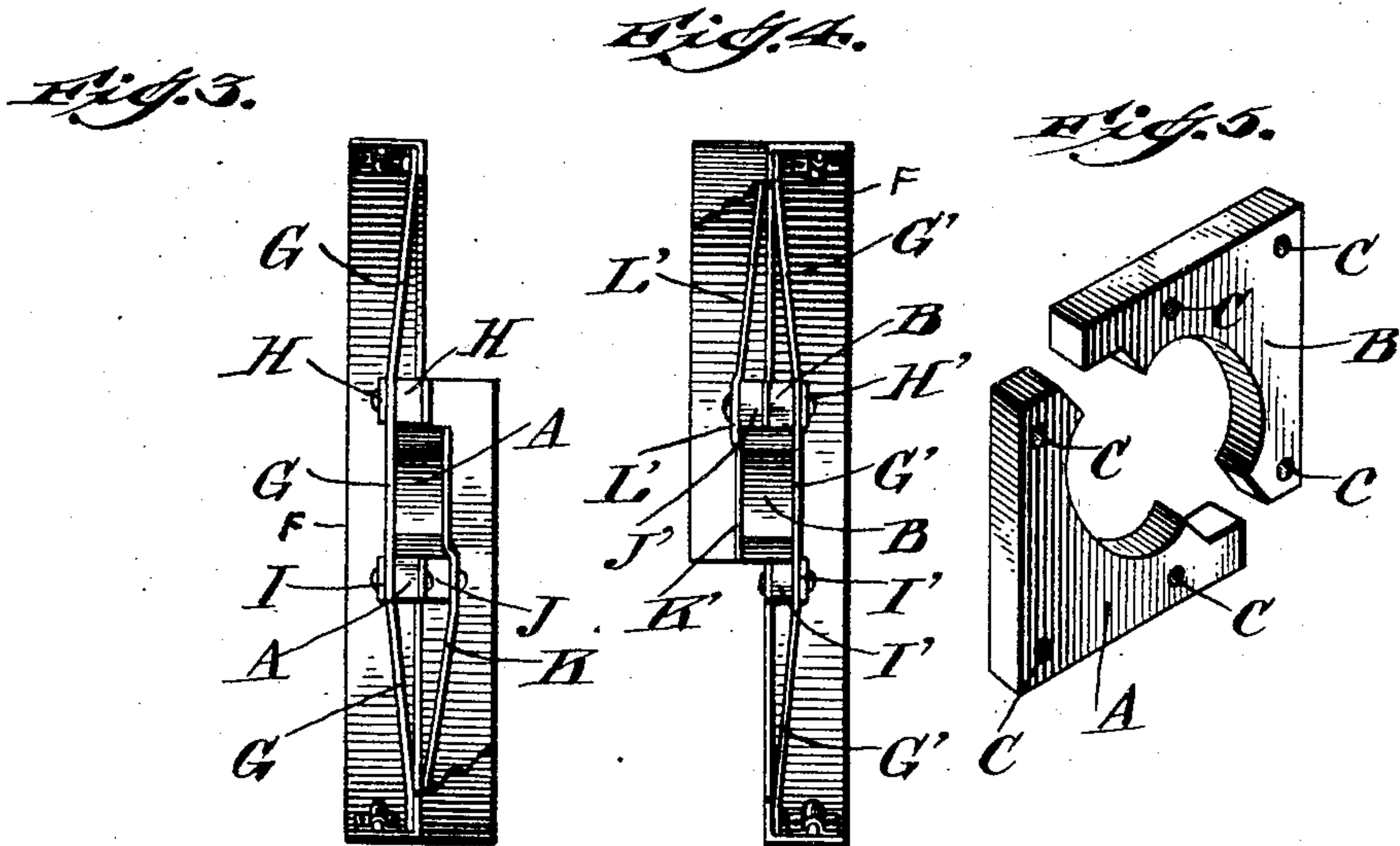
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

LAURENCE S. LACHMAN, OF NEW YORK, N. Y.

PULLEY OR WHEEL.

SPECIFICATION forming part of Letters Patent No. 785,897, dated March 28, 1905.

Application filed April 28, 1904. Serial No. 205,320.

To all whom it may concern:

Be it known that I, LAURENCE S. LACHMAN, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Pulleys or Wheels, of which the following is a specification accompanied by drawings.

This invention relates to pulleys or wheels; and its objects are to improve upon the construction and increase the efficiency of the same.

Another object of the invention is to produce a pulley or wheel that may be readily adjusted upon a shaft without the necessity of slipping the pulley over the end of the shaft.

To these ends the invention consists of a pulley or wheel for carrying out the above objects embodying the features of construction, combinations of elements, and arrangement of parts having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of one of the cooperating portions of the wheel. Fig. 2 is a perspective view of the other cooperating portion of the same. Figs. 1 and 2 are illustrated as if the two cooperating portions of the wheel were about to be assembled to form the complete wheel. Fig. 3 is an elevation of the portion of the wheel shown in Fig. 1 looking in the direction of the arrow in Fig. 1. Fig. 4 is an elevation of the portion of the wheel shown in Fig. 2 looking in the direction of the arrow in Fig. 2. Fig. 5 is a perspective view of the two-part hub illustrated in connection with this invention, it being understood that other suitable forms of hubs may be used. Fig. 6 is a side view of the portion of the wheel shown in Fig. 1. Fig. 7 is a side view of the portion of the wheel shown in Fig. 2. Figs. 6 and 7 are illustrated side by side, showing one portion about to be slipped into engagement with the other portion to form the complete wheel. Fig. 8 is a perspective view of the wheel complete with the parts assembled.

Referring to the drawings, the hub shown in Fig. 5 is a two-part hub, in this instance illustrated of cast metal, although any other suitable form of hub may be provided, the form illustrated being suitable for an understanding of the invention. The portion A of the hub is adapted to cooperate with the portion B, and the spokes are suitably secured to the said portions A and B, bolt or screw holes C being provided for securing the spokes to the portions of the hub.

One of the objects of the invention is to afford overlapping portions on the two cooperating parts D and E of the wheel, so that when said parts are placed together the overlapping portions may be suitably secured one to the other, as by means of bolts or rivets or any other devices which may be found applicable. Any suitable rim may be used with a wheel constructed in accordance with this invention, in this instance a rim F being indicated in dotted lines in Figs. 1, 2, and 8 by way of illustration and as in full lines in Figs. 6 and 7, to show substantially how much of one portion of the wheel overlaps the other portion when the two cooperating parts are assembled to form the complete wheel. It will be seen by referring more particularly to Figs. 1, 2, 6, and 7 that each part of the wheel has substantially a sector of a circle removed therefrom, and when the two parts D and E are assembled the sector lacking in one part falls opposite the completed portion of the other part, and the two parts D and E may be slipped over a shaft from opposite sides, and the overlapping portions of the parts are then suitably secured together, as stated.

The body portions of the parts D and E may of course be solid sheet metal; but preferably, as shown in the drawings, spokes are provided secured to the portions A and B of the hub. This forms a strong, light, and rigid construction, and in accordance with this invention the strain on the spokes is distributed between opposite points of the rim on chords of the circle.

The cooperating parts D and E are substantially alike, but reversed in construction, and a description of one part applies to the

other. Referring to the part D, it will be seen that there is a continuous spoke G suitably secured to one side of the portion A of the hub, while the portions H and I of the other spokes are also secured to the hub A, but outside the spoke G. It will be seen that the spoke G extends continuously from one side of the rim to the other, forming a chord of the circle, while the spokes H and I extend from the rim to the hub only.

On the portion E of the wheel similarly-arranged spokes and portions of spokes are provided, as shown, a continuous spoke G' being secured to the part B of the hub, while portions H' and I' of spokes extend from the rim to the hub B. When the two parts D and E are assembled, it will be seen that the parts of spokes H H' and I I' cooperate to form continuous spokes extending in a straight line across the wheel. The spokes G G' and the sectional cross-spokes are arranged in this instance at an angle to each other, preferably at right angles.

I am not to be understood as limiting myself to spokes at right angles or extending on the chords of the circle, because arrangements may be devised in which the spokes extend at angles other than right angles.

On the other sides of the parts of the wheel D and E the spokes are arranged in substantially the same manner as that just described, but on different parts of the portions A and B of the hub, so that when the two parts D and E of the wheel are brought together there will be overlapping portions of the spokes, which may be secured together, and thus form a rigid wheel.

To secure the two parts D and E of the wheel together, rivets or bolts or other suitable means must be provided, passing through the overlapping portions of the spokes or rim.

The continuous spokes G G' on one side of the wheel are illustrated extending vertically, while the spokes J J' on the other side of the wheel are illustrated extending horizontally and substantially at right angles to the first-named spokes G G'. The sectional spokes on one side of the wheel extend substantially at right angles to the sectional spokes on the other side, so that when the two parts D and E of the wheel are assembled the continuous spokes fall opposite the sectional spokes, thereby forming a structure which may be secured together in the strongest possible manner, and the joints on one side fall opposite continuous portions of the spokes on the other side.

Preferably the continuous spokes G G' and J J' are arranged underneath the sectional spokes, and, if desired, the spokes which pass over those next to the portions of the hub may be offset slightly to accommodate the thickness of the continuous spokes.

In order to thoroughly understand the construction of the wheel, it is necessary to ob-

serve that the continuous spoke G, with its sectional spokes, and the continuous spoke J at right angles thereto, with its sectional spokes, are both secured on opposite sides of the portion A of the hub. The continuous spokes G' and J', with their sectional spokes, are secured on opposite sides of the portion B of the wheel.

When the two parts D and E of the wheel are assembled to form the complete wheel, as shown in Fig. 8, it will be seen that the continuous spoke J cooperates with the sectional spoke I' and the continuous spoke J' cooperates with the sectional spoke H, said spokes falling opposite each other, and thereby being adapted to be secured together by suitable rivets or otherwise. When the parts are assembled, it will also be seen that the continuous spoke G cooperates with the sectional spoke L' and the continuous spoke G' cooperates with the sectional spoke K, falling opposite each other, so that they may be suitably secured together. The overlapping portions of the rim F may also be secured together.

Many different arrangements of spokes may be provided within the skill of the mechanic carrying out this invention, it only being necessary to leave sectors in each portion D and E of the wheel, so that the sectors fall opposite the spoke portions of the opposite parts of the wheel when the parts are assembled. Preferably the spokes arranged opposite each other on opposite sides of each part of the hub have their ends bent toward each other at the periphery of the wheel, this construction being provided for convenience in securing the spokes to a sheet-metal rim.

Obviously some features of this invention may be used without others, and the invention may be embodied in widely-varying forms.

Therefore, without limiting the invention to the constructions shown and described nor enumerating equivalents, I claim, and desire to secure by Letters Patent, the following:

1. A wheel or pulley, comprising cooperating parts each having a portion of the hub and spokes, and each lacking a portion of the body in the form of a sector, whereby when the parts of the wheel are assembled, the body portions of the wheel fall opposite the lacking sector portions to complete the body.

2. A wheel or pulley, comprising cooperating parts each having a portion of the hub and spokes, and each lacking a portion of the body in the form of a sector, said cooperating parts being provided with portions adapted to overlap when the parts are assembled, whereby the body portions of the wheel fall opposite the lacking sector portions to complete the body.

3. A wheel or pulley, comprising cooperating parts, each having continuous and sec-

tional spokes so arranged that when the parts of the wheel are assembled, the joints of the sectional spokes fall opposite the continuous spokes, for substantially the purposes set forth.

4. A wheel or pulley, comprising a two-part hub having sectional spokes and continuous spokes secured thereto on opposite sides of the parts of the hub, each portion of the wheel so formed lacking a portion of the body in the form of a sector, whereby when the two parts of the wheel are assembled, the spoke portions of the wheel fall opposite the lacking sector portions to complete the body.

5. A wheel or pulley, comprising a sectional hub, continuous and sectional spokes secured on the sides of the sections of said hub, in such manner that when the parts of the wheel are assembled to form the complete wheel, portions of the spokes of one part

overlap those of the other, whereby the two parts of the wheel may be secured together, for substantially the purposes set forth.

6. A wheel or pulley, comprising two co-operating parts having continuous spokes and sectional spokes angularly arranged, the intersections of said spokes falling outside of the center of the wheel, each coöperating part lacking portions in the form of sectors, whereby when the parts of the wheel are assembled, the spoke portions of the wheel fall opposite the lacking sector portions to form a complete wheel.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LAURENCE S. LACHMAN.

Witnesses:

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A. L. O'BRIEN.