No. 884,093. PATENTED APR. 7, 1908.

W. G. KIRCHHOFF.

WHEEL.

APPLICATION FILED MAR. 29, 1905.

Fig. 1.

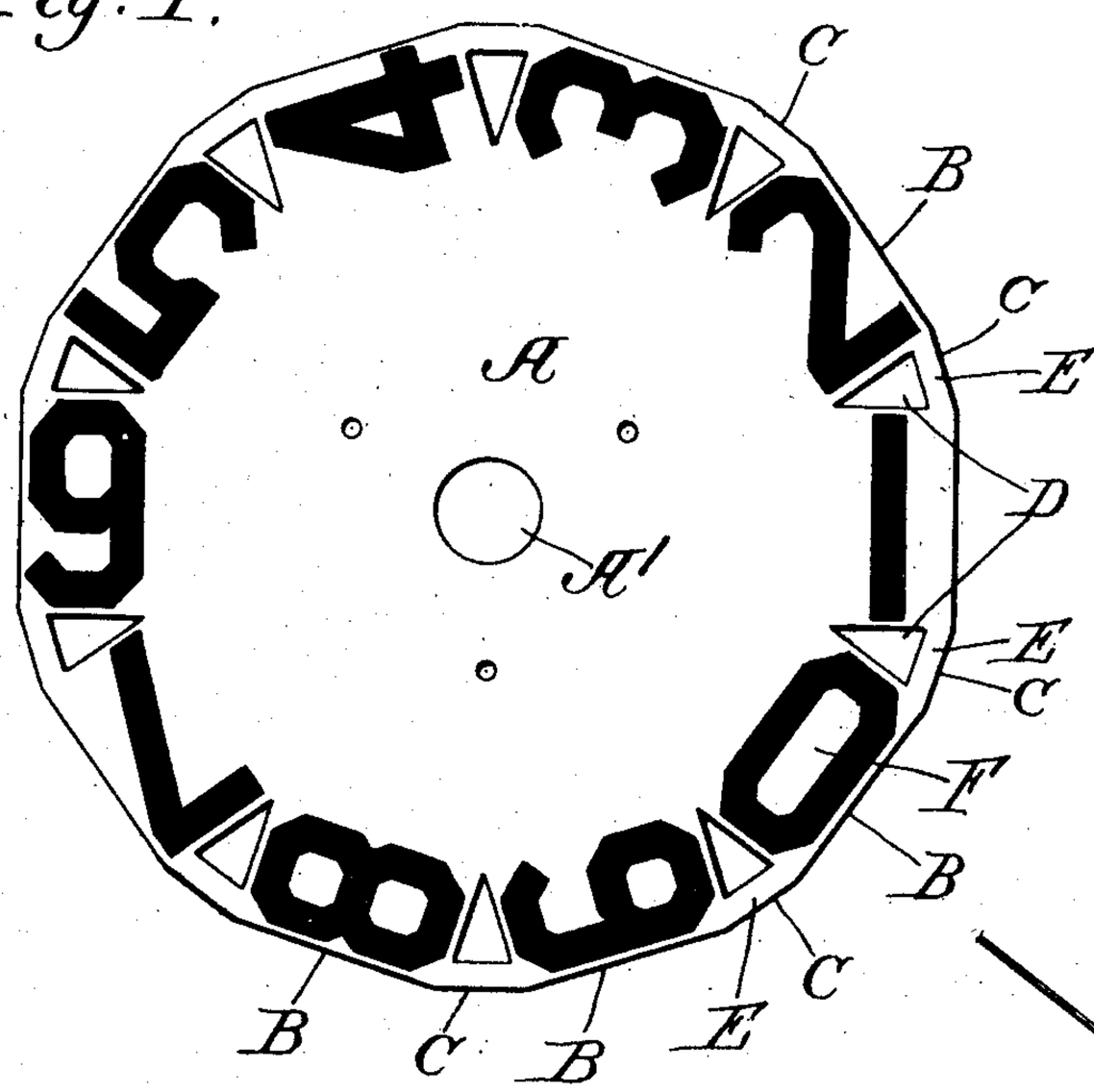


Fig. 5.

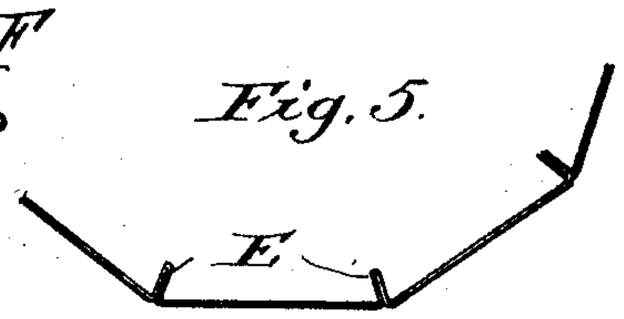


Fig. 2.

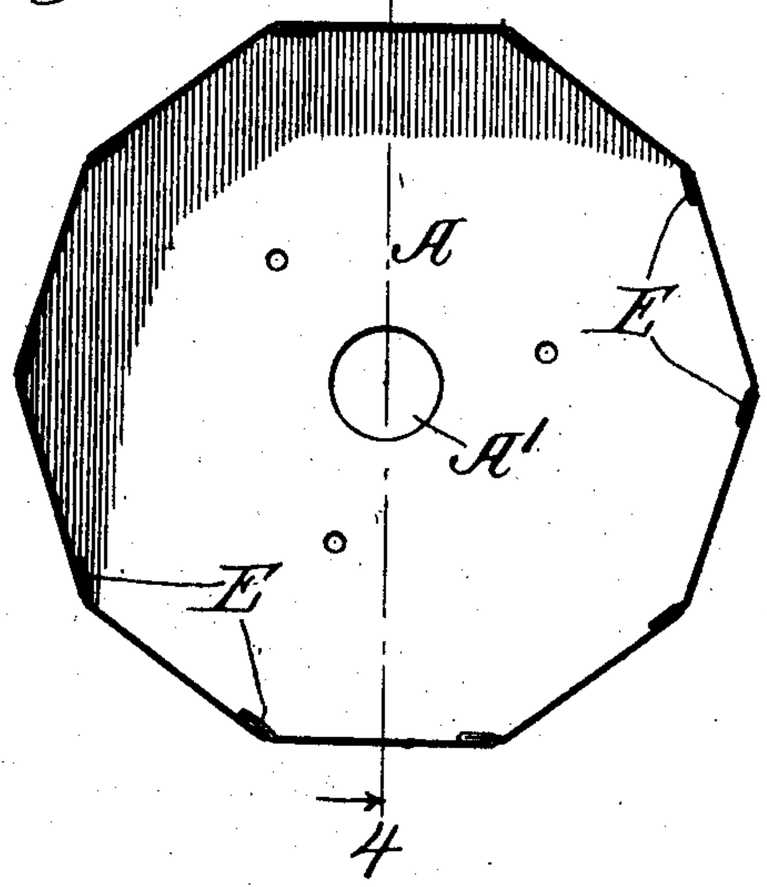


Fig. 3.

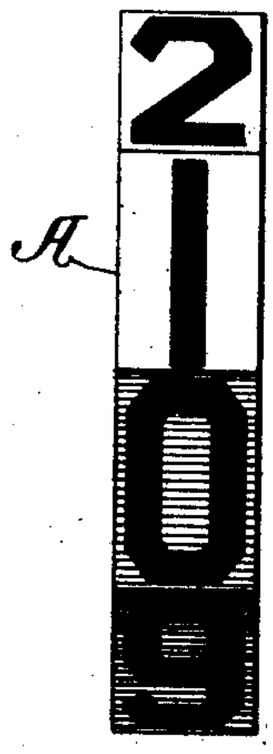
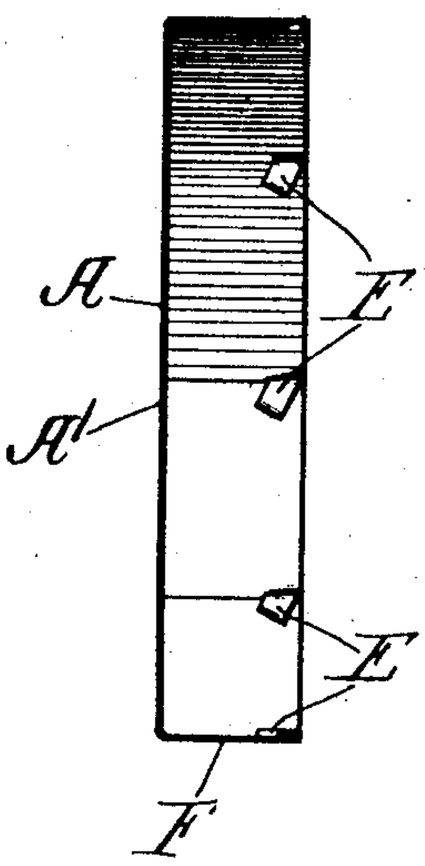


Fig. 4.



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WHEEL.

No. 884,093. Specification of Letters Patent. Patented April 7, 1908.

Application filed March 29, 1905. Serial No. 252,644.

To all whom it may concern:

Be it known that I, WILLIAM G. KIRCHHOFF, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Wheels, of which the following is a specification.

My invention relates to improvements in wheels, and has for its object to provide a new and improved device of this description.

My invention is illustrated in the accompanying drawings, wherein

Figure 1 is a plan view of the wheel before being bent into shape; Fig. 2 is a side elevation of the wheel when completely formed; Fig. 3 is an edge view of the wheel shown in Fig. 2; Fig. 4 is a sectional view taken on line 4—4 of Fig. 2. Fig. 5 is a portion of the device of Fig. 2 showing a modified construction.

Like letters refer to like parts throughout the several figures.

My present invention relates to wheels which may be used for various devices, but which are particularly adapted to be used in connection with recording or registering devices.

In carrying out my invention I take a piece of sheet metal A of the desired size. This piece of sheet metal is painted or enameled, and provided with a series of numerals, from zero to nine inclusive. This piece of sheet metal may be treated in any usual manner to properly paint or enamel it, and this is preferably done before the metal is bent into shape. The periphery of the sheet is provided opposite each number with a flat face B, and between these flat faces is preferably a shorter flat face C. Triangular pieces of metal are cut out between each figure and opposite the short flat faces C, as shown at D, thus leaving a connecting piece E between each triangular opening and the outer edge of the device. The periphery or outer portion F of the sheet is then bent at right angles to the central part by means of dies, or the like, as shown in Figs. 2 and 3, so that a series of flat faces are provided upon which the numerals show when looking at the edge of the wheel. Pieces of metal E are looped and bent against the inner face of the bent over portion, as shown in Figs. 2 and 4, so as to strengthen the construction and make the completed wheel rigid. The metal is preferably cut out so as to form triangular openings D, and such openings are of such size and the amount of metal turned over is such that the edges of said triangular openings come together when the outer edge of the sheet is turned over, as shown in Figs. 2, 3 and 4. It will be seen that the flattened faces upon which the numbers are placed are connected together by the metal at both edges, the metal between said flattened faces being cut away. The drawings show the relative proportions of the parts.

It will thus be seen that the outer edge of the metal is continuous and remains continuous when the wheel is formed, and that this continuous edge gives strength and durability to the wheel. It is, of course, evident that changes may be made in the construction without departing from the spirit of my invention, and in the method of completing the wheel and the sequence of the various steps, all of which will occur to those versed in the art.

The wheels when formed may be placed upon a shaft or other suitable supporting part, there being provided an opening A^1 for this purpose.

In the process of forming the wheels the connecting pieces E are formed into loops projecting inwardly, as shown at the bottom of Fig. 2, and they may be left in this shape if desired, although if a mechanism is located within the wheel more space is secured by bending said strengthening loops against the inner face of the bent over portion.

I claim:

1. A wheel consisting of a piece of sheet metal with an edge free from indentations, the outer portion being bent at right angles to the middle portion so as to form a series of faces.

2. A wheel made up of a sheet of metal having its outer edge bent at an angle to the central part so as to form a series of faces in a plane substantially at right angles to said central part, said faces connected together by the metal at both edges, the metal between the faces cut away between said edges.

3. A wheel made from a sheet of metal having a continuous periphery, a portion of the metal between the periphery and the center removed at intervals so as to form openings, connecting pieces of metal between the openings and said periphery, the edge of said sheet of metal bent at an angle to the central

part, said connecting pieces forming loops bent against the inner face of the bent over portion.

4. A wheel consisting of a piece of thin metal with an unbroken edge, the outer portion being bent at right angles to the middle portion so as to form a series of faces, said faces separated at their sides between their ends, both ends of each face being connected with the adjacent face.

5. A wheel consisting of a piece of sheet metal having a continuous periphery, a portion of the metal between the periphery and the center removed at intervals so as to form openings, connecting pieces of metal between the openings and the said periphery, the edge of said sheet of metal bent at an angle to the central part, said connecting pieces formed into inwardly projecting strengthening loops.

6. A wheel consisting of a piece of sheet metal, the outer edge thereof free from indentations, the outer portion, containing said outer edge free from indentations, being bent substantially at right angle to the middle portion of the wheel, the metal at the center being cut away so as to form an opening.

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