

(No Model.)

2 Sheets—Sheet 1.

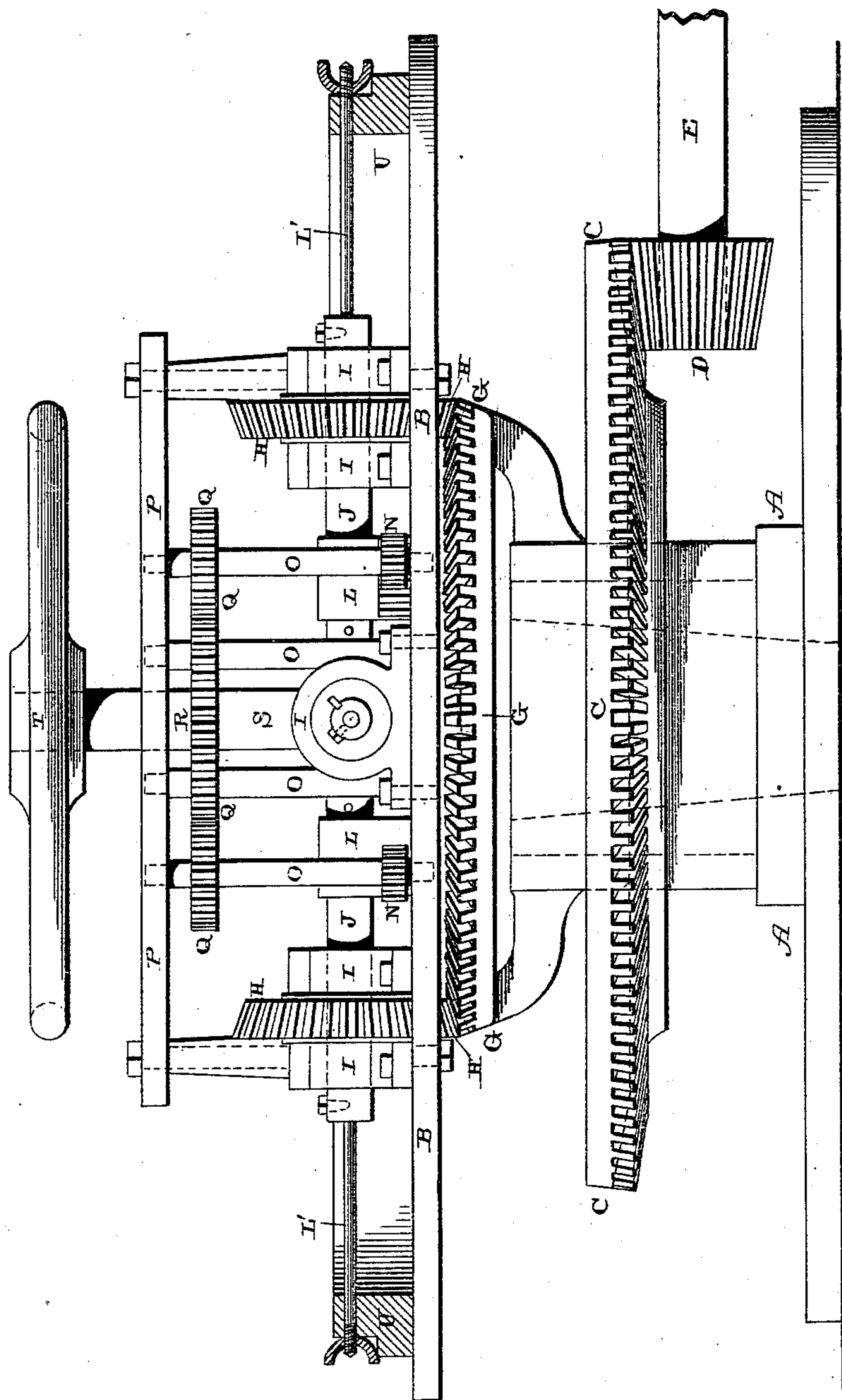
G. H. EVERSON.

MACHINE FOR DRILLING HOLES IN THE FELLIES OF METALLIC WHEELS.

No. 420,338.

Patented Jan. 28, 1890.

Fig. 1.



Witnesses:

E. P. Ellis,
L. L. Burkett

Inventor:

Geo. H. Everson,

per
J. A. Lehmann,

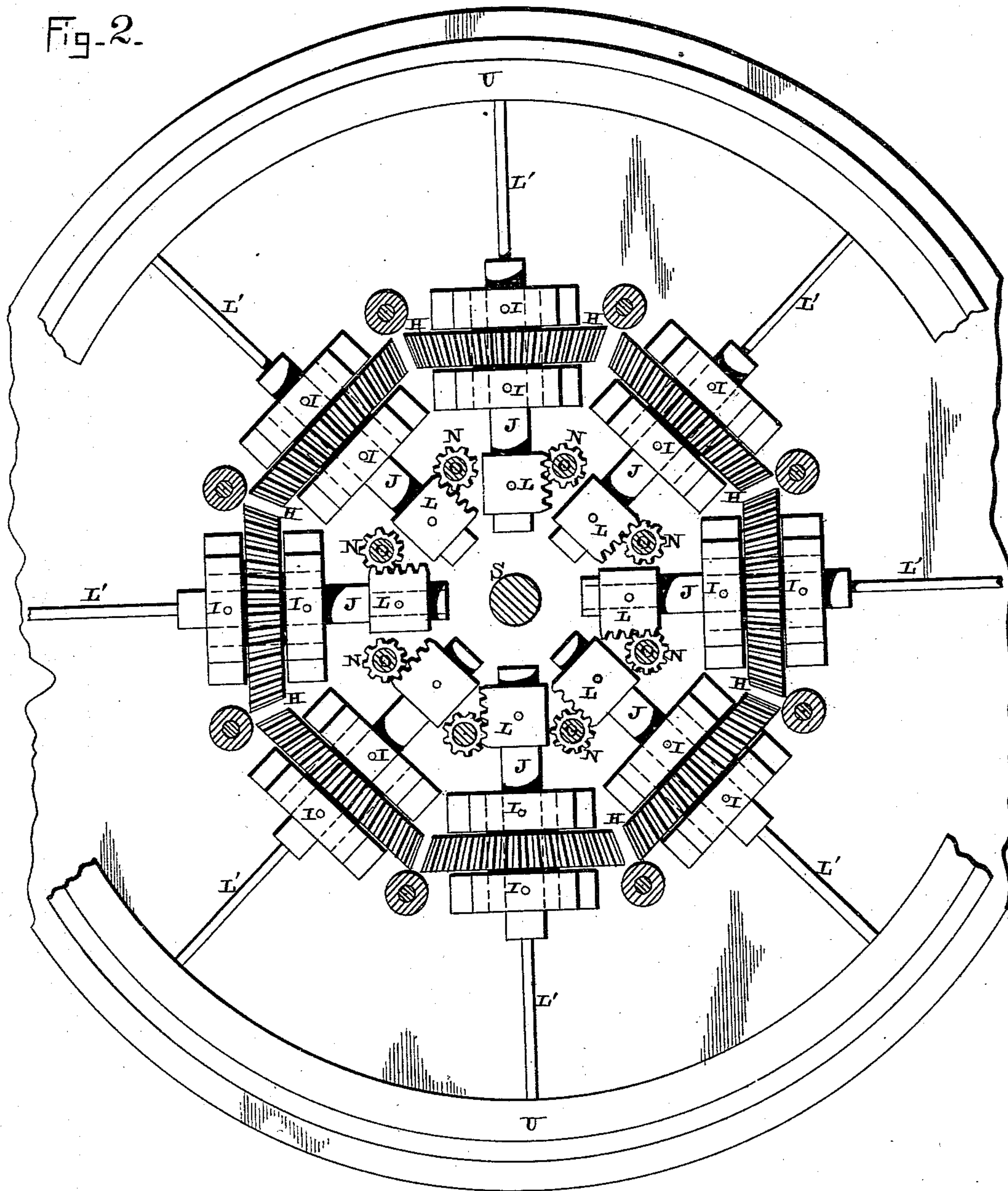
att'y

(No Model.)

2 Sheets—Sheet 2.

G. H. EVERSON.
MACHINE FOR DRILLING HOLES IN THE FELLIES OF METALLIC WHEELS.
No. 420,338.
Patented Jan. 28, 1890.

Fig. 2.



Witnesses:

E. P. Ellis,
L. L. Burket.

Inventor:

Geo. H. Everson,

per
F. A. Lehmann,
att'y.

UNITED STATES PATENT OFFICE.

GEORGE H. EVERSON, OF PITTSBURG, PENNSYLVANIA.

MACHINE FOR DRILLING HOLES IN THE FELLIES OF METALLIC WHEELS.

SPECIFICATION forming part of Letters Patent No. 420,338, dated January 28, 1890.

Application filed June 21, 1889. Serial No. 315,105. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. EVERSON, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain
5 new and useful Improvements in Drilling Spoke-Holes in the Fellies of Metallic Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in
10 the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in
15 machines for drilling spoke-holes in fellies for metallic wheels; and it consists in the combination of an operating mechanism, a series of miter-gears which are keyed loosely upon the drill-rods, which are made movable back
20 and forth through the wheels, and a mechanism for moving the drill-rods, as will be more fully described hereinafter.

The object of my invention is to provide a machine for boring spoke-holes in metallic
25 fellies, and by means of which one-half of all of the holes are bored at one operation and the other holes at the other.

Figure 1 is a horizontal section of a machine which embodies my invention, taken
30 above the miter-wheels. Fig. 2 is a vertical section of the same.

A represents a suitable supporting-frame, upon the top of which the bed-plate B is placed. Placed and revolving loosely upon
35 the frame A is the beveled wheel C, which is driven by the pinion D upon the operating-shaft E, and secured to this wheel C is a second miter-wheel G, which revolves below the bed-plate B, which is provided with a series
40 of slots, through which the small miter-wheels H project at their lower edges, so as to engage with the large wheel G, by which they are all driven. Journaled in suitable bearings I upon the top of the bed-plate B are
45 the drill rods or shafts J, which pass freely through the miter-wheels H, but which are keyed thereto, so as to be caused to revolve by the wheels. Upon the inner ends of the drill-rods I are secured the toothed castings
50 L, which are swiveled upon the ends of the

drill-rods L', and which castings engage with the pinions N upon the vertical shafts O. The lower ends of the shafts O are journaled in the bed-plate B, while their upper ends are
55 journaled in the circular plate P, which supports them in a vertical position. Upon these shafts O are secured the pinions Q, which mesh with a large wheel R on the central shaft S, which is provided with a hand-wheel
60 T at its upper end. When the shaft S is revolved by the operator, the wheel R, through the pinions Q, causes the shafts O to revolve, and the pinions N, which mesh with the toothed
65 castings L, cause the drill to advance or retract the boring-bits, as the operator may desire.

The metallic fellies to be drilled are placed upon the metallic ring U, which is placed upon the top of the bed-plate, and which ring U
70 corresponds to the diameter of the metallic wheel which is to have the spoke-holes bored in it. For each diameter of wheel there will be a separate ring U used, and each ring is provided with suitable catches or fastening
75 devices, by means of which the fellies are held while being operated upon. After the felly has been clamped in position the operator has but to force the drill-rods L' outward
80 by means of the shaft S, when eight of the spoke-holes will be bored simultaneously, and then by turning the felly partially around the other eight can be bored. The drill-rods will
85 be provided with bits of different lengths, so as to correspond to different diameters of the wheels. The larger the wheels the longer the bit-rods will be. Each of these bits passes horizontally through the ring U, so as to be
90 held rigidly in position and thus prevent any variation in the work done.

Having thus described my invention, I
claim—

1. The combination of the driving-wheel, a series of smaller wheels H, operated thereby, suitable bearings I, drill-rods J, which pass
95 both through the bearings and the wheels H, the toothed castings L, swiveled upon the inner ends of the drill-rods, the drills, and a mechanism for moving the drill-rods back and forth, substantially as shown.

2. The combination of the base-plate, the

100

ring U, upon which the fellies are placed, the
endwise-moving drill-rods carrying bits, the
wheels feathered upon the drill-rods, the swiv-
eled toothed castings placed upon the inner
5 ends of the drill-rods, the pinions N, the shaft
O, provided with the pinions Q, the operating-
wheel R, and the shaft S, substantially as de-
scribed.

In testimony whereof I affix my signature in
presence of two witnesses.

GEORGE H. EVERSON.

Witnesses:

PHILIP MAURO,
F. A. LEHMANN.