(No Model.) 2 Sheets—Sheet 1.

L. CLARENBACH, Jr.

GIGGING MACHINE.

No. 458,145. Patented Aug. 18, 1891.

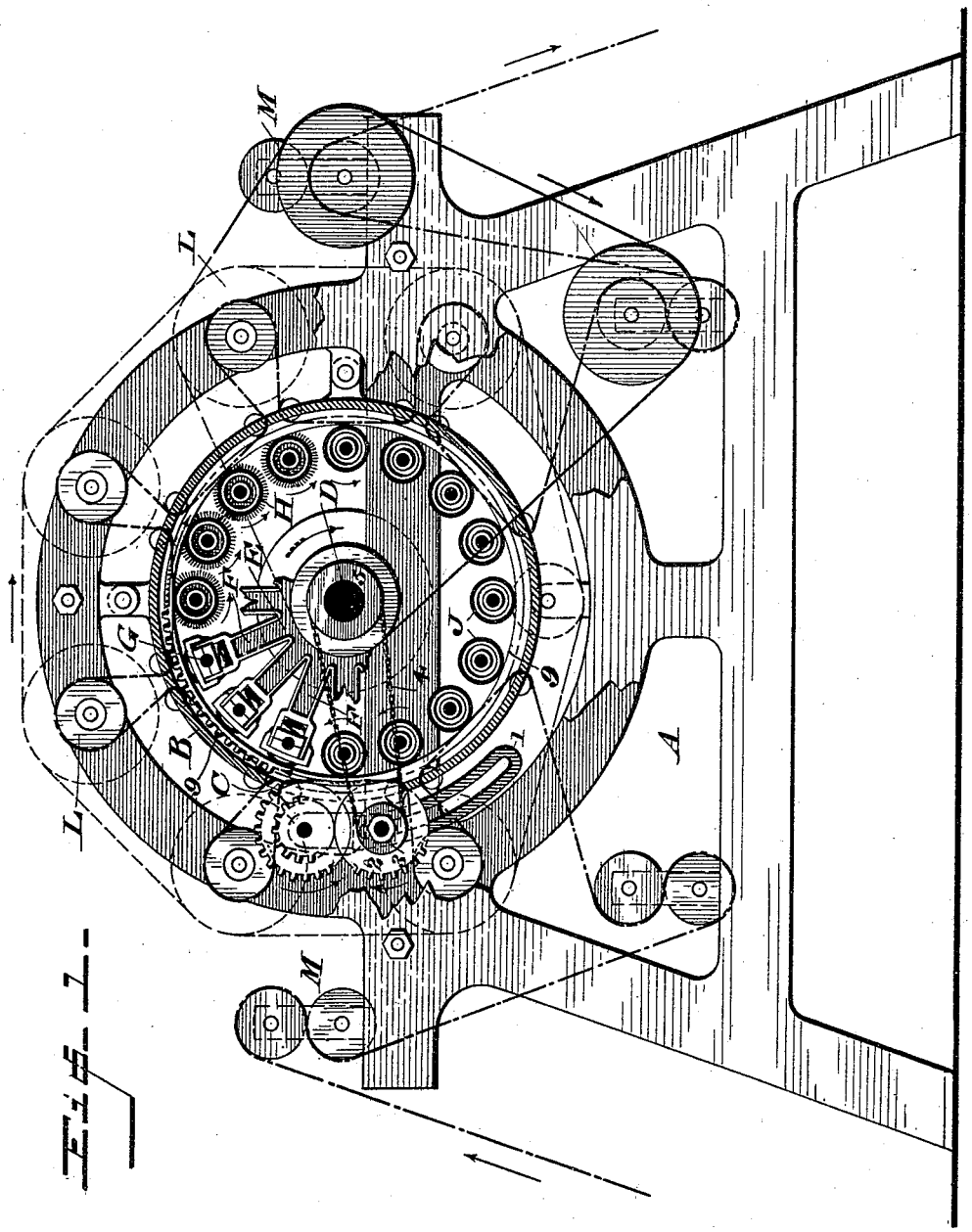

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

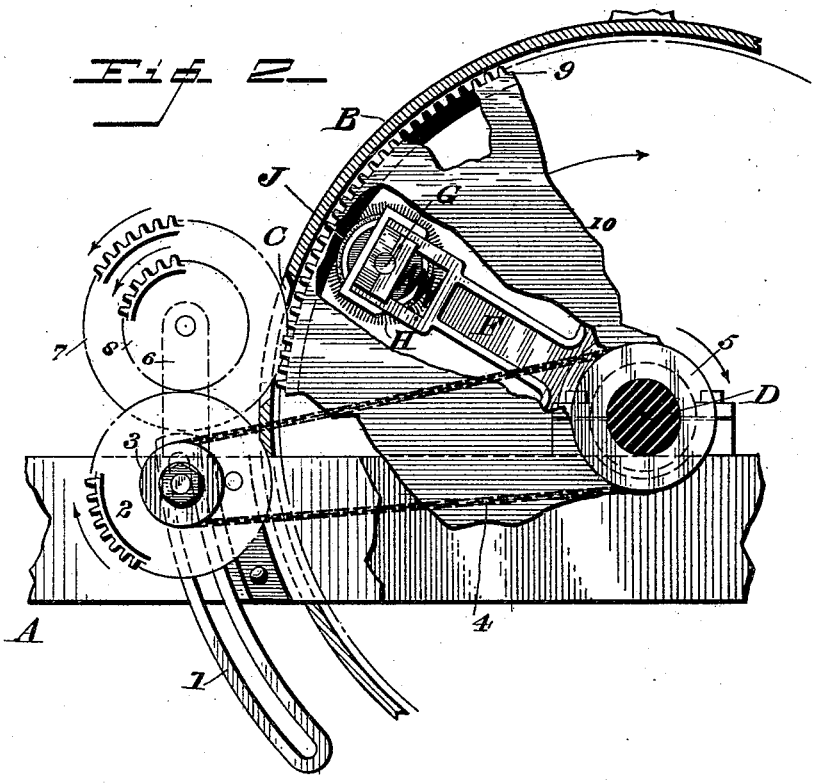
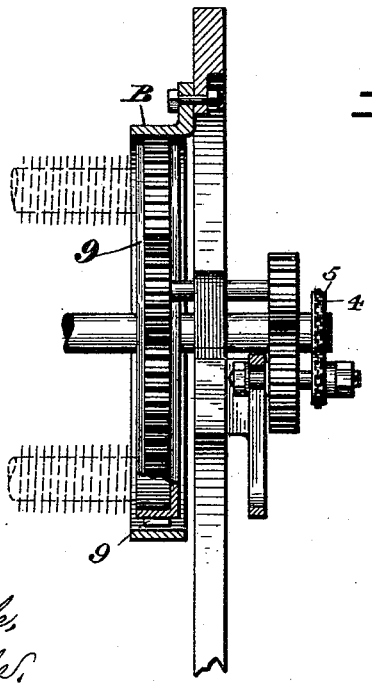


Fig. 3.



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UNITED STATES PATENT OFFICE.

LOUIS CLARENBACH, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE NAPPING MACHINE COMPANY, LIMITED.

GIGGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 458,145, dated August 18, 1891.

Application filed October 9, 1889. Serial No. 326,368. (No model.)

To all whom it may concern:

Be it known that I, LOUIS CLARENBACH, Jr., a subject of the King of Prussia, having resided in the United States one year last past and declared my intention of becoming a citizen thereof, and now residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Gigging-Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in that class of gigging or napping machines in which the napping is accomplished by the contact of the cloth with a series of carding or napping rolls which have a forward motion around a common shaft, as well as an independent motion on their own axes in the opposite direction; and it consists of novel devices for controlling the relation between these forward and backward motions.

The object of the invention is to provide mechanism for regulating the speed of the carding or napping rolls to adapt the same for use in napping cloths of various natures.

Figure 1 represents an end elevation, partly broken away, of a gigging-machine embodying my invention. Fig. 2 represents a similar view, on an enlarged scale, of part of the machine, showing my improvement applied thereto. Fig. 3 represents a partial side elevation, broken away, of my improved mechanism.

Similar letters and numerals of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the frame of the machine supporting ring-frames B, having a slot C, and centrally located within said frames B is a driving-shaft D, to the ends of which are secured spider-frames E, having radial arms F. The ends of said arms are forked and receive the spring-pressed bearings G of the journals of a series of carding or napping rolls H, arranged in the form of a circle around the said shaft D. To the journals of said rolls are keyed the friction-pulleys J, which are revolved by contact with the inner surface of an annulus 9. Guide-rolls L and feed-rolls M are supplied at different parts of the machine, as shown, over which the cloth to be napped is slowly fed against the carding-rolls H. A hanger 1 is secured to one side of the frame A, wherein a gear-wheel 2 is removably or adjustably mounted. Said gear-wheel 2 has a sprocket or analogous chain-wheel 3 affixed thereto, traversed by an endless chain belt 4, which also runs over a wheel 5, keyed to the end of the shaft D. Standards 6 are located adjacent to the hanger 1 and gear-wheel 2, as seen in Fig. 2, and support a gear-wheel 7, having a smaller gear 8 attached thereto, which meshes with the said gear 2. The teeth of the gear 7 mesh with the peripheral teeth of the annulus 9, the latter being located within the ring-frame B and constructed with a web 10, or arms, if desired, said web being mounted loosely on the shaft D. The motion of the shaft D is transmitted through the belt 4 to gear 2 and through gear 7, projecting through the slot C of frames B to the annulus for revolving the latter at a greater or less speed and in the same direction as said shaft D, as fully shown by the arrows. The friction-pulleys J on the ends of the carding-rolls H bear against the flange of the annulus. The spider-frames E revolve at a uniform rate of speed and carry the rolls H forward. The annulus is given a varied motion, according as the nature of the cloth requires a vigorous or light treatment to produce the nap. The carding-rolls therefore moving in one direction around a common shaft D at a uniform rate of speed are of themselves revolved in a reverse direction by contact with the annulus 9, which latter, according to the arrangement of the gearing, is given a fast or slow movement.

Though I have described and shown a precise arrangement of gearing to accomplish the desired revolution of the annulus, I reserve the right to employ any form of mechanical equivalent to attain the same purpose.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a gigging-machine, an exteriorly-toothed annulus, friction-rollers in contact with the interior of said annulus, and napping-rolls connected with said friction-rollers, with

means for rotating said annulus and rolls, said parts being combined substantially as described.

2. A gigging-machine having an exteriorly-toothed annulus, a frame carrying a series of napping-rolls, a driving-shaft with which said frame is connected, friction-pulleys on the napping-rolls bearing against said annulus, and gearing for operating said annulus, the friction-rollers being within said annulus, and the latter loosely mounted on said driving-shaft, the several parts named being combined substantially as described.

3. A gigging-machine having a frame carrying a series of napping-rolls, friction-pulleys carried by said napping-rolls, an annulus whose exterior is toothed and whose inner surface engages with said friction-rollers, a gear-wheel meshing with said annulus, and means for operating said gear-wheel, said annulus being loosely mounted on the driving-shaft to which the frame of the napping-rolls is secured, said parts being combined substantially as described.

4. In a gigging-machine, a driving-shaft and a frame thereon supporting napping-rolls, friction-pulleys on said rolls, an exteriorly-toothed annulus, said pulleys engaging with the interior of said annulus, a gear-wheel and means for adjustably supporting the same, a gear-wheel meshing with said removable gear-wheel and the toothed annulus, and means for operating the last-named gear-wheel, said parts being combined substantially as described.

LOUIS CLARENBACH, JR.

Witnesses:
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