

(No Model.)

2 Sheets—Sheet 1.

J. HANSON.

CLOTH GIG.

No. 358,153.

Patented Feb. 22, 1887.

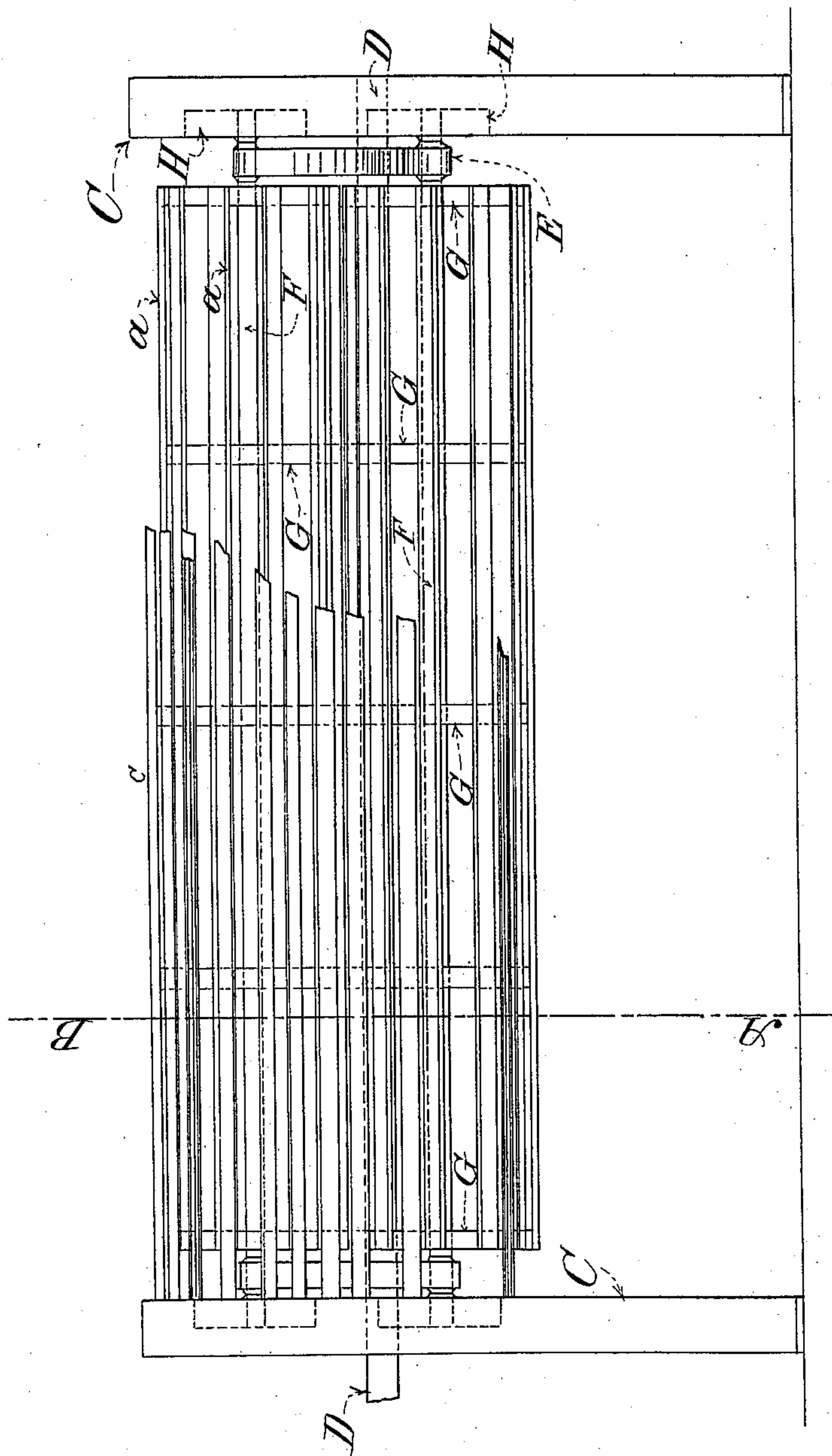


Fig. 1

WITNESSES:

John F. Belsterling
Peter Binder

INVENTOR.

INVENTOR
Joseph Hanson
by his attorney
Thomas D. Mowlds

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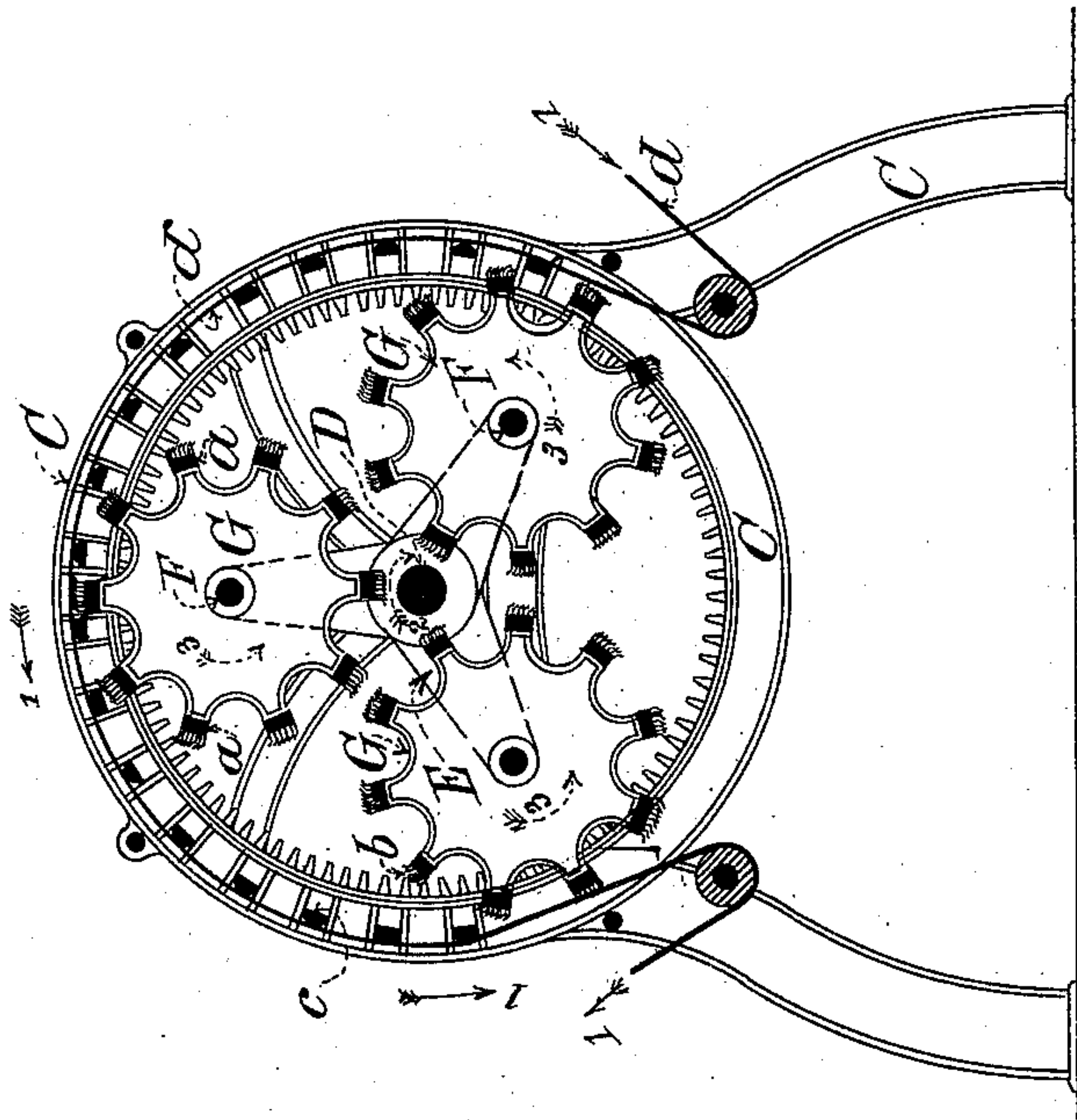


Fig. 3

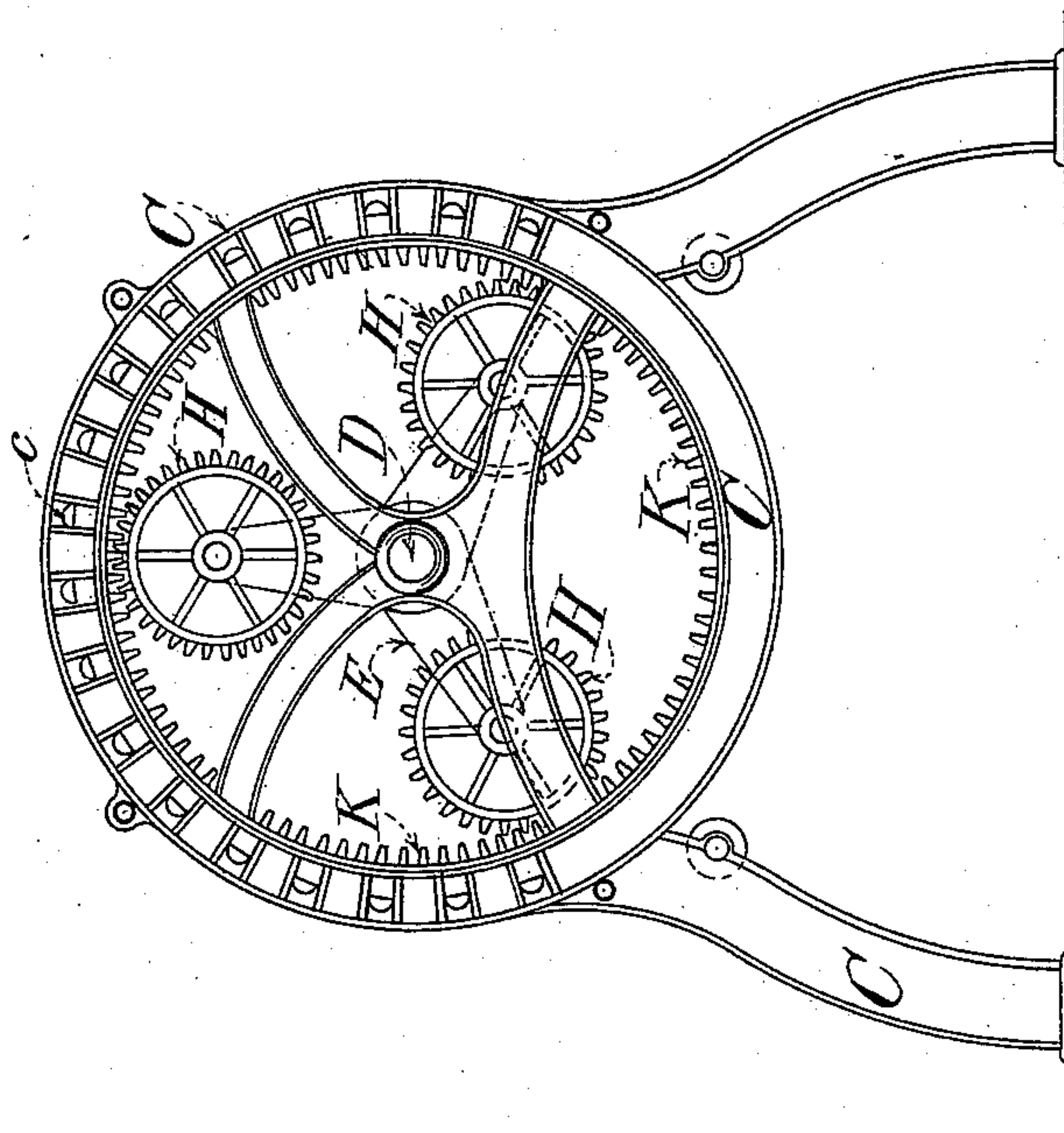


Fig. 2

WITNESSES:

John F. Belsterling
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UNITED STATES PATENT OFFICE,

JOSEPH HANSON, OF PHILADELPHIA, PENNSYLVANIA.

CLOTH-GIG.

SPECIFICATION forming part of Letters Patent No. 358,153, dated February 22, 1887.

Application filed May 10, 1886. Serial No. 201,683. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HANSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Cloth Gigs; 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 the art to which it appertains to make and use the same.

My invention relates to that class of gigs used for raising the nap upon cloth, in which a series of small nap-forming cylinders having an independent movement are attached to and receive their motive power from a central driving-shaft around which they revolve.

The objects of my improvement are to firmly secure the small napping-cylinders to the main or driving shaft, and with the least possible gearing give to the said cylinders an independent reverse revolving movement that will be accompanied with the least possible friction, thus lessening the wear and tear, and in a measure overcoming the liability of breakage. These objects I accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly broken, of the operative parts of my improved gig. Fig. 2 is an end elevation showing the manner in which the small napping-cylinders are supported and revolved. Fig. 3 is a cross-section on line A B in Fig. 1.

C C represents the frame of the machine, usually constructed of iron and made after any suitable or desired pattern.

D is the main or driving shaft secured in suitable bearings in the frame of the machine and extending from side to side thereof.

E E are two trifurcated attachments secured rigidly to the driving-shaft D, one at each end thereof.

F F are the spindles or shafts carrying the small napping-cylinders G. These shafts are supported by and in bearings located at the ends of the trifurcated attachments E.

a a are projecting sections formed on the outer surfaces of the cylinders G, for the purpose of attaching the card-wire thereon. (See Fig. 3.)

b b are strips of card-wire similar to that used on carding-machines, secured on the extending sections a of the cylinders G by tacking or any other convenient means.

H H H are cog-wheels secured rigidly at each of the ends of the shafts F of the cylinders G.

K is a series of cogs formed in a circle on the inner sides of the frame C. (See Fig. 2.)

c c are supports extending across the machine outside of the cylinders, for the purpose of holding the cloth in position to be acted upon by the wire on the cylinders G.

d represents a piece of cloth upon which the nap is to be raised.

The cylinders G are longitudinally grooved, as shown, and at the points in their revolution where the brushes on them come in contact with the cloth carried over frame C the longitudinal supports enter said grooves.

To operate my improved gig, the cloth is first extended over the top in the position shown in Fig. 3, after which, by any suitable mechanism, it is carried forward in the direction indicated by arrow 1, and the main or driving shaft D made to revolve in the direction indicated by arrow 2. This movement of the driving-shaft will carry the trifurcated attachments E, with the cylinders G, in the same direction, causing the cog-wheels H to engage with the cogs K on the inner sides of the frame C, thus giving the cylinders G a revolving motion around the shafts F in the direction indicated by arrows 3 and causing the projecting sections a, carrying the card-wire b, to strike the cloth at regular intervals between the supports c c. (See Fig. 3.)

The cloth d is made to move forward somewhat faster than the speed of the napping-cylinders G. This is for the purpose of allowing the hook-shaped carding-wire to take a firmer hold of the fibers of the fabric upon which the nap is to be raised. The peculiar movement by which the wire is made to strike the cloth and recede therefrom at regular intervals has the effect of forming the nap in a way that will do the least possible injury to the fabric.

I do not claim, broadly, the frame provided with longitudinal supports, over which the cloth passes, arranged at suitable distances

apart in cylindrical form, in combination with cylinders provided with depressions, in which the said supports may lie, and card-clad projections for acting upon the cloth between the
5 supports.

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

10 In a gig, the combination, with the main shaft, a frame, C, having longitudinal supports c, and a circular rim of inwardly-projecting teeth or cogs, of the trifurcated attachments

E, secured to the main shaft, longitudinally-grooved cylinders G, having bearings in the arms of said attachments, and gears on the ends
15 of said cylinders engaging with the inwardly-extending cogs or teeth of the rim, as set forth.

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

JOSEPH HANSON.

Witnesses:

OTIS EGAN,

THOMAS D. MOWLDS.