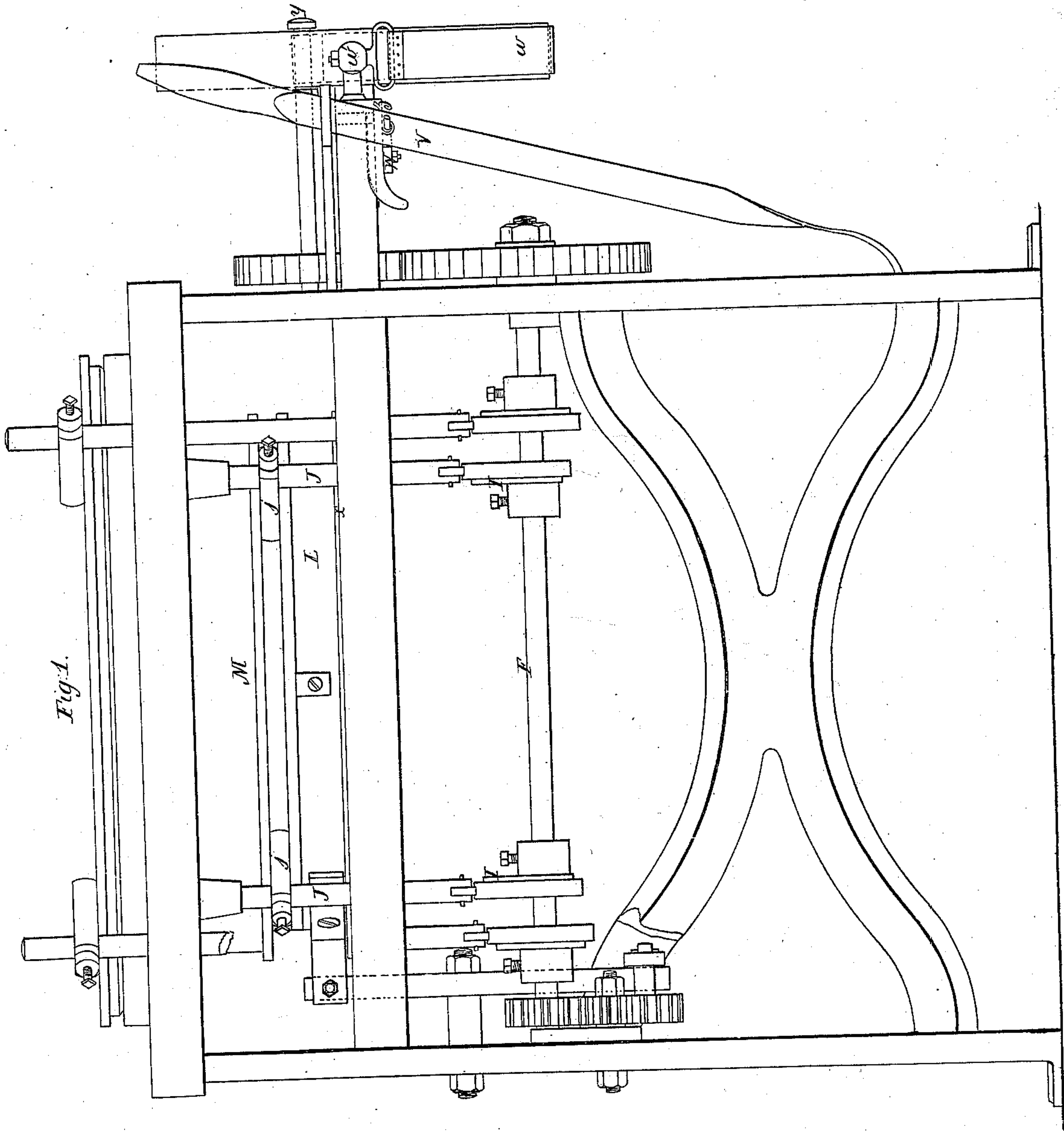


J. H. Barsantee.
Knitting Machine.

N^o 10,980.

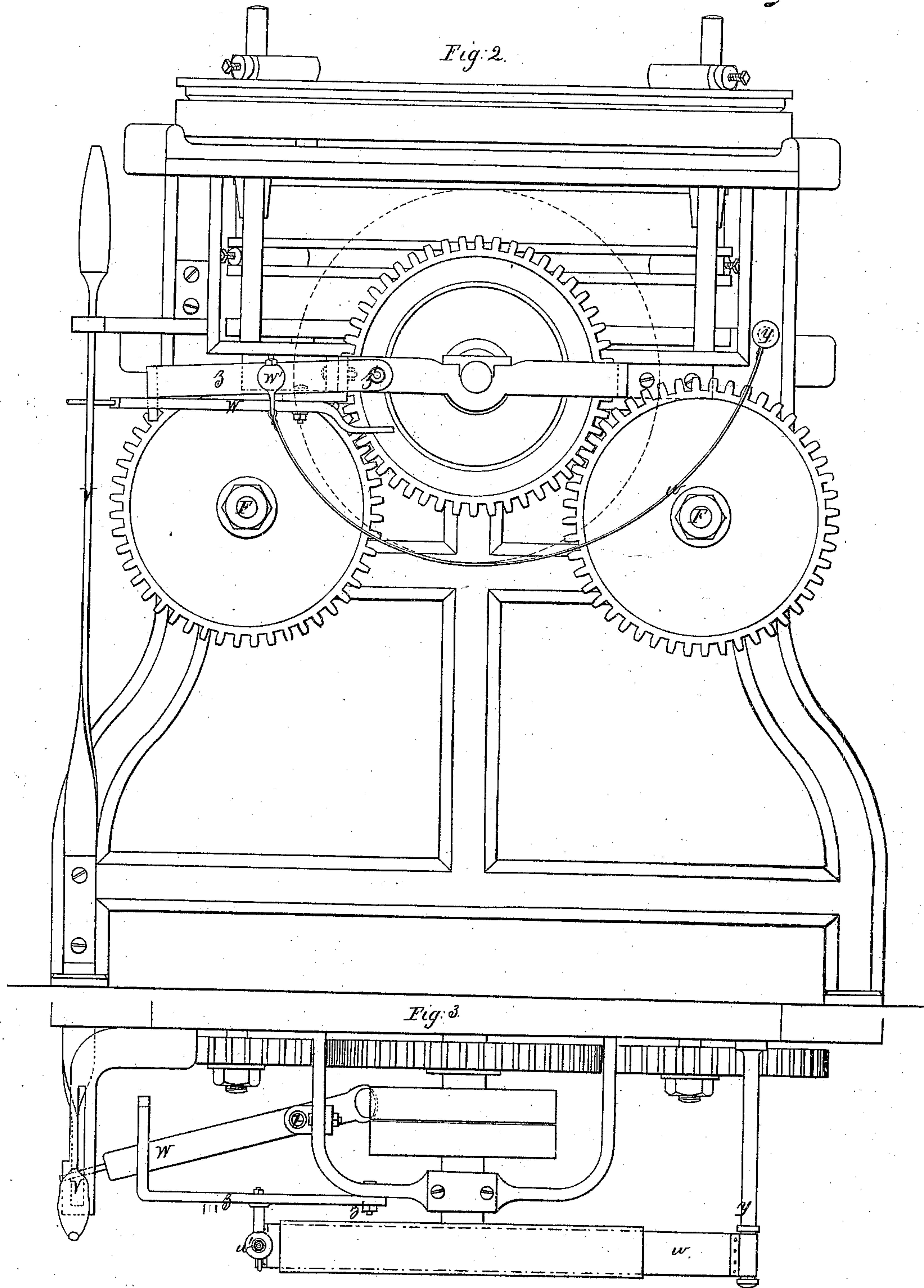
Patented May 30, 1854.



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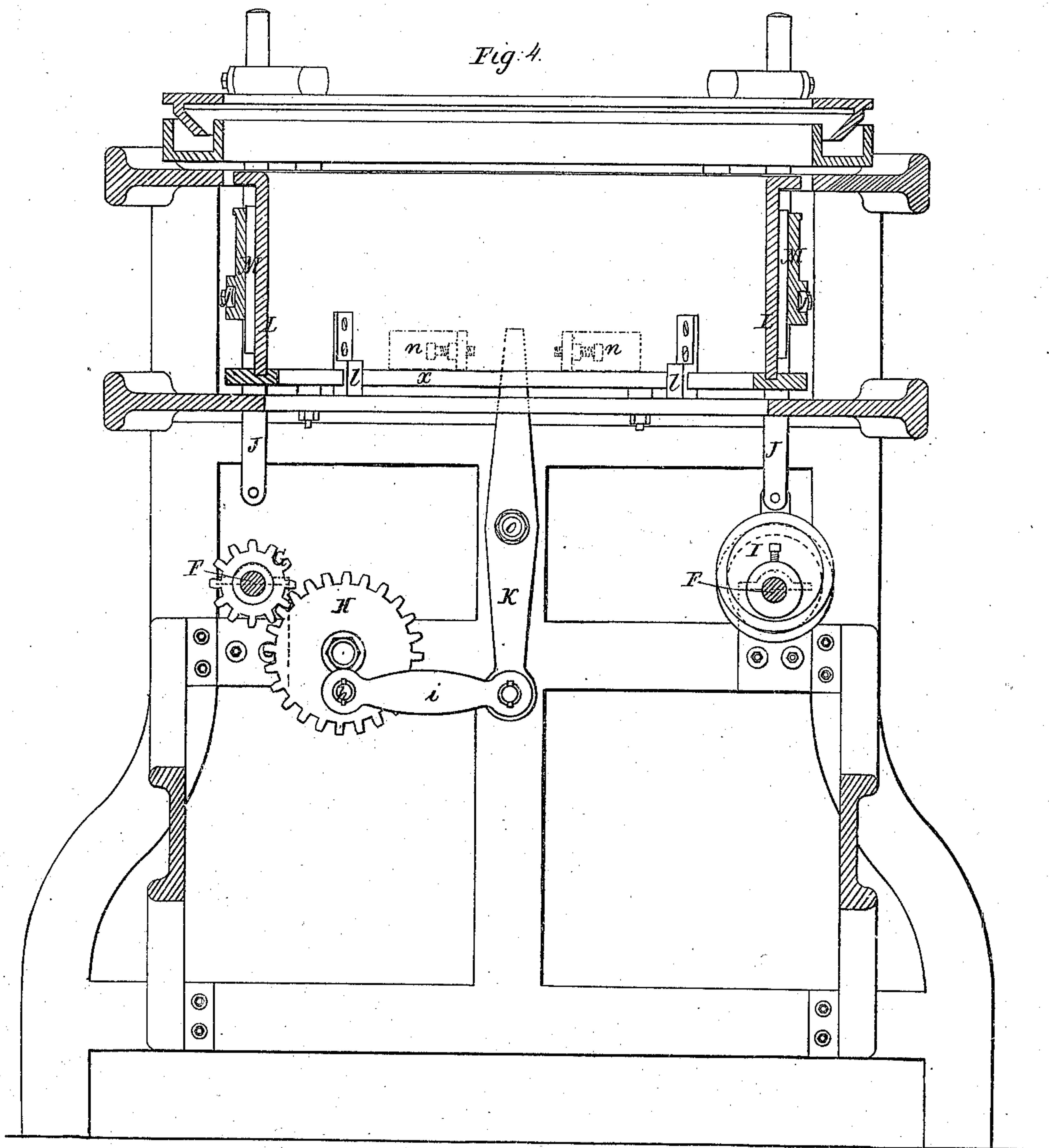


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Fig. 4.



UNITED STATES PATENT OFFICE.

JOHN H. BARSANTEE, OF PHILADELPHIA, PENNSYLVANIA.

KNITTING-MACHINE.

Specification of Letters Patent No. 10,980, dated May 30, 1854.

To all whom it may concern:

Be it known that I, JOHN HENRY BARSANTEE, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Knitting-Machines; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1, is a front elevation of the machine. Fig. 2, is a side elevation. Fig. 3, is a plan of the brake for stopping the machine. Fig. 4, is a section in a vertical plane through the machine.

My improvements consist of the following devices:

First, I form the frame and the general operating parts of my machine similar to those described in my former Letters Patent, but instead of placing the two cylinders L and M close together I now place them concentric, with a space sufficient for the dust and waste wool to sift down between them for the purpose of preventing their clogging. This is a matter of great importance in the practical working of the machine by which I am enabled greatly to expedite its operation, rendering the constant cleaning of the cylinders unnecessary, and the consequent taking apart of the parts for that purpose. At four points there are projections on the inner cylinder L to keep the space equal all around and to guide and steady the cylinders and insure their working together. This change causes the machine to move steadier and increases the product.

My second device is the mode of connecting the outer cylinder M with the moving power by means of four rods J, from which project arms (j) that project inward into a groove surrounding the outside of the cylinder M, at (m.) The rods J, being connected to eccentrics I, on the shafts F, serve to raise the cylinder accurately and steadily, while it has freedom to revolve as hereafter described. To this cylinder the needles are affixed, as will be readily understood by persons conversant with the machines to which this is most nearly allied. The steadiness with which a cylinder thus attached works far surpasses that of any other mode heretofore essayed and is absolutely necessary to working rapidly. To the frame of the machine a ring α is affixed by adjustable screws,

so that it can be set at any height required above the base and adjusted to a level in the top of the ring there is a groove into which the cylinder L fits, so that it can revolve or vibrate around more or less of the circle as required to hold the cylinder down to the ring. I employ clamps shown at l, Fig. 4, on the inside of cylinder L. This elevation and depression of the ring α with its cylinder L, determines the length of the stitch or loop in knitting fine or coarse yarn.

The next improvement in my machine consists in the apparatus for causing the cylinders to rotate a given distance back and forth. This device is shown in Fig. 4. On one of the shafts F there is a pinion G, which works into a wheel H of double its diameter, on which there is a crank wrist at (h) on which there is a connecting rod (i) coupling it with the lower end of an upright lever K, having its fulcrum at (o). Its upper end extends up beside the cylinder L, as shown by the dotted lines, and upon this cylinder two lugs (n) are affixed, also shown in dotted lines, between which the lever K plays, the free range of which between the lugs is determined by the set screws passing through them. By the vibration of this lever the cylinders are caused to move a certain distance, regulated by the set screws above named. This arrangement enables me to change the pattern by determining whether the cylinders turn past one, two or more needles each stitch.

The apparatus for stopping the machine is clearly shown in the Figs. 2 and 3. It is composed of the following parts: A stud or arm projects out from the side of the machine at (y), from which a band (w) is affixed, which passes down under the band wheel and up to a lever (z), parallel with the side of the frame, whose fulcrum is at (z'), between which and its opposite end the band above named is attached at (w'). The outer end of the lever is turned at right angles in toward the frame, as clearly shown in Fig. 3. This end of lever (z) rests upon the shipper W, the fulcrum of which is at (t) and its outer end is affixed to the usual spring shipper V. The effect of this apparatus is when the spring is thrown off and springs inward it bears the shipper W along with it, which passing along under the bent end of lever (z) elevates it and thus brings the band (w) in contact with the wheel, and by the friction thus produced

the machine is stopped. This is very necessary to prevent a loss of yarn by bad work.

Having thus fully described my improvements, what I claim therein as new and for which I desire to secure Letters Patent is—

1. The arrangement and combination of the two cylinders L and M with a space between them and supported and moved substantially in the manner and for the purposes set forth.

2. I also claim the ring in which the inside cylinder L sets, and by which it is ele-

vated or depressed, said ring being attached to the frame by set screws for that purpose.

3. I also claim vibrating the cylinder by means of the adjustable lever interposed between it and the gearing or the equivalent thereof substantially in the manner and for the purpose described.

JOHN HENRY BARSANTEE.

Witnesses:

CHARLES D. FREEMAN,
JAMES SIMPSON.