2 Sheets
Sheet 1.

W. H. Rodgers.

Hoop Skirt Machine.

No. 61261 Patented Jan. 15, 1867.

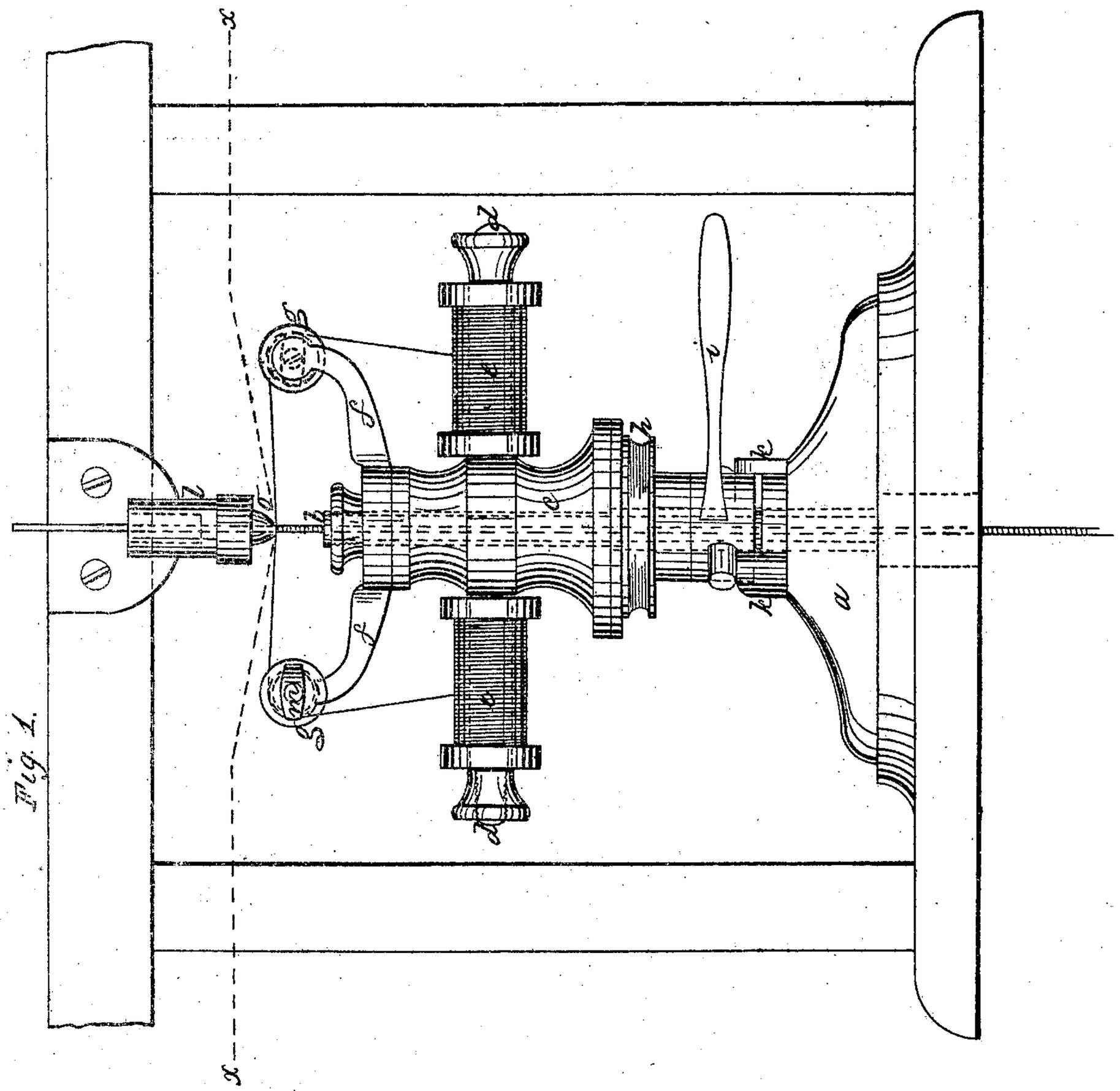


Fig. 1.

Witnesses
Lemuel W. Serrell
Geo. H. Walker

Inventor
Wm. H. Rodgers

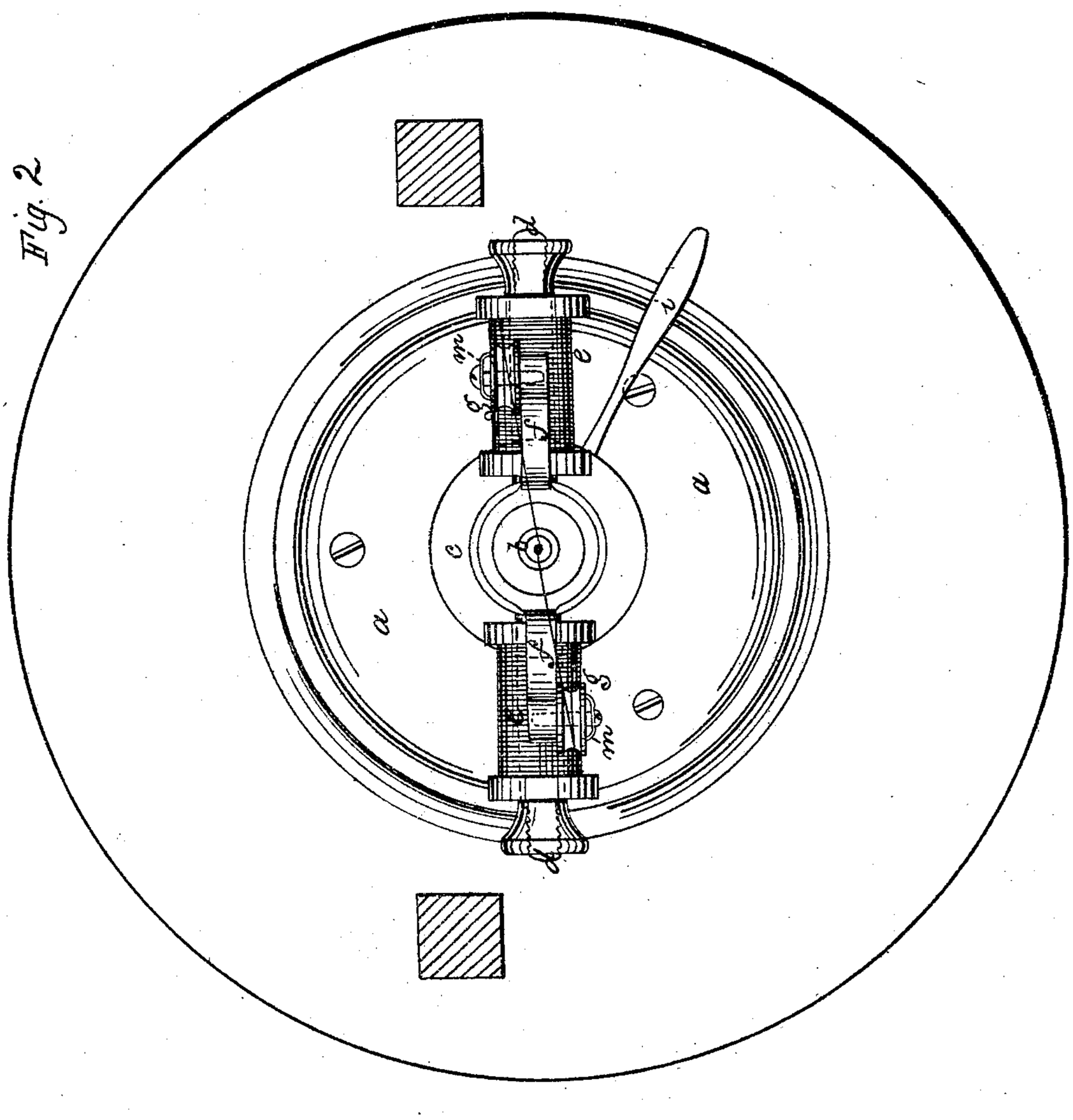
2 Sheets
Sheet 2

W. H. Rodgers.

Hoop Skirt Machine.

No. 61261 Patented Jan. 15, 1867

Fig. 2



Witnesses
Lemuel W. Serrell
Geo. H. Wallace

Inventor
Wm. H. Rodgers

United States Patent Office.

WILLIAM H. RODGERS, OF BROOKLYN, (E. D.,) NEW YORK.

Letters Patent No. 61,261, *dated January* 15, 1867.

MACHINE FOR COVERING WIRE WITH FINE WIRE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM H. RODGERS, of Brooklyn, (E. D.,) in the county of Kings, and State of New York, have invented, made, and applied to use, a certain new and useful Improvement in Machinery for Covering Skirt-Wire, &c.; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a side elevation of my said machine; and

Figure 2 is a plan of the same below the line *x x*.

Similar marks of reference denote the same parts.

Steel wire for skirts has heretofore been covered with a winding of fine wire by a machine, in which a revolving-head carrying small spools has been employed, and the wire has passed up and been covered at the end of a hollow spindle around which said head has revolved. It has been found necessary to re-spool the wire upon small spools or else the vibration of the machine prevents the wire being put upon the skirt-wire evenly, and even after this has been done, the covering wire is not laid on with uniformity; besides which there is considerable loss both of time and wire resulting from the re-spooling. My invention overcomes all these objections, and consists in an independent head for the wire, separate from but placed centrally in line with the axis of a revolving-head carrying large spools or bobbins of the fine wire. By these means I avoid the necessity of re-spooling the fine covering wire, and consequently the loss of time and wire in that operation, and the covering is laid on much more uniformily that it can be done by the machinery heretofore employed, and I am able to employ the ordinary spools as they come from the manufactory containing a large amount of wire, so as to last very much longer than the small spools heretofore employed. I do not require friction applied to the spools as heretofore, as the tension is produced by passing the fine wire around grooved rollers.

In the drawing, *a* represents a standard, carrying a hollow axis, *b*, shown by dotted lines, around which is a sleeve, *c*, carrying spindles, *d d*, for the spools or bobbins, *e e;* and *f f* are arms, at the ends of which are grooved rollers, *g g; h* is a driving pulley, around *b*, that is rotated by competent power, and thrown into or out of gear by the clutch formed by a sleeve around the axis *b*, upon which are pins that run up the inclines *k*, as the sleeve is turned by the lever *i*, so as to force the pulley *h* against the end of the sleeve *c* with the power necessary for driving said sleeve and spools around with the required speed by the friction between the surfaces. A shoulder upon the tube *b* sustains the sleeve when the friction-pulley *h* is not pressed against its lower end. A stationary head, *l*, is provided, at the end of which is a small cap, *o*, through which is a hole of the size and shape of the wire, and the head *l* is sustained rigidly by any suitable framework, so that it will not be vibrated by the rotation of the sleeve and spools. The head *l* is located on the line of a prolongation of the axis of the revolving head *c*. The wire passes from the spools *e e*, around the grooved pulleys *g g*, once or twice, so as to give friction and tension to said covering wire, and then said covering wire passes to the skirt spring or wire, at the point where it passes out of the head *l*, so that a perfect and uniform covering of fine wire is wound around the skirt-wire, by the revolution of the head and its spool of wire, the skirt-wire being drawn at a regular speed through the fixed head *l* and hollow axis *b*. The grooved pulleys *m* are prevented from turning too easily by friction springs applied to their sides; thereby the tension of the covering wire is regulated with accuracy. This invention, although especially adapted to the covering of flat steel skirt-wire, may be employed in covering any other character of wire with a winding of fine wire. By my invention the wire and its covering are kept entirely away from those portions of the apparatus that require oiling, hence I avoid the soiling and injuring of the wire by oil that often occur in other machines.

What I claim, and desire to secure by Letters Patent, is—

The hollow fixed head *l*, separate from the hollow axis *b*, in combination with the revolving head carrying the spools or bobbins of fine wire, and revolved around the axis *b*, as and for the purposes set forth.

I also claim the grooved rollers *g*, in combination with the revolving head and spools, around which rollers *g* the fine covering wire is wound to give the required tension from the friction, as set forth.

Dated this 10th day of August, 1866.

WM. H. RODGERS.

Witnesses:

LEMUEL W. SERRELL,

CHAS. H. SMITH.