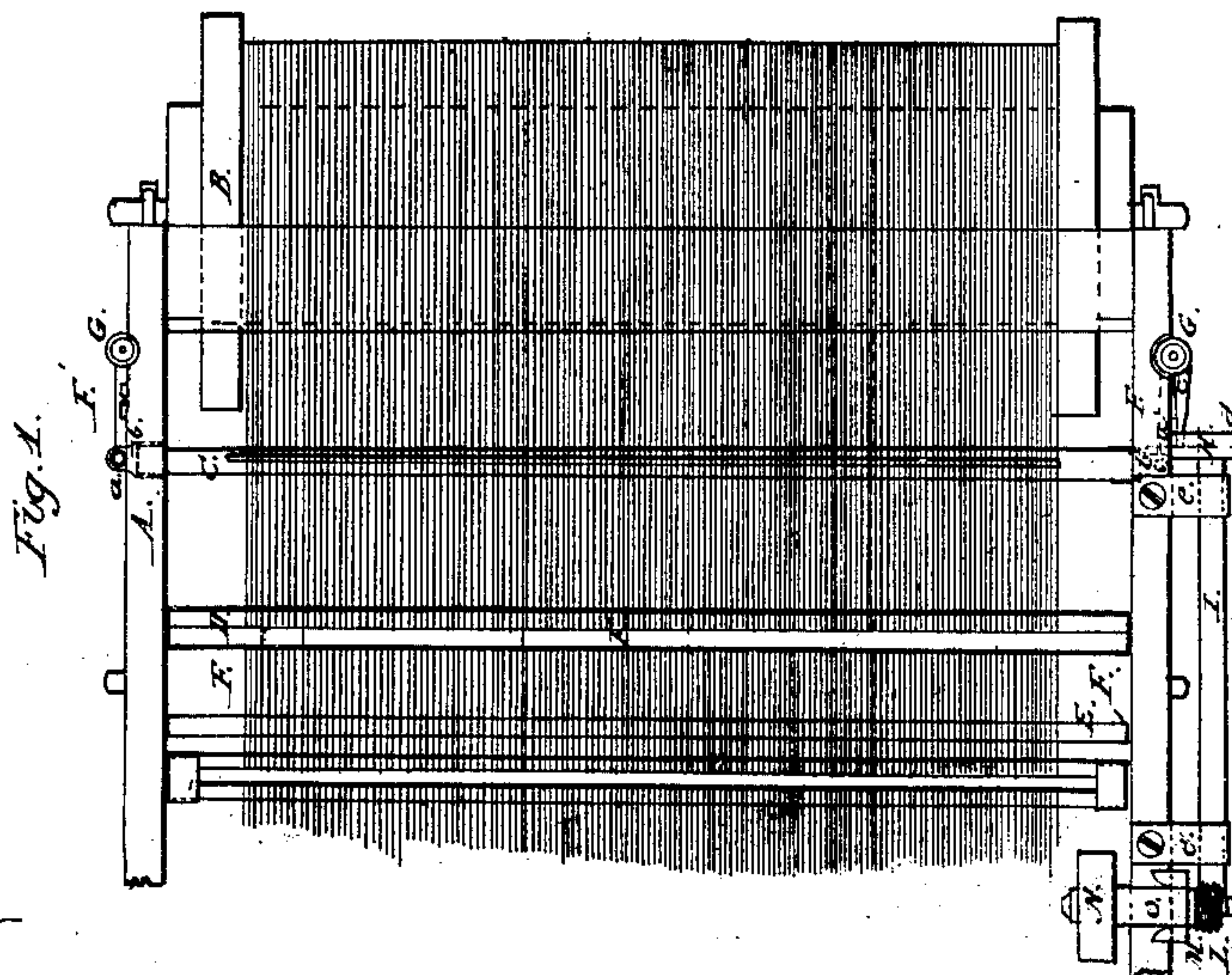
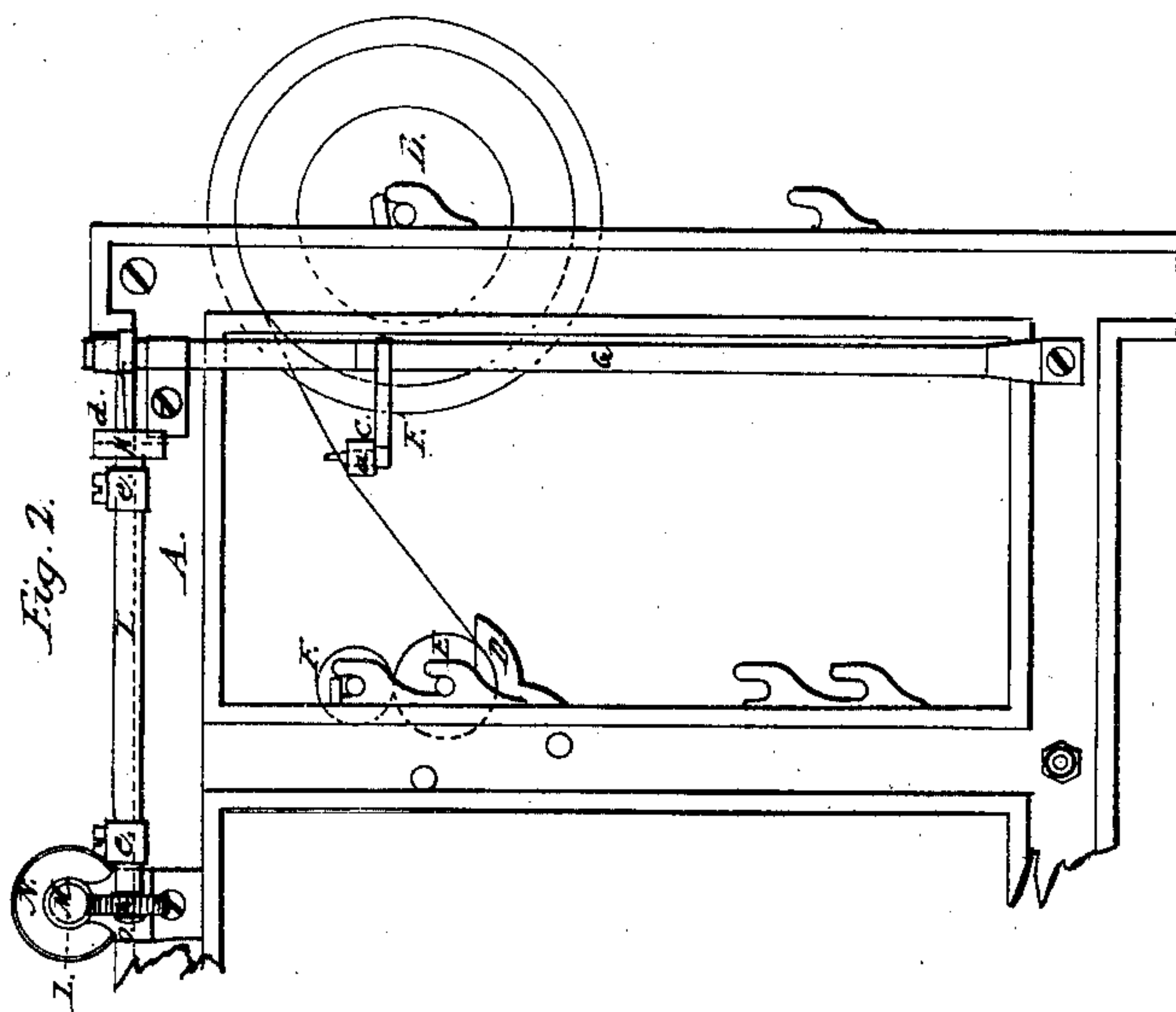
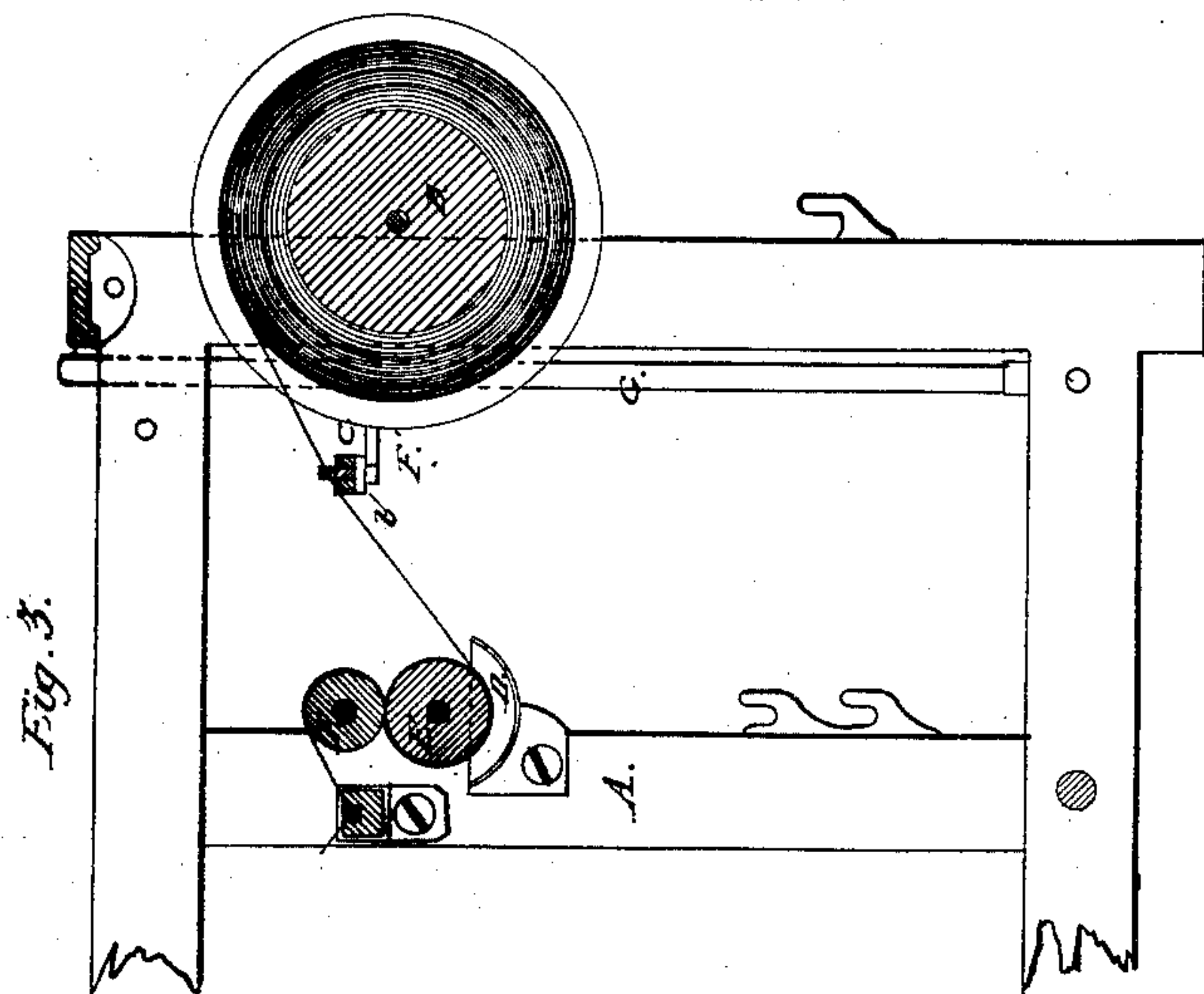


B. Saunders.
Warp Dressing Mach.

N^o 62,370.

Patented Feb. 26, 1867.



Witnesses:
Geo. A. Andrews
Samuel N. Piper

Benjamin Saunders
by his attorney
R. H. Hardy

United States Patent Office.

BENJAMIN SAUNDERS, OF NASHUA, NEW HAMPSHIRE, ASSIGNOR TO HIMSELF AND ALBERT H. SAUNDERS, OF SAME PLACE.

Letters Patent No. 62,370, dated February 26, 1867.

IMPROVEMENT IN DEVICES FOR IMPARTING A LATERAL RECIPROCATION TO THE RADDLE OF WARP-DRESSING MACHINES.

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

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, BENJAMIN SAUNDERS, of Nashua, in the county of Hillsboro, and State of New Hampshire, have invented a new and useful Mechanism for Imparting Reciprocating Lateral Motions to the Raddle of a Warp-Dresser; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view.

Figure 2, a side elevation; and

Figure 3 a vertical section of the yarn-beam and the sizing apparatus of a warp-dresser, with my invention applied to its raddle and the supporting frame of the dresser.

The said drawings do not exhibit the drying mechanism, and various other parts of the dresser not strictly incidental to my invention.

The object of imparting slow reciprocating lateral motions to the raddle of a warp-dresser is to prevent wear of cloth covering of the sizing roller by the warps; also to prevent the sizing from accumulating and drying on those portions of the surface of the sizing roller which are between the yarns.

In the drawings, A denotes the dresser-frame, B the yarn-beam, C the raddle, D the sizing trough, E the sizing roller, and F the squeeze or top roller, they being made, arranged, and applied together in any well-known manner. In carrying out my invention, I support the raddle C, at or near its opposite ends, on the vertical wrists *a a* of two cranks or arms *F' F'*, projecting horizontally from two upright shafts, *G G*, which are arranged on opposite sides of the frame, and supported by bearings applied thereto, as exhibited in the drawings. The wrists are to enter corresponding holes in the raddle, or, what is better, holes made in metallic socket-pieces or shoes, *b b*, applied to the raddle at its two ends. From one of the shafts, *G*, an arm, *c*, extends into the groove *d* of a cam or eccentric, *H*, fixed on one end of a horizontal shaft, *I*, applied in bracket bearings, *e e*, projecting from the frame A. A side view of the cam or eccentric *H* is shown in Figure 4. A worm-gear, *K*, is fixed on the opposite end of the shaft *I*, and engages with a screw, *L*, fixed on a short shaft, *M*, carrying a driving-pulley, *N*, and being supported by and so as to be capable of revolving in a standard, *O*, erected on the frame A, the whole being as exhibited in the drawings.

By putting the shaft in revolution, by means of an endless belt running on and about the pulley *N*, reciprocating lateral movements will be imparted to the raddle, that is to say, it will first be moved slowly in one direction laterally of the dresser-frame, and afterwards will have its motion reversed so as to carry it back to the position of starting.

I am aware of the mechanism exhibited and described in the United States Patent No. 58,611, and being for the purpose for which my mechanism is designed. My invention differs from such patented mechanism, inasmuch as with mine the raddle is not connected with the mechanism for operating it, but simply rests therein; nor is the raddle directly supported by the frame of the dresser, but it is supported on cranks, from which it can be easily removed (for being cleansed) without the necessity of unscrewing any screws or nuts. With my mechanism there is no friction of the raddle on stationary bearings applied to the frame. Besides, there is no grooved slide bar applied to the raddle, and to be elevated and depressed and moved laterally in order to effect the proper motions of the raddle, consequently all the weight and friction incident to the employment of such a bar is saved by my invention.

What I claim, is—

The combination, as well as the arrangement, of the grooved cam *H*, the arm *c*, the two shafts *G G*, and the cranks *F' F'*, the whole being applied to the raddle, and the dresser-frame and its shaft, substantially in the manner and so as to operate as specified.

BENJ. SAUNDERS.

Witnesses:

FRANK G. NOYES,

JAMES B. HALL.