

A. GIRAUDAT.

FEED-MECHANISM FOR THREAD-WINDING.

No. 175,967.

Patented April 11, 1876.

Fig. 1

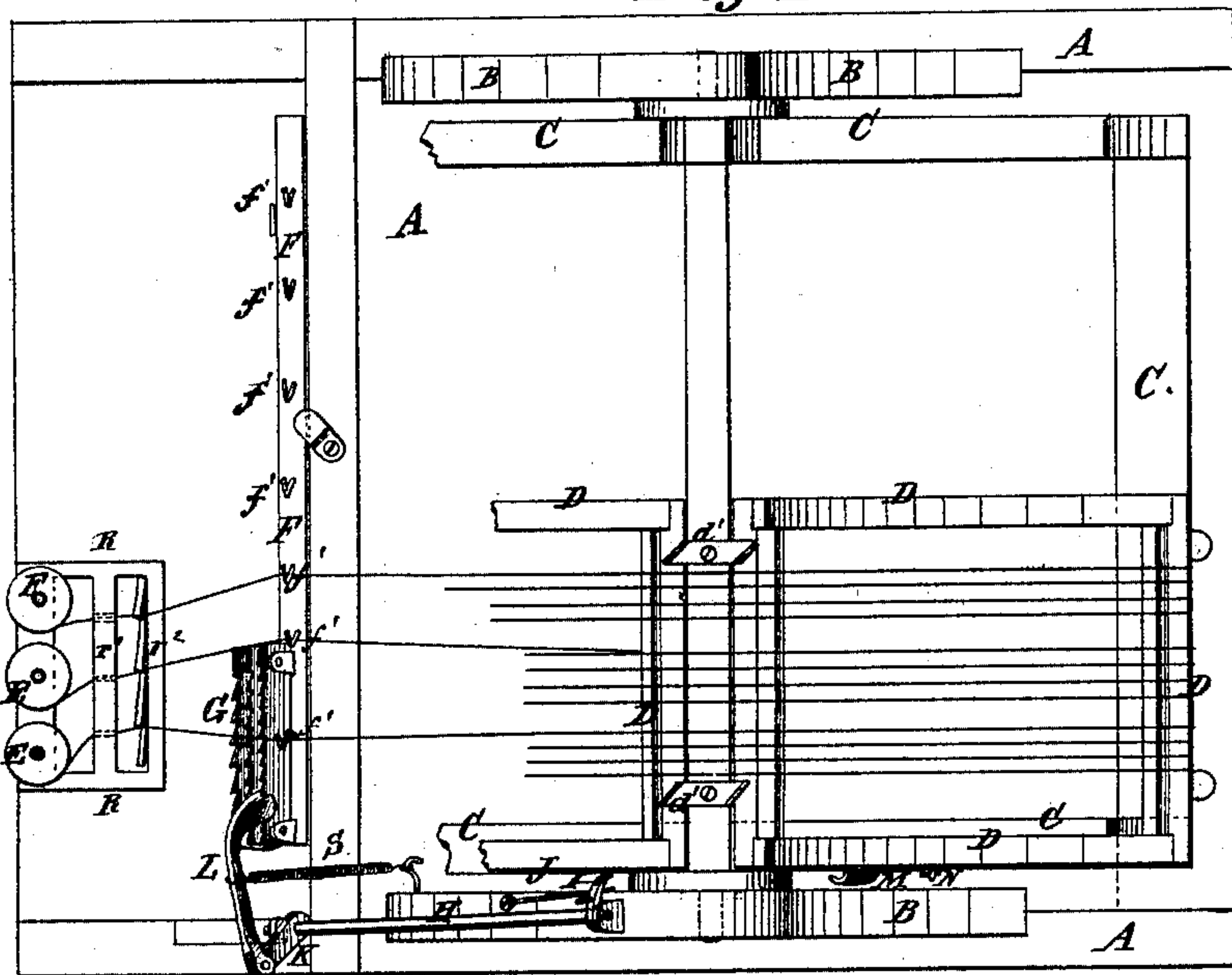


Fig. 2

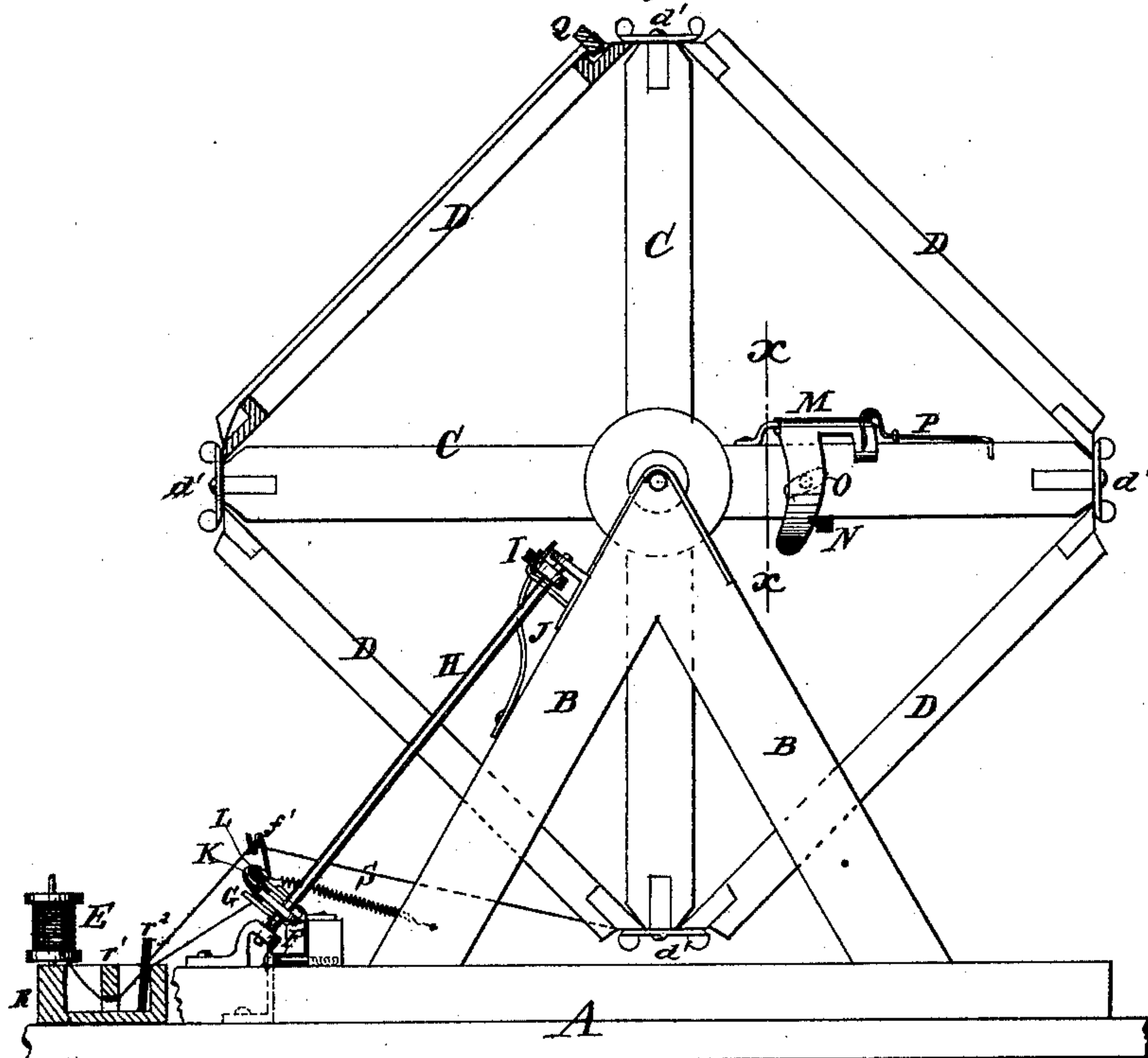
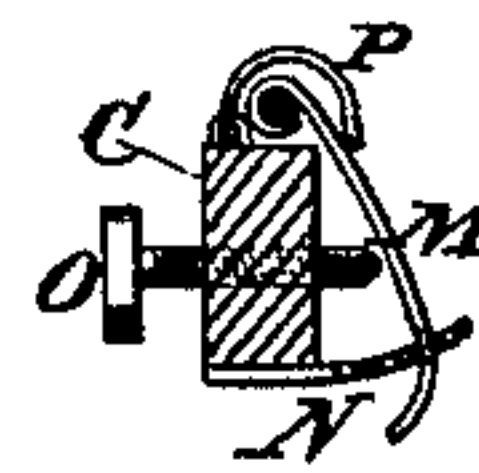


Fig. 3



WITNESSES:

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Fig. 4



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IMPROVEMENT IN FEED MECHANISMS FOR THREAD-WINDING.

Specification forming part of Letters Patent No. **175,967**, dated April 11, 1876; application filed January 7, 1876.

To all whom it may concern :

Be it known that I, AMBROSE GIRAUDAT, of Neuvy, (Norwood P. O.,) in the county of Bergen and State of New Jersey, have invented a new and useful Improvement in Feed Mechanism for Thread-Winding, of which the following is a specification :

Figure 1 is a top view of my improved machine, part being broken away to show the construction. Fig. 2 is an end view of the same, parts being broken away to show the construction. Fig. 3 is a detail section taken through the line *x x*, Fig. 2. Fig. 4 is a detail end view of the frame and its clamping-bar.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for winding threads for making stamens for artificial flowers, and for other uses, which shall be so constructed as to wind the threads regularly and at equal distances apart, and which shall be simple in construction, and convenient in use, being easily adjusted to wind the threads at a greater or less distance, as may be desired.

The invention consists in the feed mechanism, consisting of the graduated rack-bars, the pawl, the shaft and crank-arms, the springs, and the adjustable cam, with the sliding bar that carries the thread-guides, and with the frames and the reel; and in the combination of the clamping-bars with the rabbeted end bars of the frames for holding the threads while being cut and removed from the reel, as hereinafter fully described.

A represents the base-frame of the machine, to the end parts of which are attached upright V-frames B. In bearings in the angles of the frames B revolve the journals of the reel C. D are frames, which are made of convenient width, and of such a length that their ends may rest upon the bars of the reel C, where they are secured in place detachably by buttons *d'* pivoted to said reel-bars, and which, when turned, overlap the end bars of the frames D, and lock said frames in place. E are the spools of thread, which are placed upon spindles attached to the outer edge of

the paste-box R. The threads pass from the spools E through the paste-box R, and are kept in the paste and from becoming entangled with each other by passing through holes or notches in the lower part of the cross-bar or partition *r*¹, secured in said paste-box R. As the threads rise from said paste-box R they pass through slits in a rubber-plate, *r*², secured to said paste-box R, and by which the surplus paste is removed. The threads then pass through guide-eyes *f'* attached to a bar, F, that slides in keepers attached to the frame A, and pass thence to the reel and are wound around the reel C and the frame D secured to said reel. To the sliding bar F near one end is attached a set of rack-bars, G, which are made with teeth of different sizes, so as to lay the thread at a greater or less distance apart, according as one or another of said rack-bars is used.

L is a pawl, which is held down upon the proper rack-bar G by a spring, S, attached to the frame B or A. The pawl L is pivoted to a crank-arm, K, attached to the lower part of the shaft H, the lower end of which revolves in bearings attached to the base-frame A. The upper end of the shaft H revolves in bearings attached to the upright frame B and to it is attached a crank-arm, I, which is held up by a spring, J, attached to the frame B, and is pushed down to feed the sliding bar F forward at each revolution of the reel C, by a cam, M, pivoted to an arm of the said reel C. The cam M is held out by a set-screw, O, which passes through the reel-arm, and against the forward end of which the said cam is held by a spring, P, attached to the reel-arm. The cam M when being adjusted, moves along the edge of a gage, N, so that it can be readily adjusted to give a longer or shorter feed, according as the threads are to be wider apart or closer together.

When the frames have been filled with thread the bars Q are placed in rabbets in the end bars of the frames D to clamp the threads to the end bars of said frames D. The bars Q are provided with spring-catches at their ends to hold them securely in place, by pressing against the side bars of the said frames.

The threads are then cut along the bars of the reel, and the frames D and their threads are detached and taken to a cutting-machine, where the said threads are cut into suitable lengths for the stamens.

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

1. The feed mechanism consisting of the graduated rack-bars G, the pawl L, the shaft and crank-arms H K I the springs S J, and the adjustable cam M O P N, with the slid-

ing bar F, that carries the thread-guides *f'*, and with the frames A B, and the reel C, substantially as herein shown and described.

2. The combination of the clamping-bars Q with the rabbeted end bars of the frames D, for holding the threads while being cut and removed from the reel, substantially as herein shown and described.

AMBROSE GIRAUDAT.

Witnesses:

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