

C. Z. MATTISON.

Spinning-Machines.

No. 155,536.

Patented Sept. 29, 1874.

Fig. 1

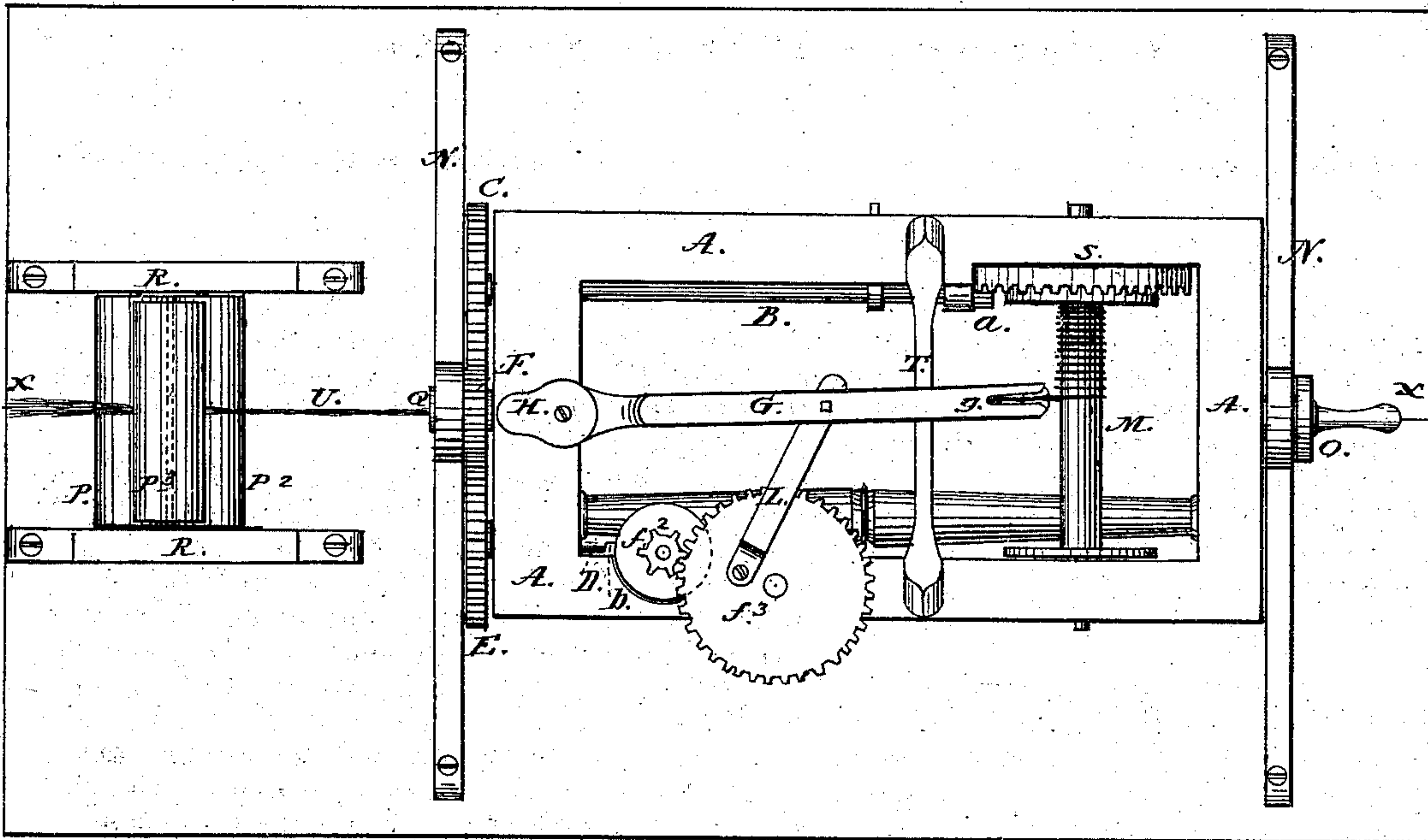
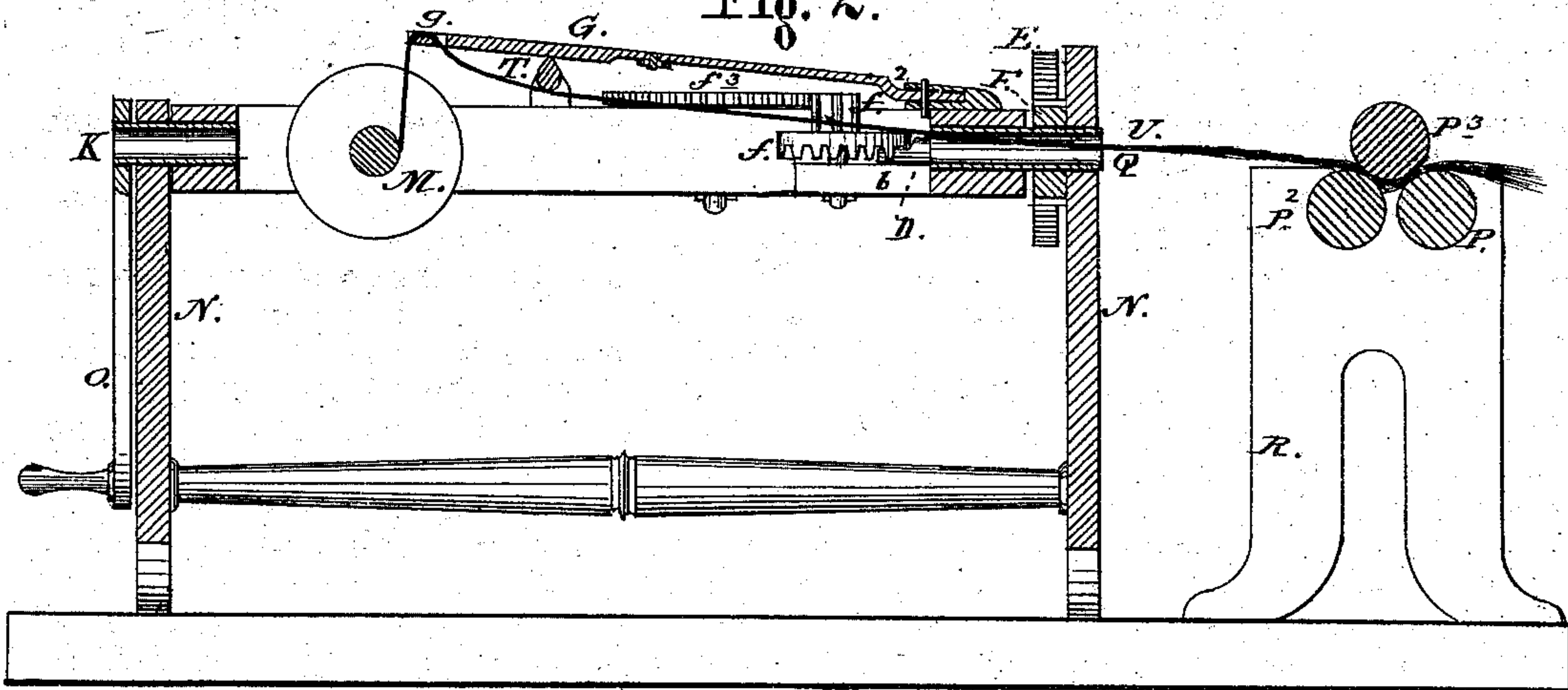


Fig. 2.



Witnesses.

J. Meuse
J. E. Newton

Inventor.

Charles Z. Mattison

UNITED STATES PATENT OFFICE.

CHARLES Z. MATTISON, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-HALF HIS RIGHT TO THOMAS J. CHRISTY, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN SPINNING-MACHINES.

Specification forming part of Letters Patent No. 155,536, dated September 29, 1874; application filed March 26, 1874.

To all whom it may concern:

Be it known that I, CHARLES Z. MATTISON, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain Improvements in Spinning-Machines, of which the following is a specification:

The invention relates to a new combination of devices for both driving the bobbin and laying the yarn evenly thereon from end to end.

Figure 1 is a plan of the machine; Fig. 2, longitudinal section on line $x x$.

A is the revolving frame, supported on the uprights N N. U is the roping, about which the frame revolves. C is a wheel attached to the long shaft, which gears into the fixed pinion F. B is the long shaft, with pinion a at one end, and wheel c at the other, to move the bobbin. D is the short shaft, having the wheel E, engaging the fixed pinion F at one end, and tooth b at the other. This tooth b , as the short shaft revolves, engages at stated intervals the wheel f , which moves and carries with it the pinion f^2 and wheel f^3 . The crank L connects the wheel f^3 to the guide-arm G, and, as it is moved with the wheel, it imparts its motion to the guide-arm, which moves to and fro, supplying the spun yarn to the bobbin evenly. A strip, T, is thrown across the revolving frame A, to serve as a support to the guide-arm G as it moves back and forth. The guide-arm is attached to the revolving frame at H, with a pivot which forms its center of motion. M is the bobbin, on which the yarn is wound as the cog-wheel S, to which it is fixed, is moved by the pinion a on the shaft B. O is the crank attached to the shaft or axle K, which forms one of the axes of support for the revolving frame. The crank, in the hands of the operator, supplies the power to revolve the frame and the mechanism attached thereto. N N are standards, connected by the brace I, which form the support for the revolving frame. P P² are the two rollers

or cylinders, supported by the frame R R, over which the roping is laid. The cylinder or roller P³ acts as a weight to reduce the material as the rollers revolve and the yarn is wound on the bobbin.

In operating the machine, I prepare the roping, and pass it over the rollers P P², through the hole Q in the axle of the frame, under the guide-arm, and through the slot g in the end of the same, and fasten the yarn to the cylinder of the bobbin. I now place the roller P³ on the roping, over the two rollers P P², and the machine is ready for work. The power is now applied, and the frame caused to revolve. The wheel C, engaging the pinion fixed to the frame N N, causes the shaft B to revolve, and carry the wheel S, which moves the bobbin, while the wheel E, engaging the fixed pinion, moves the shaft D, which, in turn, moves the cogs f , f^2 , and f^3 , and crank L, and causes the guide-arm to move back and forth. The roping is twisted by the revolutions of the frame, and, as the yarn is finished, it is taken up by the bobbin.

The compactness of the twist may be regulated by the weight of the cylinder P³.

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

1. The frame A, in combination with the fixed pinion F, wheel E, shaft D, tooth b , wheels f f^2 f^3 , crank L, and guide-arm G, to supply the yarn to the bobbin, as and for the purpose set forth.

2. The combination of the spur-gears E F C, shafts B D, gears a S f f^2 f^3 , and tooth b , whereby both the bobbin and the thread-guide are operated from the gear F, mounted on the sleeve or hollow shaft through which the thread passes.

CHARLES Z. MATTISON.

Witnesses:

J. MEESE,

H. E. NEWTON.