A. A. Swift.

Silk Doubling Mach.

No. 13,562. Patented Sep. 11, 1855.

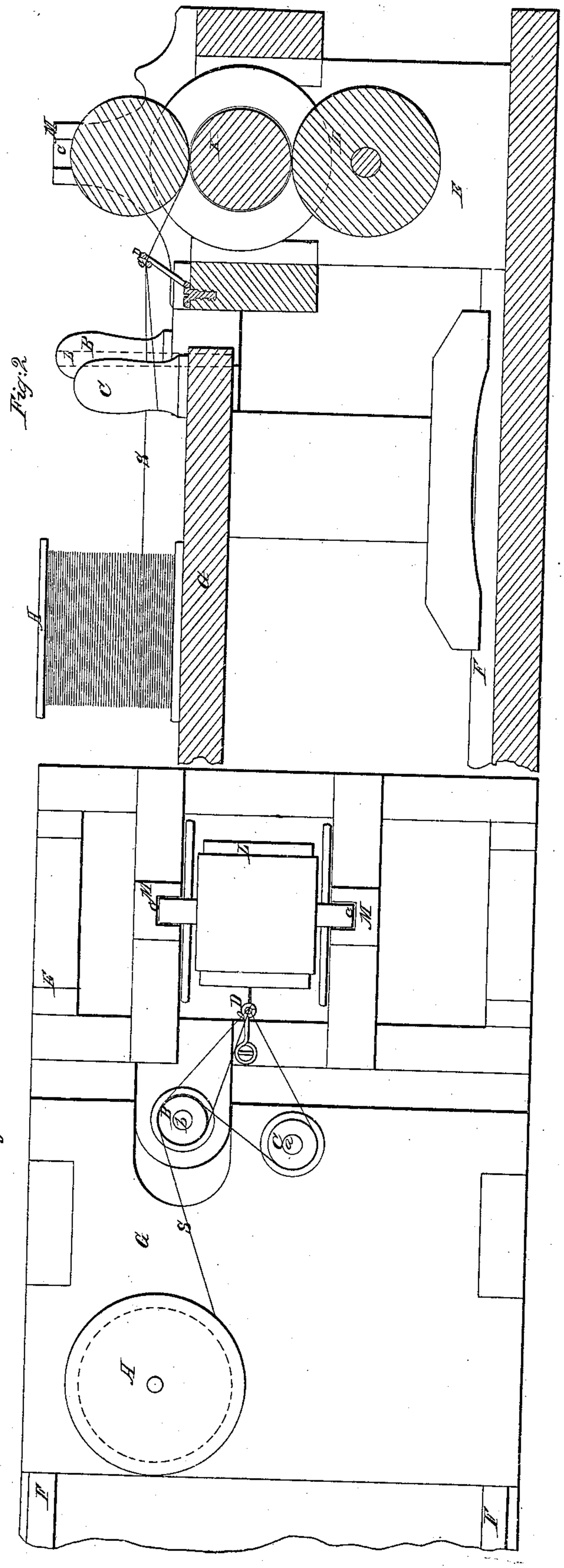

Fig: 2

Fig: 1.

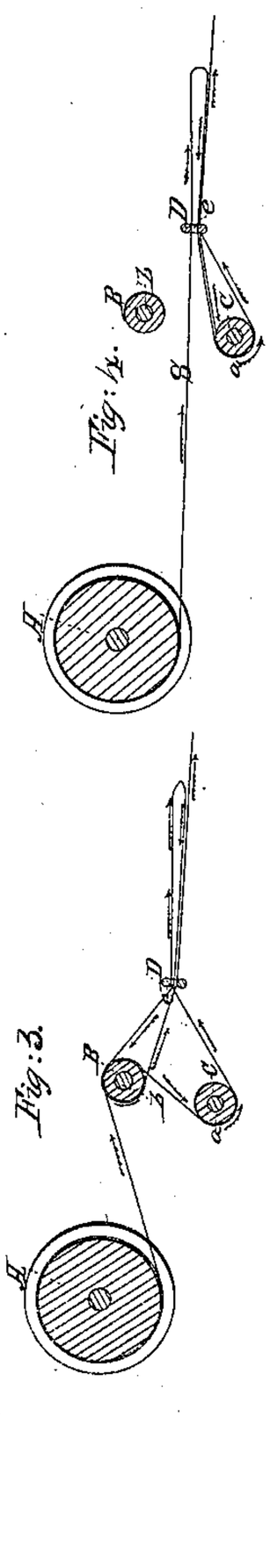

Fig: 4.

Fig: 3.

UNITED STATES PATENT OFFICE.

ANSON A. SWIFT, OF FLORENCE, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND SAML. L. HILL.

MACHINERY FOR TREBLING A SINGLE THREAD.

Specification of Letters Patent No. 13,562, dated September 11, 1855.

To all whom it may concern:

Be it known that I, ANSON A. SWIFT, of Florence, in the county of Hampshire and State of Massachusetts, have invented an Improvement in Mechanism for Trebling a Strand or Thread in the Manufacture of Silk Twist; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes a top view of the machine containing my invention; Fig. 2, is a vertical and longitudinal section of it. In such drawings, E, exhibits a stationary frame, situated at one end of, and elevated above a railway or two parallel rails F, F. G is a carriage or table supported on said railway and so as to be movable either toward or away from the frame, E. On the top of the carriage G, is a strand bobbin A, and a hitching head, C, capable of a free revolution horizontally on a vertical pin, *a*. The stationary frame, E, has another such hitching head, B, applied to it and made to turn on a vertical pin, *b*, shown in Fig. 2, by dotted lines. A guide D, formed with an eye for the reception of the strand extends from and above the frame, E, as seen in the drawings and in front of a reel bobbin, K, which rests upon and is revolved by a drum or roller, L, the journals of the said bobbin being inserted in vertical grooves, *c*, *c*, in plates M, M, arranged as seen in the drawings.

Figs. 3, and 4, are diagrams exhibiting the manner of applying the strand to the rollers or hitching heads B, C, and the guide, D.

In operating with the machine, the thread or strand, S, is drawn from the bobbin, A, and passed through the eye, *e*, of the guide, D. Next it is carried backward through such eye and looped around the hitching head C, and from thence is again carried forward through the eye—the front parts or ends of the trebled portions extending through the eye being attached to the periphery of the reel or winding roller, K. This having been accomplished, we next remove the loop from the head C, and after again looping or doubling the strand near such loop, we pass the second loop through the first so as to enchain the two. Next, we not only carry the first loop to and loop it on the hitching head, B, but carry the new loop back and hitch it upon the head C, with the strand extending partially around the head B, as seen in Fig. 4. During these operations the carriage, G, is supposed to be close or nearly up to the frame, E.

After the strand has been so applied to the hitching heads, the carriage is next to be put in movement on its rails and away from the frame E, as far as may be required. This will draw the strand from the bobbin A, and treble it between the carriage G, and the frame, E. Next, either the loops on the hitching head, B, should be removed from it, or such head should be moved downward so as to discharge them from itself. Next, not only should the carriage G, be moved toward the frame, E, but during such movement of it, the reel or bobbin K, must be rotated so as to take up or wind on it the enchained and trebled portions of the strand.

In continuing the process, we proceed precisely as we did after the strand was arranged on the hitching head C, and through the guide, D, it being left with substantially such an arrangement every time the carriage G has completed its movement toward the frame, E.

Although both hitching heads are movable, so far as rotating on their spindles is concerned, one of them, viz, the head, B, is stationary in other respects, the other (or head C) being movable with the carriage, G. Therefore in order to designate one head from the other, without regard to their rotary motions, the first may be termed the "stationary head" and the second the "movable head."

By having the stationary head and the reeling mechanism arranged on the stationary frame E, the attendant is close to the said reeling mechanism so as to be able to control its operations better than he could were he situated at the other end of the machine, which in practice would be about thirty feet distant therefrom. Were the reeling mechanism and discharging knob disposed out of reach of the attendant as they are in the machine of Harold Kelsea, lately patented, such attendant on such machine standing near to the stationary knob or head, it will be seen that he will be entirely out of reach of the reeling mechanism, and in order to either stop or control

it, would be obliged to leave his position and go back, a matter which would not only occasion loss of time, but which to avoid would generally make it necessary to employ another attendant in addition.

I do not claim the principle of trebling a thread or strand of silk by enchaining loops formed therein; nor do I claim the combination of a stationary knob, an endless band and two hitching heads or knobs (the same being movable) fixed to said band at equal distances apart, such being the subject of the patent of the said Kelsea, but as I employ but two hitching heads only, and apply one of them and the strand bobbin in a frame to have a reciprocating motion as described, while the other and the reeling mechanism I arrange in a stationary frame.

I claim—

Such an improved arrangement and combination of the hitching heads, movable and stationary frames whereby I am not only enabled to dispense with an endless band and one hitching head, but employ a reciprocating frame, and thereby afford an attendant on the machine, the advantage of being near the reeling mechanism as explained.

In testimony whereof, I have hereunto set my signature this eighth day of August A. D. 1855.

ANSON A. SWIFT.

Witnesses:

SAMUEL WELLS,

EDWARD WARNER.