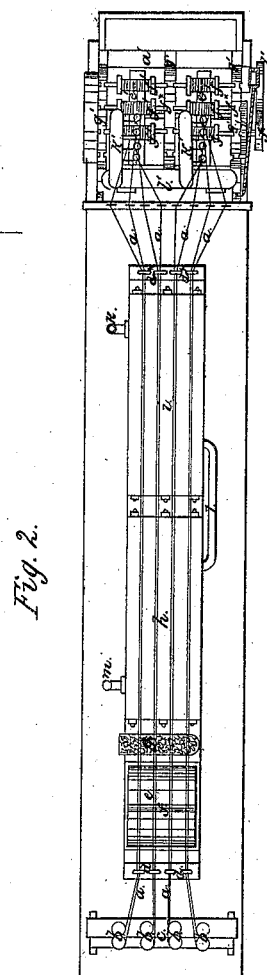
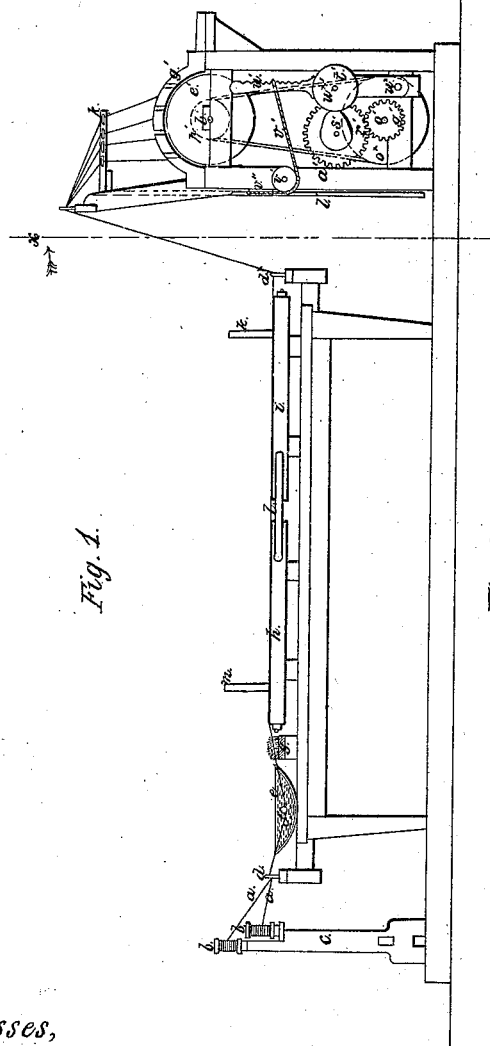
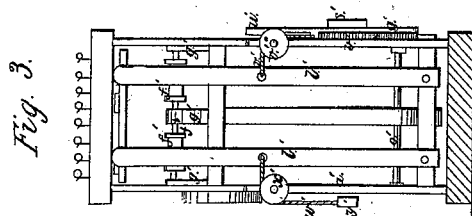


Burgy & Guillemin.
Thread Dressing & Finishing Mach.
N^o 46,314. *Patented Feb. 7, 1865.*



Witnesses,
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UNITED STATES PATENT OFFICE.

EMANUEL BURG, OF BASLE, SWITZERLAND, AND LOUIS GUILLEMIN,
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IMPROVEMENT IN MACHINES FOR DRESSING AND FINISHING THREAD, &c.

Specification forming part of Letters Patent No. 46,314, dated February 7, 1865.

To all whom it may concern:

Be it known that we, EMANUEL BURG, of Basle, in the Republic of Switzerland, and LOUIS GUILLEMIN, of Dieboldsheim, in the Empire of France, have invented a new and Improved Apparatus for Dressing Thread, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a sectional side elevation of this invention. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse vertical section of the same, taken in the plane indicated by the line *x x*, Fig. 1, and looking in the direction of the arrow marked opposite to that line.

Similar letters of reference indicate corresponding parts.

This invention relates to an apparatus which is applicable for the purpose of dressing, finishing, and imparting of luster or gloss to all threads or filaments of silk, cotton, flax, and other fibrous substances, but more especially to yarn, thread, or filaments of waste silk or floss-silk, which by the use of this apparatus can be rendered equal in appearance to silk, and thereby much enhanced in value.

The yarn or thread to be operated upon is wound upon bobbins placed upon spindles or skewers, which are ranged in rows on a suitable frame. From this frame the threads from the several bobbins pass through guides to the dressing apparatus, entering first into a tank or disk containing the requisite solution or bath. Emerging from this bath, the threads pass over sponges or wipers of any suitable material, which may, by preference, be placed over the bath, and which wipe off or absorb the superfluous moisture from the threads and allow it to flow back into the bath. After leaving the wipers the threads, passing again through guides, are conducted over heated metallic surfaces to the other end of the apparatus, from whence they pass to the winding-frame, to be wound again upon bobbins. As these bobbins revolve, the threads are unwound from the bobbins at the opposite end of the dressing apparatus, and drawn through the bath and across or over the heated metal-

lic surfaces, by the contact with and friction against which they become dried and polished. Gelatine, albumen, glycerine, gum, honey, or other suitable substances as already known and employed by finishers may be used for the dressing-bath.

The threads to be operated upon are shown in the drawings in blue outlines, and marked *a a*. They are wound on the bobbins *b b* of the frame *c c*. From said bobbins they pass through the eyelets or guides *d d* of the dressing apparatus to the bath *e*, where they pass under the rod *f* and over the sponges or wipers, which absorb or wipe off the surplus moisture adhering to the threads. The position of said wipers ought to be such that the liquid taken up by the same flows back into the bath. From the wipers the threads pass direct, or through suitable guides or eyelets, to the steam-chests *h* and *i*, over whose entire length they travel, and again, guided by eyelets *d**, they pass to the winding-frame, which is hereinafter described. By the contact with and friction against the surfaces of the steam-chests *h* and *i* the remaining moisture in the threads is dried up and the threads receive their finish or luster. The steam for heating the chests *h* and *i* enters the chest *i* through the pipe *k*, then, passing through the chest *i* and connecting-pipe *l* to the chest *h*, it may either be allowed to blow off through the pipe *m*, or the pipe *m* may be continued into and through the bath *e*, warming the latter, and finally conducting away the steam through a suitable discharge-pipe.

The dressing-bath and steam-chests are, or may be, supported by a platform or table, as shown in the drawings. Instead of or in conjunction with the steam-chests, as described, one or more cylinders heated by steam may be used, and in this case the threads are carried partly or entirely round the same, and, if desired, a rotary motion may be imparted to such drums and cylinders equal to or greater or less than that of the threads. The form or construction of the heating apparatus may be still further varied, and we do not wish to restrict ourselves to the use of the particular apparatus shown in the drawings.

The winding frame which serves to wind the finished or dressed thread on bobbins is supposed to be constructed with twenty-one bob-

bins, to correspond with twenty-one bobbins on the bobbin-frame *c c*.

The framing *a' a'* of this machine forms the bearings for the driving-shaft *b'*, at one end of which are placed a fast and loose pulley. Mounted on this shaft are the pulleys *e' e'*, each of which supports bobbins *f' f'*, so that the flanges of said bobbins rest upon the periphery of the corresponding pulley, the spindles *f* f** of the bobbins being guided by the guide-slots of the brackets *g' g'*. When the shaft *b'*, with the pulleys *e' e'*, is in motion, the bobbins will, by the contact or friction against said pulleys, be caused to revolve, whereby the threads coming from the dressing apparatus and passing through the eyelets and guides will be wound onto the bobbins *f'*. The guides *i'* receive the necessary to-and-fro motion for causing the threads to be wound uniformly over the whole length of the bobbins. The eyelets or guides *i'* for each set of these bobbins are fixed to a small bar of wood, *k'*, secured to a frame, *l'*, which vibrates on pivots secured in one of the lower cross-bars of the frame *a'*. The vibrating motion of the frame *l'* is produced in the following manner: A shaft, *o*, with pulley *o**, and driven from the small pulley *p'* on the driving-shaft *b'*, has a pinion, *q'*, keyed to its end, which gears into the wheel *r'*, that is keyed to a bush revolving on a stud which is bolted to the frame *a* of the machine. On the same bush is keyed the cam *s'*, against which the disk or roller *t'* bears.

This roller turns on a stud fixed to the lever *u'*, which has its fulcrum at *u**. The upper portion of this lever is provided with notches. A cord, *v'*, passes from the lever *u'* over the guide-pulleys *v* v**, and is attached to one rail of the oscillating frame *l'*. A second cord, *w'*, attached to the other rail of the frame *l'*, and passing over the guide-pulley *x'*, has a weight, *y'*, secured to its loose end, so that by the action of this weight the disk *t'* is kept in contact with the cam *s'*. As the wheel *r'* and the cam *s'* revolve together, an oscillating motion is imparted to the disk *t'* and lever *u'*, and this motion is communicated to the frame *l'* and guides *i'*.

Instead of causing the flanges of the bobbins *f'* to rest on the driving-pulleys *e'*, the latter may be made to fit between the flanges in such a manner that the body of the bobbins rests upon the pulleys.

We claim as new and desire to secure by Letters Patent—

The combination of a winding-frame, substantially such as herein described, with the bobbins *b*, bath *e*, wipers *g*, and steam-chests *h* and *i*, all constructed and operating in the manner and for the purpose substantially as set forth.

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Witnesses:

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