

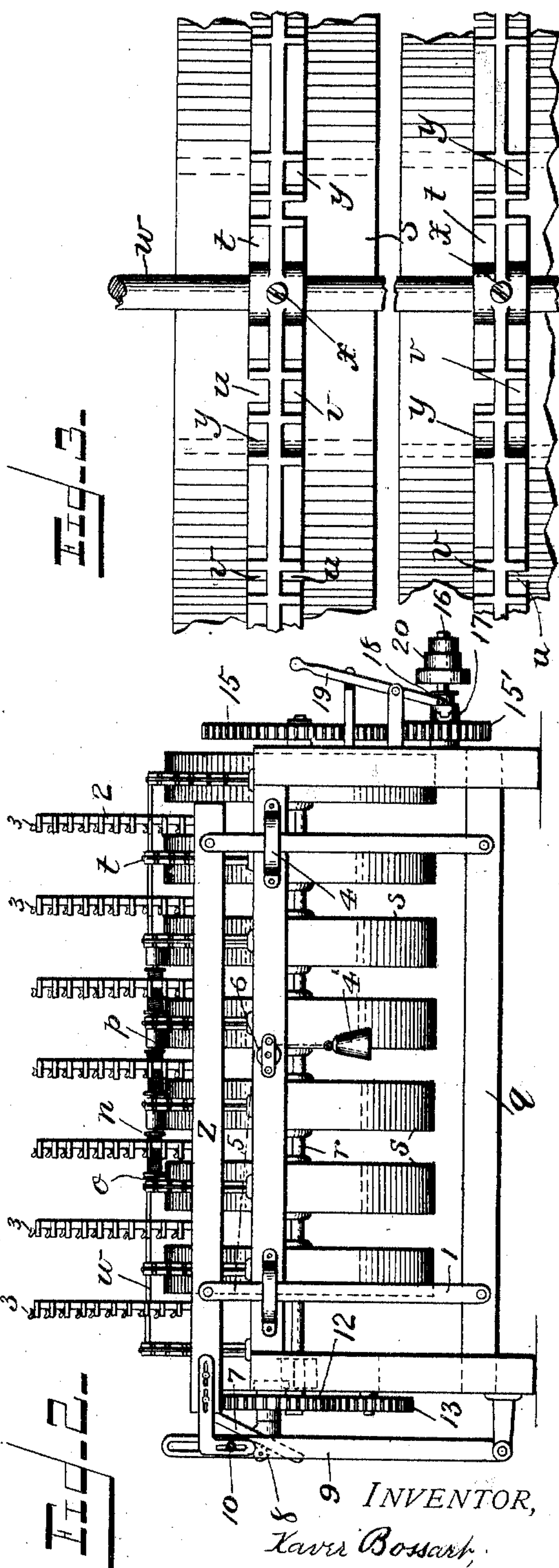
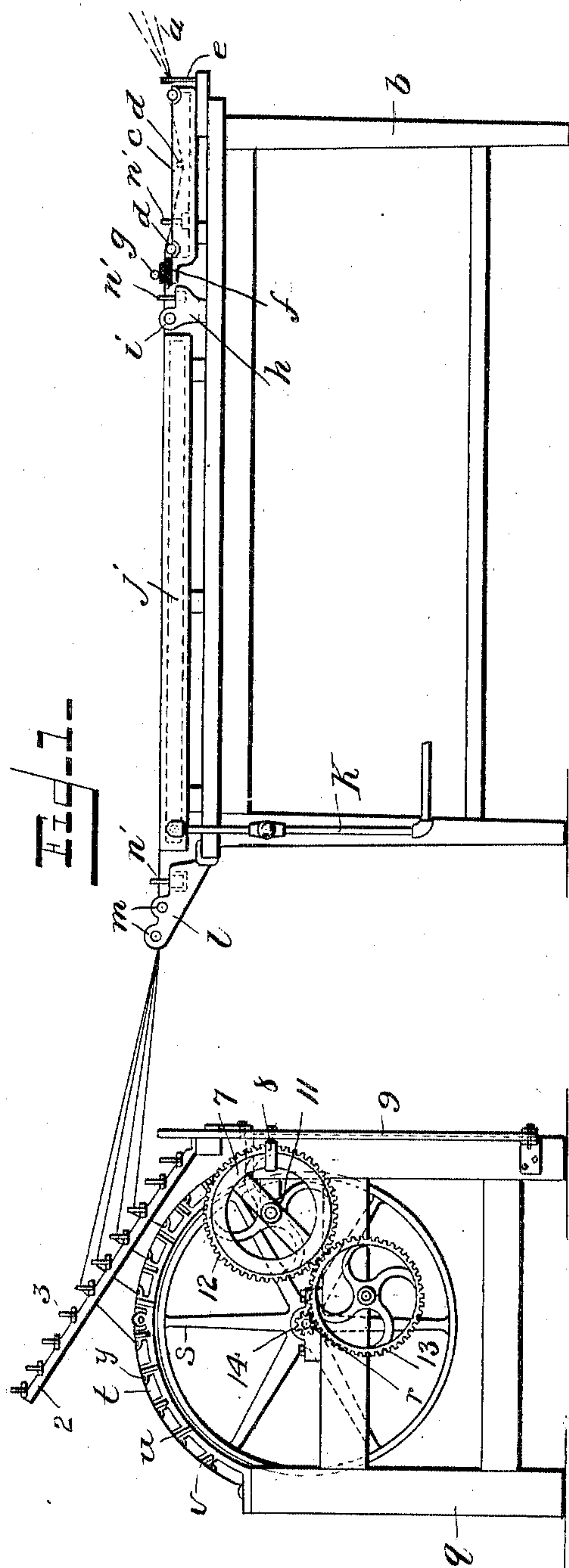
No. 776,993.

PATENTED DEC. 6, 1904.

X. BOSSART.
THREAD FINISHING MACHINE.

APPLICATION FILED SEPT. 10, 1904.

NO MODEL.



WITNESSES:
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UNITED STATES PATENT OFFICE.

XAVER BOSSART, OF PATERSON, NEW JERSEY.

THREAD-FINISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 776,993, dated December 6, 1904.

Application filed September 10, 1904. Serial No. 224,036. (No model.)

To all whom it may concern:

Be it known that I, XAVER BOSSART, a citizen of the Republic of Switzerland, residing in Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Thread-Finishing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates to machines for finishing and lustering textile filaments; and it consists in certain improvements in machines of this nature having for their object to insure quicker and better results than were heretofore possible.

I will describe my invention with reference to the one adaptation thereof shown in the accompanying drawings and then point out in the claim, forming a part hereof, the essential features.

In said drawings, Figure 1 is a view in side elevation of the apparatus. Fig. 2 is an end view of the winding frame or mechanism looking toward the left in Fig. 1. Fig. 3 is an enlarged fragmentary plan view showing two of the spindle guiding and supporting frames and two of the friction-wheels.

The threads *a* are illustrated as coming from bobbins on a suitable creel (said bobbins and creel not being shown) and as thereupon being extended over a table which carries the parts of the apparatus whereby the lustering or other dressing of the threads is effected. This table (marked *b*) carries a receptacle *c*, in which the sizing liquid is deposited, the same having glass bars or other suitable guides *d*, whereby the threads are led down into the liquid. *e* represents guides through which the threads pass before entering the solution. The receptacle *c* also carries wipers *f*, which remove the superfluous portion of the solution clinging to the threads and permit it to return to the receptacle. These wipers preferably consist of two felt pads superposed and the upper one being held on the lower one by a

bar *g*. The threads pass between these pads, as shown in Fig. 1.

In brackets *h* is arranged a glass bar *i*, over which the threads pass before being extended over the top flat face of a hollow calendering steam-chest *j*, which may be connected up with a steam source by a pipe *k*. Said steam-chest is also supported by the table. In brackets *l* on the table are supported glass bars *m*, over and under which the threads pass before being wound onto the receiving-bobbins *n*.

n' represents reeds suitably arranged, one adjacent the glass bars *m*, another adjacent the glass bar *i*, and the third in the receptacle *c* for keeping the threads separated from each other.

The bobbins *n* are removably mounted on spindles *o*, each carrying a whirl *p* near one end thereof, and they are adapted to rotate with said spindles by being fitted snugly thereto in the well-known manner.

q is a frame in which is journaled a shaft *r*, carrying a series of friction-wheels *s*. Mounted in said frame is a series of arch-shaped spindle guiding and supporting frames *t*, each arranged over a friction-wheel *s*. Each frame is formed on each side with slots *u* and pockets or recesses *v* alternating with each other, each slot *u* on one side being opposite to or alined with a pocket or recess *v* on the other side of said frame.

Respecting any two of these frames, each pocket in one is opposed to or alined with a slot in the other, the pocket being adapted as the journal for the free end of one of the spindles *o*, the end of the spindle which carries the whirl being adapted to play radially in the slot *u*, the whirl resting on the periphery of the adjoining friction-wheel *s*. By removing any spindle from the frames *t* and reversing it end for end and then replacing it in a pocket and slot next adjacent to those it last occupied its direction of rotation may be reversed. The whirls are preferably rubber-faced, so as to have good contact with the friction-wheels *s*.

The several frames *t* are braced together by means of a rod *w*, to which each is fixed by a set-screw *x*. Said frames are, moreover, pro-

vided with sockets y adjacent each slot u and pocket v . These sockets are designed to receive the spindles carrying the bobbins when the latter are out of operation, and it is found most convenient to arrange them as best shown in Fig. 1, where, viewing one of the frames t from the side, the sockets to the right of the center of the frame are shown on the right-hand sides of the corresponding pockets v and slots u , while those on the left-hand side of the center of the frame are on the left of said pockets and slots.

In order to lay the threads evenly on the bobbins while the latter are being rotated, I provide a suitable traverse mechanism. (Best shown in Figs. 1 and 2.) In this mechanism z is a rail arranged to vibrate longitudinally on levers 1, pivoted in the frame q and carrying arms 2, provided with thread-guides 3. The levers 1 are guided by suitable straps 4 on the frame q . The rail z is vibrated through the conjoint action of a weight 4', suspended from a flexible connection 5, which is secured to one of the levers 1 and extends over a roller 6 and a cam 7, against which bears a roller 8 on a lever 9, having a suitable slot-and-pin connection 10 with the rail z . As will be manifest, the weight 4' tends to pull the rail z to the right, so that the roller 8 is held in contact with the cam and will therefore follow the rises and falls of its acting face when the cam is rotated. The cam is journaled on a stub-shaft 11, mounted in the frame q , and has fixed to it a gear 12, meshing with a gear 13, which in turn meshes with a pinion 14, fixed on the shaft r . Thus as the shaft r , carrying the friction-wheels s , and thereby ro-

tating the bobbins n , rotates it at the same time indirectly effects the reciprocating of the traverse-rail and the thread-guides 3 on arms 2. On shaft r is a gear 15, meshing with a gear 15', journaled on a stub-shaft 16 in the frame q and formed with one member of a clutch, 17, the other member, 18, of which is keyed on the shaft and can be shifted into and out of engagement with the member 17 by a lever 19. The power for operating the machine is taken in through pulleys 20 thereon.

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

In an apparatus for finishing silk or other filaments, the combination of the main frame, spaced arch-shaped frames arranged side by side in said main frame, a shaft journaled in said main frame under said arch-shaped frames, friction-wheels carried by said shaft, and series of spindles, each of said arch-shaped frames having on each side alternating slots and pockets and the slots and pockets on one side of each frame being opposed to or alined with the pockets and slots, respectively, on the adjoining side of the next adjacent frame, and each pocket in one frame and the opposed slot in the next adjacent frame respectively serving as a journal and a guideway for the ends of a spindle, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of September, 1904.

XAVER BOSSART.

Witnesses:

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