(No Model.) 2 Sheets—Sheet 1.

H. GILDARD.

STRIPING ATTACHMENT FOR WARP DRESSING MACHINES.

No. 407,758. Patented July 23, 1889.

Fig. 1.

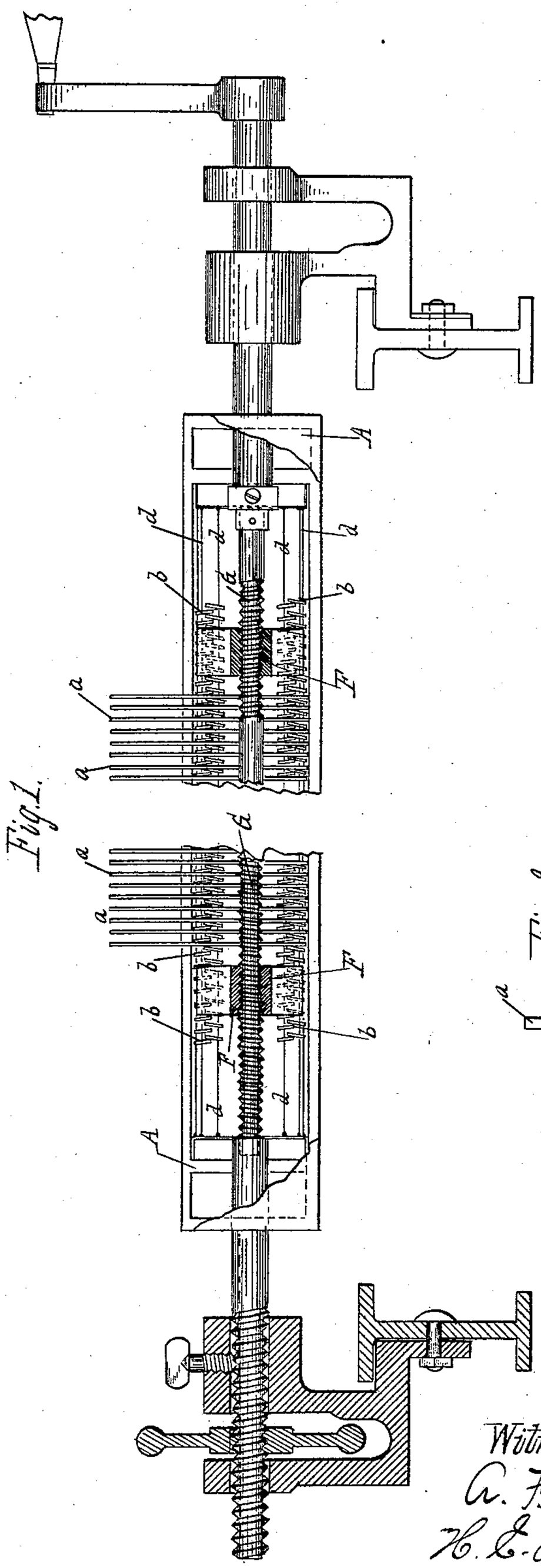


Fig. 5.

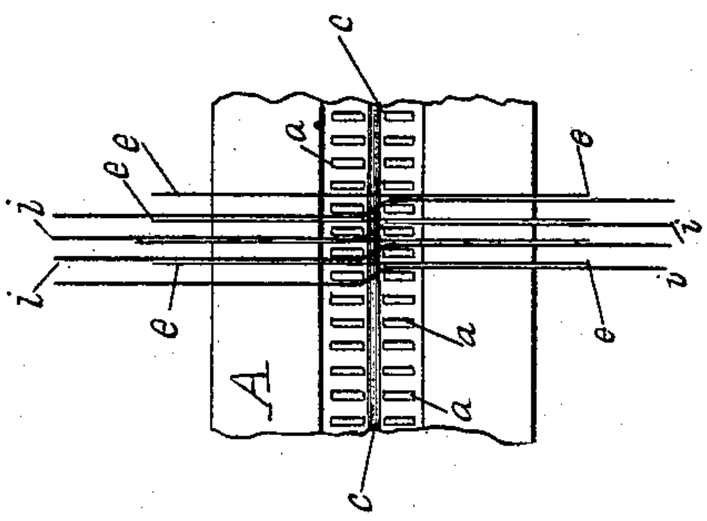
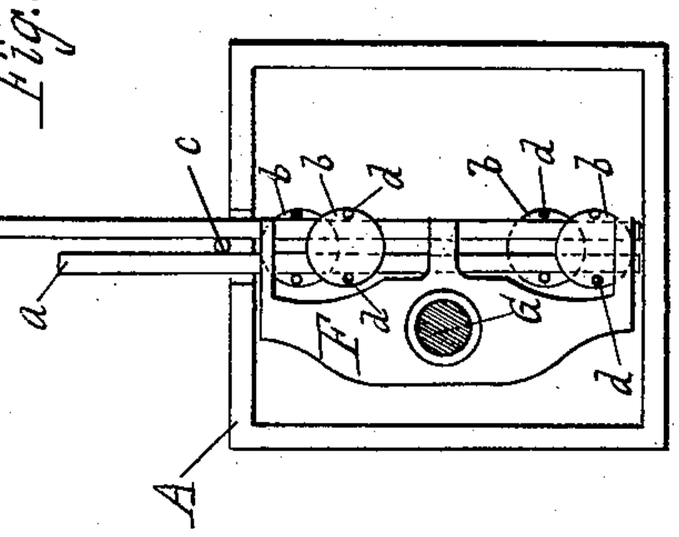


Fig. 2.



Witnesses.
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H. E. Lodge.

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(No Model.) 2 Sheets—Sheet 2.

H. GILDARD.

STRIPING ATTACHMENT FOR WARP DRESSING MACHINES.

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Fig. 3

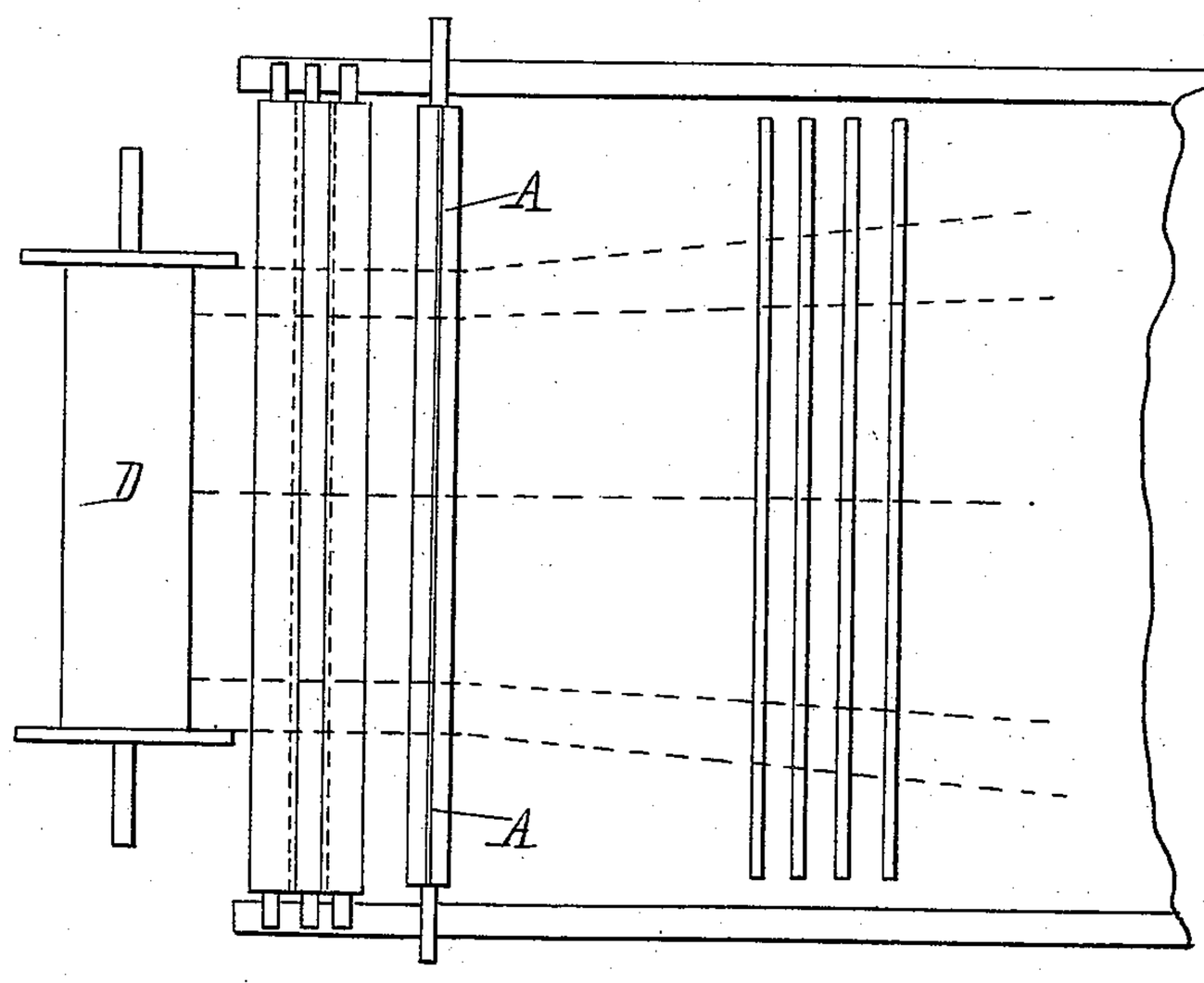


Fig. 4

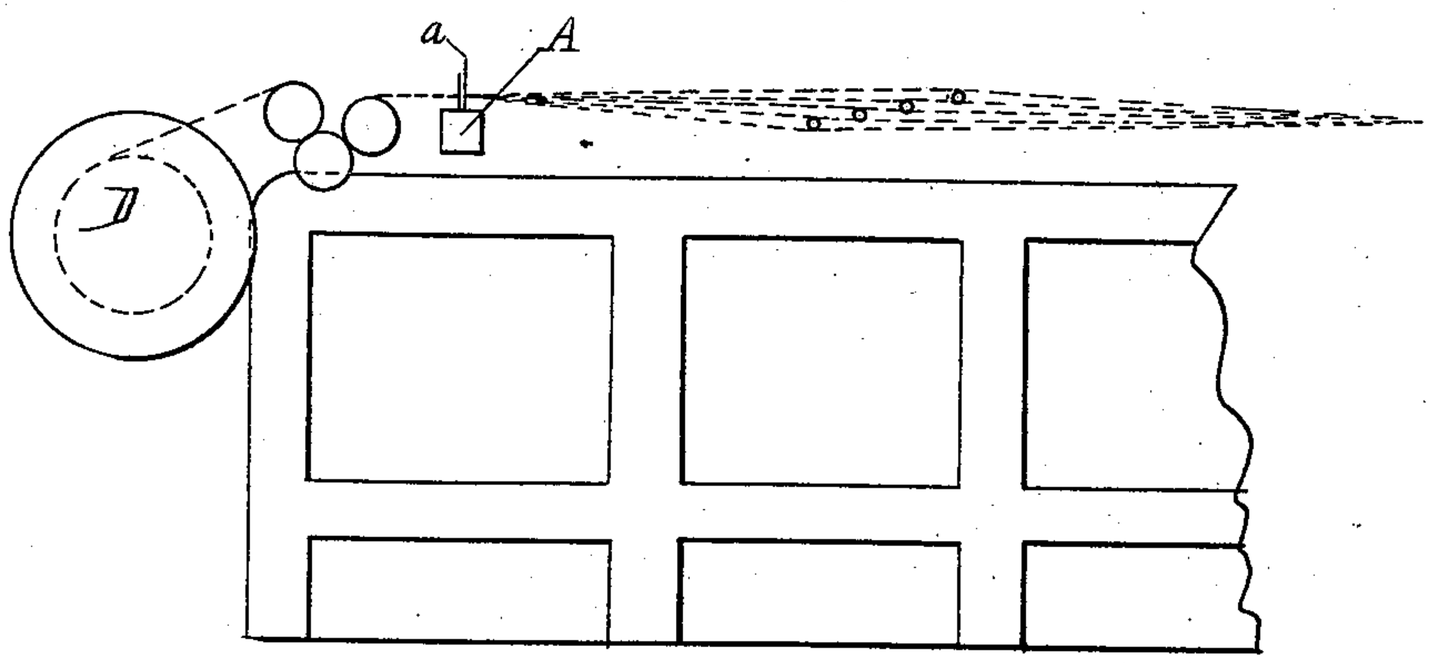
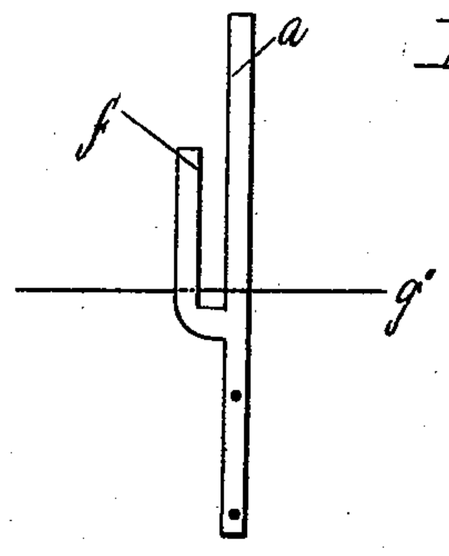


Fig. 6.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY GILDARD, OF LEWISTON, MAINE.

STRIPING ATTACHMENT FOR WARP-DRESSING MACHINES.

SPECIFICATION forming part of Letters Patent No. 407,758, dated July 23, 1889.

Application filed April 23, 1888. Serial No. 271,651. (No model.)

To all whom it may concern:

Be it known that I, HENRY GILDARD, a citizen of the United States, residing at Lewiston, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Striping Attachments for Warp-Dressing 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to a "striping attachment," so called, to be used on any style of dressing-machines, slashers, or tape-dressers running a warp of two or more colors, either on cotton, woolen, or textile goods, its purpose being to so guide and lay the threads of the warp on the receiving-beam that the pattern required in the finished cloth shall be as perfectly striped then as in the cloth. Thus a desirable condition of exactness and uniformity at this point is produced, which shall prove of advantage in the subsequent process of its manufacture into cloth.

Hitherto striping attachments of this class have generally been ineffective in accomplishing this result, in that they have never accurately guided the yarn, so that it will lie uniformly on the warp-beam, and this especially so when the stripes are very fine—say one and one, two and two, &c.; and in the old form of striping attachments, when a thread is disarranged and running out of its proper place, in order for it to be put back it has to be broken, put in its proper place, and tied, thereby making imperfect weaving. Furthermore, the old form of mechanism contained four sets of coiled springs, horizontally disposed and extensible lengthwise, which were employed with rows of reed-dents vertically arranged and adapted to co-operate and maintain the threads of yarn composing the stripes in their respective and proper places.

The object of this invention is to simplify the apparatus, and to accomplish this result I employ a bifurcated reed or dent, likewise supported in adjustable springs to form the reed-bar as an entirety. By means of this bifurcated dent only two sets of springs are required, since the lower part of each dent is single where it enters the spring, while above it is compound or forked, and in this manner said dents, when arranged in series, as described, perform the same functions as twice the number of single sets of reed-dents with their co-operating springs, as now generally in use.

The drawings accompanying this specification represent, in Figure 1 a side elevation of the comb, partly in section and partly broken away. Fig. 2 is an enlarged vertical cross-section of the comb-box now in general use, showing the nuts. Fig. 3 shows a plan of the delivery end of the dressing-machine, showing the general arrangement of the yarn and striping attachment, and Fig. 4 is a side elevation of the same. Fig. 5 represents an enlarged plan of a portion of the striping attachment of the old form. In Fig. 6 is shown a side elevation of a bifurcated dent embodying my invention.

As the adjustment and manner of mounting the bifurcated reeds or dents are the same as that generally employed with the ordinary form of separating reeds, I shall but briefly describe such mechanism.

A represents the exterior casing or box of the striper attachment, the top of said box being slotted to permit movement of the separating-reeds. The latter are shown at *a a* as rectangular in cross-section, and are fastened or interlocked into expanding springs *b b*, which are placed within the box A. In lieu of having each reed or dent consist of a single straight rod *a*, as shown in Figs. 2 and 5, I bifurcate the reeds and form dents, as shown in Fig. 6. In such construction the reeds or dents are forked at a point just above the springs. The finger or secondary reed *f* may be formed integral with the reed proper, or attached thereto by suitable fastenings, and extends upward parallel with the main rod *a*, as clearly illustrated in Fig. 6.

It is obvious that the same result can be obtained as regards the placing of the yarn, as is shown by *g*, which represents a thread. To the opposite ends of these springs are secured nuts F F, which are respectively threaded

upon right and left handed screws G G, these latter being journaled in the ends of the box A, this arrangement of the nuts and screws being for the purpose of contracting and expanding the springs, and consequently diminishing or increasing the distance laterally between the individual dents or reeds to accommodate different-sized yarns or an increased number of threads.

To steady and securely hold the dents in position, small wires *d d* are employed in contact therewith and extending the whole length of each series, as shown in Fig. 1.

In Fig. 5 is shown a plan view as an illustration of the arrangement of a portion of the beam or yarn as applied to the attachment now generally used, the position of the threads being the same as in my present device.

The threads marked *e e* are threads of one color—say white—while *i i* represent threads of a different color—say blue. The white threads pass straight through the dents, while the blue threads do not pass straight through, but are laid over one dent to give them a diagonal direction between the two rows of dents. By having this diagonal direction the threads which happen to come to this striper a little loose or crossed hug the dent around which they pass, and a tension is exerted, causing them to run in a fixed place, and the yarn accurately and uniformly striped thereby is so delivered to the beam.

In Figs. 4 and 5 I show the general arrangement and position of the striper relatively to the warp-beam. This warp-beam is shown at D. It will be observed that the striper is situated very near the rolls, in order that the yarn after it is striped can go directly upon the warp-beam without giving the threads an opportunity to become crossed or disarranged.

I claim—

1. A series of bifurcated reed-dents composing a double reed, the teeth of which are adapted to regulate and guide certain threads by carrying such threads diagonally about any given tooth of their respective series, whereby they take and maintain a proper place on the warp-beam, according to the design of the pattern when the yarn is woven into cloth, substantially as described.

2. A reed-dent consisting of a single post bifurcated at the top and operating substantially as and for the purposes set forth and described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY GILDARD.

Witnesses:

FRED ZIEGLER,

WARREN D. SAWYER.