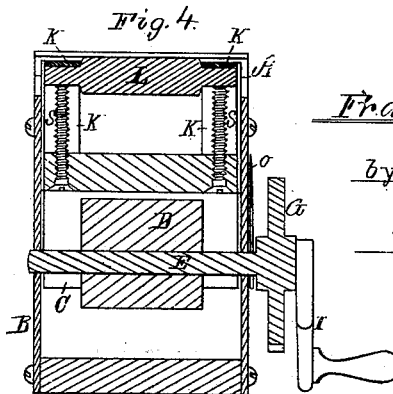
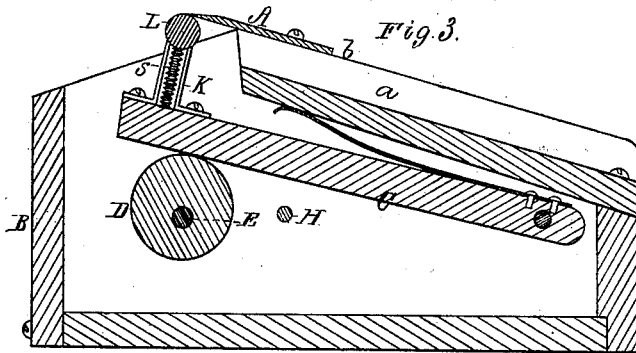
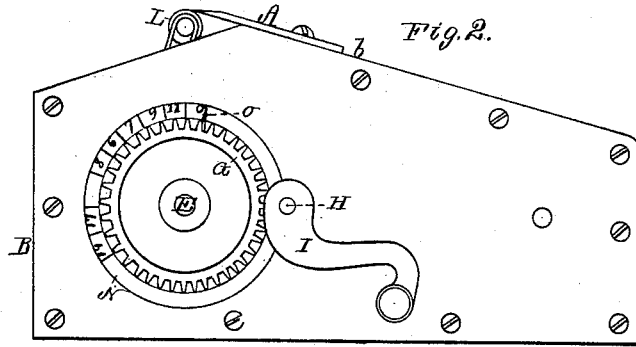
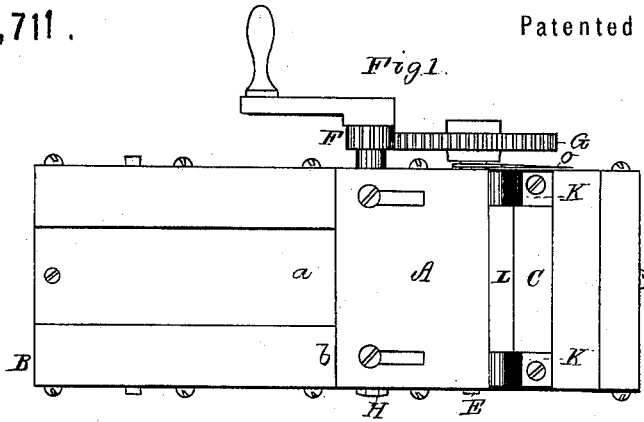


F. E. MERRIMAN.

Machine for Splitting or Dressing Whalebone.

No. 166,711.

Patented Aug. 17, 1875.



Witnesses
 L. W. Piper.
 L. W. Miller.

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 by his attorney
 R. W. Day

UNITED STATES PATENT OFFICE.

FRANCIS E. MERRIMAN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR SPLITTING OR DRESSING WHALEBONE.

Specification forming part of Letters Patent No. 166,711, dated August 17, 1875; application filed July 20, 1875.

To all whom it may concern:

Be it known that I, FRANCIS E. MERRIMAN, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Machinery for Splitting or Dressing Whalebone or Rattan, &c.; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of a machine embodying my invention, which consists, mainly, in the combination of a gage, a vibrator, and an eccentric, applied together and arranged with a knife and its supporting-frame, all substantially as hereinafter explained.

In such drawings, A denotes a splitting or dressing knife, supported on the top *b* of a box or frame, B, and arranged transversely of and directly over a groove or channel, *a*, extending through the said top lengthwise of it, in manner as shown. Below the said top there is arranged, within the box or frame B, a vibrator or arm, C, it being pivoted at its rear end to the sides of the box, while at or near its front end the said vibrator rests on an eccentric, D, arranged below the knife, and fixed on a shaft, E, disposed transversely in the box. The said eccentric is a cylinder, arranged eccentrically on its shaft, on which is also a spur-gear, F, to engage with a pinion, G. This latter is fixed on a shaft, H, which is provided with a crank, I, for revolving it. At or near its front end the vibrator C has two standards, K K, extending up from it, and serving to support a cylindrical gage bar or roller, L, which is arranged transversely across the machine, and when up to its highest position has its top immediately against the knife, at or close to its cutting-edge. As the vibrator is depressed, in order to vary the distance of the bar or roller L from the knife-edge, such bar or roller, owing to the position of the pivots of the vibrator, will be not only moved downward, but more or less forward, relatively to the cutting-edge of the knife. Such a compound movement of the bar or roller is very necessary, in order not only to enable the knife to split whalebone as it may

increase in thickness, but to enable the whalebone to be readily drawn forward against the knife, for were the bar or roller not to move forward relatively to the knife-edge, while in the act of moving downward from such edge, the power to cause the knife to operate, or, in other words, to advance the strip of whalebone against the knife, would have to be very much increased. This will be readily understood by whalebone-splitters. The gage bar or roller L has its supports so constructed as to enable the axis of the roller to be brought into parallelism with the cutting-edge of the knife, or to be inclined more or less with reference thereto. To this end each support or standard K, recessed vertically, as shown, has within it a vertical screw, *s*, which screws up through the vibrator, the bar or roller journal resting on the top of the said screw. By revolving the screw it may be moved more or less vertically. This makes the gage L, to be adjusted to a piece of whalebone, variable in thickness from edge to edge, or thicker at one than at the opposite of the two edges. There is fixed to the side of the frame or box A, concentrically with the axis of the larger gear, a divided limb or arcal scale, N, a pointer or index, O, therefor being applied to or made on the gear, or fixed to its shaft. The zero or starting-point of the scale is that part of it against which the index is when the gage L is up against the knife, the other terminus of the scale being at the lowest position of the pointer or index. The arcal scale, properly divided, serves to enable a person, while using the machine, to regulate the thickness of the whalebone cut off by the knife, as well as that from which the strip may be taken. To do this he turns the crank more or less, as circumstances may require, to cause the knife to cut in the path he may desire.

Strips of whalebone to be dressed by this machine are usually wedge-shaped. Each is introduced, smaller end foremost, between the gage and the knife, after which an attendant seizes the strip by its smaller end and pulls such strip against the knife, which separates from it a thin wedge. The strip is next to be turned over or reversed and another wedge taken from it, so as to bring the opposite surfaces of the strip parallel to each other.

This may be illustrated by Fig. 5, in which A and B denote the two wedge-strips removed, leaving the piece C, for a larger portion of its length, with its opposite sides parallel. The part C usually is subsequently split lengthwise into several other strips, each being square or rectangular in transverse section.

Each of the supporting-standards K of the gage L may be in one single piece of metal, so as to keep the gage always in parallelism with the knife; but it is far preferable to have to the standards adjustment-screws, as and for the purpose specified. I would also remark that the pivots of the vibrator may be so arranged as to cause the gage, during its downward movement, to move practically in

but one direction relatively to the knife-edge; but this is in no respect so advantageous as to have the compound movement of it, as hereinbefore specified.

I claim as my invention—

In the described machine for splitting or dressing whalebone, the combination of the gage L, the vibrator C, and the eccentric D, all being arranged as shown, and applied to the knife A and its supporting-frame B, substantially and to operate as specified.

FRANCIS E. MERRIMAN.

Witnesses:

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