N. Goddard.

Cutting Waterbox.

No. 96,220. Patented Oct. 26, 1869.

Fig: 2.

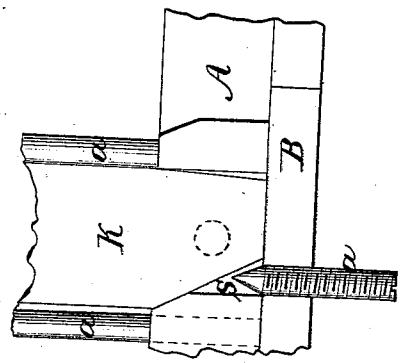


Fig: 3

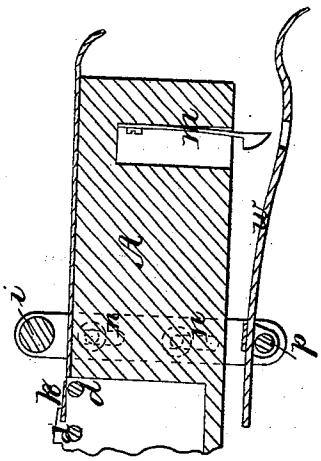
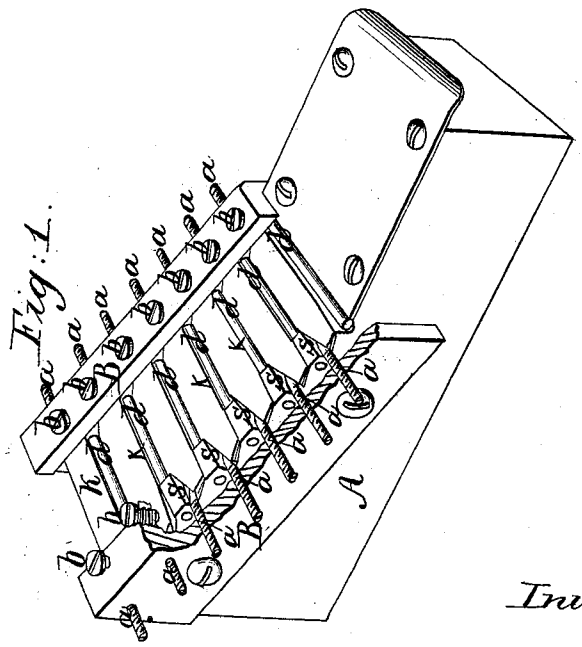


Fig: 1.



Witnesses;
J. L. Newton
Edwd. T. Bigham

Inventor;
Nathan Goddard

United States Patent Office.

NATHAN GODDARD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND D. B. SAUNDERS, OF SAME PLACE.

Letters Patent No. 96,220, *dated October* 26, 1869.

IMPROVED MACHINE FOR SPLITTING WHALEBONE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, NATHAN GODDARD, of Boston, in the county of Suffolk, and State of Massachusetts, have invented new and useful Improvements in Machines for Splitting Whalebone; and I hereby declare that the following is a full and exact description of the same, and I refer to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification, of which—

Figure 1 is a perspective view of the invention and improvements, with part of one clamp removed.

Figure 2 is a section of a part of the machine, showing the application and arrangement of certain parts.

Figure 3 is a section of a part of the machine, showing the guide and its parts applied to the same.

The letter A represents the frame of the machine.

B B, the clamps.

a a, &c., the side adjusting-screws.

b b, &c., the top adjusting-screws.

d d, &c., the rollers.

k k, &c., the knives.

s s, &c., the spaces.

i p, the rollers of the guide.

n n, slots in the sides of the guide.

m and *w*, springs attached to frame and guide.

The drawings exhibit a quadrangular frame, a portion of the top of which is an inclined plane, and upon this plane is arranged a series of knives, clamps, rollers, screws, a guide, &c., all combined in a machine for the purpose of splitting whalebone and like material into strips.

The invention embraces improvements upon a device for the same purpose, patented by this applicant, of date November 5, 1867; and in order that others may better understand and be enabled to manufacture the same, I will explain the improvements.

The series of knives *k k*, &c., is arranged, as seen in fig. 1, one above or beyond another, so that when a piece of whalebone is placed in front of the knives and pushed under the roller *l*, or against the first knife in the series, the same will be split into strips of uniform thickness, according to the height between the knives, this height being regulated by adjusting-screws beneath the rollers *d d*, &c., the heads of the screws being at the bottom of the machine, and not shown in these drawings. This arrangement of the series of knives is precisely the same as in the aforesaid patent.

But in order to sharpen the knives when necessary, I have constructed the improvements thus:

B B represent clamps, as seen in fig. 1, rectangular in form, and made so as to fit closely upon the frame A.

They have screws, *b b*, &c., passing through the top, and pressing upon the upper surfaces of the knives *k k*, &c., and at the sides are screws, *a a*, &c., passing through and into the spaces *s s*, &c., at the back of the bevelled part of the knives. The same is clearly seen in fig. 2.

The screw *a* adjusts the knife over and to the roller *k*, and the screw *b*, with the clamp B, keeps the knife down, and from twisting and warping. The knife may in this way be taken out and ground, and readjusted, till the blade is nearly worn out. It is more precisely adjusted over the roller than in the aforesaid patent, is simpler in form, and more easily made.

The clamps B B are guides, for keeping the whalebone upon the sharpened parts of the knives.

In pushing the whalebone through or against the knives, it is necessary to keep the same down upon the plane, before the knives, with the hand, in the aforesaid patented machine.

I have constructed a guide, which is seen apart, in a vertical section of a part of the machine, in fig. 3.

This consists of a pair of bars and rollers, slipped on the lower end of the frame A, as far as or near the clamps B B. At the upper part is a roller, *l*, at the lower part the roller *p*, both being fitted into the side pieces of the guide.

The guide is fastened to the machine by two screws, on the two sides of the same, and the two side pieces of the guide have slots, *n n*, in which the screws work, as seen in fig. 3. The slots enable the guide to work up and down when needed.

There are also springs, *m* and *w*, seen in said fig. 3.

When the whalebone is to be pushed against the knives, push up the spring *w*; this carries the guide, and it will be held by the notch in the spring *m*. Push back the spring *w*, and the guide will drop upon and hold the whalebone or steady it.

Being made with a roller at the top and bottom, and slots at the side, it has an oscillating or side movement, or may have. This will enable a diamond-shaped piece of whalebone to pass under the roller *l* without difficulty.

When in use, the machine is secured in a vise, or otherwise fastened, and the operators stand, one pushing in the whalebone, the other seizing the same, as it passes through, with instruments, and pulls through the strips of any length, and with great rapidity and ease, thereby saving, by use of the machine, much time and labor.

The improvements are novel, and of great practical utility.

I claim as my invention, and desire to secure by Letters Patent—

1. The rectangular clamp B, provided with the screws *a a* and *b b*, in combination with the knives *k k* and rollers *d d*, all the parts constructed substantially as described and for the purpose specified.

2. In combination with the above, the presser-roller *l*, constructed and operated as shown and described.

NATHAN GODDARD.

Witnesses:

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EDMUND V. HIGHAM.