

N. J. COLMAN.

TAPPET-CLAMPS FOR STAMP-STEMS.

No. 170,236.

Patented Nov. 23, 1875.

Fig. 1.

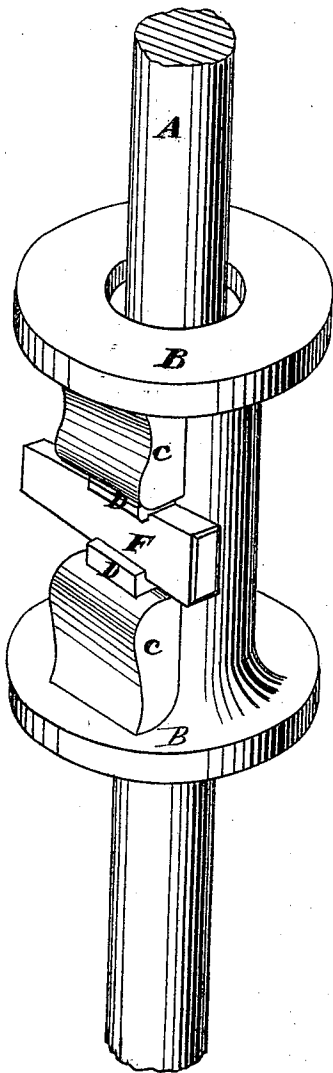
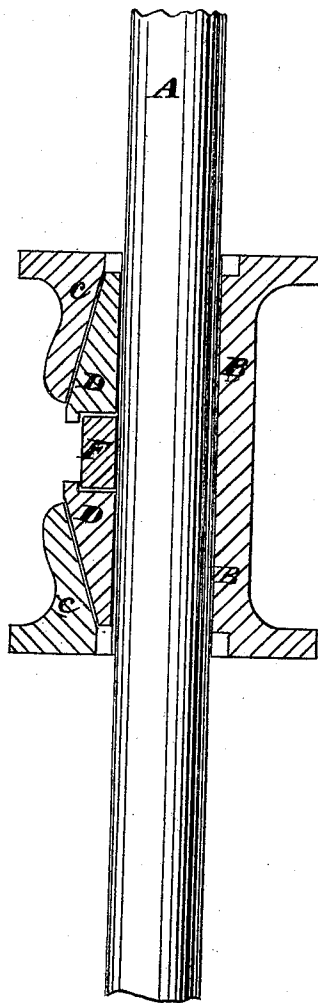


Fig. 2.



Witnesses

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IMPROVEMENT IN TAPPET-CLAMPS FOR STAMP-STEMS.

Specification forming part of Letters Patent No. **170,236**, dated November 23, 1875; application filed September 23, 1875.

To all whom it may concern:

Be it known that I, NICHOLAS J. COLMAN, of San Francisco city and county, State of California, have invented an Improved Tappet-Clamp for Stamp-Stems; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement, without further invention or experiment.

The object of my invention is to provide an improved device for securing tappets to the stamp-stems of quartz-mills, so that when working they will not become loosened or slip upon the stem.

The position of the tappet on the stamp-stems of quartz-mills must be changed occasionally as the stamp wears away. It is necessary, therefore, to provide a clamping device which will secure the tappet at any point on the stem; and, as the stem is made cylindrical and with a smooth surface, much difficulty has heretofore been encountered in keeping the tappet in place, as the repeated lifting upon it by the cam and the jar of the drop of the stamp tend to loosen it, thus causing much annoyance and waste of time, as the mill must be stopped in order to fasten it again.

My invention is intended to remedy this difficulty by supplying a clamp which cannot become loosened by either of the causes above mentioned.

Referring to the accompanying drawings, let A represent the stamp-stem, and B the tappet. In the construction of this tappet I form two narrow boxes or enlargements, *c c*, on one side of the tappet, inside of the flanges. These boxes are in the same line, and a small space is left between their inner ends. Inside of each box an inclined groove is made, which communicates with the bore of the tappet. The upper face of each groove inclines from the inner end of the box toward the end of the tappet, thus giving two oppositely-inclined upper faces in the two boxes. A wedge or gib, D, which has one inclined and one straight side, is placed in the recess inside of each box, so that its inclined side will bear against the inclined side of the groove.

Each of the keys or gibs D have only one inclined face, while the opposite or straight face is made convex, to fit the convexity of the stamp-stem. These gibs or keys are introduced into the recesses of the boxes *c c* before the tappet is placed upon the stem, and as long as the keys are loose and drawn toward each other in their boxes the tappet can be moved up or down at will upon the stem; but when it is desired to secure the tappet at a fixed point the gibs D are forced apart by a wedge or key, F, driven in between them transversely to the ends of the boxes, so as to tighten them upon the stem, the inclined face of the box and key serving to clamp the gibs upon the stem, according to the force with which the gibs are pressed apart.

It will be readily seen that, by driving the key or wedge F between the projecting ends of the gibs D, they will be forced up and down in opposite directions, or from the center toward the ends of the tappet, and thus firmly clamp the tappets to the stem. By this arrangement, when the cam strikes the tappet to lift the stamp, the tendency is to drive the tappet upward, consequently tightening it upon the lower gib D, while the downward jar of the stamp will tighten it upon the upper gib, thus securing the immovability of the tappet from its keyed position on the stem. I thus secure a large clamping-surface, as the gibs D D will bear upon the stem along the greater portion of the length of the tappet, and their gripe will be proportionately increased.

When it is desired to move the tappet, it will only be necessary to remove the wedge or key F, when a tap upon the gibs D with a hammer will loosen them so that the tappet can be moved up or down, as desired.

I thus provide a very effective, cheap, and convenient tappet-clamp, which cannot be shifted by the action of the cam, and which will, therefore, be a great improvement on stamp-mills.

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

1. The tappet A, having the boxes B'B, with their inclined grooves or chambers, in combination with the corresponding gibs D

and the wedge or key F, substantially as and for the purpose above described.

2. An improved tappet-clamp, consisting of the tappet A, provided with two oppositely-inclined chambers, on each of which a tapering wedge or gib, D, is placed, and the two wedges or gibs D are forced in opposite direc-

tions, so as to tighten them upon the stem by a wedge or key, F, driven in between them, substantially as above specified.

NICHOLAS J. COLMAN.

Witnesses:

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