

(No Model.)

A. S. RUSSELL.
CAM.

No. 535,923.

Patented Mar. 19, 1895.

Fig. 1.

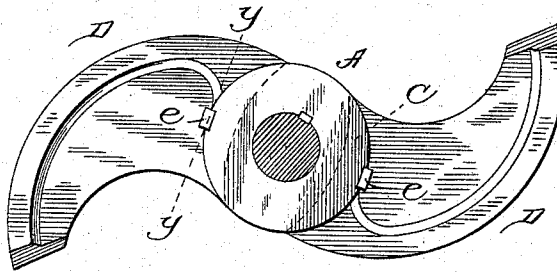


Fig. 2.

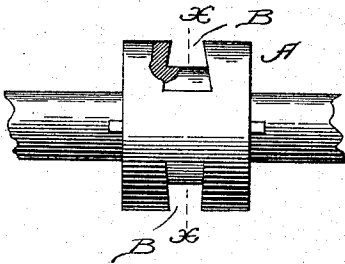


Fig. 3.

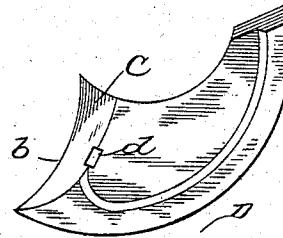


Fig. 4.

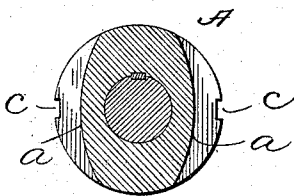
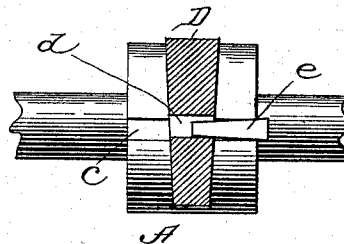


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT S. RUSSELL, OF BOISE CITY, IDAHO, ASSIGNOR OF ONE-THIRD TO
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CAM.

SPECIFICATION forming part of Letters Patent No. 535,923, dated March 19, 1895.

Application filed September 5, 1894. Serial No. 522,203. (No model.)

To all whom it may concern:

Be it known that I, ALBERT S. RUSSELL, a citizen of the United States, residing at Boise City, in the county of Ada and State of Idaho, have invented certain new and useful Improvements in Cams; and I do hereby declare the following to be a full, clear, and exact description of the invention.

This invention relates to certain improvements in stamp mills, and the invention consists in a specially constructed cam such as hereinafter fully described and the novel features thereof pointed out in the claim.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and use, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side view of the cam in position on its supporting shaft, the latter being in section; Fig. 2, a plan, with the cam-arms detached, showing the tapered dovetailed grooves for attaching said cam-arms; Fig. 3, a plan, showing one of cam-arms; Fig. 4, a sectional view of the cam-hub, taken on line *x x* of Fig. 2; and Fig. 5 a sectional view, taken on line *y y* Fig. 1, showing the cam-arm partly in place and the securing key arranged ready to be driven home.

The object of this invention is to provide the ordinary cam of a stamp mill with detachable arms, and the features of novelty reside more particularly in the special means, devised by me, affording ready detachment and security against accidental dislodgment of the cam-arms, all as will appear farther on. Cams of this class and use are liable to be rendered inoperative by reason of one or more arms being broken, and where the cam is formed integral, *i. e.*, one solid casting, it is necessary, in rectifying the accident, to remove the supporting shaft and adjust an entire new cam. This difficulty has, in a measure, been overcome by providing the cam with detachable arms, but in all such instances more or less objection is found in the means for securing the said arms, and to overcome these defects, I have devised a cam such as follows:

In my cam I provide a hub, A, having on one or more sides inclined dovetailed grooves, B, adapted to receive like-shaped tongues, C, of the cam-arms, D. These grooves, as will be seen in Fig. 4, have a convex surface, *a*, conforming to a concave like-shaped surface, *b*, on the under side of the tongue, C, of the cam-arm, D. The hub, A, at right angles with the grooves, B, is provided with a groove, *c*, and the arm, D, formed with a perforation, *d*, registering with the groove, *c*, when the cam-arm is in its most rigid position. For securing the cam-arm I provide a tapered flat key, *e*. In adjusting an arm to my cam, the tongue, C, is placed in the groove, B, and shoved in until its perforation, *d*, partly registers with the groove, *c*. The key, *e*, is then placed in the groove, *c*, with its forward end entering the perforation, *d*, as shown in Fig. 5. Now, by driving the key home, the cam-arm is forced into the groove, B, of the hub, A, by the incline edge of the key, as will be readily understood and needs no further description.

By providing the cam-arm with the concave surface, *b*, and hub with convex surfaces, *a*, as hereinbefore described, I secure additional rigidity. When the parts are assembled and the arms secured in place, the key, *e*, is less liable to rupture and the parts insured against dislodgment by vibration.

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

In a cam the combination of a hub, detachable arms and securing keys, the hub provided with inclined tapered grooves each having a convex surface, the detachable arms each having a tapered tongue constructed to enter the said grooves of the hub, and each tongue provided with a concavity adapted to rest on a convex surface of the hub, and each arm secured in place by one of the aforesaid keys, as set forth.

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

ALBERT S. RUSSELL.

Witnesses:

T. J. BALDIE,
S. C. TORRANCE.