March 25, 1930. J. O. McKEAN 1,751,938

CAM

Filed March 6, 1929

Fig. 1.

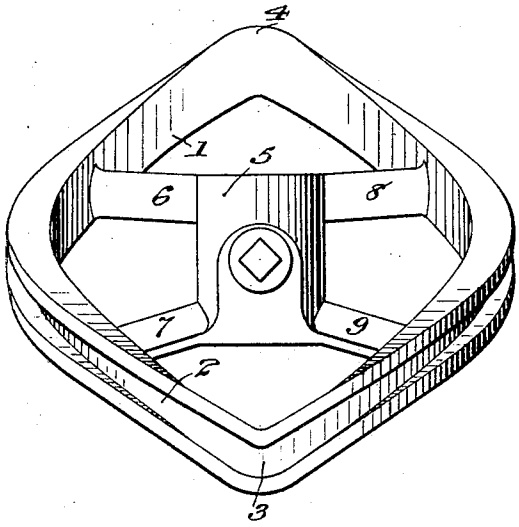


Fig. 2.

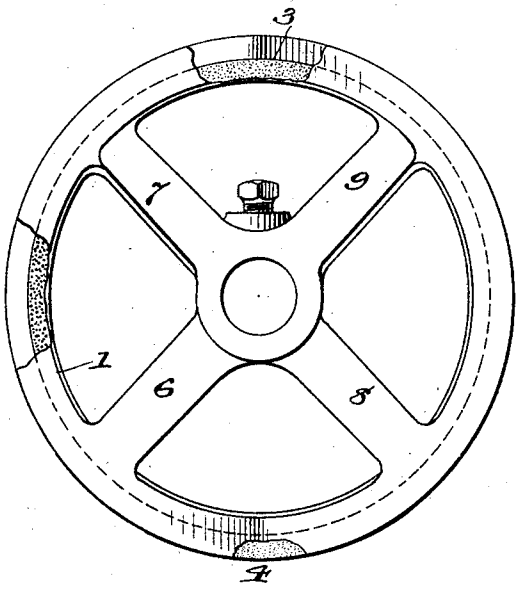
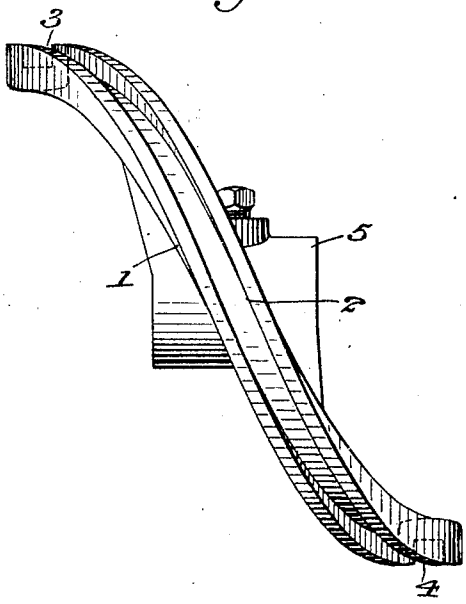


Fig. 3.



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Patented Mar. 25, 1930

1,751,938

UNITED STATES PATENT OFFICE

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CAM

Application filed March 6, 1929. Serial No. 344,695.

The traverse cams for winding machines are commonly made of cast iron and they wear away very rapidly at their return points where the excess pressure of the thread guide comes, due to its sharp reversing action, said wearing away of the cam frequently causing breakage at these return points and also adversely affecting the accurate winding of the thread or yarn. The intermediate portions of the cam are subjected to very little wear.

The object of my invention is to extend the effective life of the traverse cam by elminating to a great extent this wearing away of the cam at the return points; by hardening the return points whereby the return points will have greater wear resisting qualities than the intermediate portions of the cam; thus allowing the cam to be made of cast iron as is now usual, because of its comparative cheapness.

A further object is to arrange the spokes of the cam so they will connect the hub with the rim at its unhardened portions between the hardened return points of the cam and thereby permit the shrinkage of the metal at the return points when subjected to the hardening step, without liability of breaking the cam or spokes.

A practical embodiment of my invention is represented in the accompanying drawings, in which:

Fig. 1 represents a plan view of the traverse cam;

Fig. 2 represents an end view of the same, portions of the rim being broken away at the return points of the cam groove and at a point intermediate the same, to indicate the hardened and unhardened portions of the cam, and

Fig. 3 represents the cam in side elevation.

The traverse cam illustrated herein comprises a rim 1 having a groove 2, the walls of which are hardened at its two return points 3, 4, a hub 5 and four spokes 6, 7, 8 and 9 connecting the hub with the unhardened portions of the rim between the said hardened return points.

In producing the traverse cam, it is first cast of iron in the desired form and subsequently the return points of the cam are subjected to any well known or approved hardening process so that the return points will be of greater wear resisting qualities than the intermediate portions of the cam.

Where the cam has a cam groove, as illustrated in the accompanying drawings, the cam is cast and the cam groove is cut therein. Afterwards, the cam at the return points of the groove is hardened by any well known or approved process which will cause the walls of the groove at its return points to be of greater wear resisting qualities than the intermediate portions.

By casting the cam so that the spokes will connect the hub with the unhardened portions of the rim between the hardened return points of the cam, I am enabled to permit the shrinkage of the metal in the hardening step at the return points of the cam without danger of causing breakage, as would be liable if the spokes were connected to the rim at its return points.

By hardening the cam at its return points only, I am enabled to still produce the cam of cast iron, which is very cheap, and yet materially prolong the life of the cam as there is very little wearing away of the cam intermediate its return points.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention; hence, I do not wish to be limited to the particular embodiment herein shown and described; but what I claim is:—

1. A cast iron traverse cam comprising a rim treated at its return points to harden them, a hub and spokes connecting the hub with the rim between said hardened return points.

2. A cast iron traverse cam comprising a rim having a cam groove cut therein, the walls of the groove being treated at the return points to harden them, a hub and spokes connecting the hub with the rim between said hardened return points.

In testimony, that I claim the foregoing as my invention, I have signed my name this 4th day of March, 1929.

JOHN O. McKEAN.