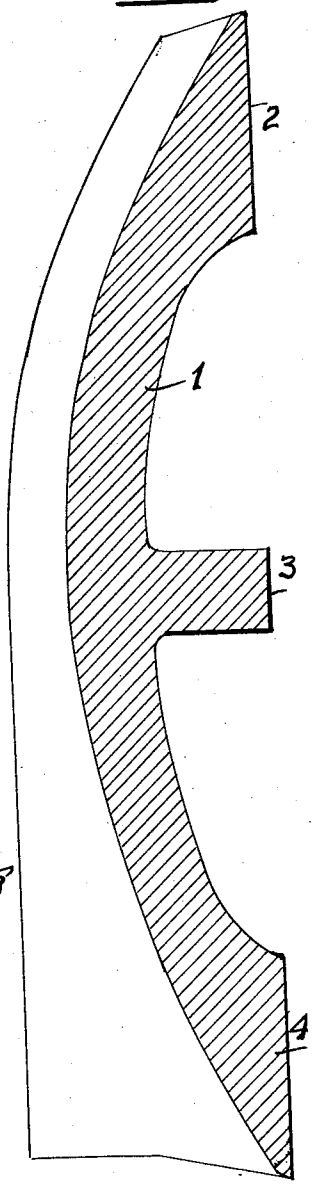
March 15, 1932. E. L. KROPP 1,849,935

ROCK CRUSHER JAW

Filed Feb. 4, 1929

Fig. 1.



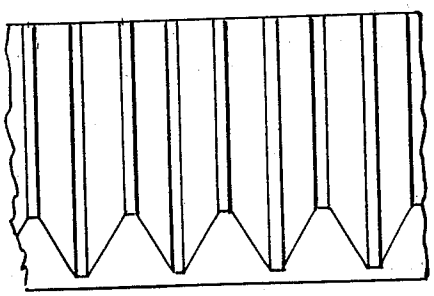


Fig. 4.

Fig. 2.

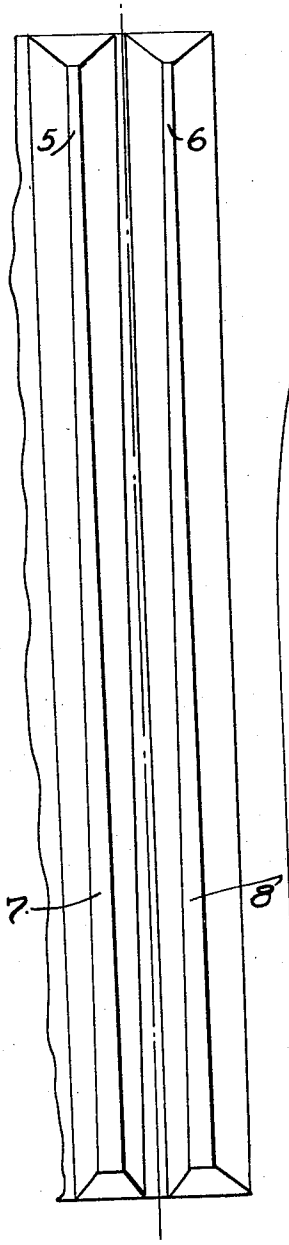
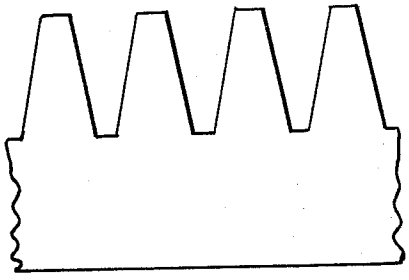


Fig. 3.



Inventor

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Patented Mar. 15, 1932 1,849,935

UNITED STATES PATENT OFFICE

EDWARD L. KROPP, OF PORTLAND, OREGON, ASSIGNOR TO WESTERN ROAD MACHINERY COMPANY, OF PORTLAND, OREGON, A CORPORATION OF OREGON

ROCK CRUSHER JAW

Application filed February 4, 1929. Serial No. 337,446.

This invention relates to a rock crusher jaw, and its object is to provide a corrugated rock crusher jaw which will have the corrugations so shaped as to improve the crushing qualities of the jaw and cause it to wear at least 25 to 50% longer than the ordinary plain serrated jaws do when made of the same size and material.

The present jaw is intended to fit ordinary rock crushers of the general type known as "reciprocatory jaw crushers" and has the upper portion of the jaw curved with shallow ribs projecting therefrom, while the lower portion of the jaw is provided with a series of ribs coincident with the extensions of the upper ribs, but approximately twice as deep at the lower end of the jaw, and with the outer edges of the ribs lying in a single plane.

Another object of the invention is to produce a crusher jaw of greater wearing qualities with the minimum amount of material.

Another object of the invention is to so curve the upper part of the jaw ribs and to increase the height of the lower part of the jaw ribs as to increase the capacity of the crusher 25%, while at the same time the life of the jaw is increased 50%.

A further object of the invention is to so form the corrugations on the lower half of the jaw as to cause the jaw or ridge front to always remain parallel to the original jaw or ridge front, the relative position between the corrugations as the jaw wears always remaining the same and evenly distributing the wear from the center of the jaw to its lowest point.

Another object of the invention is to provide a type of jaw which will give several crushing blows to the rock received in the jaw, whereas in the old type of jaw crusher there is but one crushing blow given, and this is usually near the extreme lower edge of the jaw, which causes the jaw to flow or peen out and causes pockets in the jaw which interfere with the crushing.

Other objects of the invention will be apparent as the description proceeds.

An embodiment of the invention is shown in the accompanying drawings in which the same reference numeral is applied to the same portion throughout the several figures of the drawings and of which there may be modifications.

Figure 1 is a vertical sectional view through the plate,

Figure 2 is a front elevation of the plate showing a portion of the crusher jaw, and illustrating three ribs,

Figure 3 is a view in end elevation of the crusher jaw at the widest ends of the ribs, and

Figure 4 is an end view of the jaw at the narrowest ends of the ribs.

In the present instance the crusher jaw is indicated at 1. It has a bearing surface 2 at its upper end, a bearing rib 3 at approximately the middle of the crusher jaw, and a bearing surface 4 near the bottom of the jaw. The jaw 1 forms the segment of a circle with the chord line 2—3—4.

The front of the jaw is curved to produce a plurality of shallow ribs 5—6 in such number as the width of the jaw shall determine. These ribs are curved from front to back as illustrated in the top of Figure 1, and they extend below the center of the jaw to form deeper ribs in alignment therewith, as indicated at 7 and 8.

The ribs below the center of the jaw have their outer edges in a single plane for the purpose of restricting the throat opening of the rock crusher as much as possible, and to give as much metal in efficient position for the operation of the rock crusher as possible.

The result of the foregoing construction is that a jaw made in this way will run from 25% to 50% longer than an ordinary plane jaw without the rib formation shown and described herein.

Having thus described my invention, what I desire to secure by Letters Patent of the United States is as follows, but modifications may be made in carrying out the invention as shown in the drawings and in the above particularly described form thereof, within the purview of the annexed claims.

1. A rock crusher jaw having a plurality of ribs extending from the top of the jaw to the bottom of the jaw, the upper portion of said ribs being curved from front to back,

while the portion of the ribs below the center of the jaw have their edges in a plane and extend from a curved surface on the lower portion of the jaw.

2. A rock crusher jaw comprising a jaw having vertically extending ribs extending from the top to the bottom thereof, said ribs being curved above the center of the jaw, and having their lower edges in a single plane with the space between the ribs greater at the bottom of the jaw than at the top of the jaw, the ribs being deeper at the bottom of the jaw than at any other place.

3. A rock crusher jaw forming the segment of a cylinder and having ribs the upper portions of which are substantially parallel to the plane of the jaw and the lower portions of which are substantially parallel to the chord of the segment.

In testimony whereof I have hereunto set my hand this 30th day of January, A. D. 1929.

EDWARD L. KROPP.