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2,396,114

LIGHTER FLINT

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Fig. 1.

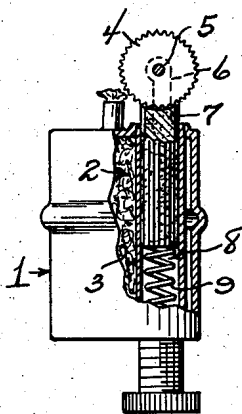


Fig. 2.

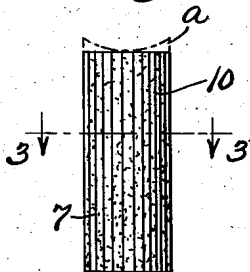


Fig. 3.

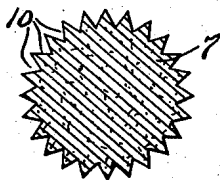


Fig. 4.

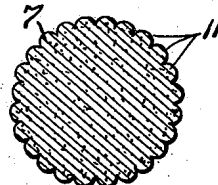
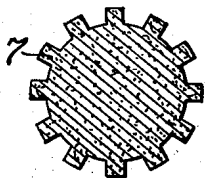


Fig. 5.



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LIGHTER FLINT

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Application May 19, 1944, Serial No. 536,320

3 Claims. (Cl. 67-7.1)

My present invention, in its broad aspect, has to do with the form and construction of flints for use with various mechanisms designed to create a spark, as for instance, cigar and cigarette lighters. It has been found that flints of the usual type when advanced against a friction wheel to create a spark become deeply cavitated or grooved which has the effect of weakening the spark and otherwise rendering the device inefficient in operation. I have found by experimentation that by chipping off the active end of the flint or crumbling the edges, the spark is again rendered effective. To that end, I have provided in the present invention means whereby extensive cavitation or grooving is prevented by producing or accelerating the constant crumbling of the edges of the flint as it is advanced against the friction wheel, thereby inducing at all times a sharp and effective spark.

As a means for automatically producing or accelerating the crumbling of the edges of a flint I have produced in the body of a flint closely associated, longitudinally extending serrations, so that the principal object of my invention may be said to consist in the formation of a unique flint having closely associated grooves, ribs, serrations, indentations or the like extending longitudinally over the whole surface of the flint whereby a spark of constant intensity and sharpness is produced as it is fed against a friction wheel.

Other and equally important objects and advantages of my invention are (1) to produce a flint having the characteristics heretofore attributed to it without appreciably increasing its cost or needlessly complicating its manufacture (2) to produce a constantly efficient flint without complicating the mechanism of a lighter, as for instance, providing means for turning the flint as it is advanced to prevent undue cavitation which I understand has previously been proposed (3) to provide means for causing accelerated crumbling of the edge of a flint which is constantly effective throughout the life of the flint, and (4) to attain these ends effectively, practically, and without modifying the conventional structure of a lighter.

While I have briefly defined some of the major objects and advantages of my invention in the foregoing, others will be apparent as the detailed description of parts proceeds, but in so particularizing, I do not wish thereby to limit the scope of my invention which should only be conclusive when made in the light of the claims.

In the drawing wherein I have illustrated preferred forms of my invention:

Figure 1 is a side elevation, partly broken away, of a lighter wherein my flint is utilized;

Figure 2 is an enlarged side elevation of my flint;

5 Figure 3 is a transverse section taken on the line 3-3 of Figure 2;

Figure 4 is a transverse section showing a somewhat modified form of serration, and

10 Figure 5 is a transverse section showing another modified form of serration or groove and rib construction.

In the drawing wherein like characters of reference are used to designate like or similar parts throughout the several views:

15 The numeral 1 designates generally a form of cigarette or cigar lighter having a combustible flint compartment 2 in which suitable wick material 3 is contained and designed to be ignited by a spark produced by a suitable serrated friction
20 wheel 4 pivotally mounted as at 5 on a support 6—shown in dotted lines—in the path of travel of the flint 7 in the flint compartment 8. The flint is urged upward, or advanced against the serrated edge of the friction wheel by a spring 9.
25 As indicated the operative end of the flint is somewhat cavitated or grooved by the action of the friction wheel and the effectiveness or efficiency of the flint as indicated by the sharpness
30 of the spark produced is in inverse proportion to the extent of cavitation or grooving.

In order to accelerate crumbling of the edges of the flint under action of the friction wheel thereby to reduce excessive cavitation or grooving and increase the sharpness of the spark, I
35 provide my flint with closely associated serrations 10, extending longitudinally of the flint in its whole outer surface as shown in Figures 2 and 3 thereby producing the desired results and approaching as closely as possible the ideal formation of the end of the flint (for purposes of a sharp spark) as indicated at *a* in Figure 2. As
40 shown in Figures 2 and 3, the serrations may be sharp, or rounded as at 11 in Figure 4, or square ribbed as at 12 in Figure 5.

In operation, the serrations cause progressive crumbling of the edges of the flint as it is advanced to the friction wheel thereby automatically and effectively producing a spark of constant high efficiency.

55 It is to be understood that changes in form, size, shape, configuration and arrangement of parts may be made as desired, and that the specific disclosure herein made is for purposes of illustration only and not intended as a limitation

of the scope of my invention as defined in the appended claims.

I claim:

1. A flint for a lighter having a rotating abrader wheel for a spark producing mechanism said flint having closely associated longitudinal serrations designed to effect crumbling of the edges of the flint.

2. The invention as in claim 1 wherein said flint has a series of closely associated grooves in the entire surface of the sides and said grooves are arranged longitudinally of the flint.

3. The invention as in claim 1 wherein the flint is provided with ends and serrations adjacent the ends and weakening the edges thereof.

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