

care of the stock is splendid training for the boys and girls. People with the instinct for stock raising are and have been the dominant people of the world. Grain farming is a soil robber; hence it is only possible on a new soil and then only for a short time.

The aim of every farmer should be to gradually work into some phase of live stock farming. This results in rotation of crops and a home market for the grain and hay. In this way, as much grain can be grown

on the farm as though it were all given to grain, as the yield will be larger, due to increased soil fertility, fewer weeds, less plant disease, better mechanical condition of the soil, etc.

The only permanent agriculture is that which is based on live stock farming and permanent agriculture means profitable agriculture.

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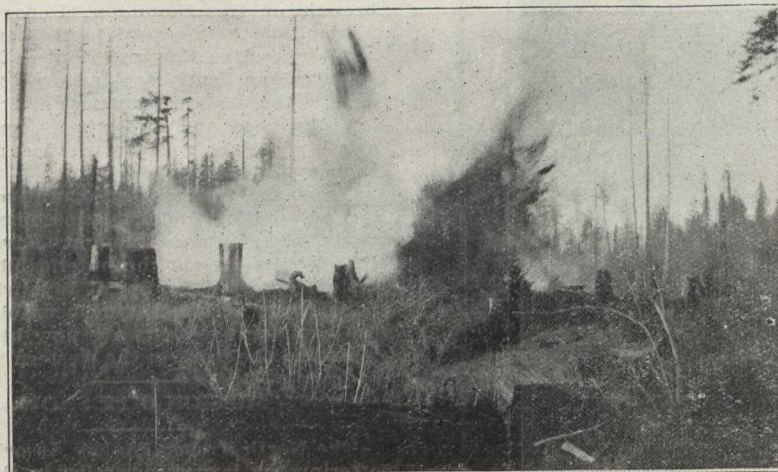
Cap and Fuse

By Bertrand Vogel

Not so very long ago the use of powder was an operation left to those who had some experience with this powerful and precarious agent. Stumping powder was an invaluable aid to the settler clearing his land in the days before the machinery for that purpose was so handily procured or so cheap. Though for the matter of that, many still claim that powder is the quickest and the cheapest. Therefore the method of handling it is still a vital issue.

But in those days, when the settler, perhaps but newly arrived from the long-settled district or from a city, wished to use powder on his stumps he found as a rule only two or three men in the district who

occasion requires. The wonder is that there are not more accidents than one hears of. You will find them working away with cheerful disregard of even the most ordinary precautions. Not long ago I walked across a partly cleared field where the new owner was blowing out the remaining stumps. I was naturally interested. He took every precaution with the powder and I was agreeably surprised. He placed the charge carefully in what I thought a well-judged position under the stump he was working at—not too close up under the crown and about right for the centre of resistance. I became doubly interested. Here was a paragon, indeed, though he had



A BIG BLAST—PHOTO BY VOGEL.

would handle the dangerous stuff. Generally they were men who had had some experience of railroad work and had learned to use blasting powder in that way, but sometimes a man would be found who had learned to use it for himself, because no one was handy who would undertake it. Then he would do a little of such work for his neighbors. Such a man, if he had a natural aptitude for "placing" the charge, would often come to handle all the blasting operations in the land clearing of such new districts. He would be sent for from miles around. Sometimes a rancher, whose swelling under the hat band convinced him that he could do most anything without previous experience, became too familiar and in trying to throw out the powder in the kitchen oven learned a much needed lesson—though sometimes there was not enough left of him to profit by the lesson. But as a rule the job was left to the experienced man.

But now, when we are beginning to know more about it and see it used more often, every Tom, Dick or Harry will use it as

"new settler" written all over him. Then he cut his length of fuse and rammed the end of it down into the percussion cap with great gusto and much whole-hearted effort. I removed myself with more speed than dignity. He paused with surprise at my sudden move and asked the wherefore. From a safe distance I answered with a few facts about percussion caps. He said he did not know that those little things were dangerous. On being told how hard a knick lay in so small a compass he was properly impressed and handled them with more circumspection.

Often it is just such ignorance, not realizing where the danger may be, but very often it is mere carelessness. I once saw a road foreman of a logging railroad walk into the camp cook house, when the rest of the men were seated at the long table, take a box of percussion caps from his hip pocket and place it on the narrow edge of a 2x4 which was just above his head. This 2 inch by 4 inch piece of timber was used as a plate from wall to wall across the center of the building and was not braced ex-

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