nitro-glycerine have exploded a third of a mile under our feet.

Now the gas, which had been rising in a little tremulous stream all the morning, begins to roll out, at first gently, and then with a low roar, while mutterings below begin to be heard, and increase until, with a loud hiss and rush, a small column of oil comes out about six feet, then for an instant subsides, but only for a new burst, which mounts nearly to the top of the derrick, then, falling back, is caught by the main flow, which, in a solid, black stream, pushes on steadily to the top of the derrick, where, broken and deflected, it expends its force against the planks, knocking off loose braces and sending smaller spurs, perhaps, fifty feet above. The wind catching the falling oil carries it in a glistening shower far down the hillside, drenching some of the houses of the little settlement below. Following in the rear of the clear oil, we hear the stones rattling in the derrick, and some are seen flying upward till out of sight; then the sudden bang of a stone on the roof, followed by a perfect fusillade of rocks, warns us to keep our heads indoors. Now the flow of oil has slackened, and some water comes out, quickly subsiding, and followed by spraying jets, and from the noisy turmoil below rolls out a sickening gas. This last is the product of the explosion, and is very poisonous, causing most severe nausea and headache, for which no remedy is known. It is dreaded by the men, as some of them have severe sickness after every shot.

Coming out of the engine-house, we find everything in the neighborhood dripping with oil. The firing line hangs broken, caught in the derrick; small lumps of sandstone and shale are scattered around, and occasionally a bit of tin. We keep away from the well, getting to the windward of the noxious fumes. The shooter saves what he can of his firing line, packs up his tools, and drives off. The workmen hasten to put back the tubing into the well and make connections into the tank before another flow takes place, in order to save the oil. The first flow is usually allowed to go into the air, as the well cleans itself better than if the flow is confined.

The shot cannot have its greatest effect, unless there is tamping around and above it; so if the hole is not already full, it is filled with oil nearly up to the lower end of the casing, care being taken to keep the oil below this point, in order that it may not transmit the shock of explosion into the casing, and by so doing cause a leak.

Premature explosions by the well flowing are not rare. In one case, the shell when thrown out of the hole fell across a bar and was bent. The man who was doing the work hastened to pick it up, and, probably, in trying to straighten it, jarred or in some way gave it a shock, which caused an explosion, killing and almost annihilating all who were near enough to see distinctly what he did.

In a similar case, the shooter heard the shell coming up, and was fortunate enough to catch it, in all likelihood saving his own and helpers' lives. After the flow ceased, he put the shot back in and exploded it in the proper place.

The cans in which the nitro-glycerine is carried cannot be entirely emptied, but retain a few drops of the fluid, which stick to the sides and in the corners. These cans are often left in the woods, where they sometimes explode by spontaneous combustion, or by accidental shock. They are often found by boys, who delight to set them off. Sometimes they are left until the Fourth of July, or some holiday, and then exploded by dozens. They make as much noise as a cannon. Twenty so-called empty cans have shattered window glass a third of a mile away. The safest way to explode them is by a rifle ball; but many are put on a brush-heap, which is then set on fire. Nearly as many men and boys have been killed by carelessly handling these cans as by transporting the material in bulk. It frequently happens that some reckless fellow, in spite of warnings, will kick or throw a stone at a can which he runs across in the woods, or perhaps try to clean it out to carry water in, thus adding another name to the list of mysterious disappearances or fatal accidents.

F. H. N.