

Beware! The Tanks are Coming— Under the Table

OUR picture shows a toy tank with its young commander. This is a most realistic toy, although it is very inexpensive. The sides and body are made of wood, and the gun turrets are merely other scraps of wood nailed to the sides. The gun ports are drilled obliquely so that the guns point forward. Ordinary paper cigarette holders serve as guns—fired in a most realistic manner by inserting fireworks into them. These toys have no motive power, as they are primarily intended for the very little folks, but they make fine stage properties in sanguinary play-room battles. They are not dangerous even for youngsters.

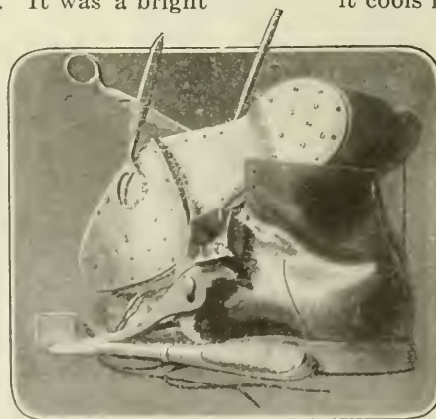


Here is the toy tank in full action. Note the gun being fired

Novel Idea of Converting Shell-Cases into Shoe Protectors

TRENCH life is extremely hard on shoes. That has been definitely proved. Rough usage and exposure to mud and water quickly wear them out. For a long time the men in the trenches have tried to devise some method of prolonging the life of soles and heels. It was a bright and happy idea of some French soldier to use discarded shell-cases to strengthen the heels and soles of his shoes. The plan proved thoroughly practical, and soon many other French and British soldiers imitated the example of the inventive poilu.

The shell cases are cut open lengthwise and rolled flat. Then the soles and heels are cut out with strong shears to fit the shape



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A pair of shell-soled trench shoes and the tools used in doing the job properly

of the shoes and tacked or screwed down. The illustration shows a pair of shoes thus metal-soled and heeled and the tools used in doing the work. It is scarcely necessary to state that both the British and the French authorities encourage this economy in shoe materials.

Why Isn't It Hotter Nearer the Sun Than Away From It?

WHY is the air generally much colder a mile above the earth than near the ground? The heat of the atmosphere comes from the sun, but by a somewhat indirect process. The incoming sunbeams are only slightly absorbed by the dry air at high levels, and so have little effect on its temperature. In the lower regions of the atmosphere there is always a considerable amount of water vapor (water in the form of gas), and this substance has a relatively large capacity for absorbing heat from sunshine. Lastly, the earth absorbs all the heat that falls upon it, and then gives it back, by radiation or conduction, to the air above it. Thus the atmosphere is mainly heated from below and not from above. Air heated near the ground tends to rise, but it cools rapidly in rising. As it

reaches higher levels the pressure upon it is less; it expands, pushing away the surrounding air, and it uses up in this work some of the energy that it originally possessed in the form of heat. This process is referred to by scientists as "adiabatic cooling."

This explains why the heat of summer often seems to come up from the ground, rather than from the boiling sun above.