(No Model.)

J. F. G. DE R. DE SALES.

HORSESHOE CALK.

No. 515,619. Patented Feb. 27, 1894.

FIG. 1

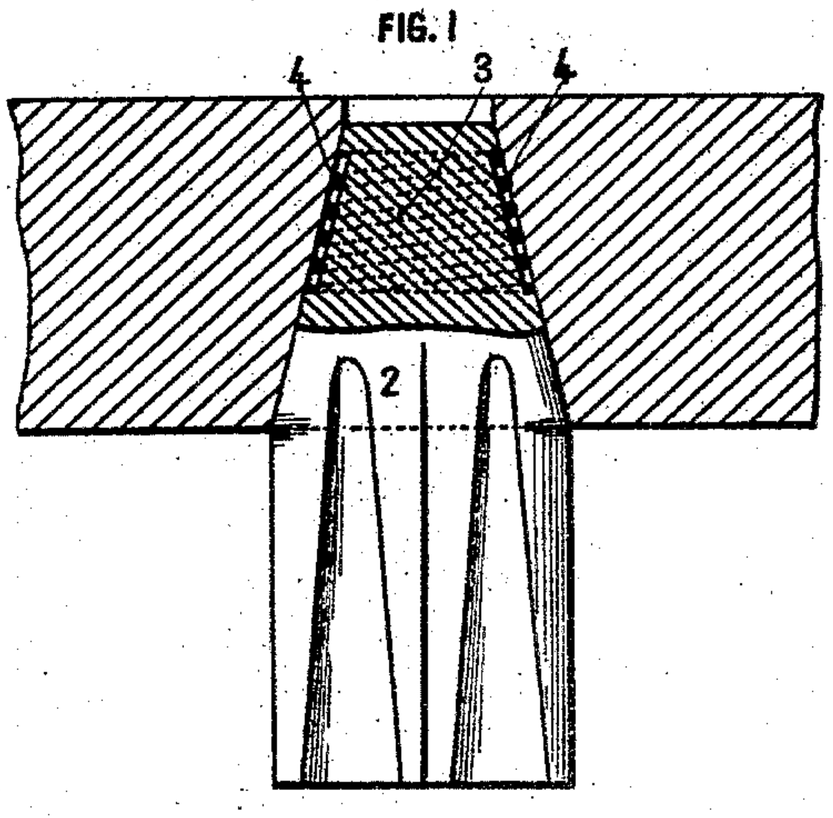


FIG. 2

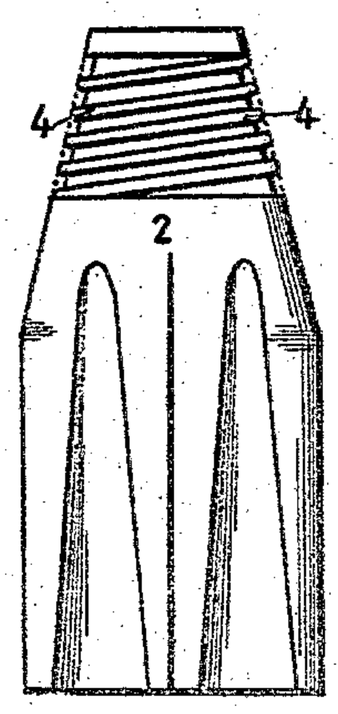


FIG. 3

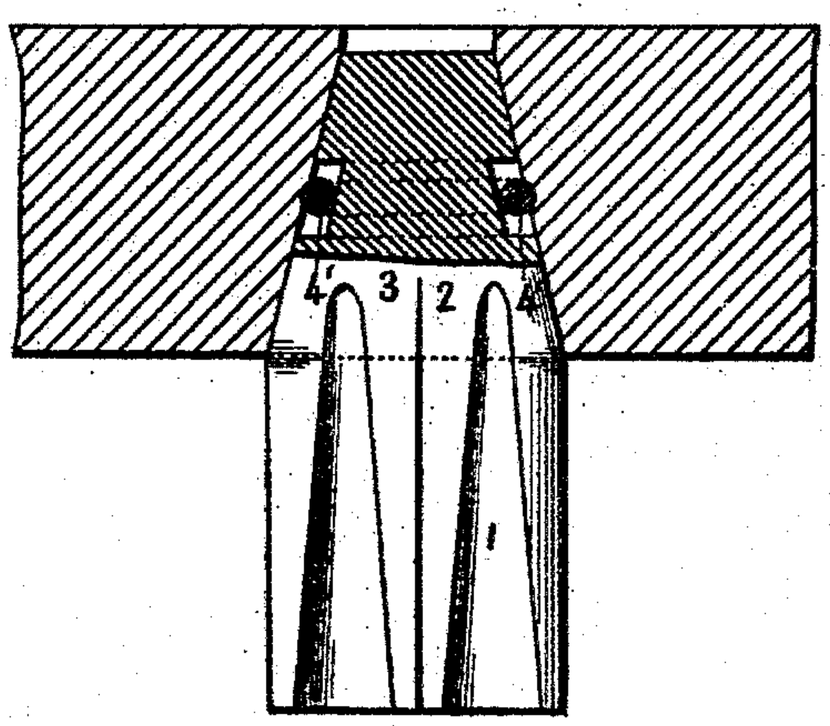
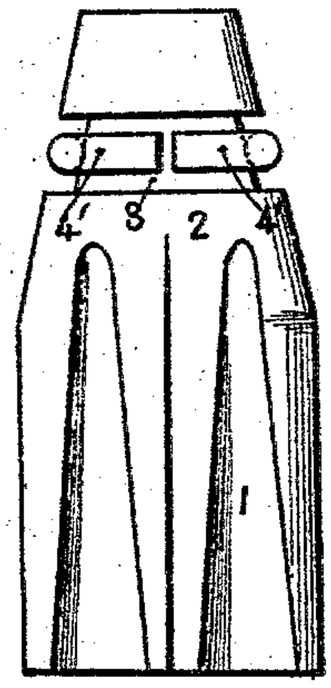


FIG. 4



Witnesses:
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Thos. A. Green

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UNITED STATES PATENT OFFICE.

JULES FRANÇOIS GEORGES DE ROUSSY DE SALES, OF STE. MENEHOULD, FRANCE.

HORSESHOE-CALK.

SPECIFICATION forming part of Letters Patent No. 515,619, dated February 27, 1894.

Application filed August 21, 1893. Serial No. 483,661. (No model.) Patented in France February 16, 1891, No. 211,421.

To all whom it may concern:

Be it known that I, JULES FRANÇOIS GEORGES DE ROUSSY DE SALES, a citizen of France, and a resident of Ste. Menehould, (Marne,) France, have invented a new and useful Improvement in Calks or Hobnails for Horse or other Shoes, (for which I have obtained Letters Patent in France, No. 211,421, dated February 16, 1891,) of which the following is a specification.

The improved means of attaching calks to the shoes of horses, or other animals, or hobnails to boots and shoes, forming the subject of my present invention, may be employed in connection with calks or hobnails having heads of any shape.

The accompanying drawings illustrate my invention as applied to a calk having wings and is shown only by way of example to enable the invention to be readily understood.

For the sake of clearness, the calk or hobnail is represented about three times its natural size.

My invention consists essentially in the interposition of a steel or other hard metal wire between the inner walls of the holes in the shoe and the body of the calk so that after being secured therein it is firmly retained in position, but may be readily and quickly removed therefrom when necessary.

The head 1 of the calk which should alone project from the lower face of the shoe, may be of any desired shape. It is surmounted by a truncated conical part or body 2 in which is cut a groove of rectangular section, the bottom of which also constitutes the frustum of a cone 3. Within the groove is wound a spiral 4 (Figs. 1 and 2) of steel or other metal wire. The hole in the shoe, in which the calk is to be secured, is of either cylindrical or truncated conical shape, and the steel wire spiral or coil is inserted therein with slight force. Or instead of the spiral, a simple steel split ring 4′ (Figs. 3 and 4) may be used and be located within a groove cut for its reception in the shank of the calk.

When it is desired to fix the calks in the holes in the shoe, they are forced in by striking them on the head. As they enter, their truncated conical body is wedged firmly against the iron walls of the holes, and the wire spiral or ring, which becomes embedded in the shoe, forms practically a screw thread, or is compressed to form a filling or packing, according to the nature of the metals employed. The screw threads or packings thus retain the calks in position in the holes, and enable them to resist transverse shocks.

Both forms of calks shown are inserted in the shoe by striking them on the head, and to remove them the calk shown in Figs. 1 and 2 is unscrewed from the threads formed in the shoe caused by the wire spiral being forced into the metal of the shoe, while the calks shown in Figs. 3 and 4 are removed by turning them and at the same time exerting a pull thereon, which partially withdraws the truncated portion 3 of the calk from the split ring, permitting the latter to contract when the calk can be instantly withdrawn.

The dimensions of the calks may be varied according to the different breeds of horses, or other animals, to which they are to be applied, and to the kind of work the animals are to perform.

The forms, size, and material of my automatic wedging calks may likewise be varied, the iron being replaced by cast iron, malleable iron, or other appropriate material.

The means of attachment herein described with reference to horse shoes may equally well be applied to boots and shoes for personal wear.

The shoe is made of the metal ordinarily used for the purpose, and the calk is formed from hardened steel to enable it to resist wear.

What I claim, and desire to secure by Letters Patent of the United States, is—

The combination with a horse or other shoe, of a calk or hob-nail having a truncated conical body, a circumferential groove formed in said truncated conical body, a wire arranged within said groove and encircling said body and adapted to become embedded in the shoe when the said conical body is driven therein, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JULES FRANÇOIS GEORGES
DE ROUSSY DE SALES.

Witnesses:
W. FORD,
GEORGES DELOUS.