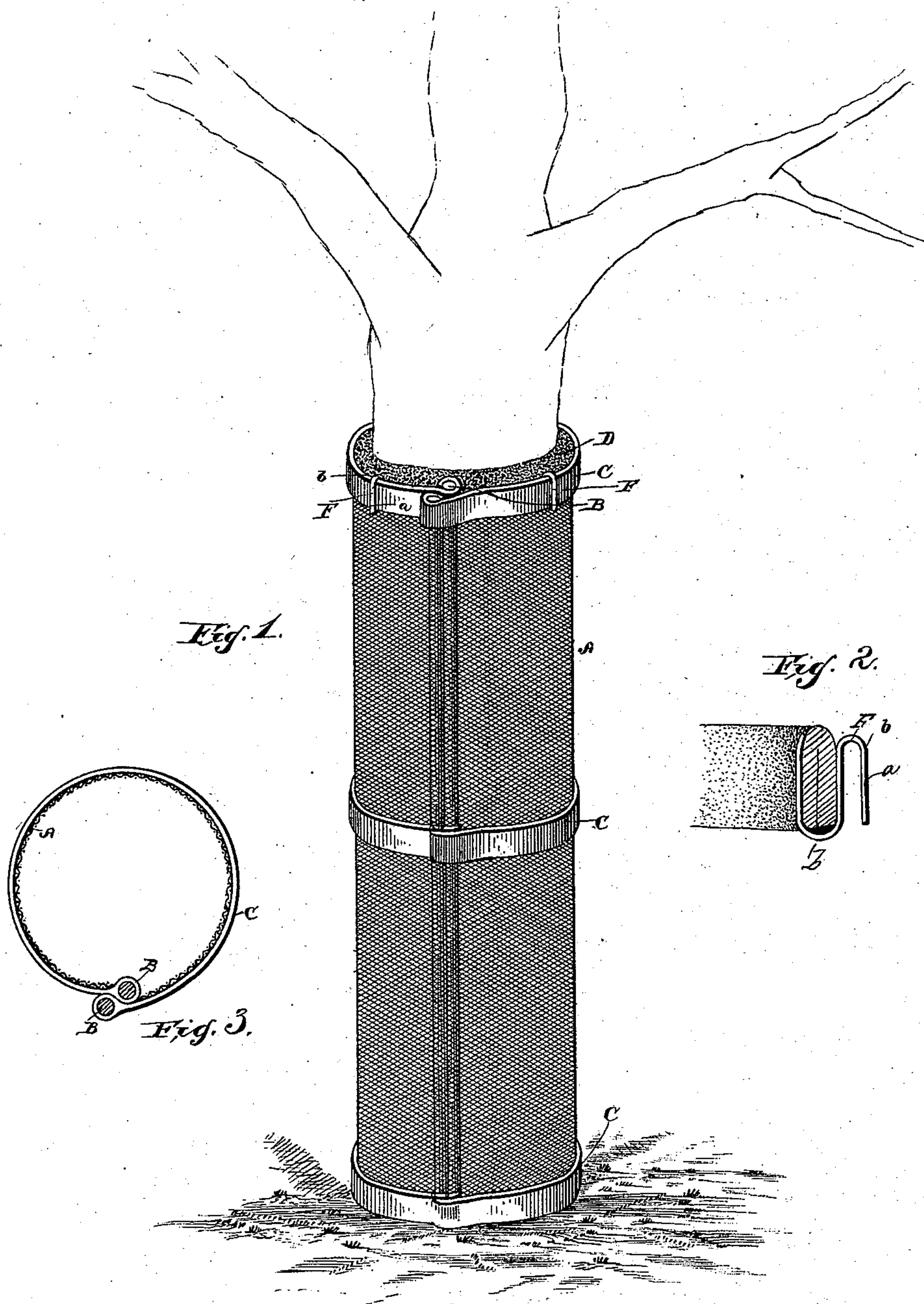


(No Model.)

E. L. FRANTZ.
TREE PROTECTOR.

No. 379,948.

Patented Mar. 27, 1888.



WITNESSES,
Edwin L. Yewell,
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UNITED STATES PATENT OFFICE.

EUGENE L. FRANTZ, OF SWEET VALLEY, ASSIGNOR OF ONE-HALF TO F. N. RUGGLES, OF LUZERNE COUNTY, PENNSYLVANIA.

TREE-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 379,948, dated March 27, 1888.

Application filed December 19, 1887. Serial No. 258,255. (No model.)

To all whom it may concern:

Be it known that I, EUGENE L. FRANTZ, a citizen of the United States of America, residing at Sweet Valley, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Tree-Protectors, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention pertains to certain new and useful improvements in tree-protectors; and it consists in the peculiar construction, combination, and arrangement of the parts, substantially as hereinafter fully set forth and described.

The object of my invention is to produce a more efficient and durable tree-protector than any of the many devices hitherto invented for the purpose, and to protect trees not only from insects, but the bark from animals, the most of which are made of tarred paper, which, under exposure of the elements, are soon rendered inefficient.

In the accompanying drawings, Figure 1 is a view in perspective of my invention, showing the same as applied to a tree. Fig. 2 is a detail perspective view, and Fig. 3 is an end view.

In constructing my tree-protector I employ the wire-netting A, having secured thereto at either longitudinal end a metallic rod, B, and having attached thereto the elastic steel bands C, which serve to bind the device closely to the tree. The upper end of the netting has attached to its inner side any suitable cloth or woolen pad, D, which is pressed tightly against the tree by the elastic steel bands C. This pad or cloth D is held in place by approximately S-shaped wire staples or hooks F, which are attached to the outer sides of the netting, as at *a*, projecting over the cloth and bent down over the same, as at *b*, thus holding the cloth securely in position. The cloth may be immersed in tar, pitch, or other glutinous sub-

stance. Thus constructed, my tree-protector may be applied not only for the protection of the tree from insects and rabbits, but also from horses, sheep, and other cattle, and very readily be applied to trees of varying size.

I am aware that elastic paper sometimes tarred has been employed in connection with a pad for the protection of trees; but such appliances are very perishable and sometimes invite attacks of horses and other animals, whereas my tree-protector may be removed in winter and replaced in the early spring, besides which, such perishable devices soon lose their elasticity through exposure to the elements and become soon worn and worthless for the intended purpose.

Another important feature of my invention is due to the fact that as hitherto constructed the trunk of the tree, when enlarged or swollen in rainy weather, relaxes and loosens the band or bandage which incloses it for the period when the hot and dry weather contracts the diameter of the tree, whereas the steel bands which I employ constantly bind the pad to the tree and prevent the passage of any insect.

Having fully described my invention, what I claim is—

In a tree-protector, the combination of the wire-netting, the longitudinal end rods to which said netting is secured, the elastic steel bands secured to the ends and center of said netting, the pad, and the approximately S-shaped wire staples or hooks securing said pad in the upper end of said netting, said staples or hooks being bent to enclasp the upper steel band and support said pad, and said longitudinal rods being designed to overlap, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE L. FRANTZ.

Witnesses:

WM. C. PRICE,

WETHRIL R. WILLARD.