A. F. OLDS.

REMOVABLE FROG-PAD FOR HORSES FEET.

No. 172,473. Patented Jan. 18, 1876.

Fig. 4.

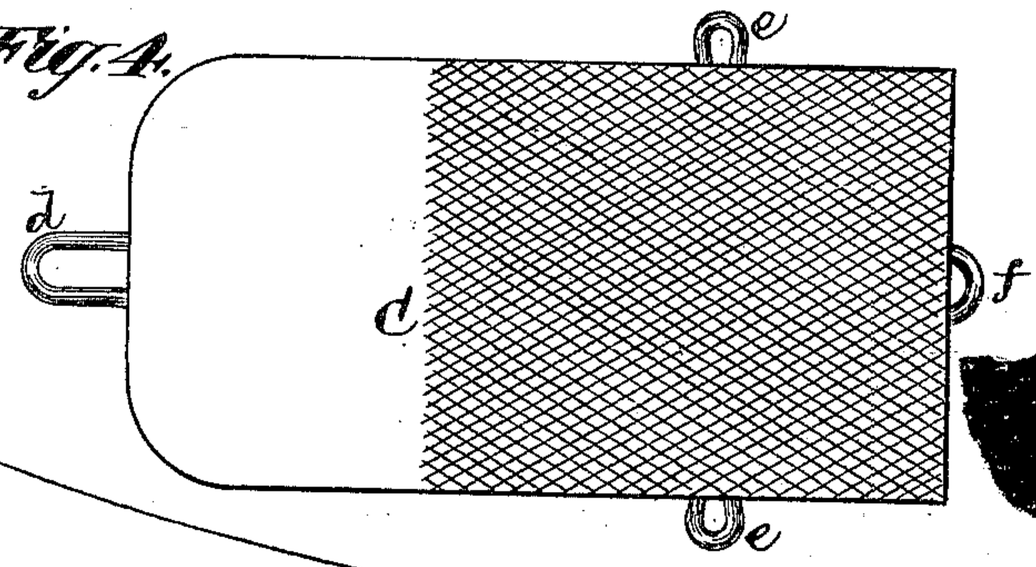


Fig. 1.

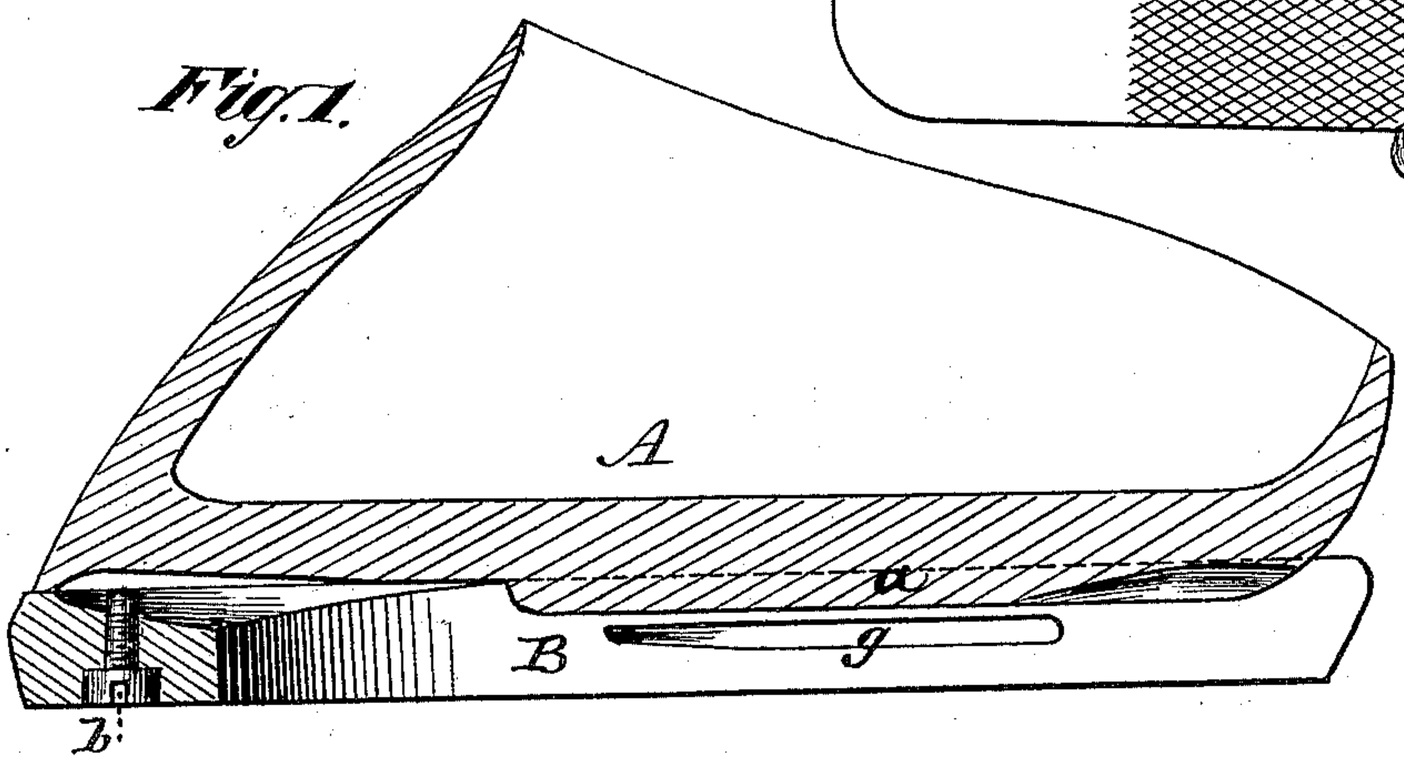


Fig. 2.

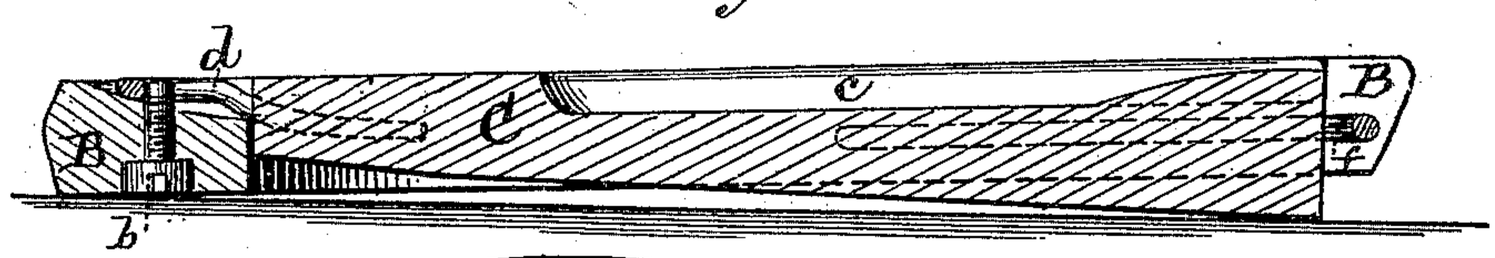
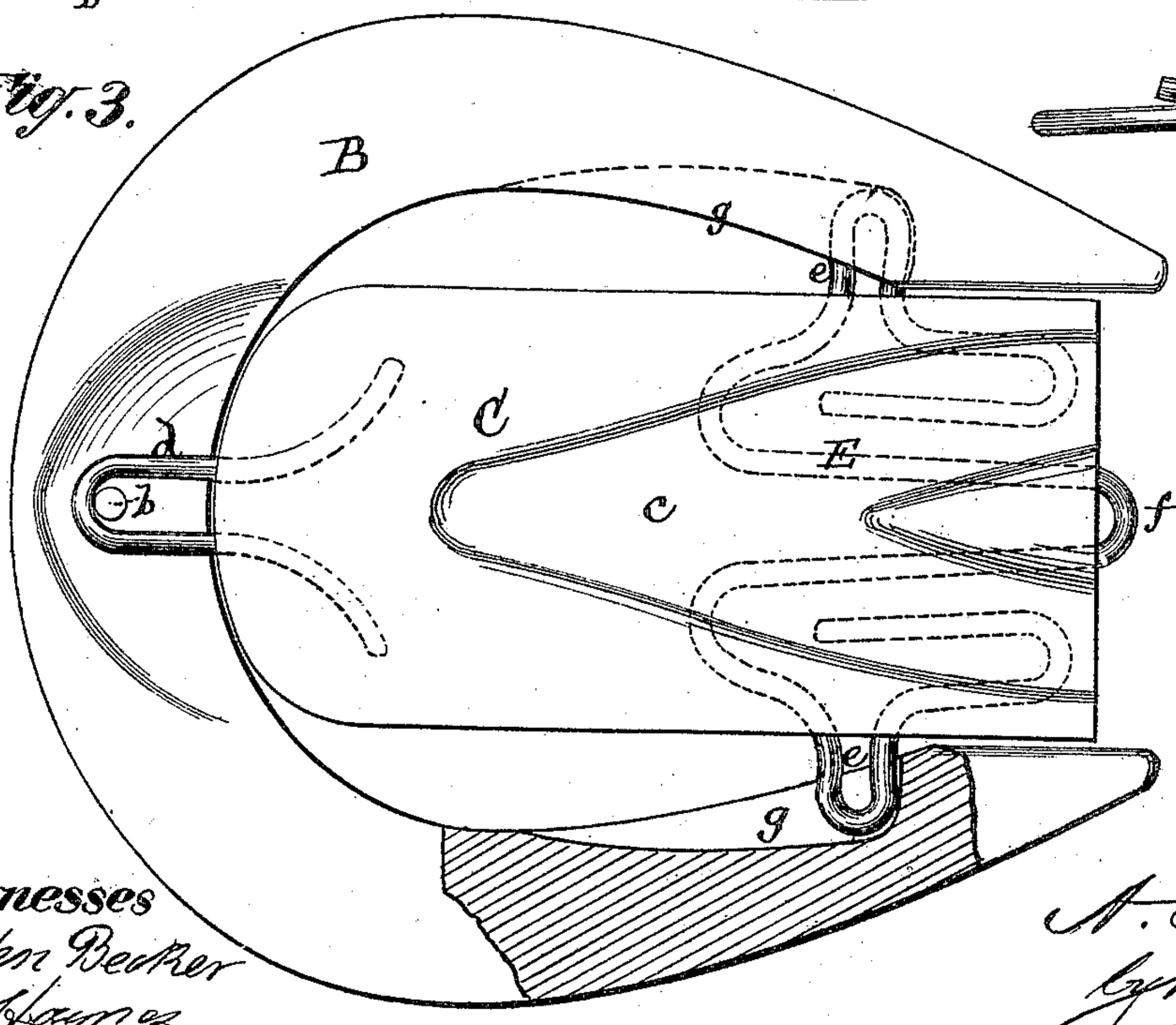


Fig. 5.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ALONZO F. OLDS, OF NEW YORK, N. Y.

IMPROVEMENT IN REMOVABLE FROG-PADS FOR HORSES' FEET.

Specification forming part of Letters Patent No. **172,473**, dated January 18, 1876; application filed May 17, 1875.

To all whom it may concern:

Be it known that I, ALONZO F. OLDS, of New York, in the county and State of New York, have invented an Improved Removable Frog-Pad for Horses' Feet; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms part of this specification.

My invention consists in an adjustable removable elastic pad of novel construction, adapted to the shape of the frog, and provided with means for securing it to the horseshoe, whereby many advantages are obtained, and many of the evils incident to the use of the ordinary shoe without a pad are remedied, as hereinafter particularly described and set forth.

In the accompanying drawing, Figure 1 is a central vertical sectional view of a horse's foot and attached shoe. Fig. 2 is a sectional view of my improved pad and an attached horseshoe. Fig. 3 is a top view of the same. Fig. 4 is a bottom view of the pad. Fig. 5 is a detail view hereinafter referred to.

The horseshoe B is of the ordinary construction, with the exceptions of the details hereinafter referred to. The elastic pad C is composed of rubber or other suitable elastic material, of a suitable width to allow it to readily fit between the sides and rear ends or heel portion of the shoe, and with its front edge rounded to correspond with the inner edge of the front or toe of the shoe. In its thickness it is slightly tapering or wedge-shaped, so that the front end is thinner than the toe of the shoe, and the rear portion is thicker, and projects below the shoe, as shown in Fig. 2. The bottom or sole of the pad may be roughened in any suitable manner. The upper side of the pad is provided, if necessary, with a cavity, *c*, corresponding with the size and shape of the frog *a* of the foot A, so as to fit nicely thereon. This cavity and the entire upper side of the pad may be lined or faced with felt, cloth, or similar material. At the front end of the pad is a toe-piece, *d*, for insertion above the shoe to assist in holding the pad in place. This toe-piece may be a perforated lug, or a staple or eye formed of a piece of wire with its ends bent, as shown in dotted lines in Fig. 3. A slight cavity is provided in the shoe or hoof, or partially in both, for the reception of the toe-piece. A screw, *b*, is passed through the toe-piece *d* for securing the latter in the cavity in the shoe, the head of the screw being countersunk in the shoe, as shown in Figs. 1 and 2. Near the rear end of the pad are two lateral lugs, *e e*, one on each side opposite to each other, for engagement with grooves *g g* in the shoe B; and at the heel or rear edge of the pad is a staple or eye, *f*, for pulling it in place by means of a hook when necessary, as hereinafter described. The lugs *e e* and eye *f* may be made of separate pieces of metal, embedded in the pad in any suitable manner, but I prefer to make them of one piece, as follows: I take a piece of elastic steel wire, E, about sixteen inches long, and first bend it midway of its length, to form the eye or staple *f*, then outward, and again inward, to form the lugs *e e*; and, finally, bend the ends in the first-mentioned direction, toward the front end of the pad, about parallel with the portion which forms the eye or staple *f*. The form in which the wire E is bent is shown in dotted lines in Fig. 3. The eye portion and the extreme ends of the wire are inclined upward and downward from a horizontal line, so as to intersect each other in the manner shown in edge view, Fig. 5. The wire E, thus arranged, is embedded in the pad C when said pad is molded. By bending the wire in the form and manner described, it serves to form the lugs *e e* and eye or staple *f*, and by inclining the ends and eye portion in the manner shown in Fig. 5, it constitutes a spring, and adds stiffness, strength, and elasticity to the pad. The grooves *g* in the web of the shoe are, preferably, made to run parallel with the upper and lower sides, extending forward to the bulge or widest part of the shoe, as shown in Figs. 1 and 3; but in some cases the grooves may be inclined and extend to the surface of the shoe.

The thickness of the shoe or of the pad may be varied, in order to vary the pressure on either the frog or the heel, according to circumstances, or the condition of the horses' foot.

The pad C is attached and secured in place by first inserting the lugs *e e* in the grooves *g g*, and forcing the pad toward the heel, us-

ing, if necessary, a hook in eye *f* to pull it backward, until the front edge of the pad is even with the inner edge of the toe of the shoe. The pad is then bent so as to insert the toe-piece *d* in the cavity between the shoe and foot, and spring into place, and, if necessary the screw *b* is inserted, as shown in Figs. 2 and 3.

By means of this invention many advantages are obtained, and many of the evils incident to the use of the ordinary shoes without pads are remedied. It equalizes the pressure on the foot by imparting a portion thereof to the frog. It breaks the concussion on the foot; prevents slipping on ice or slippery pavements; prevents "balling" in snowy weather; prevents injury to the foot by nails, stones, &c., and prevents injury to the joint from bruises. It prevents both splitting and contraction of the quarters, and also remedies the evils resulting therefrom. By its elasticity it gives the horse higher knee-action, and improves the gait of the animal.

What I claim as new, and desire to secure by Letters Patent, is—

1. The spring-wire E bent midway of its length to form the eye *f*, and bent outward and inward to form the lugs *e e*, said wire being molded within the elastic frog-pad C, and having its eye portion and extreme end bent upward and downward, as described, in combination with the loop *d* embedded in the said pad, and with the shoe B, having the recesses *g g*, all substantially as and for the purpose described.

2. The elastic steel-wire E, constituting a spring, and also forming the lugs *e e* and eye *f*, in combination with the pad C and shoe B, substantially as herein described.

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Witnesses:
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