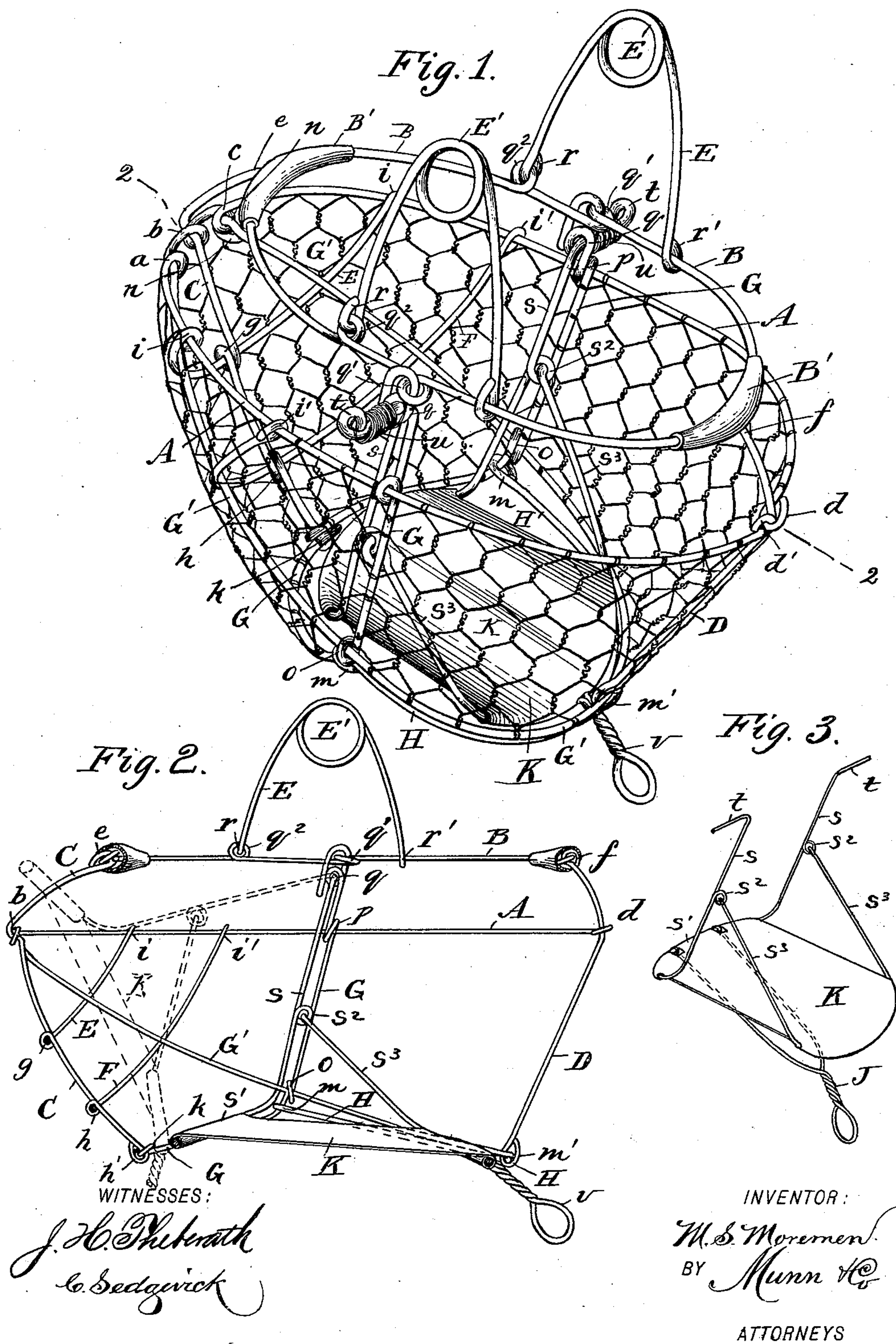


(Model.)

M. S. MOREMEN.
MUZZLE.

No. 478,882.

Patented July 12, 1892.



UNITED STATES PATENT OFFICE.

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MUZZLE.

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Application filed May 6, 1891. Serial No. 391,741. (Model.)

To all whom it may concern:

Be it known that I, MARCUS S. MOREMEN, of Switzerland, in the county of St. John's and State of Florida, have invented a new and useful Muzzle, of which the following is a full, clear, and exact description.

This invention relates to an improvement in muzzles for cattle and horses, and has for its object to provide a simple and practical device that is attachable to the head of the animal and which in service will prevent the muzzled beast from injuring other cattle or destroying trees and shrubbery, while freedom to graze is permitted.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all of the views.

Figure 1 is a perspective view of the muzzle, exposing the portion which engages the head of the animal. Fig. 2 is a side view in section, taken on the line 2 2 in Fig. 1, exhibiting the frame of the muzzle with its covering removed, the guard-plate which closes the aperture forward of the animal's mouth being shown in closed condition by full lines and in opened adjustment by dotted lines; and Fig. 3 is a detached view of a modified form for the guard-plate.

To carry into effect my present invention, a light metal frame is provided, consisting of a wire oval ring A, whereon is bent integral eyes *a b c* at the crown or upper part of said ring, the equal remaining portions of material being bent at the ends into hooks *d d'*, which are interlocked, as shown in Fig. 1, and represent the lowest point of a median line that would longitudinally divide the muzzle into half-sections. The size of the ring A is proportioned to the dimensions of the head on which it is to be placed, and upon it a contact-ring B of the same material, oval and of smaller dimensions, is secured by the ends *e f* of the wire-frame bars C D, respectively, which bars extend out and down through the eyes *b d* of the main frame-ring A, and thence are downwardly and convergingly projected. The top frame-bar C has a retaining-bight

formed at its point of engagement with the main ring A, and integral eyes *g h* are produced thereon at proper intervals of length, wherein the curved brace-bars E F are inserted, which latter have their ends hooked fast to the side portions of the main frame-ring A at *i i'*. There is a wire sectional ring G G' provided, that forms the front oval portion of the muzzle-frame, said composite frame-ring being bent from two pieces of wire rod. The piece G, that forms the upper half of the front or guard ring of the muzzle, is bent into an eye *k* near its center, wherein a hook *h'*, formed on the lower end of the top frame-bar C, is secured. (See Fig. 2.) Two outwardly and upwardly extending portions of the section G of the front guard-ring are joined at *m* on each side of the muzzle-frame by the looped ends of a wire brace H, that approaches a half-circle in form and serves to reinforce the half-section G' and stiffen the muzzle-frame, said curved brace H being embraced at its arched center by the loop *m'* on the lower end of the bottom frame-bar D. The other half-section G' of the front guard-ring of the muzzle-frame has hooks *n* formed on its terminals, which enter and are secured to the eyes *a c* on the main frame-ring A. This section of the guard-ring, which is of a substantially ovate form, extends diagonally downward from its engaged ends to rest upon the curved brace H within the loop *m'* on the frame-bar D.

Referring again to the other half-section G of the front guard-ring, it will be seen that the laterally-projecting portions of said half-section have an integral eye *o* formed on each, through which the opposite limbs of the diagonally-descending half-section G' of the front guard-ring pass and are securely clamped thereby. The opposite equal limbs of the half-section G that are farther extended laterally from the eyes *o* have similar eyes *p* formed thereon at proper points to receive the main frame-ring A, and above said eyes *p* other eyes *q* are produced at right angles to the eyes *p* for the loose support of limbs of a rocking plate K, which will be further mentioned. From the eye-bearings *q* the end portions of the frame-piece G are farther extended to have a hooked engagement with the opposite integral eyes *q'*, formed on the con-

tact-ring B, which ring has other eyes q^2 formed on it to receive the hooks r , that are produced on one end of each of the rocking wire bails E, that are suitably bent to form the rings E' thereon, and have their other ends formed into hooks r' , that are loosely connected with the contact-ring B at a suitable distance from the other limbs of the bails, said swing attachments serving as a convenient means for securing the entire device upon the head of the animal by applied straps, (not shown,) there being pads B' of any proper yielding material applied to the contact-ring B to prevent it from injuring the beast to which it is attached.

The several parts of wire formation which have been described when assembled produce a strong light frame, which is braced in such a manner as to withstand the rough usage incidental to the service it is designed for, and upon its exterior a strong netting of coarse mesh is applied and affixed, which completes the frame structure of the muzzle.

It has been found that in the use of muzzles for vicious and unruly animals it is objectionable to have exterior parts loosely depending from the muzzle-frame, as such attachments are soon injured by the exertions of the animal to dislodge the muzzle from its head.

To avoid the use of outside parts and provide a practical substitute for the same, a swinging guard-plate has been provided, which consists, essentially, of a sheet-metal piece K of a proper size and form to neatly close the muzzle-aperture at the front when in position to effect this, which adjustment will prevent the animal from having access to anything outside of the muzzle-frame. Upon the side edges of the guard-plate K similar arms s are bent from a single piece of wire, there being a sufficient portion of the wire rod allowed to intervene between these parallel arms to receive one end s' of the guard-plate, which is folded upon said portion of the wire-rod material and is secured to it. Each of the arms s has an eye s^2 integrally formed on it at opposite points and a proper distance from the guard-plate K, on the lower portion of which plate the strut-braces s^3 have one end of each attached, so as to align the braces with the side edges of the guard-plate. The upper ends of the braces s^3 have hooks formed on them, which are interlocked with the eyes s^2 of the arms s , thus furnishing strong light supports for the guard-plate that is secured in swinging adjustment within the muzzle-frame by an engagement therewith of the trunnion ends t , which are outwardly bent upon the upper ends of the arms s in alignment with each other, said trunnion ends entering from within the eyes q , previously mentioned, and projecting outward therefrom. Upon the projecting ends of the wire trunnions t , just mentioned, there are spiral springs u placed and so connected that their torsion

will be exerted to hold the guard-plate K normally closed, as shown in Fig. 1.

On the lower edge of the guard-plate K, near its center, the wire strut-brace s^3 is twisted to form a projection v , which extends beyond the plate K at such an angle as will adapt it to readily engage the surface of the ground when the animal lowers its head to graze on growing herbage, which engagement of the limb v will rock the guard-plate upwardly within the muzzle-frame, so as to enable the animal to freely partake of the grass or herbs near the surface of the ground, but will be prevented from browsing on plants of higher growth by the automatic closure of the guard-plate as soon as the head is lifted, so as to release the limb v .

In Fig. 3 a guard-plate is shown of the same general form as the one already described, but which has a longer limb J substituted for the rigidly-affixed limb v , the limb J being forked to afford two places for a hinged attachment upon the upper edge of the plate K on its outer side. The limb J, hanging loosely, is adapted to engage the ground and open the muzzle equally as well as the short limb v , but will yield if the animal seeks to hook it fast to a fence-rail or other stationary object, so as to get a purchase for the breakage or removal of the muzzle-frame from its head.

The muzzle is applied to the head of the animal with the limb of the guard-plate projecting rearwardly, so that when the head of the animal is lowered the said limb will engage the ground and swing the plate up in front of the animal's head.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a muzzle having an opening in its bottom, of a guard-plate for closing said opening, pivoted to swing upwardly within the muzzle to uncover the said opening when the animal lowers its head, substantially as described.

2. The combination, with a muzzle having an open bottom, of a pivoted and spring-pressed guard-plate for closing the said open bottom, said guard being provided with a projection for engaging the ground to swing it upward within the muzzle when the animal lowers its head, substantially as described.

3. The combination, with a skeleton muzzle-frame that has a mouth-opening and is made to fit upon the jowls of a beast and be there secured, of a guard-plate having braced arms whereon trunnions are oppositely bent, a spiral spring on each trunnion, which holds the guard-plate normally closed over the mouth-opening of the frame, and a limb depending from the edge of the guard-plate, substantially as set forth.

4. The combination, with a skeleton wire muzzle-frame that will fit upon the jowls of a beast, a wire-netting thereon, and swinging bails on the frame, which receive a securing-

strap, of an interiorly - located guard - plate having two braced arms projected from opposite edges of the guard-plate, and trunnions bent from the free ends of these arms oppositely, a spiral spring on each trunnion, which springs are adapted to hold the guard-plate over the front end of the muzzle-frame, and a pendent limb secured to swing on the guard-plate from its edge, substantially as set forth.

5. The combination, with a wire muzzle-frame composed of a main ring A, a contact-ring B, having oppositely-swinging bails thereon, two wire curved sections G G', a front guard-ring, a top frame-bar C, a bottom frame-bar D, two brace-bars E F, bent to engage the

frame-bar C and main ring A, and a reinforcing curved brace H, of an interiorly-located guard-plate K, having oppositely-braced arms whereon trunnions are formed which loosely engage bent eyes on the upright portions of the guard-ring section G, a spiral spring on each trunnion which coacts and rocks the guard-plate across the mouth-opening of the muzzle-frame, and a depending limb on the edge of the guard-plate, substantially as set forth.

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Witnesses:

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S. D. MORGAN.