(No Model.)

F. R. WINGROVE.

MUZZLE FOR STOCK.

No. 590,409. Patented Sept. 21, 1897.

Fig. 1.

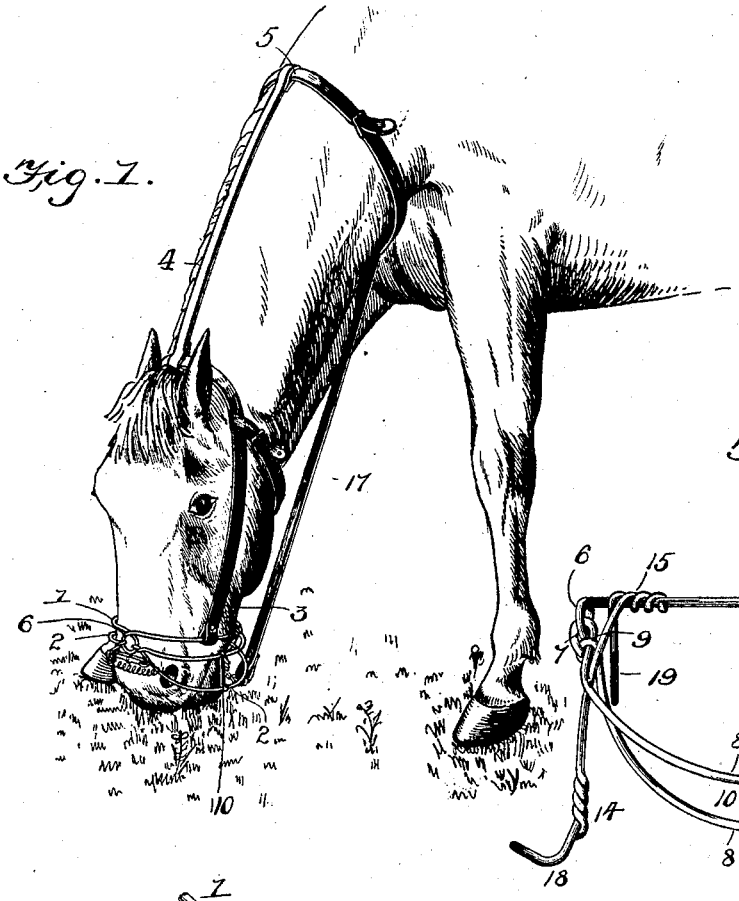
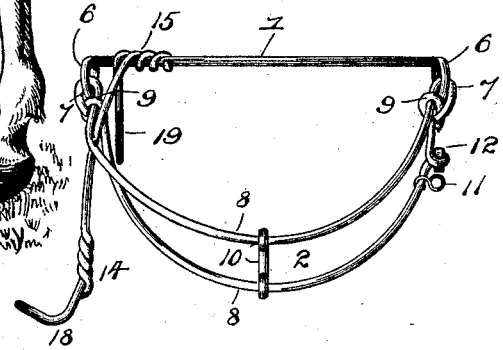


Fig. 2.



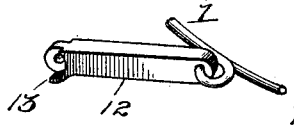


Fig. 4.

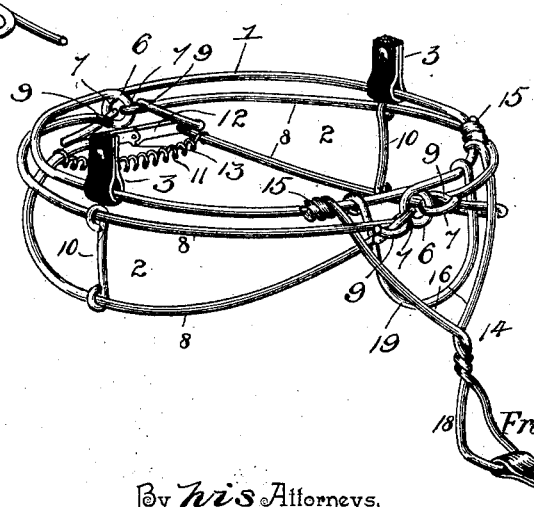


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANKLIN R. WINGROVE, OF WAXAHACHIE, TEXAS.

MUZZLE FOR STOCK.

SPECIFICATION forming part of Letters Patent No. 590,409, dated September 21, 1897.

Application filed September 26, 1896. Serial No. 607,074. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN R. WINGROVE, a citizen of the United States, residing at Waxahachie, in the county of Ellis and State of Texas, have invented a new and useful Grazing and Weaning Muzzle, of which the following is a specification.

My invention relates to muzzles, and particularly to weaning and grazing muzzles for stock, the object in view being to provide a muzzle adapted when the head of the animal is elevated to remain closed and when the head of the animal is lowered to open, and thereby permit grazing, said means being so constructed and arranged as to insure the proper operation of the parts of the muzzle and avoid effort upon the part of the animal in lowering the head, and, furthermore, to provide means for locking the muzzle in its open position to allow feeding when the head is lowered.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a muzzle constructed in accordance with my invention applied in the operative position to a head and shown open. Fig. 2 is a side view of the same with the muzzle shown closed. Fig. 3 is a perspective view of the muzzle locked in its open position. Fig. 4 is a detail view of one member of the brace.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The muzzle is sectional in construction with an endless approximately circular band or ring 1, upon which are mounted the jaws or folding sections 2, said band or ring being arranged upon the muzzle of the animal in the position of an ordinary nose-band, and being held in place by means of cheek-straps 3, connected to the centers of the sides thereof. Attached to the center of the cheek-straps at the crown of the head is a crown-strap 4, from which depends a throat-latch 5.

The nose-band or ring is looped at its front and rear to form eyes 6, with which are engaged eyes 7, respectively at the front and rear ends of the jaws or folding sections, each jaw or section comprising segmental bars or rods 8, connected together at their extremities by means of eyes 9 on the outer bars engaging the eyes 7, by which the sections are pivoted upon the nose-band or ring. The intermediate portions of the bars or rods forming the jaws are held at the desired interval by means of cross-braces 10.

The means which I have provided for yieldingly holding the jaws or sections in their normal or closed position consists of a coiled spring 11, connecting said jaws or sections, and in order to lock the jaws in their open position against the tension of this actuating-spring I employ a toggle-lever or link 12, having its arms or members respectively pivoted at their outer extremities to the jaws or sections of the muzzle and pivotally connected at their contiguous extremities, whereby when the lever or link is extended the jaws or sections are separated. The contiguous extremities of the members of the lever or link are provided with shoulders 13, which come in contact when the lever or link is extended to prevent accidental folding or closing of the jaws or sections. Obviously, the shoulders on the sections of the lever or link are held in engagement by the closing-spring of the jaws or sections.

The means which I have shown in the drawings for opening the jaws or sections as the head of the animal to which the muzzle is applied is lowered in the act of grazing consists of a spring-opening lever 14, connected by means of spring-coils 15 to the nose-band or ring near the rear eye, and respectively upon opposite sides thereof, said lever being bifurcated, as shown at 16, with the deflected legs respectively connected with said coils, and a flexible connection 17 between the loop 18 at the free end of the operating-lever and the lowermost point of the throat-latch, the arrangement being such that as the head of the animal is lowered said flexible connection is strained and the free end of the operating-lever is moved outward and upward with relation to the muzzle. In other words, as the muzzle is lowered by a downward movement of the nose of the animal and the neck of the animal is thereby straightened the lever swings upward at its free end against the ten-

sion of the spring-coils, by which it is connected to the nose-band or ring to occupy the position indicated in Figs. 1 and 3, whereas when the head of the animal is in its normal or elevated position said lever returns to a position close to the rear side of the muzzle, as indicated in Fig. 2. The arms of the bifurcated portion of the operating-lever extend between the rear ends of the bars or rods forming the jaws or sections of the muzzle, and thereby bear against the inner sides of the outer bars or rods, and hence as the position of the lever with relation to the muzzle is changed by an upward strain upon the free end of the lever the jaws or sections are swung outwardly and upwardly to the position shown in Figs. 1 and 3. Obviously, the outward and upward swinging movement of the jaws or sections brings them approximately into the plane of the nose-band or ring, and thus exposes the nose of the animal, whereby grazing is permitted without interference.

In practice I prefer to employ jaws or sections of the arc shape illustrated in the drawings, and in order to prevent the disarrangement thereof by the intermittent outward and upward straining thereof due to the movement of the operating-lever I employ a segmental guide-rod 19, connected at its extremity to the nose-band or ring upon opposite sides of the rear eye and arranged in contact with the inner surfaces of the jaws or sections.

The advantage of the above-described means for operating the jaws or sections of the muzzle resides in the fact that the flexible connection whereby motion is communicated to the operating-lever is aranged under the throat of the animal, and therefore is not exposed to contact with bushes and other objects through which the animal may pass, and, furthermore, the lever action gives greater power in the operation of opening the jaws or sections, whereby less strain upon the flexible connection is necessary to accomplish the desired purpose. The closing-spring for the jaws or sections may be of any desired tension, but in practice I have found that a comparatively light spring is sufficient, and therefore the exertion necessary for opening the jaws when the animal lowers the head in the act of grazing is reduced to the minimum.

A muzzle constructed as above described may be applied to and held in place by a halter of the ordinary construction by connecting the sides of the nose-band or ring to the halter-squares and connecting the ring below the jaws to the extremity of the lever.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a muzzle, the combination of a nose-band or ring, spring-closed jaws or sections supported by the nose-band or ring, an operating-lever fulcrumed upon the nose-band or ring and having arms arranged in contact with the deflected members of the jaws or sections, and means for straining the free end of the lever upward as the muzzle is lowered, substantially as specified.

2. In a muzzle, the combination of a nose-band or ring, spring-closed jaws pivotally mounted upon the nose-band or ring and having arc-shaped or segmental bars or rods, an operating-lever fulcrumed upon the nose-band or ring and having arms arranged in sliding contact with said bars or rods of the jaws, and means for straining the free end of the lever upward as the muzzle is lowered, substantially as specified.

3. In a muzzle, the combination of a nose-band or ring, spring-closed jaws or sections pivotally mounted upon the nose-band or ring and having segmental bars or rods, a bifurcated operating-lever connected to the nose-band or ring upon opposite sides of the rear ends of the jaws or sections by means of spring-coils, the legs of the lever being arranged in sliding contact with the bars or rods of the jaws or sections, and means for straining the free end of the lever upward as the muzzle is lowered, substantially as specified.

4. In a muzzle, the combination of a nose-band or ring, spring-closed jaws or sections mounted upon the nose-band or ring and adapted to swing laterally at their intermediate points, a bifurcated operating-lever having the extremities of its arms connected to the nose-band or ring, said arms being arranged in sliding contact with bars or rods forming parts of the jaws or members whereby as the free end of the lever is swung upwardly the jaws or sections are swung laterally, cheek-straps connected to the sides of the nose-band or ring, a throat-latch adapted to encircle the neck of the animal to which the muzzle is applied and connected at its upper side to the cheek-straps by means of a crown-strap, and a flexible connection between the extremity of the operating-lever and the lowermost point of the throat-latch, substantially as specified.

5. In a muzzle, the combination with a nose-band or ring, laterally-swinging spring-closed jaws or sections mounted upon the nose-band or ring, and means for spreading or opening the jaws as the muzzle is lowered, of a locking device for securing the jaws in their open position, to facilitate feeding without removing the muzzle substantially as specified.

6. In a muzzle, the combination of a nose-band or ring, laterally-swinging spring-closed jaws mounted upon the nose-band or ring, means for opening the jaws as the muzzle is lowered, and a locking device for securing the jaws in their open position, said locking device consisting of a toggle-lever or link having the outer extremities of its arms connected to the jaws and having the inner extremities of its arms pivotally connected and

provided with shoulders to abut when the lever or link is extended, substantially as specified.

7. In a muzzle, the combination with swinging spring-closed jaws and means for supporting the same upon the nose of an animal, of an operating-lever mounted upon said supporting means and arranged in operative position with relation to bars or rods of the jaws or sections, and means, including a throat-latch and a flexible connection between the throat-latch and the free end of said lever, for elevating the free end of the lever, as the muzzle is lowered, to open the jaws, substantially as specified.

8. In a muzzle, the combination with swinging jaws and yielding means for holding the same normally closed, of jaw-opening devices, including a throat-latch, and connections between the throat-latch and said jaws, whereby as the muzzle is lowered the jaws are separated in opposition to the tension of the yielding means employed to hold the same normally closed, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANKLIN R. WINGROVE.

Witnesses:
B. F. JAMES,
O. H. CHAPMAN.