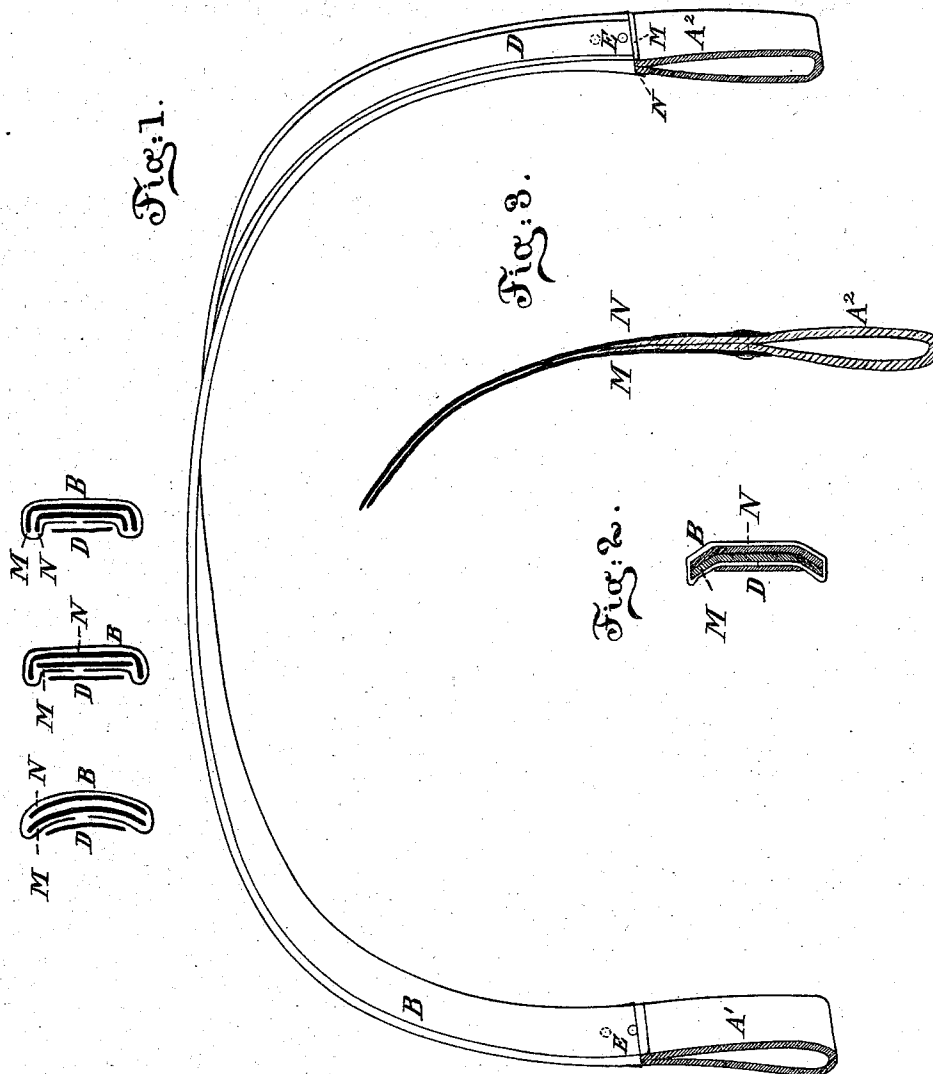


F. MEINBERG.

Brow-Bands for Bridles.

No. 156,435.

Patented Nov. 3, 1874.



Witnesses:

McDey.
" *E. Volkmann.*

Inventor:

F. Meinberg
by his attorney *J. L. Nelson*

UNITED STATES PATENT OFFICE.

FRANZ MEINBERG, OF NEW YORK, N. Y.

IMPROVEMENT IN BROW-BANDS FOR BRIDLES.

Specification forming part of Letters Patent No. **156,435**, dated November 3, 1874; application filed October 9, 1874.

To all whom it may concern:

Be it known that I, FRANZ MEINBERG, of New York city, in the State of New York, have invented certain Improvements relating to Brow-Bands for Bridles, of which the following is a specification:

The construction set forth in the patent issued to me December 24, 1872, is a desirable one, but I have succeeded in improving upon it.

I have devised the employment of two or more springs peculiarly applied together within the leather, and make a very efficient and desirable junction thereof, with a leather loop at the ends. The loop is flexible and centrally secured between the two parts of my compound spring, while the main band is highly elastic and tough, and will stand a large amount of hard usage, and a much thinner facing metal may serve within the concave front.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a general perspective view, representing the front band complete. Fig. 2 is a cross-section of the same; and Fig. 3 is a horizontal section through a portion, showing the junction of the end loops with the springs.

The additional figures are cross-sections representing modifications.

Similar letters of reference indicate like parts in the figures.

M and N are two matched concave springs, fitted one within the other, and properly curved, as shown. They may be made of steel or semi-steel, or hard brass; but I have made very successful ones of hard iron, giving a preference to the brands known as Swedes. A covering of patent-leather, or other suitable leather, B, envelops the two, with the joint or abutting edges in the concave front. A narrower ornamental band, D, of thin brass, silver-plated, lies in the trough-like front.

The ends of the springs M N are opened apart, as represented, and receive the chamfered ends of stout leather loops A¹ A². Efficient rivets, E, being inserted through the

decorative facing material D, and also through the covering B, the spread ends of the springs M N, and through the inclosed material of the end loops A¹ A², the whole is very strongly and permanently secured. The outside washer or clinch-ring on the rivet E may be decorative.

The construction shown in my patent of December, 1872, is rigid at the junction of the looped ends with the body, where I find that rigidity is not desired. Its main body is not sufficiently elastic. I have, in working the invention, endeavored to remedy this latter evil by giving much strength to the ornamental front band D; but this, being an exposed piece, requires to be of incorrodible material, and greatly increases the expense.

My present plan, by employing two inclosed springs, matched together so as to be jointly concave or trough-like, set with the proper curvature, gives great strength and lightness, with slight cost for the spring material, allows the employment of a very thin facing material, and affords flexible loops at the ends very efficiently secured, not on one side of a single spring, but within and between the two nicely-covered springs M and N.

I can vary the form of the springs within wide limits, so long as I preserve the general concave character, and its compound construction of separate springs lying together, and nicely covered, with the cavity in front receiving the front band. I can make the front spring narrower than the back. I prefer to make it with a greater curvature than the back spring, so as to fit perfectly in its concave interior; but I can, if preferred, employ a quicker curvature near the upper and lower edges of the back spring, and have the front one narrower, and nearly flat, so as to be embraced within it.

Two rivets may be employed to secure the flexible end loops within the compound spring at each end, if preferred; but I do not deem it necessary. The compound spring may be made in three or four thicknesses, if preferred.

I claim as my invention—

1. The compound brow-band spring M N, formed in two or more separate thicknesses of sheet metal, curved and concave, and adapted

to serve as and for the purposes herein specified.

2. The combination of the concave spring M N, formed in two or more thicknesses, with the flexible ends A¹ A², securing-rivets E, covering B, and facing material D, as herein specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANZ MEINBERG.

Witnesses:

WM. C. DEY,

M. A. VAN NAMEE.