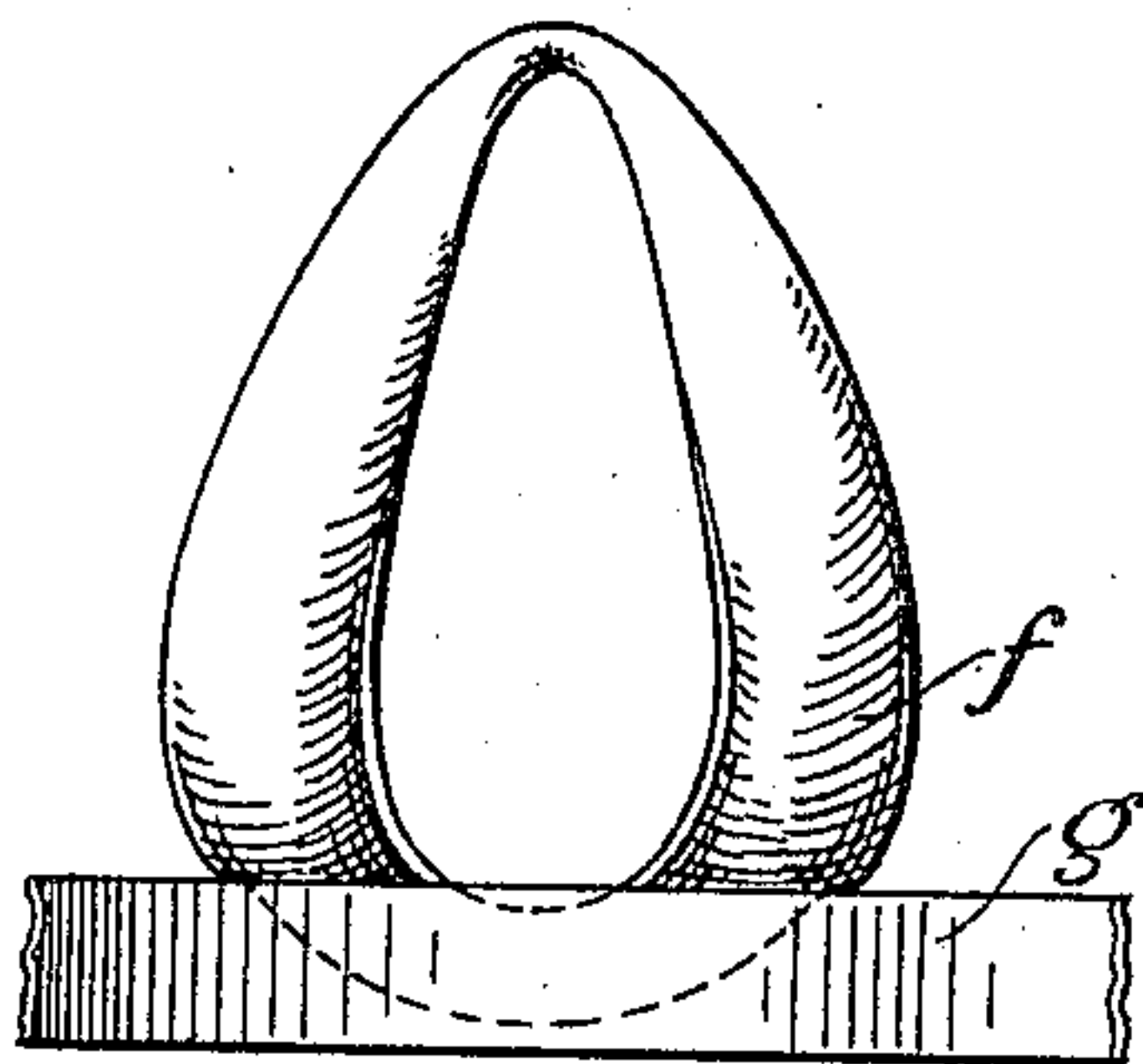
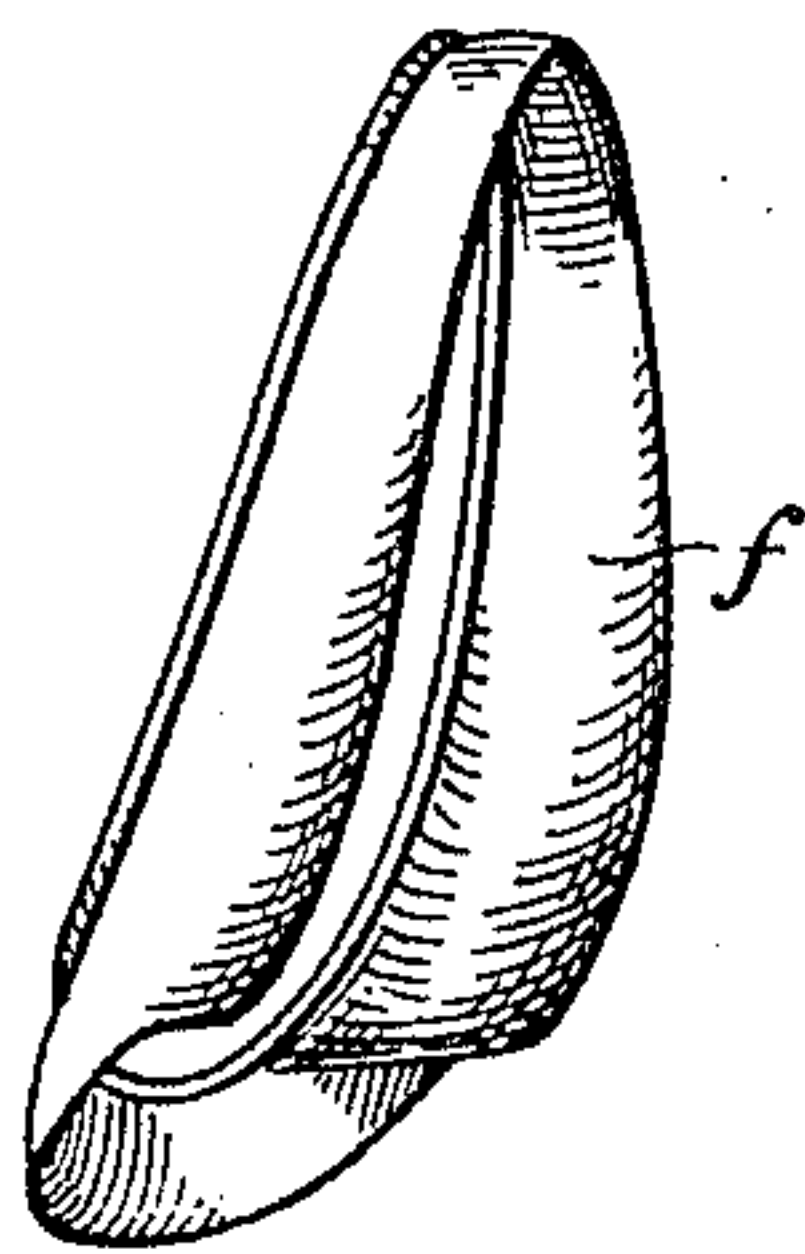
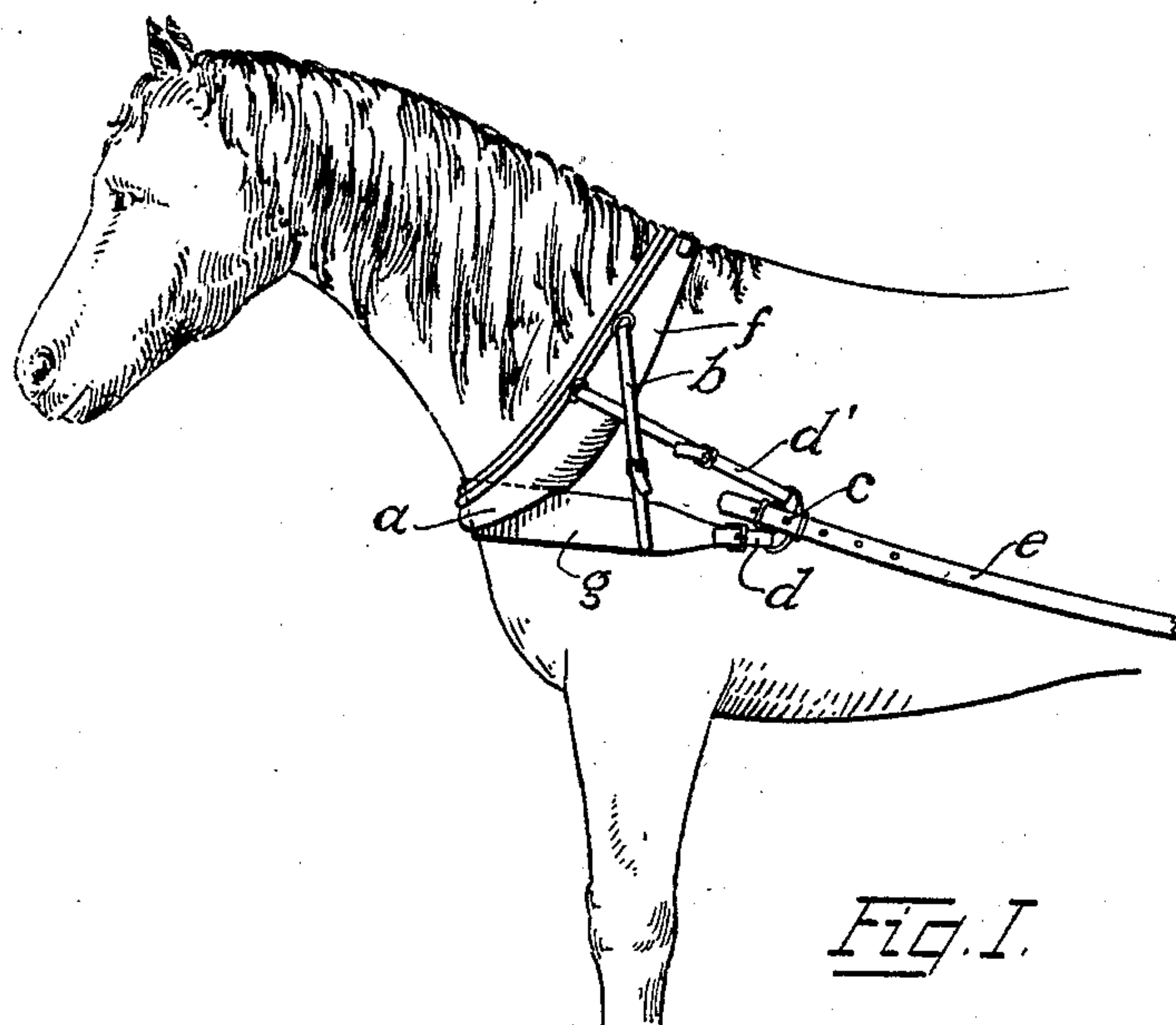


No. 812,913.

PATENTED FEB. 20, 1906.

G. E. BENNETT.
HARNESS.

APPLICATION FILED DEC. 27, 1904.



Witnesses:
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UNITED STATES PATENT OFFICE.

GRANT E. BENNETT, OF CLEVELAND, OHIO.

HARNESS.

No. 812,913.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed December 27, 1904. Serial No. 238,506.

To all whom it may concern:

Be it known that I, GRANT E. BENNETT, of the city of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Harness, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to collars, and is intended for work-harness, and especially heavy draft, where the shoulders are liable to injury.

My primary object is to protect the shoulders from injury at the place where the shoulder-muscles crush up under the hame-collar at the bend of the neck (indicated by *a*, Fig. I) as the lower shoulder swings with the step, often causing sores, callouses, and sweeney.

My secondary object is to cover with a collar the entire available bearing-surface of the front of the horse.

I accomplish these objects, in brief, by providing for the harmonious use of both a breast and hame collar.

Referring to the drawings, Figure I is a side view of my device applied to a horse. Fig. II is an oblique inner face view of the hame-collar as it is built in at its lower extremity to pass above the breast-collar. Fig. III, in which *f* is the hame-collar and *g* the breast-collar, is an inner face view of the two collars in their relative positions.

In the first place I use an ordinary work breast-collar made of a uniform thickness, of leather preferably. With this I use a hame-collar made in the ordinary way except that where it engages the breast-collar it is depressed or built in in such a way that it has no bearing below the upper line of the breast-collar. The rim of the collar remains intact.

The breast-collar is suspended from the upper ring or other point of attachment on the hames or hame-collar by an adjustable strap on each side, (marked *b*, Fig. I.) Then to maintain the same relative draft upon the two collars and to provide for the greater swing of the lower shoulder I provide that the two adjustable short tugs *d* and *d'* attach to a combined equalizer and buckle, as shown by the accompanying drawing, Fig. I. The pivot *c* is the center upon which the equalizer works, as well as the post or buckle-tongue for shortening or lengthening the trace (or tug) at the forward end by simply inserting the post in the different holes of the trace. The trace *e* is shown attached

to the two short tugs by means of the combined equalizer and buckle. As a measure of convenience the hames may be made fast to or a part of the hame-collar. The collars thus adjusted work together in complete harmony and accomplish the object desired by protecting the entire lower shoulder from sores and injury owing to the pliable breast-collar taking the bearing at this special point *a* and also adds from sixty-six and two-thirds to seventy-five per cent. to the collar face-bearing. The result to the horse is to enable him to apply his strength at the lowest practicable level and with most perfect ease, owing to the amount of bearing-surface and the absence of friction.

It is to be understood that the two collars are not connected in such a way but that the breast-collar performs its independent function. However, differing methods of connection may be employed.

My invention in general consists in the adjustment of both collars so that they work together harmoniously upon a horse at one time and by such adjustment succeed in eliminating the disadvantages of either when used separately and still by their combined use preserve the advantages of both as well as accumulating collar bearing-surface.

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

1. The combination in a harness of both a hame-collar and a breast-collar with the hame-collar depressed or built in at the place where it engages the breast-collar, whereby the hame-collar has no draft-bearing below the upper line of the breast-collar and having two short tugs connecting with an equalizer to which the trace is attached.

2. The combination in a harness of both a breast and a hame collar with the hame-collar built in to take no draft-bearing below the upper line of the breast-collar and having the breast-collar suspended from the hame or hame-collar by adjustable straps and with two short tugs connecting with an equalizer to which the trace is attached.

3. The combination in a harness of both a breast-collar and a hame-collar with the hame-collar depressed or built in below the upper line of the breast-collar and with two short tugs connecting with the trace by means of a combined equalizer and buckle as set forth.

4. The combination in a harness of both a hame-collar and a breast-collar and having

the hame-collar built in or depressed below
the line where it engages the breast-collar
and having the breast-collar suspended from
the hame or hame-collar by adjustable straps
5 and having two short tugs connecting with
the trace (or tug) by a combined equalizer
and buckle (buckle-trace) substantially as set
forth.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

GRANT E. BENNETT.

Witnesses:

J. S. ZIMMERMAN,
FRANK HIGLEY.