

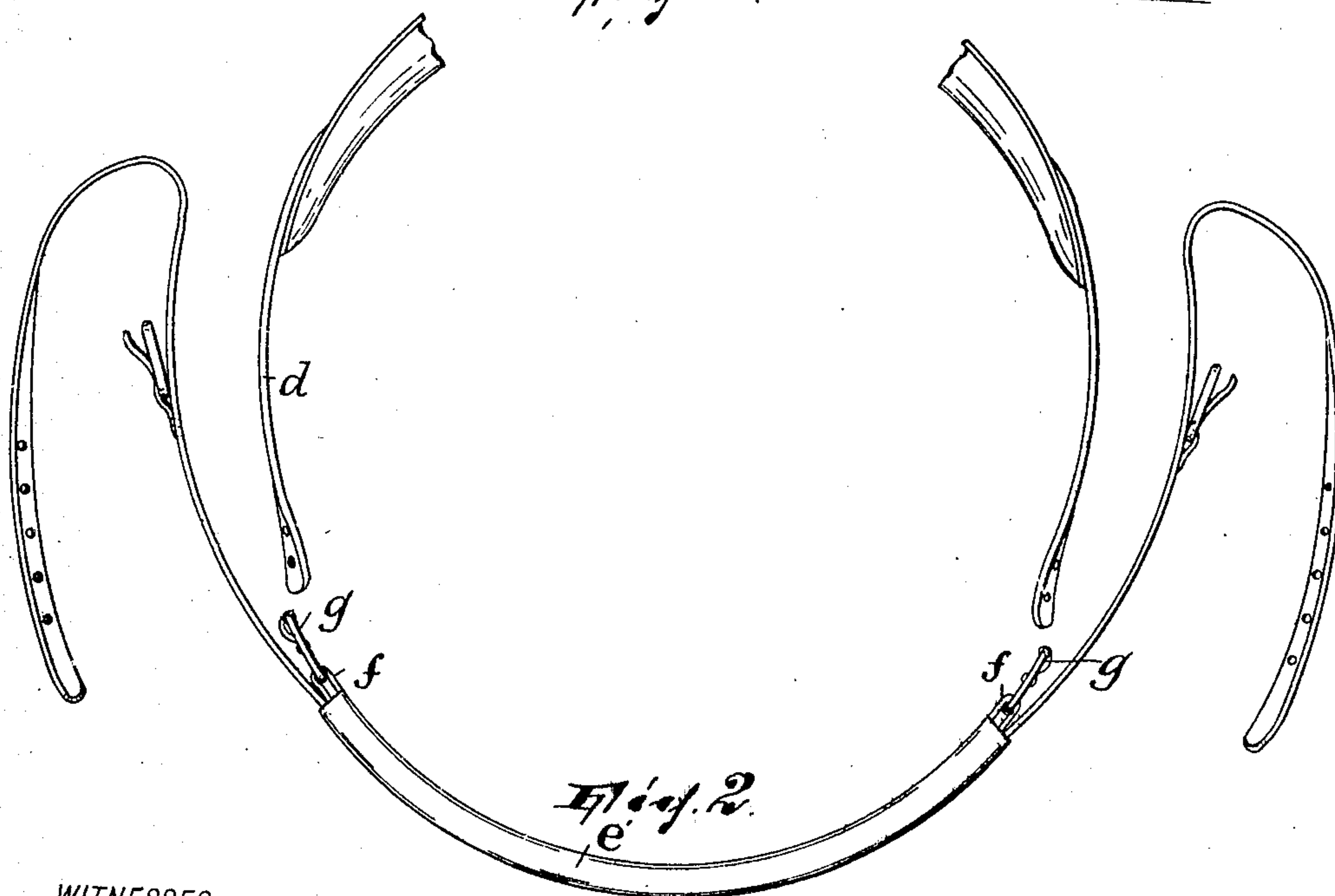
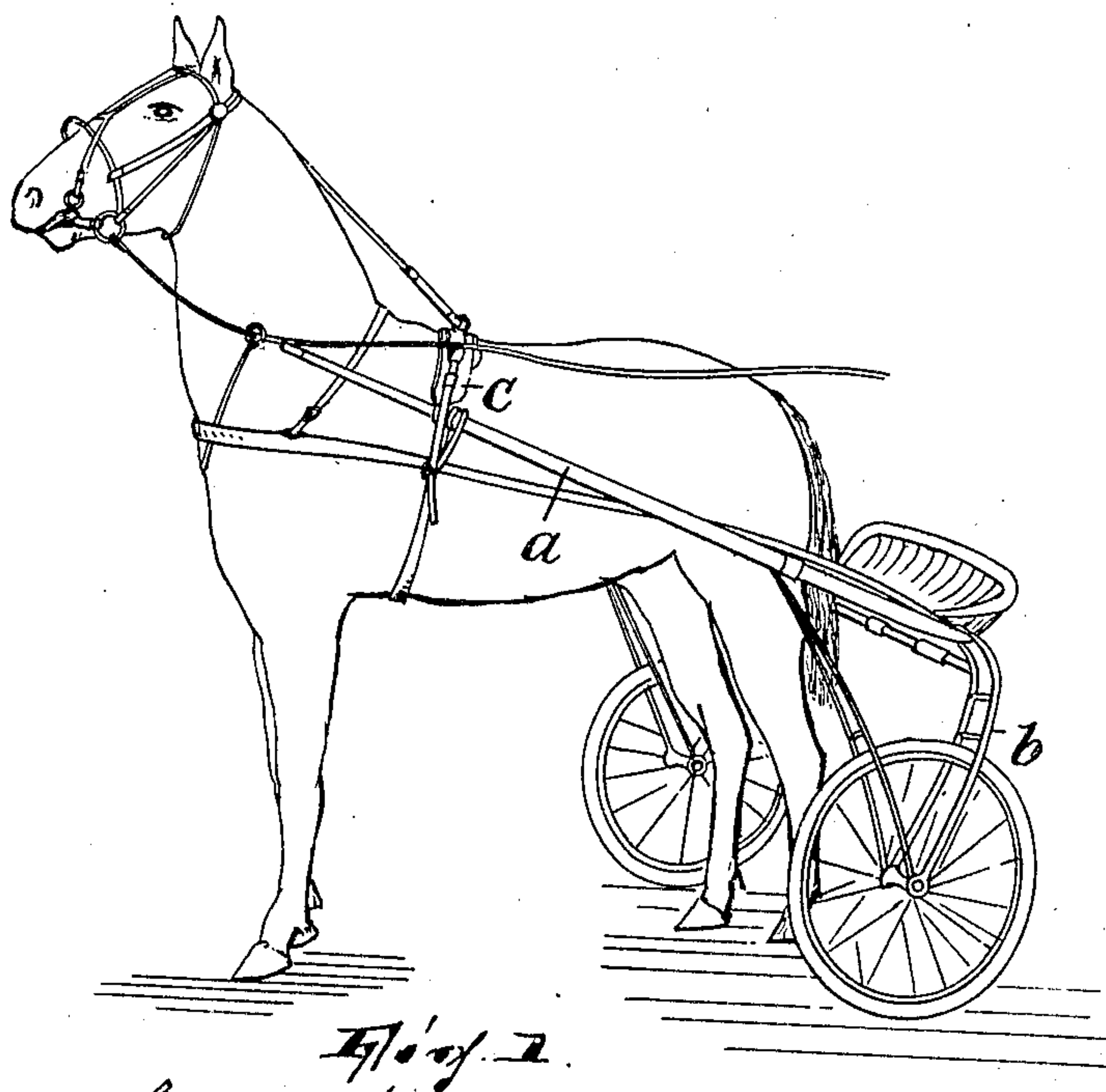
No. 872,245.

PATENTED NOV. 26, 1907.

E. MORREY.
HARNESS.

APPLICATION FILED MAY 27, 1907.

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

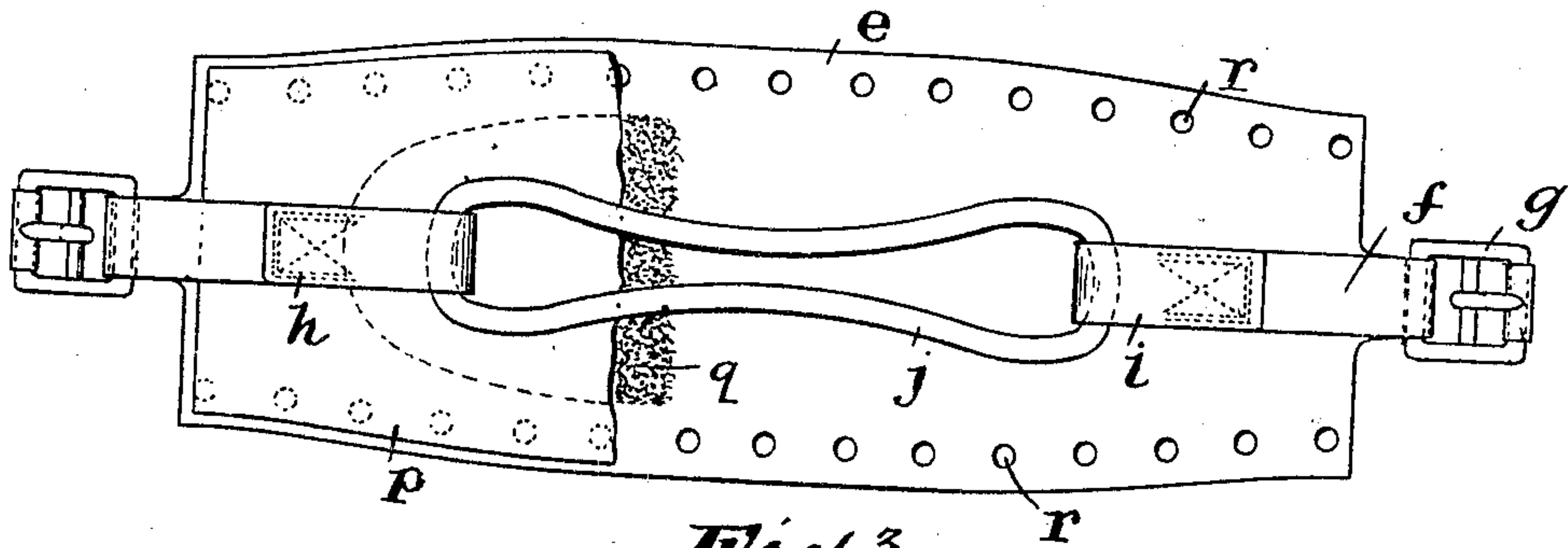


Fig. 3.

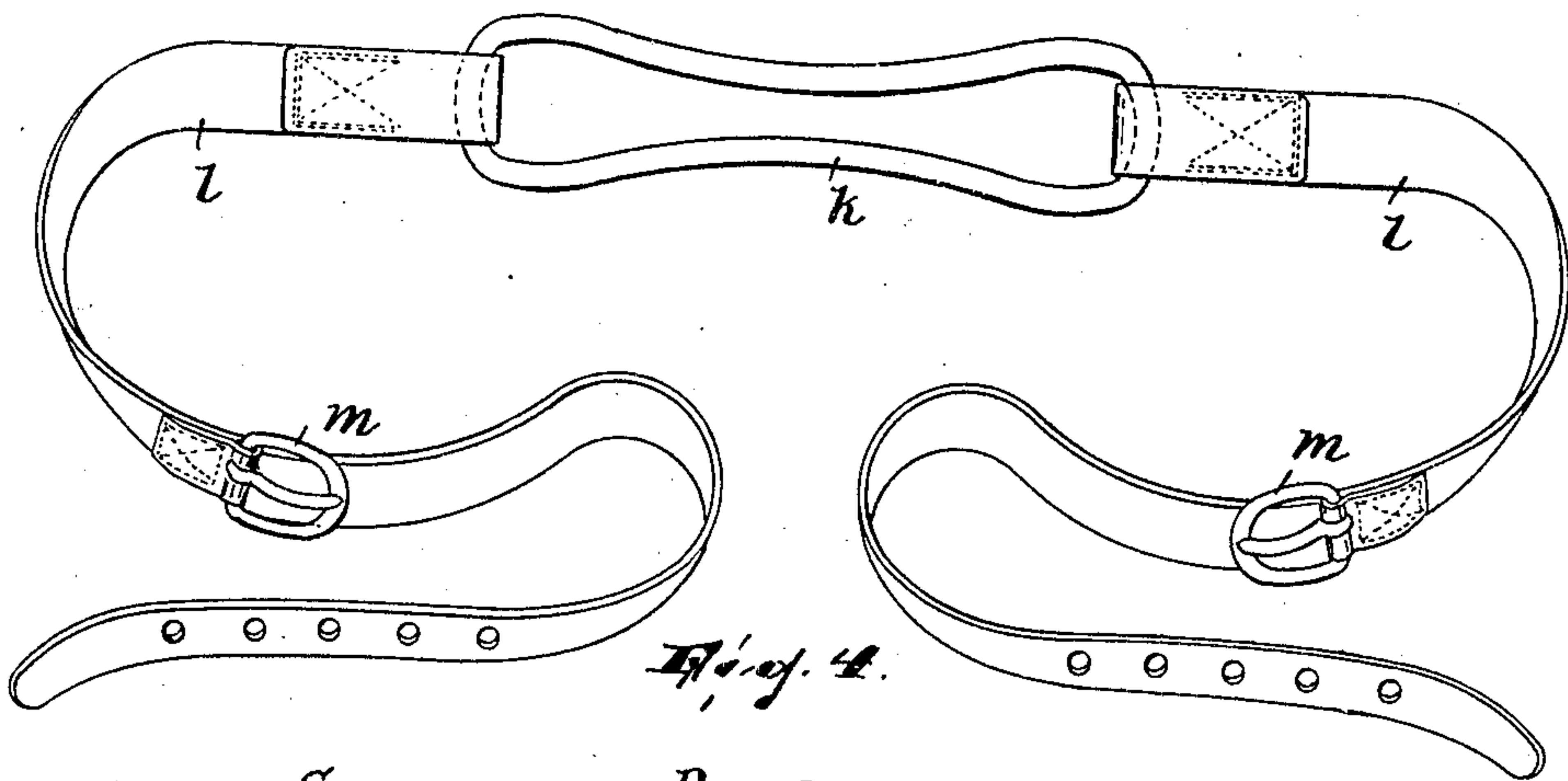


Fig. 4.

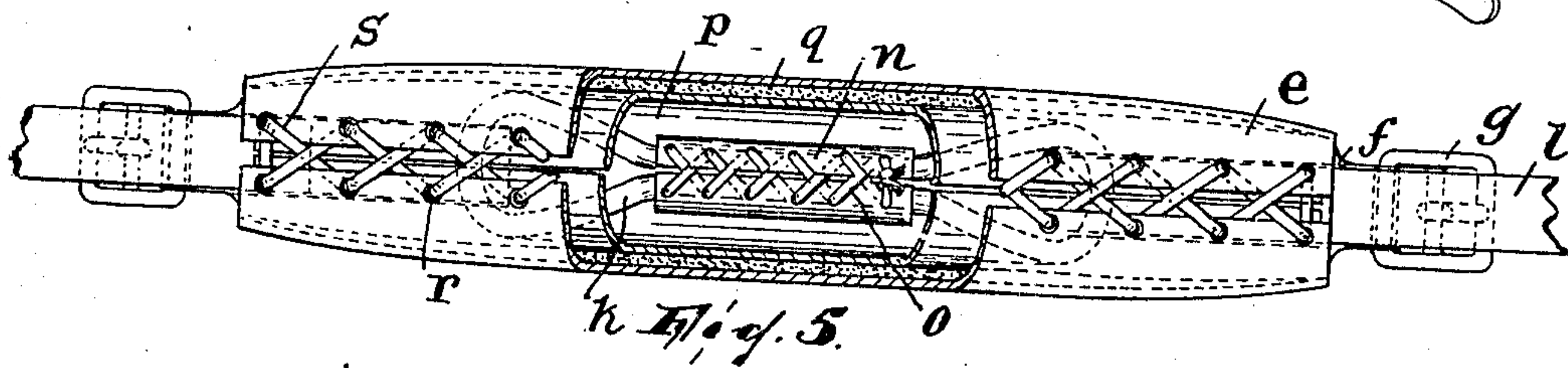


Fig. 5.



Fig. 7.

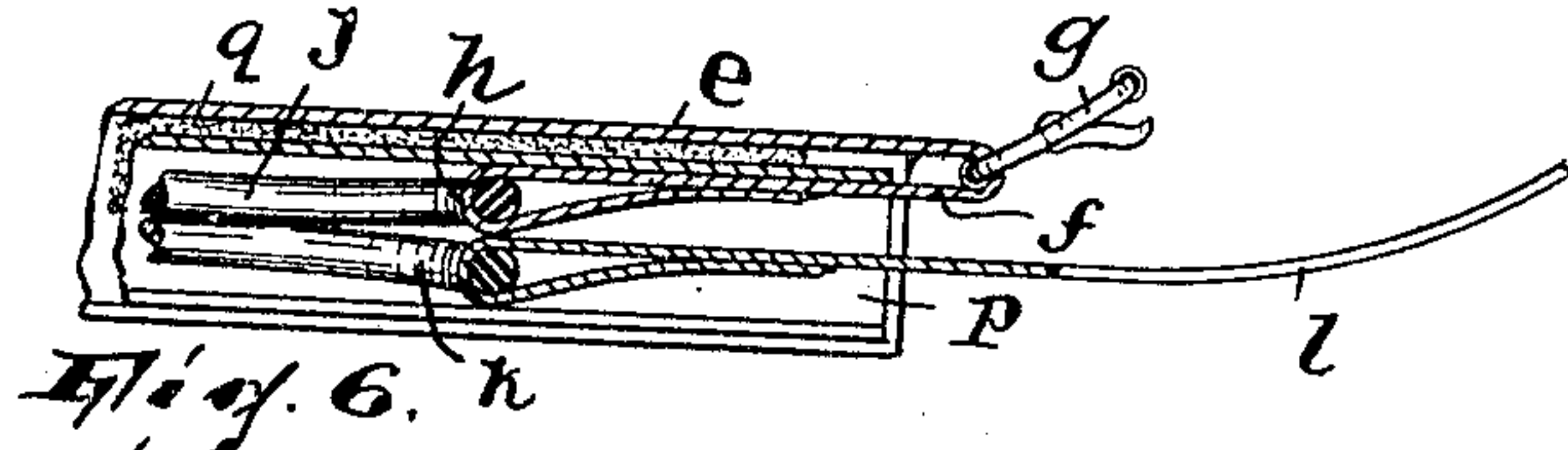


Fig. 6.

WITNESSES

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UNITED STATES PATENT OFFICE.

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No. 872,245.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed May 27, 1907. Serial No. 375,820.

To all whom it may concern:

Be it known that I, EDWARD MORREY, a citizen of the United States, residing in Paterson, Passaic county, New Jersey, have invented certain new and useful Improvements in Harness; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a combined belly-band and thill-strap which, mainly by being elastic, shall adapt itself under all conditions to the girth of the animal and thus make it possible for those parts of the harness which control the shafts or thills of the vehicle to maintain the same in such relation to the horse that lost motion between the horse and the shafts will be practically eliminated.

My invention is the result of observing that present devices for securing the thills or shafts in the harness and cinching the girth, especially in trotting service where two-wheeled sulky are used, do not take into consideration, for instance, that, however tightly the parts thereof may be initially set, they are likely to loosen under the action of the animal, or that when a horse is being harnessed he learns in time to expand or swell his body before the cinching can be accomplished so as to keep some freedom in reserve. The result is that before the heat is completed, instead of the sulky shafts accurately coinciding with every movement of the horse, there is undue lost-motion between them, and this is of course a serious drawback to attaining the best speed results.

My invention will be found fully illustrated in the accompanying drawings, wherein,

Figure 1 shows my improvement as used on a horse hitched to a trotting sulky; Fig. 2 is an elevation of the improved belly band and thill-strap and of a portion of the saddle and the strap whereby the belly band is connected with the saddle; Fig. 3 is an underneath view of the several parts with the belly band unlaced and laid out flat and certain parts removed; Fig. 4 is a view of the parts comprised in the thill-strap; Fig. 5 is an un-

derneath view of the several parts in their normal arrangement, certain portions of the belly band and a certain sleeve being broken away; and, Figs. 6 and 7 are longitudinal and transverse sectional views, respectively, of what is shown in Fig. 5.

a, in the drawings, designates the shafts or thills of a trotting sulky *b*, and *c* is the saddle of the harness, the same having the usual depending loops (not specifically shown) to receive the thills, and also the depending straps *d* whereby the portion of the harness which girths the animal's body is cinched.

e is a piece of leather of almost rectangular form except that its end portions taper slightly, for a purpose hereinafter indicated, the same having, extending from each end thereof, an integral strap *f* on which is arranged a buckle *g* and the end of which is turned back upon itself and stitched, as at *h*, so as to form a loop *i*. The loops *i* receive an endless, heavy elastic band *j*, which thus connects the ends of the straps *f*, which are turned back over the inside face of the piece of leather *e*, as shown in Fig. 3. The buckles *g* are intended to receive the straps *d*, so as to effect the cinching of the various parts. *k* is another endless, heavy elastic band and *l* two straps connected therewith and carrying the buckles *m*. The band *k*, when the parts are adjusted to the animal, lies directly under the band *j*, and in order to keep them in this relation there is provided the laced sleeve *n* through which they extend and an adjustment of the clasp effect of which may be accomplished by means of its lacing *o*.

The straps *l* are intended to be wrapped about the shafts *a* and then secured by means of the buckles *m*.

As a protection against wear and in order to give the parts a certain degree of stiffness, a split sleeve *p* of rawhide or the like is made to inclose the inwardly projecting ends of the straps *f*, the bands *j* and *k*, and the sleeve *n*; and, if desired, a padded layer of felt or the like *q* may be introduced between the rawhide sleeve *p* and the piece of leather *e*.

Along both its longitudinal edges, the piece of leather *e* is formed with a series of holes *r*, and when these edges are brought together in the manner shown in Fig. 5, so that the piece of leather *e* becomes a tubular casing for the other parts, lacing *s* is passed

through these holes and made to hold the casing in its tubular form, which is its normal condition, (see Figs. 2, 5, 6 and 7).

It will be observed that upon cinching, the portion of the harness which girths the animal is elastic, and is therefore always adapted to adjust itself to varying conditions in the girth of the animal, so that lost motion between the animal and the part of the harness referred to is avoided.

It will not be necessary, generally, to relax the cinch between the heats, since it accommodates itself to the breathing of the horse. Lost motion between the shafts and the harness is fully prevented on account of the elasticity afforded by the band *k*, so that the movements of the vehicle accurately correspond at all times to the movements of the animal, the two working together practically as one.

In the claims I use the expression "belly-band" to denote that member herein described which connects the strap *d*, and the expression "thill-strap" to denote that member which connects the shafts or thills of the vehicle.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The combination, with the saddle and depending straps, of an elastic belly-band connecting said straps, an elastic thill-strap adapted to be connected with the shafts or thills of the vehicle, and means for securing the thill-strap and belly-band together, substantially as described.

2. In a belly band, the combination of a piece of flexible material having reduced extensions forming straps at the ends thereof, buckles slidingly arranged on said extensions, said extensions being turned-back

towards each other, and an elastic member connecting the turned-back portions of said extensions, substantially as described.

3. In a belly-band, the combination of a piece of flexible material having reduced extensions forming straps at the ends thereof, buckles slidingly arranged on said extensions, said extensions being turned-back towards each other, and an elastic band connecting the turned-back portions of said extensions, substantially as described.

4. The combination of a belly band consisting of a flexible tubular casing having straps at the ends thereof turned-back into said casing, an elastic member connecting the ends of said straps and inclosed in the casing, and a thill-strap extending through said casing, substantially as described.

5. The combination of a flexible tubular casing having straps at the end thereof turned-back into said casing, an elastic member connecting the ends of said straps and inclosed in the casing, a thillstrap extending through said casing, and a stiffening body inclosed in the casing and arranged adjacent to the upper side thereof, substantially as described.

6. The combination of a flexible tubular casing having straps at the ends thereof turned back into said casing, and an elastic member connecting the end of said straps and inclosed in the casing, substantially as described.

In testimony, that I claim the foregoing, I have hereunto set my hand this 25th day of May, 1907.

EDWARD MORREY.

Witnesses:

ALBIN SMITH,
JOHN W. STEWARD.