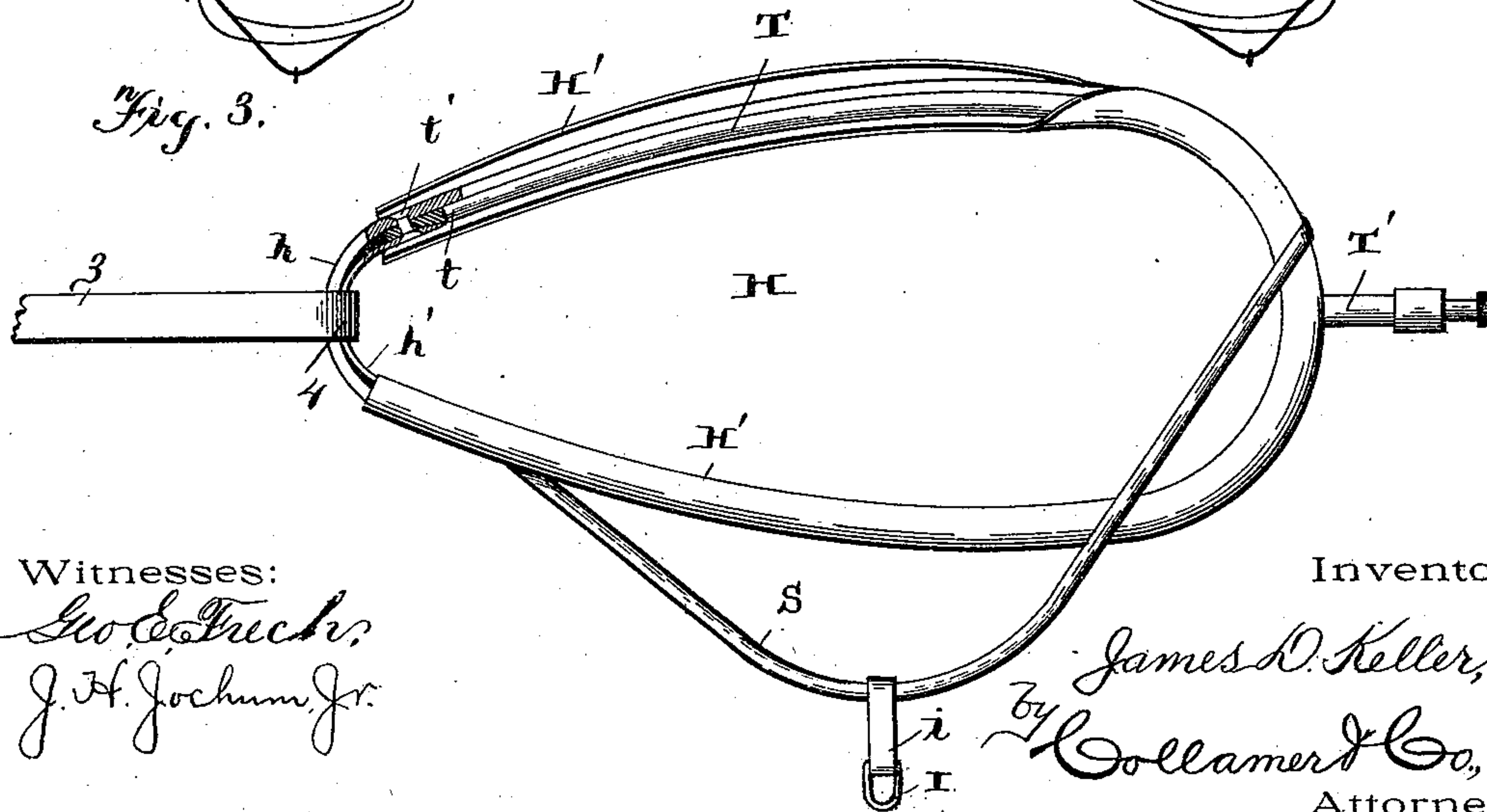
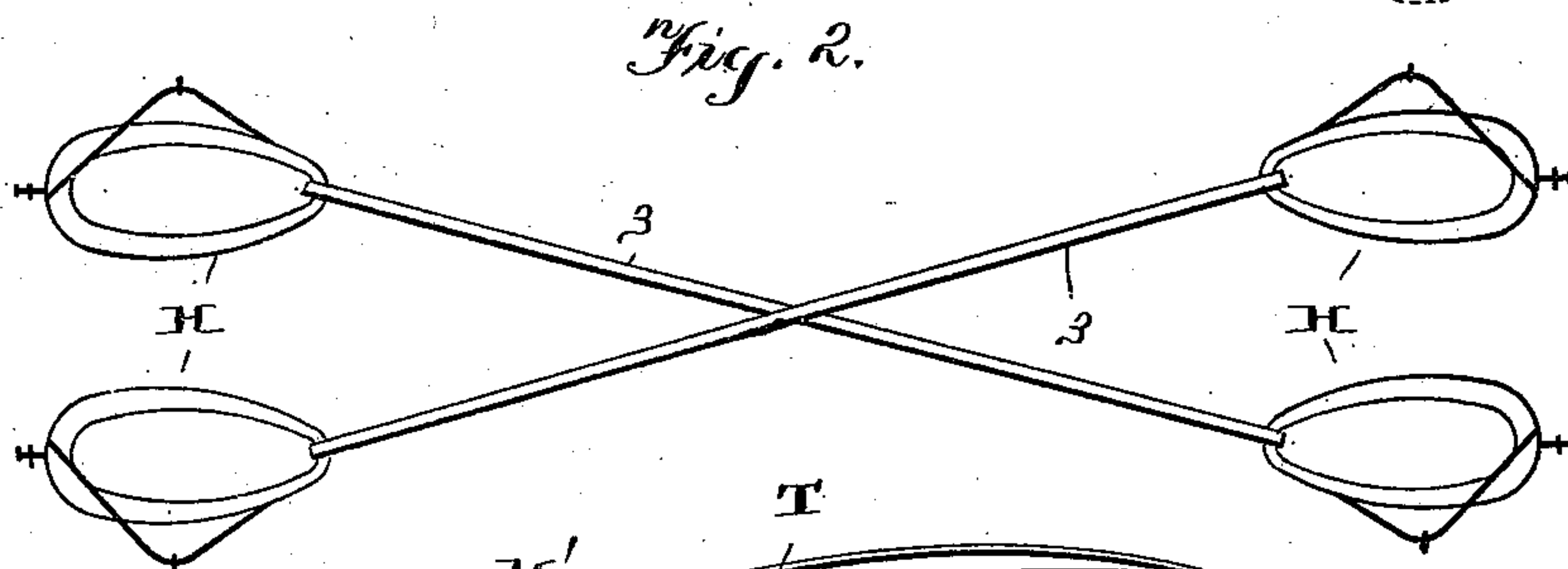
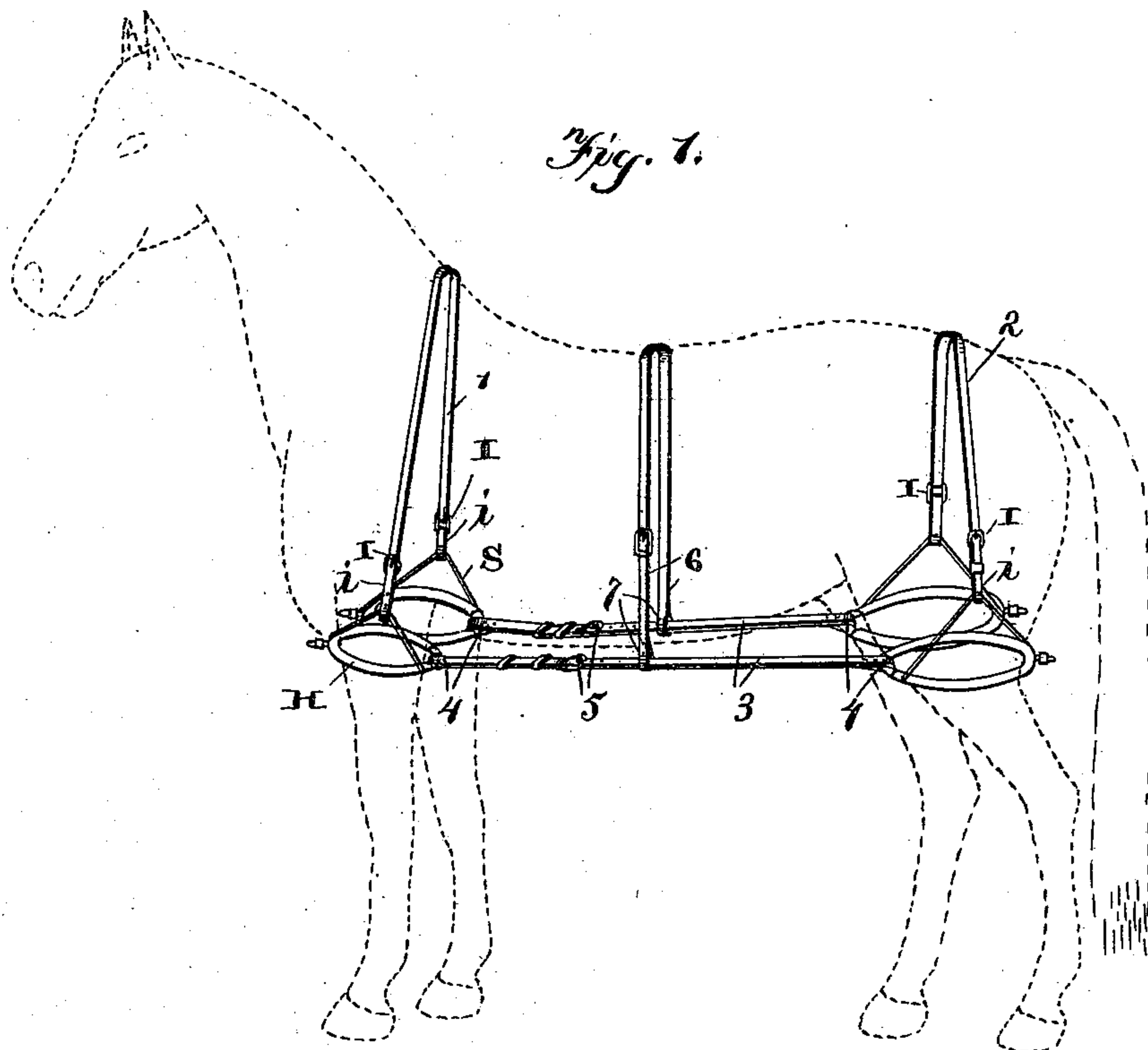


(No Model.)

J. D. KELLER.
PNEUMATIC HOPPLE.

No. 556,314.

Patented Mar. 10, 1896.



Witnesses:

Geo. E. Truch,
J. H. Jochum, Jr.

Inventor:

James D. Keller,
by Collamer & Co.,
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES D. KELLER, OF DETROIT, MICHIGAN.

PNEUMATIC HOPPLE.

SPECIFICATION forming part of Letters Patent No. 556,314, dated March 10, 1896.

Application filed April 10, 1895. Serial No. 545,172. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. KELLER, a citizen of the United States, and a resident of Detroit, Wayne county, State of Michigan, have invented certain new and useful Improvements in Pneumatic Hopples; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to the care of live stock, and more especially to that class of devices used on horses and which are known as "hopples," and the object of the same is to produce a pneumatic hopple, employing one for each leg and connecting the same diagonally or in pairs according to the gait or step it is desired to teach the animal.

To this end the invention consists in the specific construction of parts hereinafter more fully described and claimed, and as illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of this device complete, showing the hopples connected on each side in pairs so as to produce a pacing action. Fig. 2 is a diagrammatic plan view showing the hopples connected diagonally so as to produce a racking action. Fig. 3 is an enlarged plan view of one of the hopples proper, partly broken away to show its internal construction.

Referring to the said drawings, the letter H designates the hopple as a whole, of which there is one for each of the four legs of the horse. This hopple consists of a stout oval ring formed of a strap *h* standing in a horizontal plane, within which is arranged a pneumatic tube of rubber or other flexible and inflatable material. This tube is lettered T in the drawings and has its closed and flattened ends or extremities *t* connected by rivets *t'* with the ring *h* at one end of the oval of the latter, a brace or additional strap *h'* standing within the main strap *h* spanning the distance between the ends *t* of the tube and being held under the heads of the rivets *t'*, as seen in Fig. 3. From these points of connection with the ring *h* the tube extends around within the same, and at the center of its length is a nipple T' projecting outward through the ring *h* and by means of which the tube may be in-

flated in the usual manner. The whole is then covered with a sheath of leather, preferably enameled or otherwise handsomely finished, which sheathing H' extends from one rivet *t'* completely around the ring to and over the other rivet, leaving exposed the center of the brace *h'*.

A hopple as thus constructed may be worn on the horse's leg near his body and will not interfere with the free action of the muscles nor in any way chafe or wear the leg or the body. Secured to the ring *h* at diagonally-opposite points (preferably adjacent the nipple at one end of the oval and adjacent one rivet diametrically opposite) is the supporting-strap S, which preferably consists of a round cord or thong of leather or other suitable tough and flexible material rather than a flat strap, and *i* is a leather eye engaging this thong and carrying a buckle I. This eye can slide upon the thong or turn thereon at will, and the connection of the support with the hopple proper is at such points as will not interfere with the free action of the legs.

Four of the hopples, as above described, are attached to the horse in the usual well-known manner, as illustrated in the drawings, and as will be described by reference numerals and letters.

1 designates a strap passing over the fore quarters of the animal when in pasture, or connected with his collar when in harness, and having its lower extremities adjustably engaged with the buckles I of the two forward hopples.

2 is a similar strap passing over the hind quarters of the horse and engaged with the buckles of the two rearmost hopples.

3 are side straps having loops 4 and buckles 5 at their extremities, each of which loops takes over the ring *h* and brace *h'* at the inner end of one side hopple, and the bodies of these side straps 3 may be caused to lie parallel with each other, as seen in Fig. 1, when it is desired to cause the side legs to move in unison, as for teaching the horse to pace, or may be crossed over diagonally, as seen in Fig. 2, when it is desired to teach the horse to rack. In Fig. 1 are shown two additional straps 6 having loops 7 at their lower ends, and these central straps may be used when the side straps 3 stand parallel, as there

shown, to support the centers of said side straps by passing over the back of the horse between the straps 1 and 2. It will be understood that all of these several straps may
5 be made adjustable in length by means of suitable buckles.

The uses and advantages of this device are obvious, but for sake of greater clearness I might say that it is often desirable to break
10 a young horse who is inclined to pace or rack and teach him the opposite step. With this object, especially when the horse is a valuable one, the trainer applies four of these hobbles to the legs of the horse and supports them by
15 the straps 1 and 2. He then attaches the side straps 3 and arranges them as shown in Fig. 1 if it is desired to teach the horse to pace, or as shown in Fig. 2 if it is desired to teach him to rack. In the former case it is obvious
20 that the legs on one side of the body must necessarily move in unison, since the forward movement of the front leg forces a similar movement of the hind leg at the same time. In Fig. 2 the forward movement of the right
25 fore leg will cause the forward movement of the left hind leg.

Heretofore considerable difficulty has been experienced with devices of this character, owing to the fact that the loops or hobbles
30 themselves, being of strap only, with or without padding, were liable to chafe the leg or body, and young and skittish horses were greatly irritated thereby. By employing a pneumatic ring or hobble of the specific construction described above I entirely avoid
35 this chafing or any pressure on the muscles of the legs, and yet the loops 4 at the ends of the side straps 3 do not compress the pneumatic tubes, because they surround the hobbles at points between the flattened ends of the inflated portions thereof, so that the strain
40 on said loops is communicated to the ring *h* and brace *h'* only. This I consider an important feature of my invention, because it
45 permits the use of a pneumatic tube in a device of this character and yet has no tendency to burst such tube by undue pressure thereon.

Considerable change in the details of construction may be made so long as there is no
50 essential departure from the principles of this invention.

What is claimed as new is—

1. A hobble consisting of an egg-shaped

leather ring, a pneumatic tube having closed and flattened extremities and its body standing within the ring, a nipple at the center of the tube projecting through the ring at the larger end thereof, a bracing-strap within the ring at the smaller end of the oval and having its ends lapping the extremities of the
55 tube, and rivets through the strap, tube extremities, and brace ends; in combination with side straps each having a loop embracing the ring and bracing-strap and leading to another leg of the animal, as and for the purpose set forth. 65

2. A hobble consisting of an oval leather ring, a pneumatic tube having closed and flattened extremities slightly separated from each other at one end of the oval, a bracing-
70 strap having its ends lapping said extremities, the body of the tube standing within said ring, means for inflating the tube, rivets through the ring, tube extremities, and brace ends, and a casing covering the rivets and connected parts and extending thence around the ring leaving the smaller end of the ring and body of the brace uncovered; in combination with a side strap having a loop embracing the uncovered portion of the ring and
80 brace, and leading thence to and connected with another leg of the animal, as and for the purpose set forth. 75

3. A hobble consisting of an oval leather ring, a pneumatic tube having closed extremities slightly separated from each other at one end of the oval and its body standing within the ring, means for inflating the tube, a brace having its ends connected with said ring at one end of the oval, and a casing inclosing
90 the tube and contiguous portion of the ring but leaving the body of the brace and adjacent portion of the oval uncovered; in combination with a side strap having a loop embracing the uncovered portion of the oval
95 ring, and leading thence to and connected with another leg of the animal, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature on this the 8th day of
100 April, A. D. 1895.

JAMES D. KELLER.

Witnesses:

CHARLES S. McDONALD,
JAS. H. LYON.