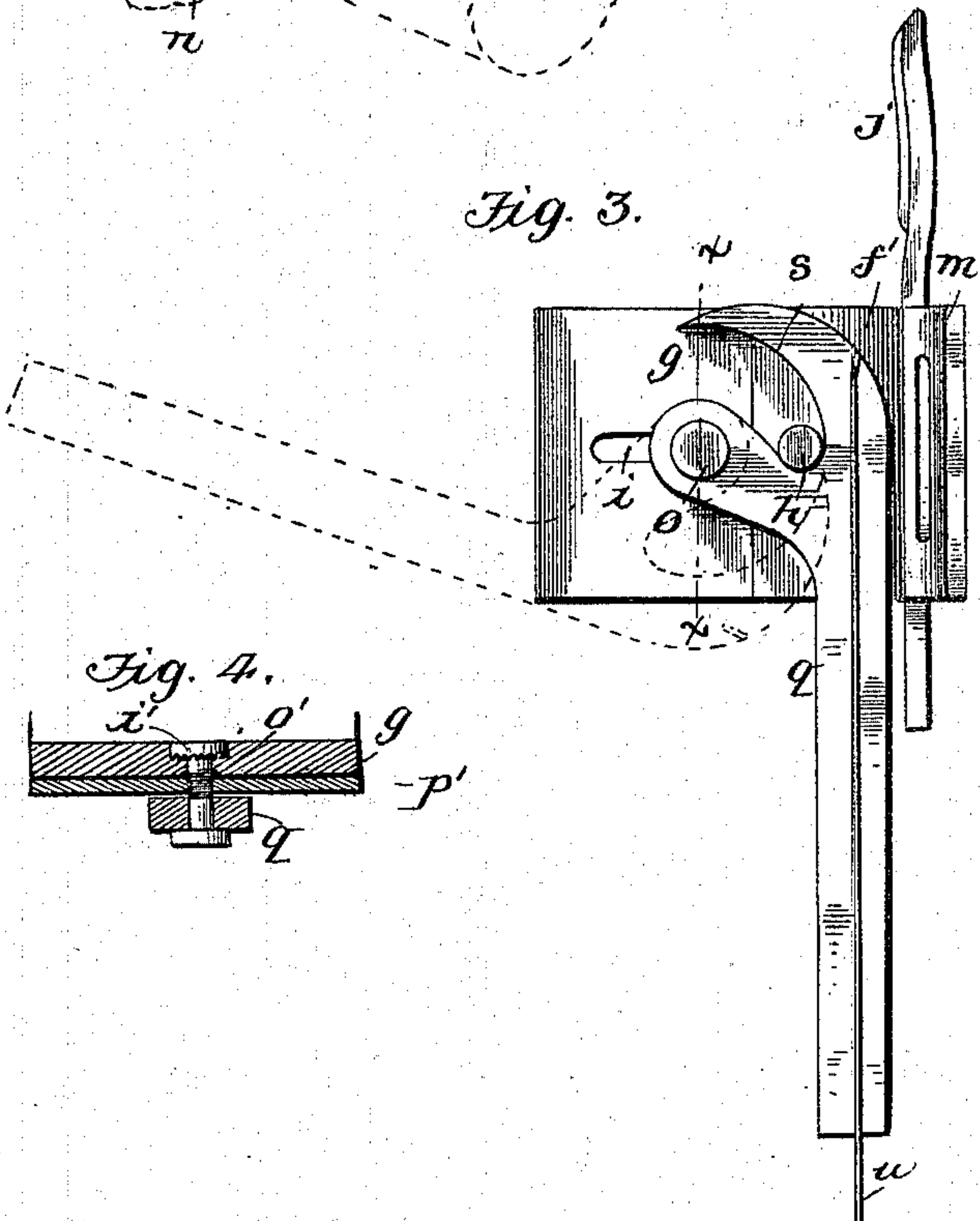
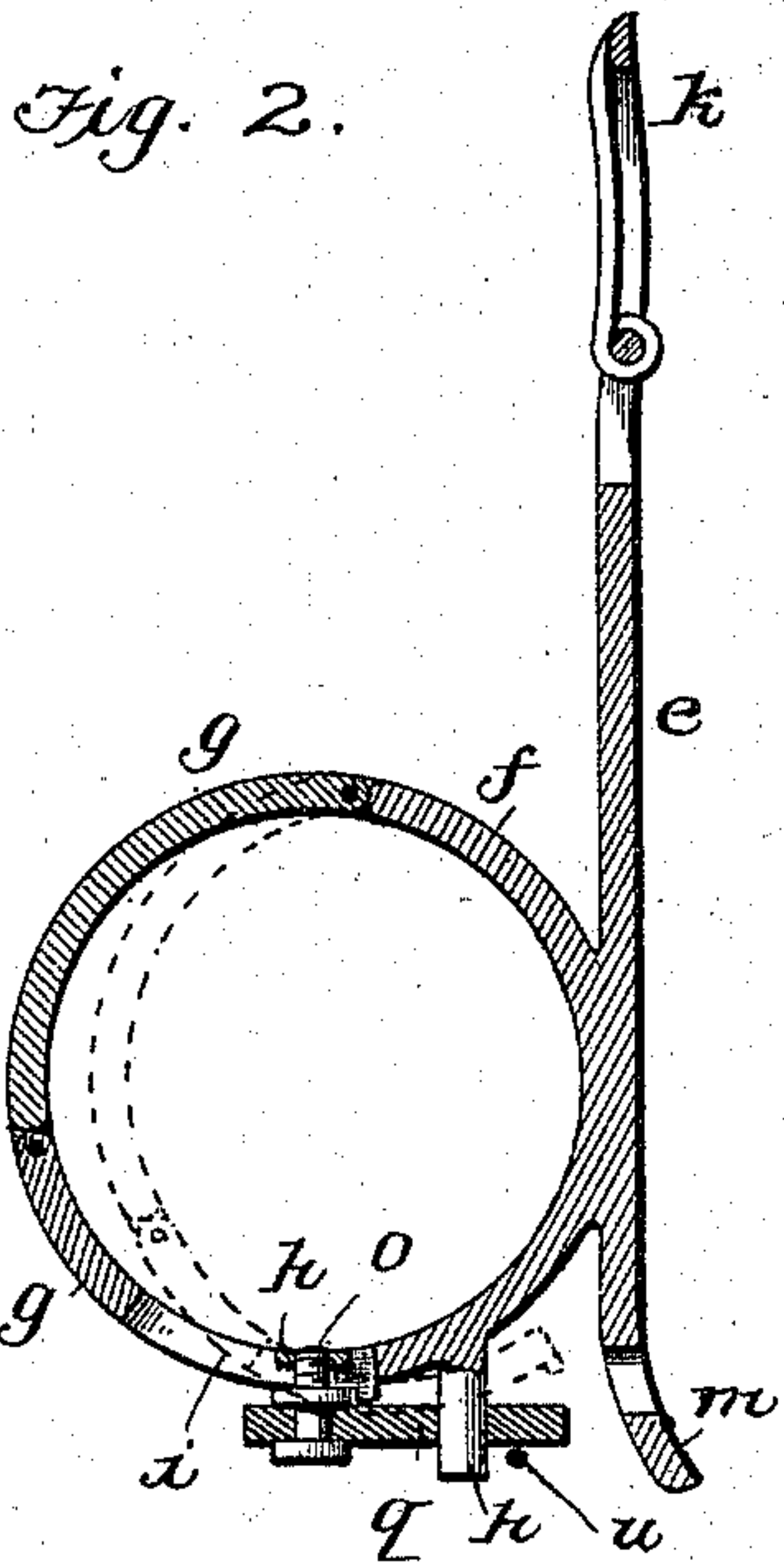
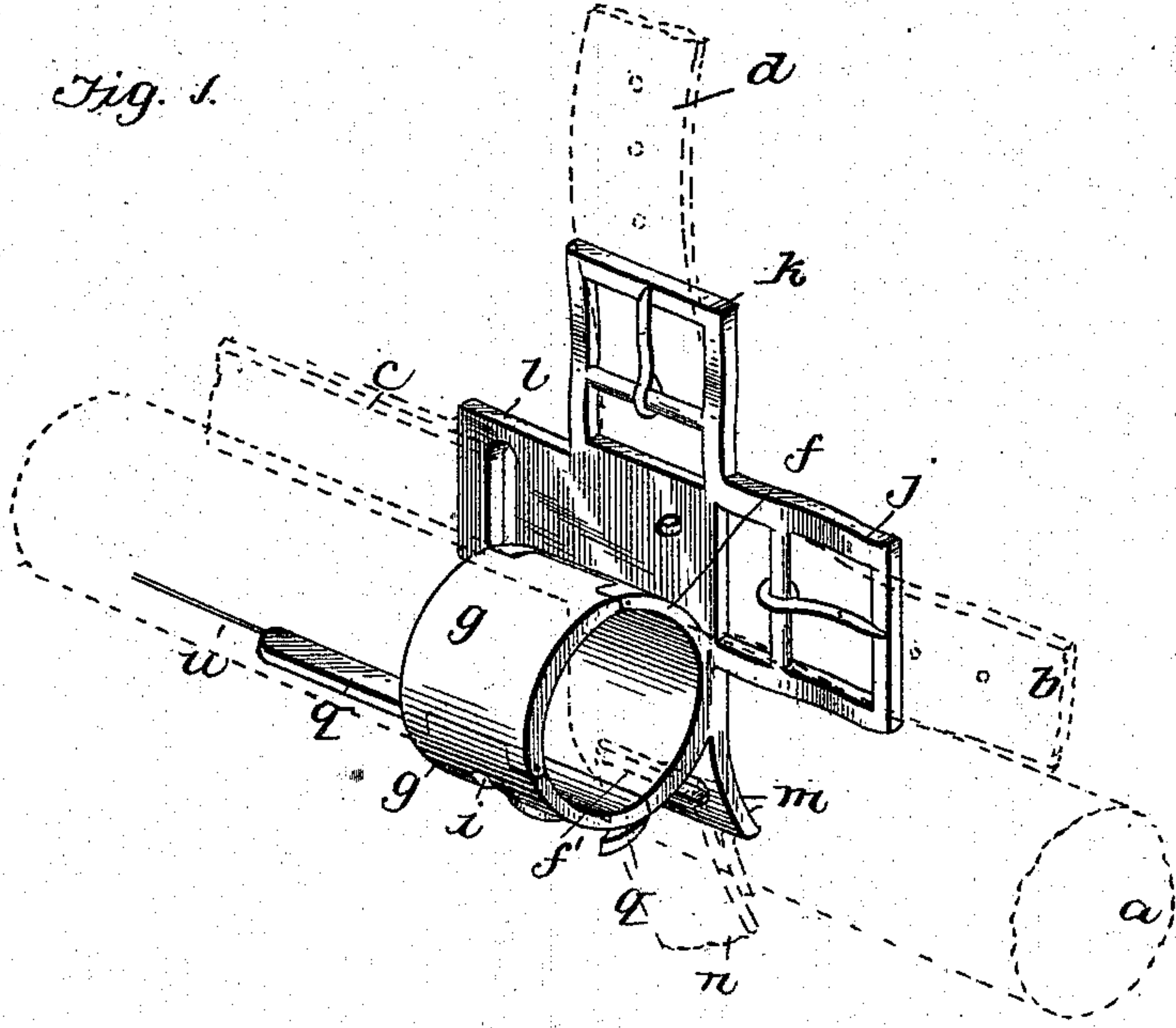


(No Model.)

R. G. KENNEDY.
HARNESS.

No. 527,994.

Patented Oct. 23, 1894.



Witnesses.
John Smiric
Hubert D. Peak.

Inventor
Richard G. Kennedy
per *Or. E. Duff*
Attorney

UNITED STATES PATENT OFFICE.

RICHARD G. KENNEDY, OF PITTSBURG, PENNSYLVANIA.

HARNESS.

SPECIFICATION forming part of Letters Patent No. 527,994, dated October 23, 1894.

Application filed October 14, 1893. Serial No. 488,148. (No model.)

To all whom it may concern:

Be it known that I, RICHARD G. KENNEDY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain
5 new and useful Improvements in Harness; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use
10 the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in harness.

The object of the invention is to provide certain improvements in harness, whereby the draft will be applied directly to the thills and the thills will be at the same time supported by very cheap, simple and durable
20 means composed of a minimum number of parts.

A further object of the invention is to provide certain improvements for attaching the
25 harness to the thills by means of a tug so constructed and arranged that the tug can be readily and easily released when desired from the vehicle.

The invention consists in certain novel features of construction and in combination of parts more fully and particularly described hereinafter and pointed out in the claims.

Referring to the accompanying drawings: Figure 1, is a perspective view of my present
35 improvement, a thill and certain straps of the harness being shown in dotted lines. Fig. 2, is a vertical sectional view through the present invention, parts being shown in different positions by dotted lines. Fig. 3, is a
40 bottom plan view of the device shown locked. Fig. 4, is a cross sectional view taken on the line *x x* Fig. 3.

In the drawings the reference letter *a*, indicates a thill shown in dotted lines.

45 *b*, indicates the trace (shown in dotted lines) in this construction of harness extending from the breast strap only a short distance rearwardly along the thills, but not extending back to the end of the thill or connected
50 to a whiffletree. By the employment of the

present invention the use of the whiffletree is dispensed with.

c, indicates the hold back strap.

d, indicates the back or thill supporting strap.

55

n, indicates the bellyband.

The invention comprises a tug adapted to firmly and rigidly grasp a thill and to which a trace is attached, and which is supported by the strap *d*, and to which the bellyband
60 and hold back straps are secured.

Referring to the construction of this tug, *e*, indicates a flat vertically arranged plate having a lower extension *m*, formed to receive the bellyband *n*, and permit securing
65 thereto and from its side having the rearwardly extending extension *l*, formed to permit securing thereto of the hold back strap. This plate is also formed to permit securing thereto of the supporting strap *d*. If desired
70 this can be accomplished by means of a buckle *k*, cast integral with the plate. The plate is also provided with the means *j*, to permit securing of the trace *b*, in the front edge of the plate *e*. This means can also
75 consist of a buckle formed in the same manner, although I do not wish to limit myself to the use of these buckles, but can form the plate *e*, in any suitable manner to permit attaching the various straps thereto.

80

The plate *e*, is attached to or connected with a suitable tug arranged to tightly embrace a thill. A portion *f*, or the inner side of the tug is preferably formed integral with the plate *e*, and is located on the outer side
85 of the plate. The movable portion of the tug is composed of one or more links *g*, loosely connected with the rigid part of the tug preferably at the upper end of the rigid portion *f*.

Suitable means are provided to detachably
90 lock the tug on the thills. Such means can consist of the downwardly projecting pin *h*, preferably formed integral with the lower portion *f*, of the tug, and the cam lever *q*, having the rearwardly extending handle and
95 pivoted eccentrically to the under side of the free end of the tug and having the cam groove *s*, as shown, so arranged that when the movable portion of the tug is placed around the thill and the locking lever *q*, is so moved as
100

to throw the pin *h*, into said cam slot and the handle of the lever swung inwardly, the said cam groove bearing against the pin *h*, will tightly and rigidly draw the movable portion
 5 of the tug inwardly and tightly around the thill until the lever *q*, assumes the position shown in Fig. 3, with the pin at the inner end of the cam groove. In this position the lever is firmly locked and is located beneath and
 10 preferably parallel with the thill and extending rearwardly toward the vehicle, the pin *h*, being located at such a point in the cam groove that the outward strain of the movable portion cannot swing open this tug but
 15 holds the same locked.

In order to adapt the tug to variously sized thills the link *g*, at its free edge is provided with an inwardly extending slot *i*. The pivot
 20 *o*, of the locking lever is adjustable longitudinally in said slot by means of a screw threaded end and a burr or nut *t*, so that the pivot can be loosened and adjusted in the slot and then tightened therein so as to hold the lever at
 25 the desired point. By means of this construction when a small shaft is engaged the free end of the link will overlap the rigid portion *f*, of the tug and the pin *h*, can extend into the outer end of the slot *i*. However, it will be observed that when the tug has been ad-
 30 justed to fit a certain sized shaft it will not have to be again changed.

Each set of harness will be provided with two of the connecting devices here described, one for the right hand and the other for the
 35 left hand.

After the horse has been harnessed by attaching the various straps and bands to the connecting plate and opposite sides of the animal all that is necessary is to lock the
 40 tugs on their respective thills, the tugs rigidly grasping the thills so that all the draft is through the medium of the tugs and thills and thereby the strain on the horse is rearward and downward to the front axle of the
 45 vehicle and not at an elevated plane as is usual where the draft is through the traces to a whiffletree. Great advantages and better results are attained by thus attaching the draft directly to the axle through the thills.

By means of this improved connecting device a great saving of material is effected in that the long traces and whiffletrees are dispensed with.

The connecting device and tug are very
 55 simple in construction and can be made at a minimum cost and can be easily and quickly attached to any harness with very slight and inexpensive alterations. The horse can be

detached from the shaft by merely releasing the two clutches which can be very easily
 60 and quickly accomplished by swinging the lever outwardly. Hence it is not necessary to harness or unharness the horse in the shaft or thills.

If desired connections *u*, can be extended
 65 from the outer ends of the lever rearwardly to the vehicle along the under side of the shaft so that the horse can be easily and quickly detached from the vehicle if desired by the person driving. These connections
 70 can be suitably secured to the levers at any portion desired but preferably at or about the point shown in Fig. 3.

It is evident that various changes might be made in the forms, arrangements and con-
 75 struction of parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction here shown but consider myself entitled to all such changes that fall within
 80 the spirit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A harness attachment comprising the
 85 plate having strap attaching means, the tug member rigid with said plate, and having the projecting upper and lower ends, the swinging tug member at one end hinged to one
 90 edge of said rigid tug member, and the horizontally swinging cam lever or catch having an extended handle and adjustably fulcrumed to the free edge of one of said tug
 95 members, and arranged to engage a projection from the corresponding edge of the opposite member of the tug, substantially as described.

2. A harness attachment comprising the connecting plate, and a tug carried thereby and composed of the rigid and movable mem-
 100 bers, the free edge of one member of the tug having a projection, the free edge of the other member having an inwardly extending slot opposite said projection and capable of receiving the same, a pivoted catch arranged
 105 to engage said projection and lock the tug, the fulcrum or pivot of said catch adjustably held in said slot, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two
 110 witnesses.

RICHARD G. KENNEDY.

Witnesses:

HUBERT E. PECK,
 C. M. WERLE.