

No. 772,323.

PATENTED OCT. 11, 1904.

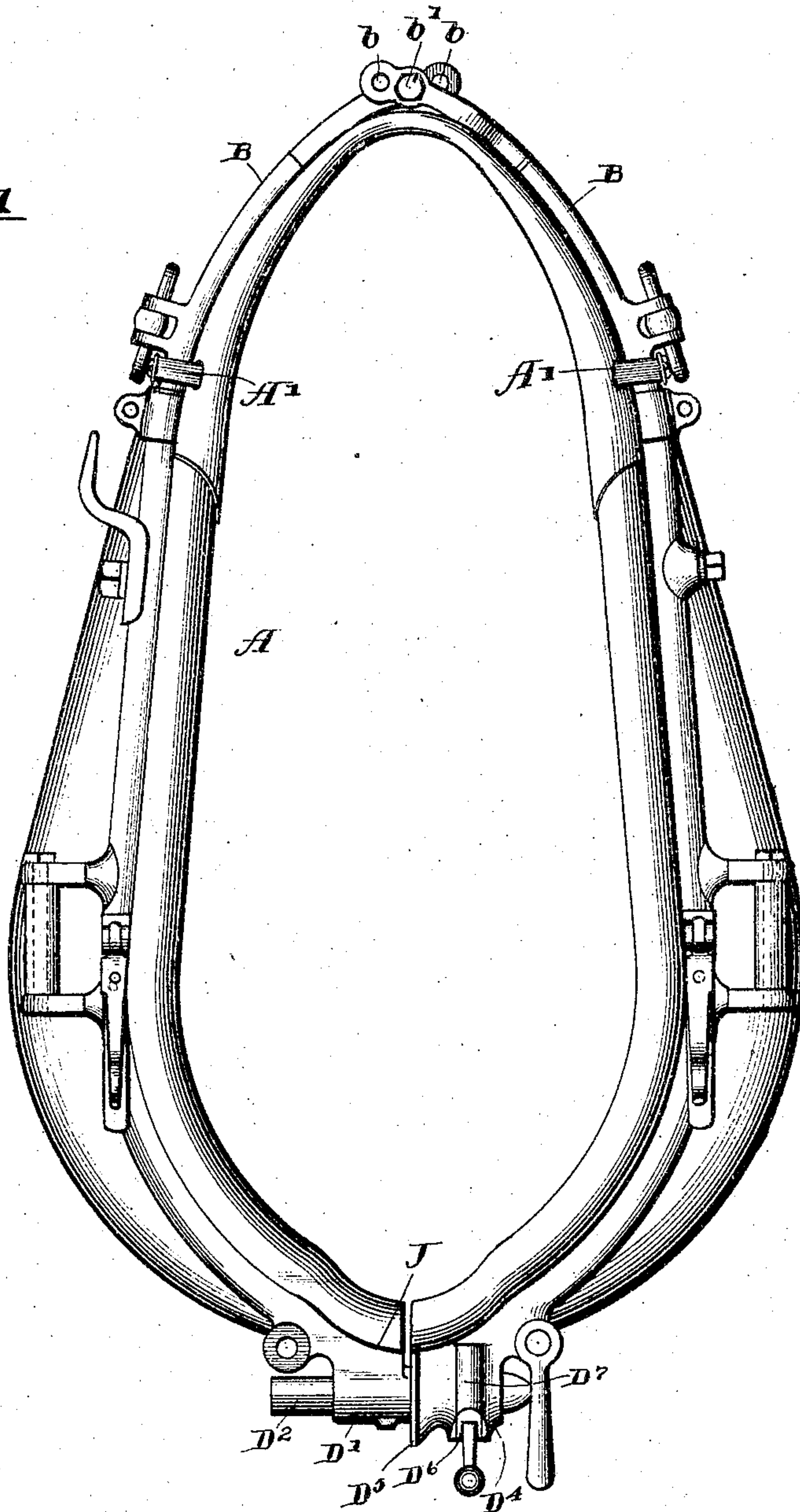
R. G. ARMSTRONG.
HAME.

APPLICATION FILED APR. 7, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig 1



Witnesses:

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William H. Hall

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Robert G. Armstrong

by Pooler Brown

his Attorneys

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2 SHEETS—SHEET 2.

Fig 2

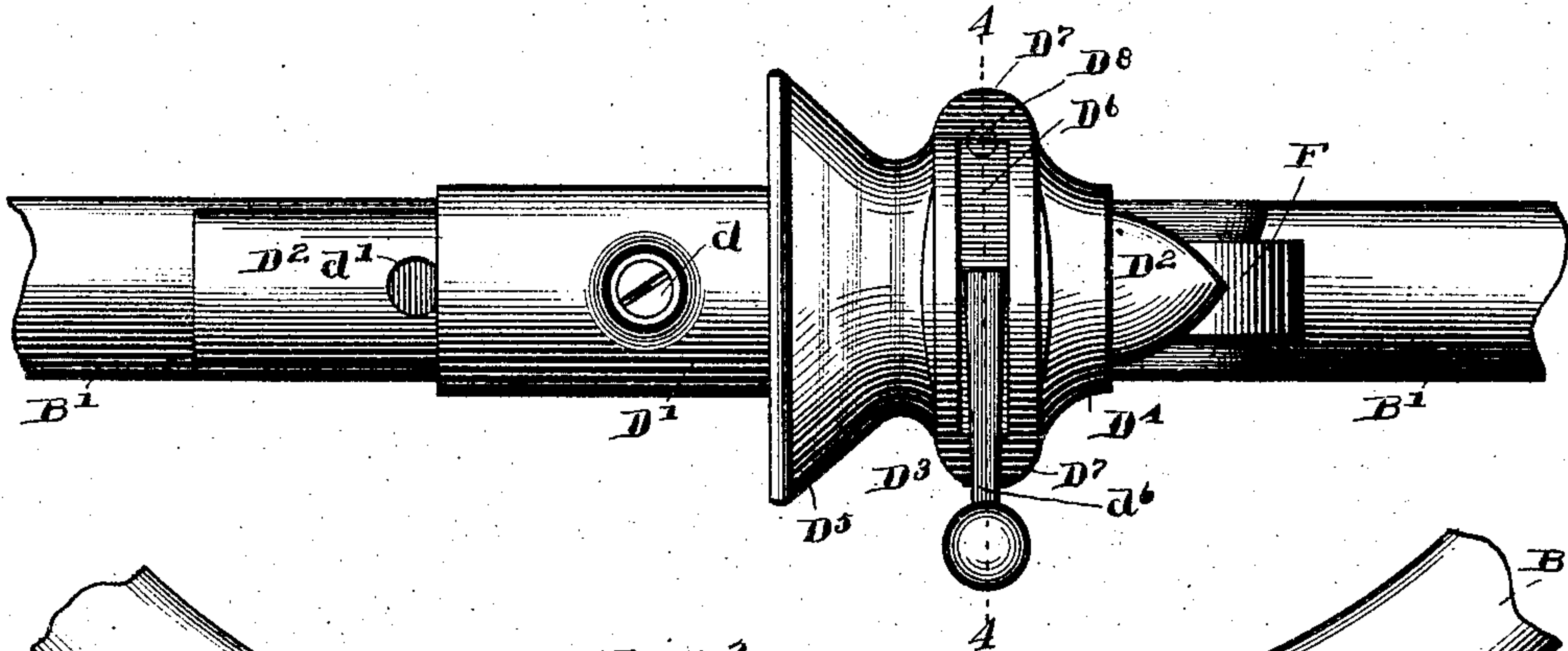


Fig 3

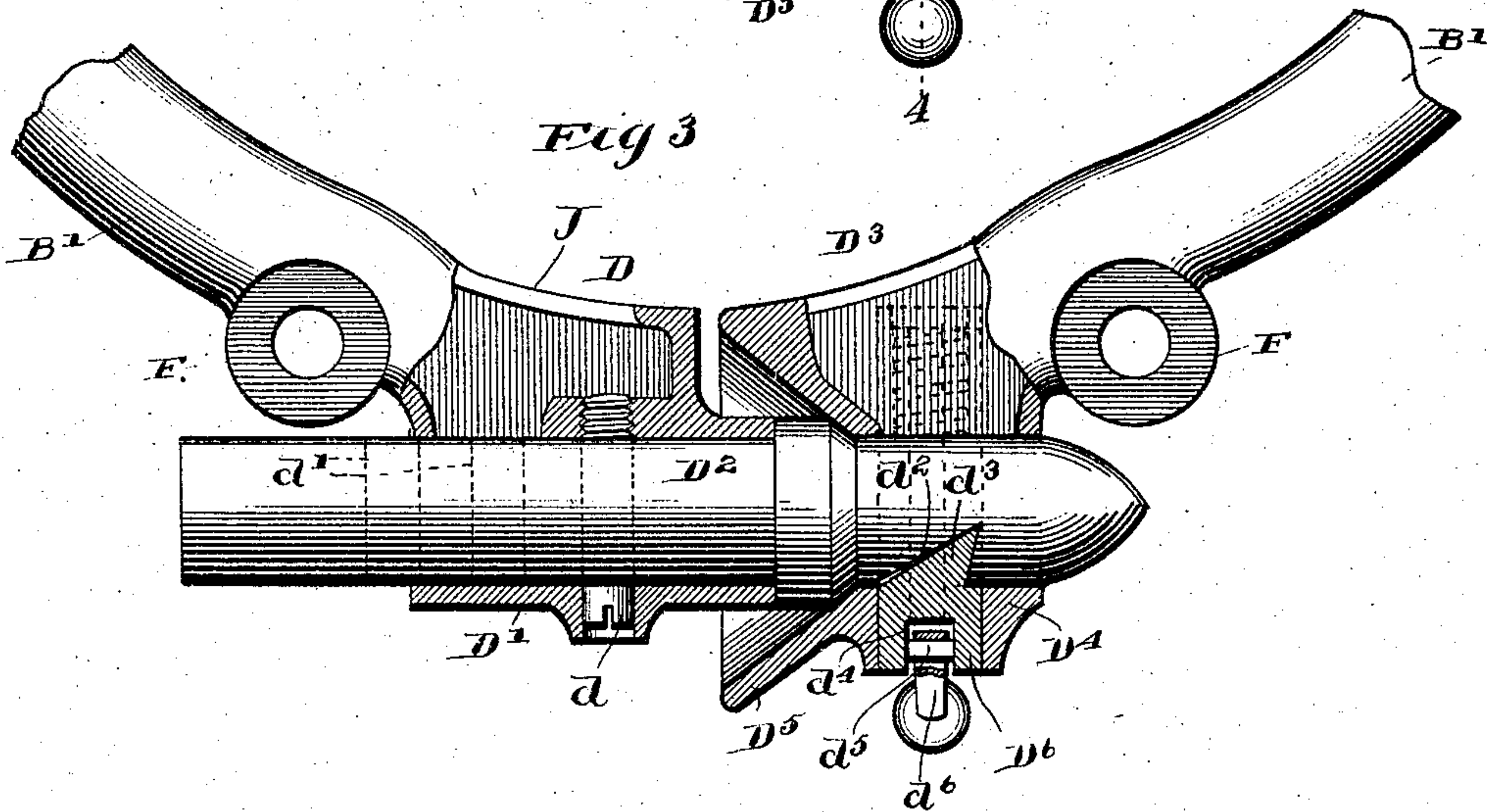


Fig 4

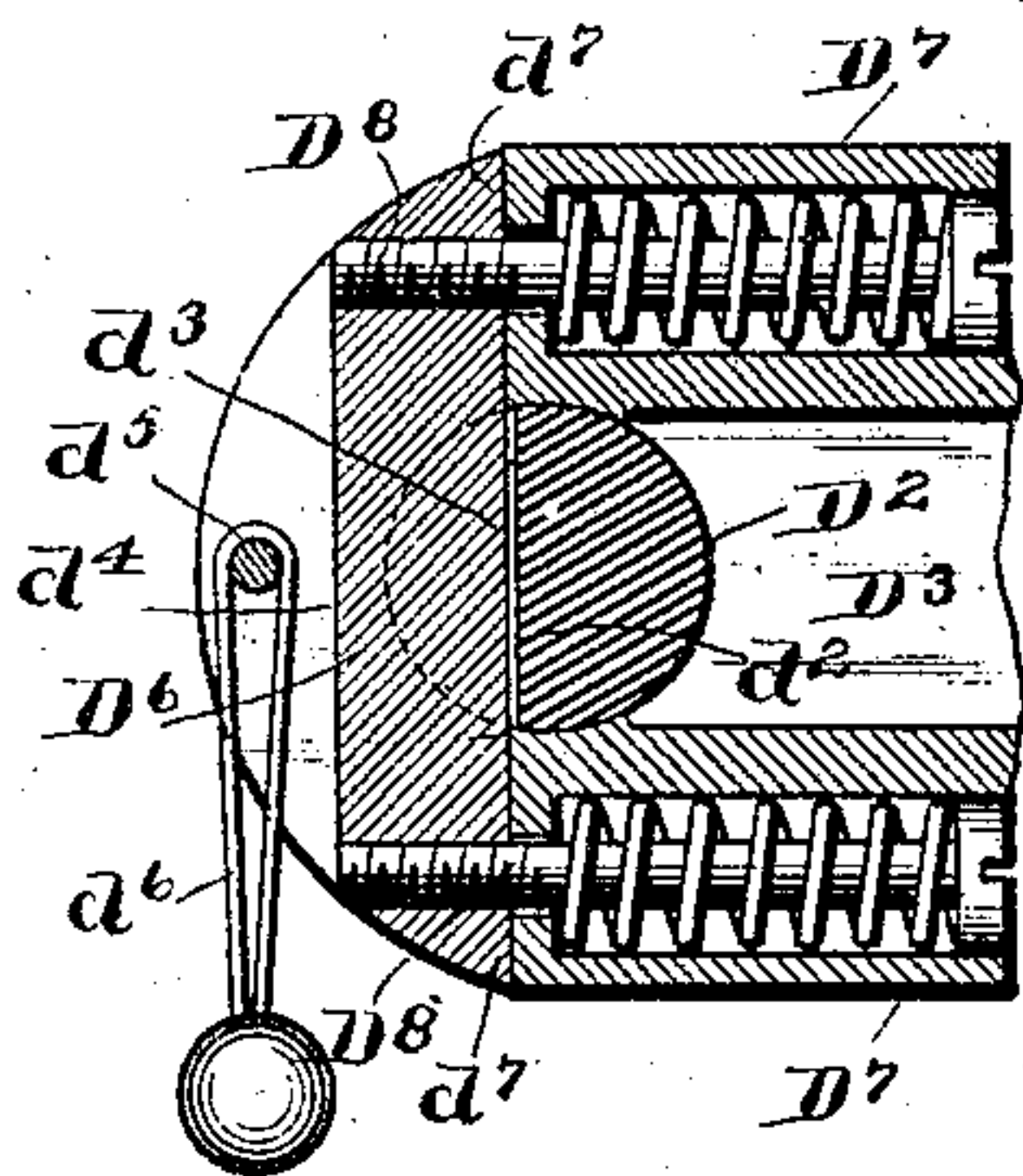


Fig 5

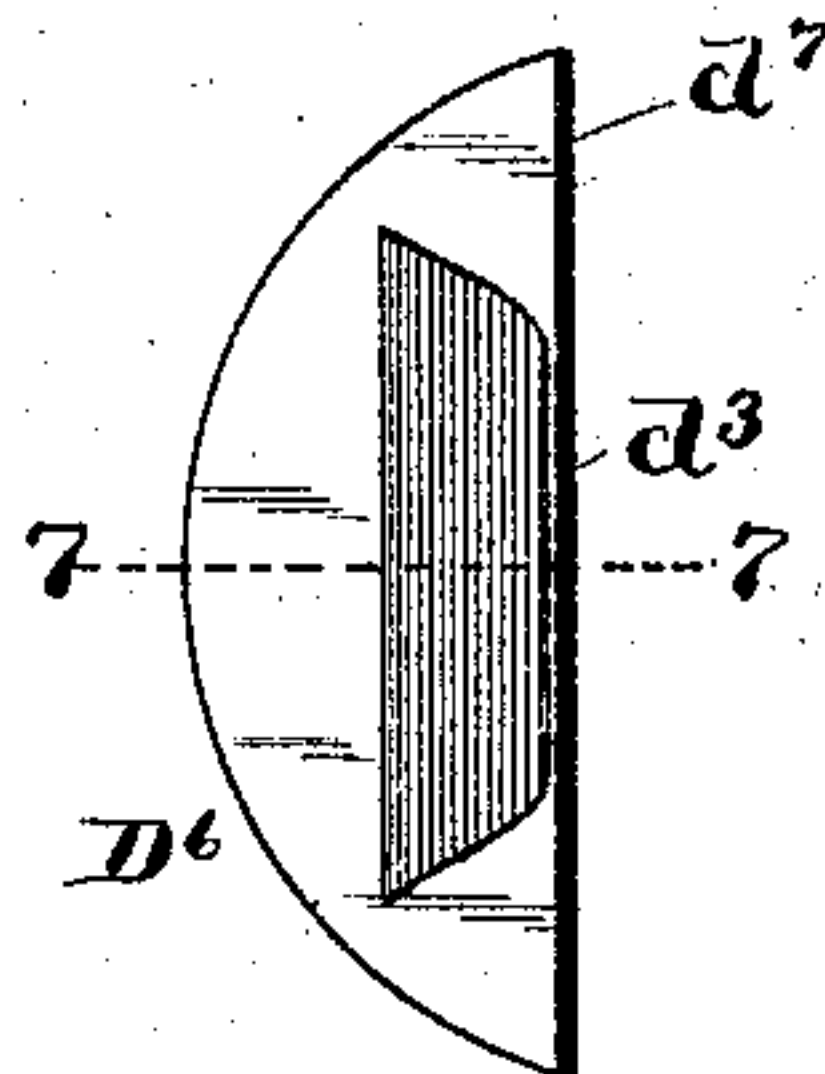


Fig 6

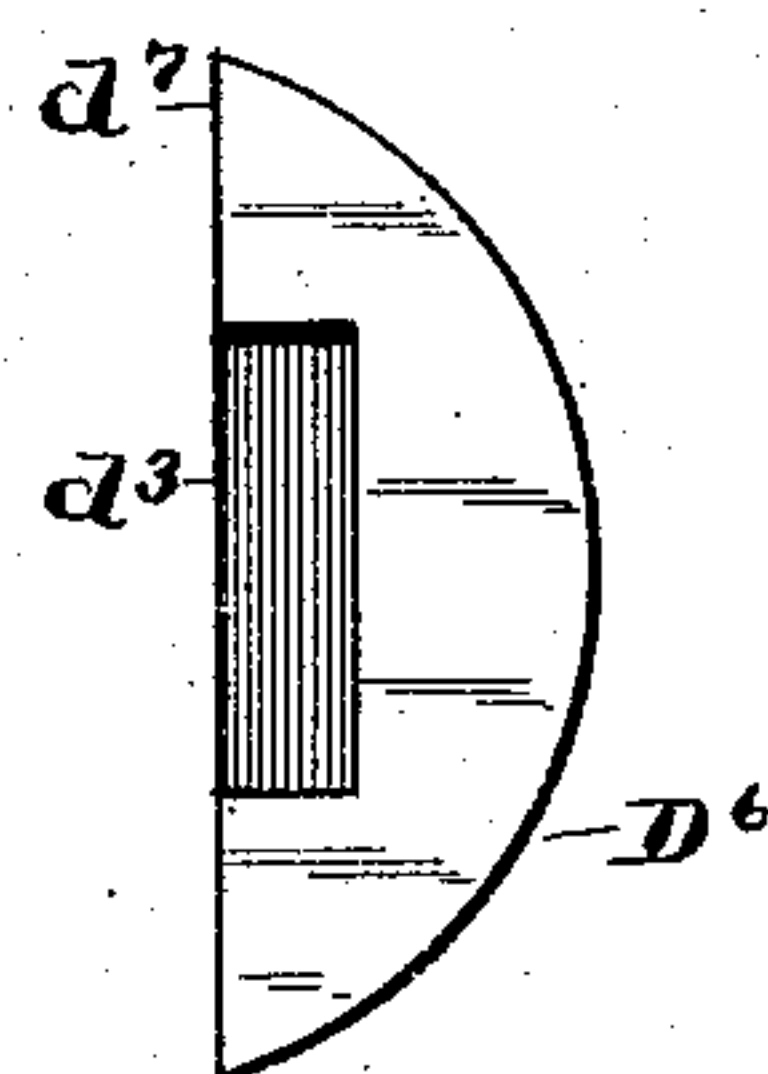
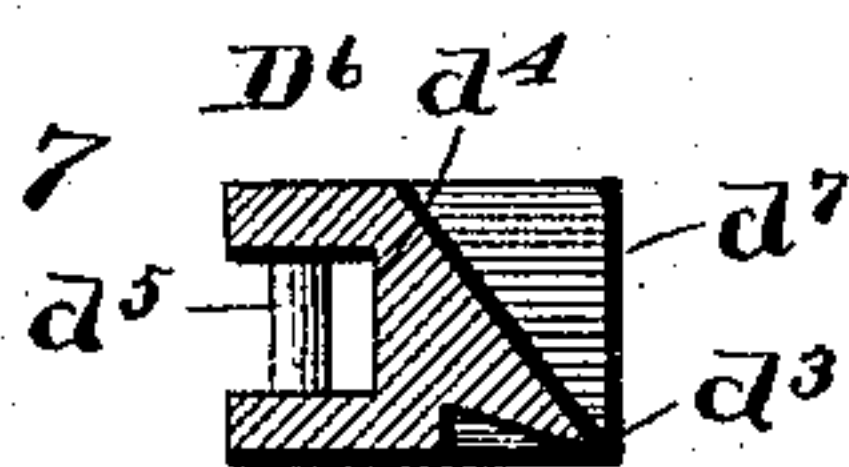


Fig 7



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UNITED STATES PATENT OFFICE.

ROBERT G. ARMSTRONG, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF
TO IVERT LARSEN, OF CHICAGO, ILLINOIS.

HAME.

SPECIFICATION forming part of Letters Patent No. 772,323, dated October 11, 1904.

Application filed April 7, 1902. Serial No. 101,609. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. ARMSTRONG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hames; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in adjustable hames for harness designed more especially for use in fire departments where it is desired to provide for the suspension of the hames and collar in connection with other parts of a set of harness over the tongue or shafts of a fire apparatus or vehicle in such manner that the hames and collar will be in an open position when suspended and the parts thereof are adapted to be quickly placed and locked upon the horse when the horse is to be attached to the fire apparatus or vehicle. Certain of the features of the construction shown may be employed in connection with harness for other uses.

The invention relates more specifically to a locking device for locking together the lower ends of such hames, the upper ends of which are hinged together.

Among the objects of the invention is to provide a locking device of this character which is strong and durable and which is simple in its construction and easy to operate.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a front elevation of a collar and a set of hames thereon, the latter being provided with my invention. Fig. 2 is a fragmentary bottom view of the lower connected ends of the hames. Fig. 3 is a fragmentary front view thereof with parts shown in section. Fig. 4 is a cross-section taken on line 4 4 of Fig. 2. Figs. 5 and 6 are obverse and reverse elevations of the latch-block constituting part of the coupling devices for the lower parts of the hame. Fig. 7 is a transverse section taken on line 7 7 of Fig. 5.

As shown in the drawings, A designates a collar, and B B the hames. Said collar is of that type that is separated at its lower or throat end and the side members of which are flexibly joined at the upper or wither end of the collar, whereby said side members may be separated for the purpose of fitting the collar to and removing the same from the horse. The lower or divided ends of the collar are held or locked in place by the hames and the locking or coupling connections thereof, as will hereinafter more fully appear. Said hames occupy the depression in the collar between the fore and after wales thereof and are secured to the collar in any suitable manner, as by means of loops A', connected with the collar and encircling the hames, near the upper ends thereof, as shown in Fig. 1. The hames are hinged at their upper ends to permit the hames and the collar to be opened and closed by means of a hinge-bolt b', extending through apertures b in the upper overlapping parts of the hames. Said overlapping parts are shown as provided with a plurality of apertures, whereby by the application of the bolt to different apertures the hames may be adjusted to collars of varying widths.

Referring now to the construction of my improved locking device, the same is made as follows:

One of the hames, the left hame as herein shown, is provided at its lower end with an irregularly-shaped cast-metal part D, which is brazed to the tubular part of the hame, and in said part is formed a horizontal sleeve D'. Said sleeve is open at both ends, and seated therein is a locking-bolt D², which extends at its inner end beyond said sleeve toward the adjacent hame and is adjustably fixed in the sleeve by means of a screw-bolt d, which extends transversely across the sleeve and has screw-threaded engagement therewith and is adapted to engage one of a plurality of transverse apertures d' in said bolt, as indicated in dotted lines in Fig. 3. The lower end of the other hame is provided with a cast-metal socket-piece D³, which is brazed to the tubular part of the hame and in which is formed a socket D⁴, which receives the adjacent end

of the locking-bolt D^2 . Said socket is provided with a flaring or bell-shaped mouth D^5 for properly guiding the locking-bolt into the socket, and the bolt is preferably tapered or
 5 conical on its advance end to facilitate its entrance to the socket. The bolt is provided on its under side with a downwardly-opening notch d^2 , which is adapted to receive when
 10 said bolt occupies the socket D^4 the projection d^3 of a spring-pressed latch-block D^6 , which occupies a transverse opening in the lower wall of the socket D^4 , as clearly shown in Fig. 3. The socket-piece D^3 is also provided at the front and rear sides thereof with
 15 cored-out chambers D^7 D^7 , as more clearly shown in Fig. 4, which receive guide-pins D^8 D^8 , attached to said latch-block, said pins extending through the adjacent end walls of the chambers and having screw-threaded engagement with the latch-block. Said guide-
 20 pins are provided on their ends remote from the latch with wide heads, which have guiding engagement with the walls of the chambers D^7 , and interposed between said heads and the end walls of the chambers are spiral expansively-acting springs, which hold the
 25 latch-block interlocked with the bolt D^2 and resist movement of the said block away from the locking-bolt. Said latch-block is provided in its lower surface with a transverse groove
 30 d^4 , across which extends a pin d^5 , to which is attached a pull-strap d^6 , by which the latch-block is retracted to release the locking-bolt. The latch-block is rounded on its under side
 35 to conform to the shape of the socket-piece D^3 and when in its locking position is flush with the outer surface of said socket-piece. Said latch-block is provided on its upper or inner face, at the ends thereof, with contact-surfaces
 40 d^7 , which engage opposing surfaces on the socket-piece to limit the inward movement of the said latch-block, and the latch-block is cut away between its ends on both sides thereof, as shown in Figs. 5, 6, and 7, to form the
 45 locking-detent d^8 , which engages the locking-notch of the bolt.

The construction described forms a very rigid locking connection or coupling between the lower ends of the hames when the same
 50 are in their closed position, and at the same time permits the same to be readily detached from each other and connected together. Moreover, the provision of the plurality of transverse openings d' in the locking-bolt
 55 makes it possible to readily adjust said hames and the collars associated therewith to horses having different-width shoulders, so that an accurate fit of the collar is insured. Other means may, however, be employed for effect-
 60 ing such adjustment of the lower ends of the hames and collar.

An advantage of the construction herein shown in the connection or coupling between the lower ends of the hames is that the spring-
 65 pressure given to the latch-block may be made

of considerable strength, so as to insure against accidental detachment of said parts, and the bearing-faces of the block and bolt may be made sufficiently wide to afford a rigid lateral connection between said parts, which
 70 act to prevent twisting of one hame with respect to the other.

It is obvious that changes may be made in several of the structural details described without departing from the spirit of my in-
 75 vention, and I do not wish to be limited to such details except as hereinafter made the subject of specific claims.

I claim as my invention—

1. The combination with a pair of hames for
 80 a horse-collar having a hinged connection at their upper ends, of means for connecting the lower ends of said hames comprising a socket in the lower end of one of the hames, a spring-pressed latch having a projection which enters
 85 said socket, a sleeve at the lower end of the other hame which is open at both ends, a locking-bolt in said sleeve and adapted to enter at one end said socket to engage the projection of the latch and adapted to project at its other
 90 end beyond the rear end of said sleeve, and means for adjusting the bolt longitudinally of said sleeve.

2. The combination with a pair of hames for a horse-collar having a hinged connection at
 95 their upper ends, of means for connecting the lower ends of said hames comprising a socket in the lower end of one of the hames, and a locking-bolt in the corresponding end of the other hame adapted to enter said socket and
 100 to engage a locking projection in said socket, said locking-bolt being provided with a plurality of transverse through-apertures, and a stationary holding-screw in said hame adapted to severally engage said apertures, where-
 105 by the bolt may be adjusted toward and away from said socket.

3. The combination with a pair of hames for a horse-collar having a hinged connection at
 110 their upper ends, of means for connecting the lower ends of said hames comprising a socket in the lower end of one of said hames, a sleeve in the lower end of the other hame in axial alinement with said socket, a bolt in said sleeve
 115 which projects therefrom for entrance to said socket and adapted to engage a locking projection in said socket, said bolt being provided with a plurality of through transverse apertures, and a holding-screw extending trans-
 120 versely through said sleeve and adapted to engage either one of said apertures of said locking-bolt.

4. The combination with a pair of hames for a horse-collar having a hinged connection at
 125 their upper ends, of means for connecting the lower ends of said hames comprising an integral socket-piece on the lower end of one of said hames provided with an inwardly-flaring socket, an integral sleeve on the lower end of the other hame which is open throughout its
 130

length and located with its central axis in alignment with axis of the opening of said socket, a locking-bolt in said sleeve and adapted to project at its rear end beyond the rear end of said sleeve and to enter at its other end said socket, a spring-pressed projection in said socket adapted to engage said bolt, and means for adjusting said bolt longitudinally of said sleeve.

10 5. The combination with a pair of hames for a horse-collar having a hinged connection at their upper ends, of means for connecting the lower ends of said hames comprising a socket in the lower end of one of said hames, a locking-bolt in the corresponding end of the other
15 hame adapted to enter said socket, and provided with a notch and a latch provided with a projection which enters said socket and which engages said notch in said locking-bolt,
20 said latch being made wider than the bolt and provided with shoulders on each side of the bolt which engage shoulders on the hame to arrest the inward movement of the latch.

6. The combination of a pair of hames for a

horse-collar having a hinged connection at 25 their upper ends, of means for connecting the lower ends of said hames comprising a socket in the lower end of one of said hames, a locking-bolt in the corresponding end of the other hame adapted to enter said socket, a latch occupying a transverse recess in the socket-piece and provided with a projection which extends into the socket for interlocking engagement with said bolt, guide-pins connected with said latch and occupying recesses or chambers in 35 said socket-piece, one at each side of said socket, and springs surrounding said guide-pins between heads or projections thereon and the ends of said chambers for holding the latch interlocked with said bolt. 40

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 1st day of April, A. D. 1902.

ROBERT G. ARMSTRONG.

Witnesses:

TAYLOR E. BROWN,
IVERT LARSEN.