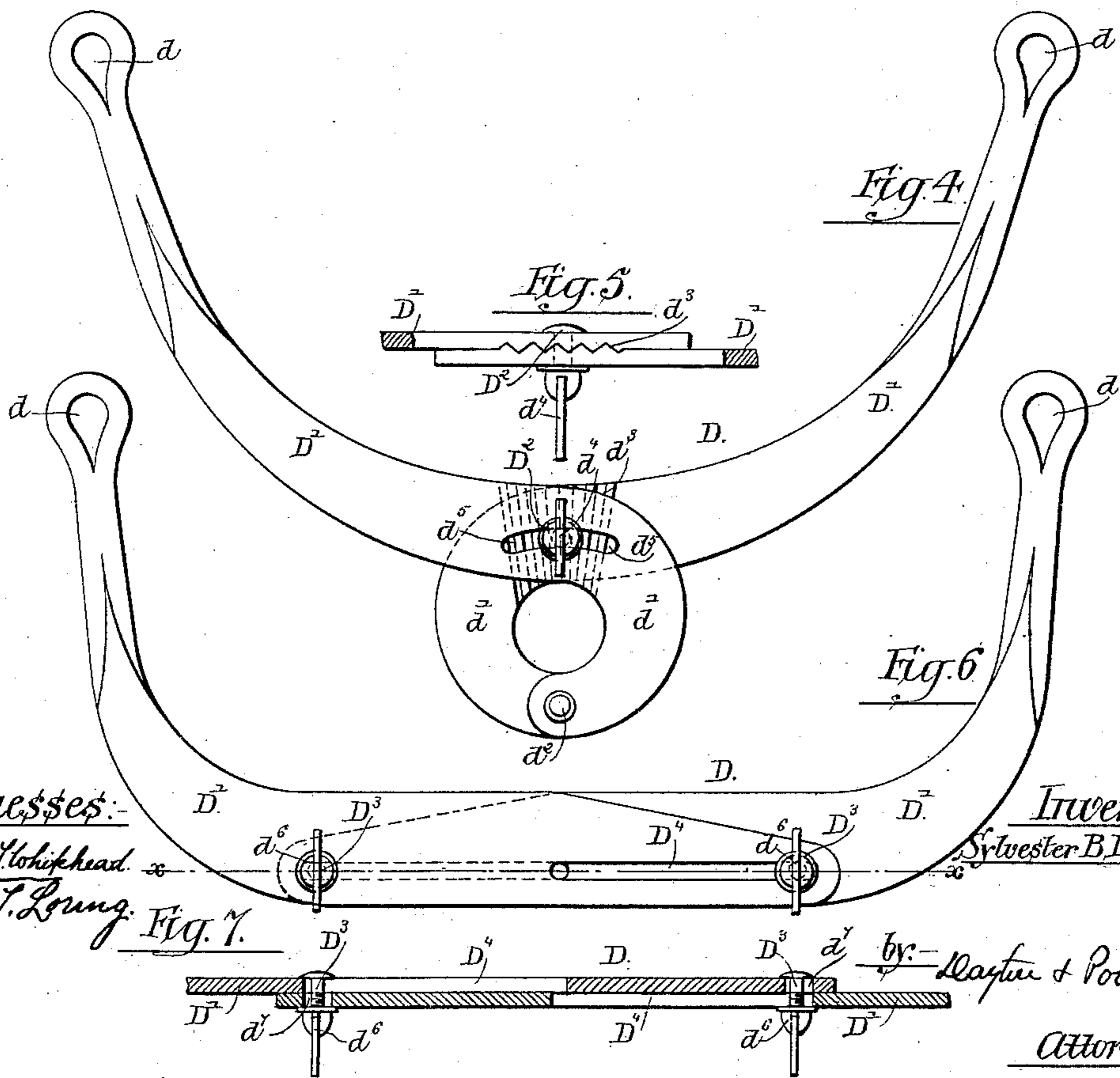
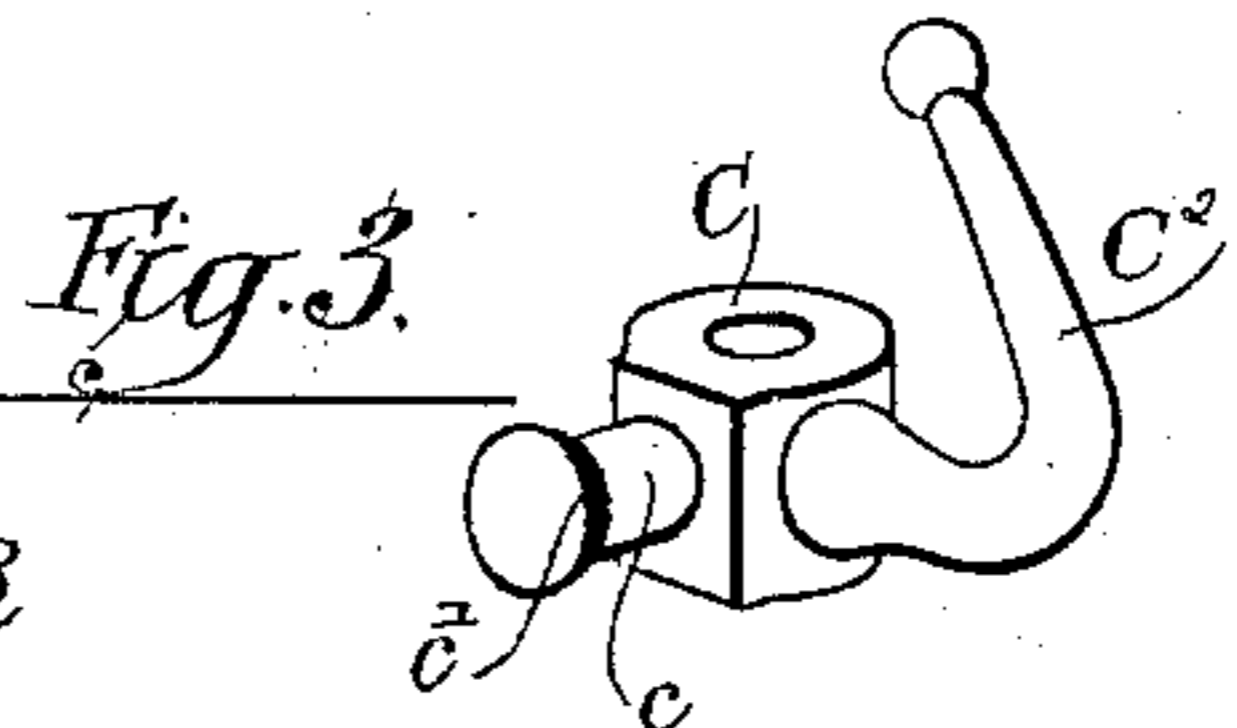
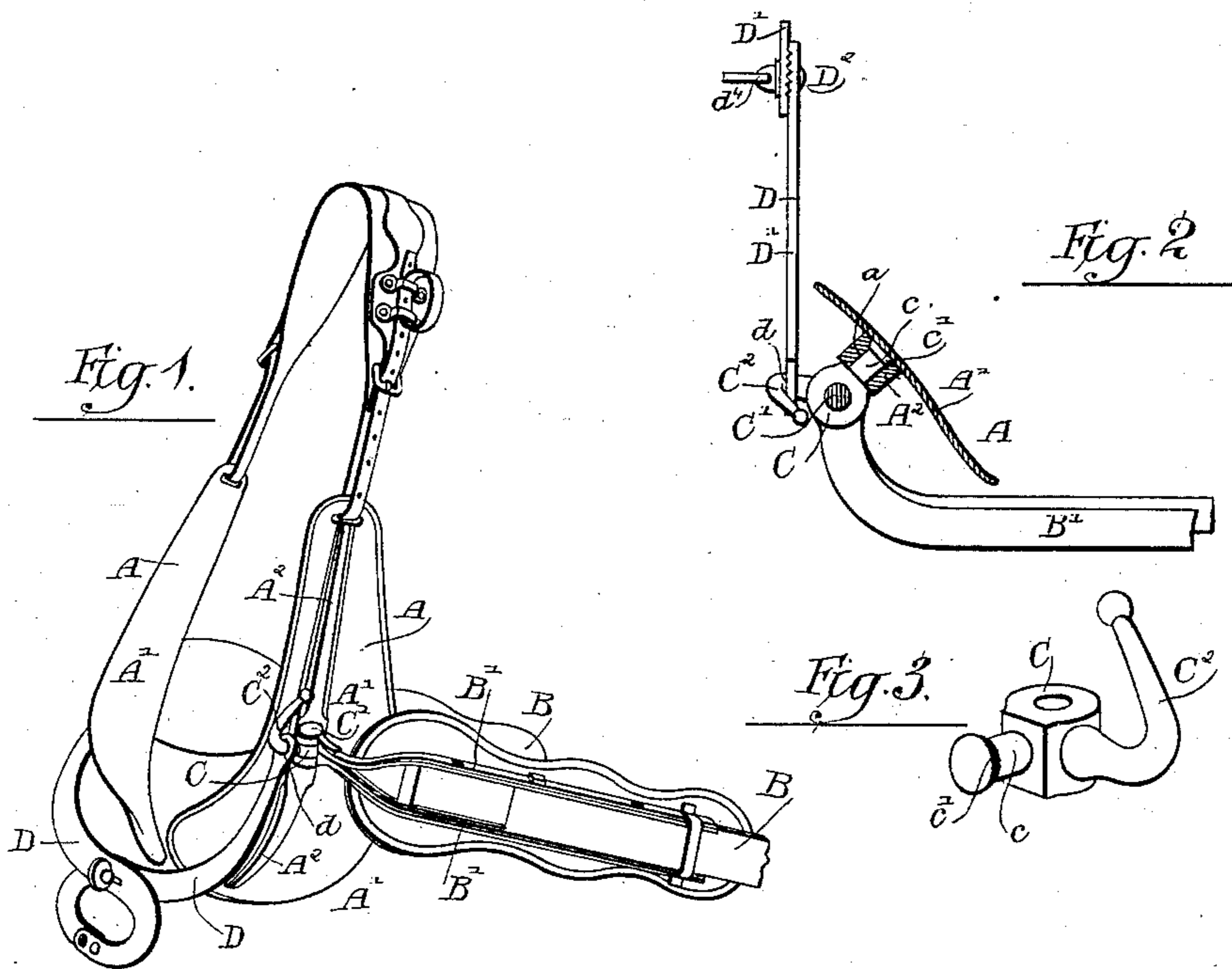


(No Model.)

S. B. DAVIS.
HORSE COLLAR.

No. 359,139.

Patented Mar. 8, 1887.



Witnesses:

Louis H. Whithead

Chas. T. Long

Fig. 7.

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UNITED STATES PATENT OFFICE.

SYLVESTER B. DAVIS, OF EUREKA, CALIFORNIA.

HORSE-COLLAR.

SPECIFICATION forming part of Letters Patent No. 359,139, dated March 8, 1887.

Application filed November 1, 1886. Serial No. 217,655. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER B. DAVIS, of Eureka, in the county of Humboldt and State of California, have invented certain new and useful Improvements in Horse-Collars; 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 a novel horse-collar of that kind having two independently-movable collar-pads connected with each other by a rigid yoke reaching from one side to the other of the horse's neck, so as to hold the pads from spreading apart, and in which hame-tugs for attaching the traces to the collar are pivotally connected with the ends of the yokes and with the pads.

The object of the invention is to improve the construction of horse-collars of the kind referred to in several particulars, as will hereinafter appear; and it consists in the matters hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a perspective view of a horse-collar embracing the several features of construction constituting my invention. Fig. 2 is a horizontal section of one of the collar-pads, taken through the pivotal connection by which the hame-tug is connected therewith. Fig. 3 is a perspective view of a swiveled block by which the pivotal connection between the collar-pad and tug is made. Fig. 4 is a face view of the adjustable yoke shown in Figs. 1 and 2. Fig. 5 is a detail side view of the joint connecting the two parts or arms composing the yoke shown in Fig. 4. Fig. 6 shows in side view a yoke differing somewhat from the one shown in Fig. 4. Fig. 7 is a sectional view of the same, taken upon line *x x* of Fig. 6.

In the said drawings, A A are the collar-pads, which are suitably shaped upon their inner surfaces to fit the shoulders of a horse.

B B are the traces, and B' B' tugs, by which the traces are connected with the collar-pads.

As far as the other features of the invention are concerned, the pads A A may be constructed in any desired or preferred manner,

a preferable form thereof being herein illustrated, in which they consist of thin metal plates A' A', to the outer surfaces of each of which is attached by rivets or screws a vertically-arranged bar, A², employed for the purpose of giving the necessary stiffness to the plates A' A', and to afford a convenient means of connecting the hame-tugs and other parts therewith. As a preferred means of connecting the said tugs B' with the collar-pads, a swiveled connection between the parts is employed, consisting of a block, C, provided with a shank, *c*, which passes through and is adapted to rotate in an aperture, *a*, in the bar A² of the collar. In constructing the said block C it will preferably be connected with the bar A² by inserting the shank *c* through the bearing-aperture *a*, and then upsetting a head, *c'*, upon the end of the said shank before the plate A' is attached to the inner surface of the said bar A². The tug B' is connected with the block C by means of a pivot-pin, C', inserted vertically through the parts, the end of the tug being, as herein shown, forked to embrace the said block C. The joint between the tugs and the collar-pads, formed as described, obviously allows said pads to rotate freely in a horizontal plane, and also to rotate about an axis at right angles with their inner and outer flat surfaces, thus allowing the pads to accurately adjust themselves to the shoulders of the horse during all movements of the latter. The ends of the tugs B' adjacent to the collar-pads are bent or curved inwardly, as more clearly shown in Fig. 2, the employment of the vertical pivot C' obviously preventing the rotation of the tug in such manner as to allow the outer part of the tug to fall, so that the latter is constantly sustained in a horizontal position, with the traces free from the shoulders of the horse, as will be readily understood by an inspection of the drawings, Figs. 1 and 2.

D is the metal yoke connecting the pads A A, to hold the latter from spreading apart and in proper position against the horse's shoulders. The said yoke D is connected at its ends by universal joints with the collar-pads, so that it may depend or swing freely beneath the horse's neck, and will hold the collar-pads from spreading apart, while at the same time allowing perfect freedom of movement therein. Said yoke is preferably made adjustable in such

manner that the distance between its ends may be changed, thereby enabling the distance apart at which the pads are held to be varied to fit the shoulders of the horse. When the particular form of joints between the tugs and collar-pads illustrated in Figs. 1, 2, and 3, and above described, is used, the blocks C C may be conveniently provided with upwardly-turned hooks C² C², adapted to engage eyes *d* *d*, formed in the ends of the yoke D, this construction obviously affording a universal joint or connection between the parts, allowing a free movement of one pad with reference to the other pad, while at the same time permitting the yoke to be easily disconnected from the pads, when desired.

In one convenient form of the yoke D, (shown in Figs. 1, 2, 4, and 5,) said yoke consists of two bars, D' D', arranged to overlap at the middle of the yoke, and provided at their adjacent ends with downwardly-extending arms *d'* *d'*, through the ends of which is inserted a pivot-pin, *d*², by which the said bars D' D' are connected, the bars being held in a desired relative position by a clamping-screw or other equivalent device applied to the overlapping parts of the said bars D' D', to hold the outer ends of the latter rigidly in a desired position. As herein shown, the contact-faces of the arms are corrugated or serrated, as indicated at *d*³, Figs. 4 and 5, and a bolt, D³, provided with a thumb-nut, *d*⁴, is employed for clamping the corrugated surfaces together, one of the bars D' being provided with a slot, *d*⁵, concentric with the pivot *d*², to allow the required movement of the outer ends of the bars in adjusting them.

Another construction in the yoke whereby the same general result is obtained is illustrated in Figs. 6 and 7. In this instance the two bars D' D', composing the yoke, are provided with straight overlapping parts, and are united by means of bolts D³ D³, which are provided with thumb-nuts *d*⁶ *d*⁶, one of said bolts being inserted through an aperture, *d*⁷, in the end portion of one of the bars D', and through a slot, D⁴, in the opposing part of the other bar, this construction obviously enabling the outer ends of the bars to be placed and held at a greater or less distance apart in a familiar manner.

In a prior patent, No. 331,871, granted to me on the 8th day of December, 1885, is shown and described a horse-collar embracing two independent collar-pads and connected hame-irons, forming a metal yoke for holding the pads at a desired distance apart, said yoke being extended over the top of the horse's neck. This construction is objectionable, for the reason that the arms of the yoke thus made are necessarily of considerable length, so that in order to obtain the requisite strength therein they must be made of considerable weight. A yoke of the kind shown in said patent, furthermore, requires to be connected with the collar-pads in such manner as to sustain it ver-

tically while in use, thereby interfering to some extent with the free movement of the collar-pads with reference to each other and to the yoke. The yoke arranged to hang beneath the horse's neck, as herein shown, has the advantage of being much shorter than the yoke shown in said patent, so that it may be made much lighter, while at the same time of the necessary strength.

A main feature of my invention is embodied in a construction in which a depending rigid yoke is employed in connection with two independent collar-pads and hame-tugs connected with the collar-pads, and in which the tugs and the end of the yoke are pivotally connected with each other and with the pads, thereby allowing entire freedom of motion in the pads both with reference to each other and with reference to the tugs and the yoke.

I am aware that a rigid yoke flexibly connected with two collar-pads at the front edges of the latter has been heretofore employed in connection with traces attached directly to the rear margins of said pads, so that each pad is held at two separate points, or both at its front and rear edges. The construction employed by me, in which a rigid yoke is employed in a device embracing hame-tugs, to which both the yoke and the pads are attached by universal joints, has the obvious advantage of sustaining each pad at a single point or center of motion, with the result of allowing perfect freedom of motion therein. A horse-collar embracing the said pads, tugs, and yoke, connected in the manner described, is, therefore, herein broadly claimed, without restriction to the particular details of construction in the joints and other parts herein shown.

The particular form of joint between the tugs and collar-pads illustrated, inasmuch as it affords free movement of the pads while holding the tugs vertical, is, however, also herein claimed as part of my invention, together with other novel details of construction in the collar illustrated.

I claim as my invention—

1. The combination, with two independent collar-pads, of tugs connected with the pads and a depending metal yoke, said tugs and the ends of the yoke being pivotally connected with each other and with the pads, substantially as described.

2. The combination, with two independent collar-pads, of a depending yoke connected at its ends with the pads by universal joints, said yoke consisting of two overlapping bars, D' D', provided with arms *d'* *d'*, and pivotally connected at the ends of said arms, and means for clamping the bars together, substantially as described.

3. The combination, with two independent collar-pads, a rigid yoke joining the pads, and tugs connected with the pads, of joints for connecting the tugs with the pads, consisting of blocks pivotally supported upon the pads, with their axes of rotation at right angles

with the planes of the pads, said blocks being connected with the tugs by vertical pivots, substantially as described.

4. The combination, with two independent
5 collar-pads, each consisting of a metal bar, A², provided with a bearing-aperture and a plate secured to the inner face of the bar, of tugs for joining the traces with the pads and blocks connecting the same-tugs with the pads, said
10 blocks having shanks inserted and adapted to rotate in the said bearing-aperture, and being connected with the tugs by vertical pivots, substantially as described.

5. The combination, with two independent

collar-pads, of a depending yoke for connect- 15
ing the pads, provided with apertures or eyes at its ends, tugs for connecting the traces with the pads, and blocks pivotally connected with the pads and tugs, said blocks being provided with hooks for engaging the ends of the yoke, 20
substantially as described.

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

SYLVESTER B. DAVIS.

Witnesses:

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CHARLES T. LORING.