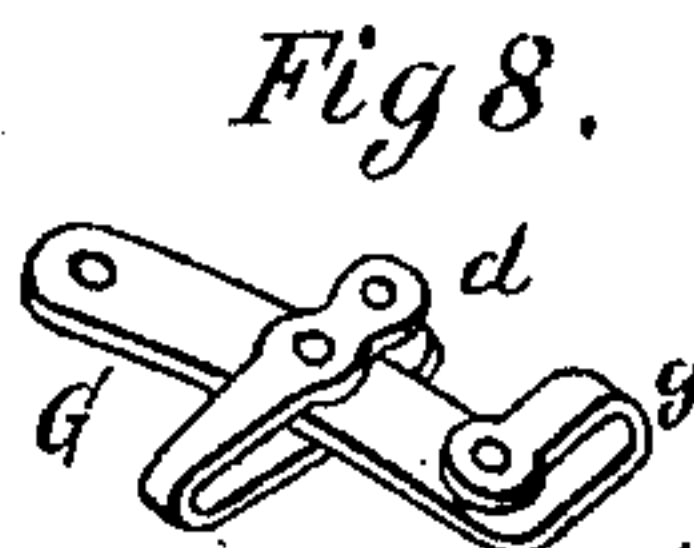
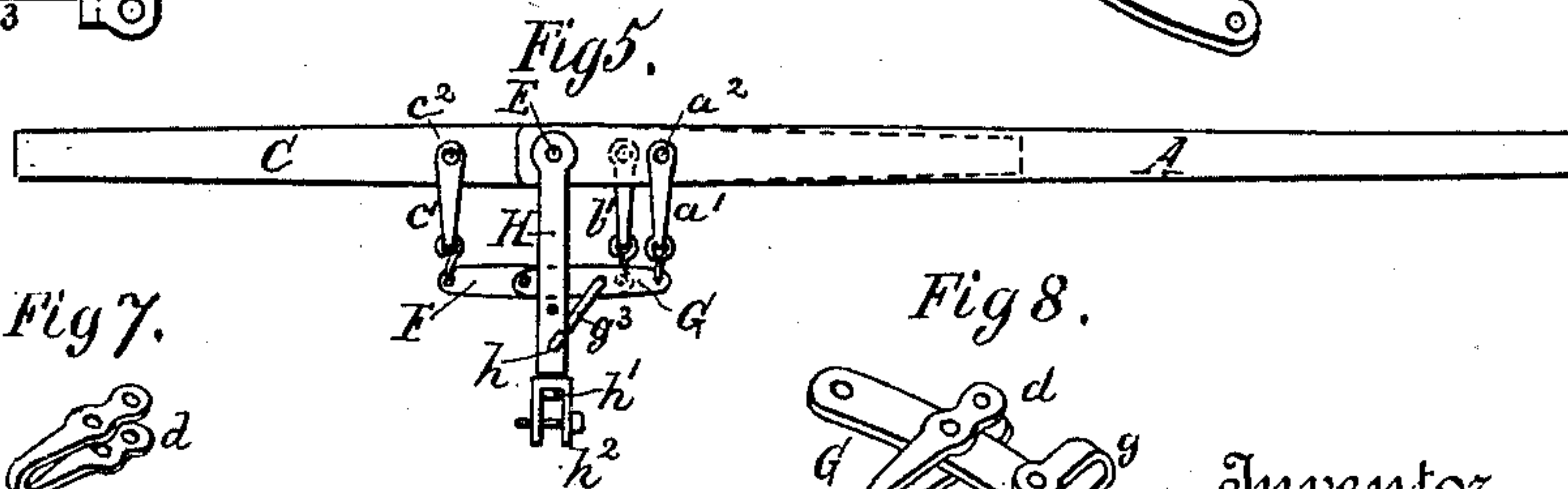
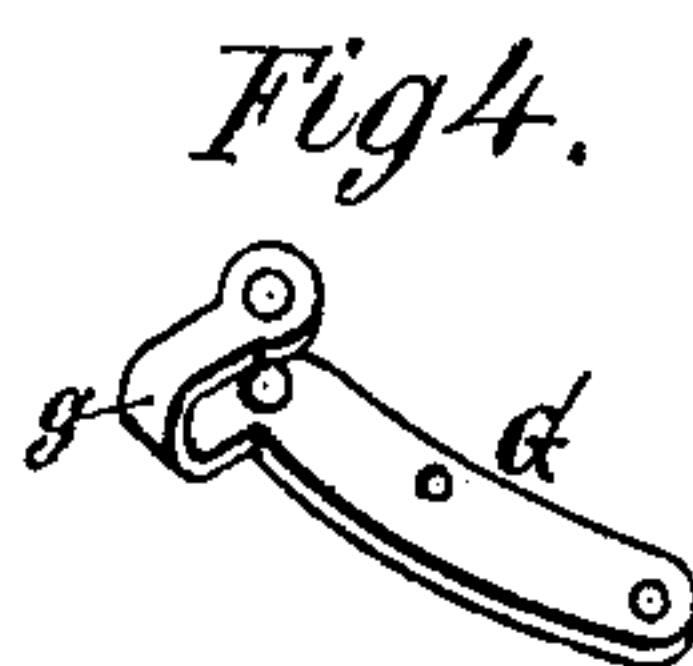
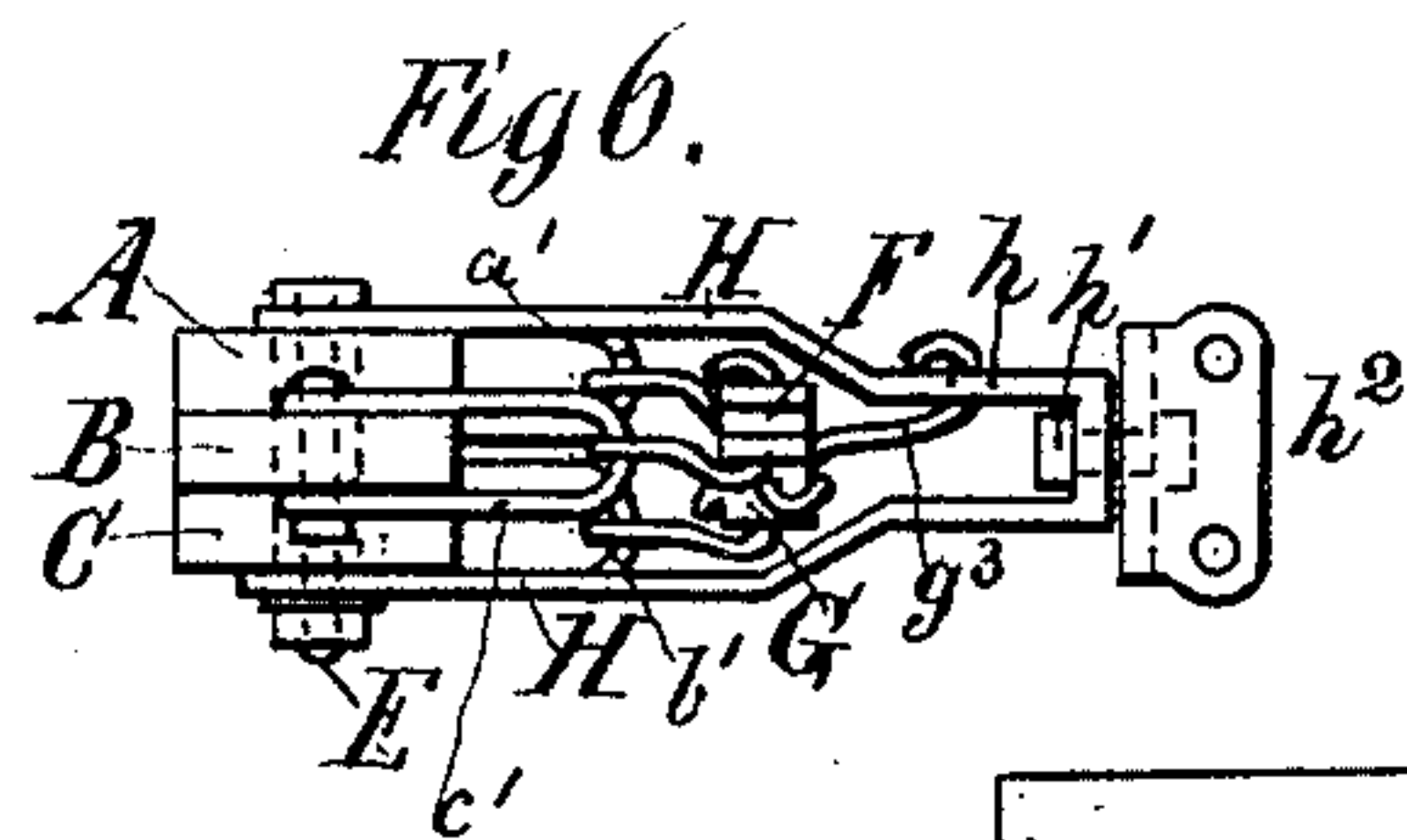
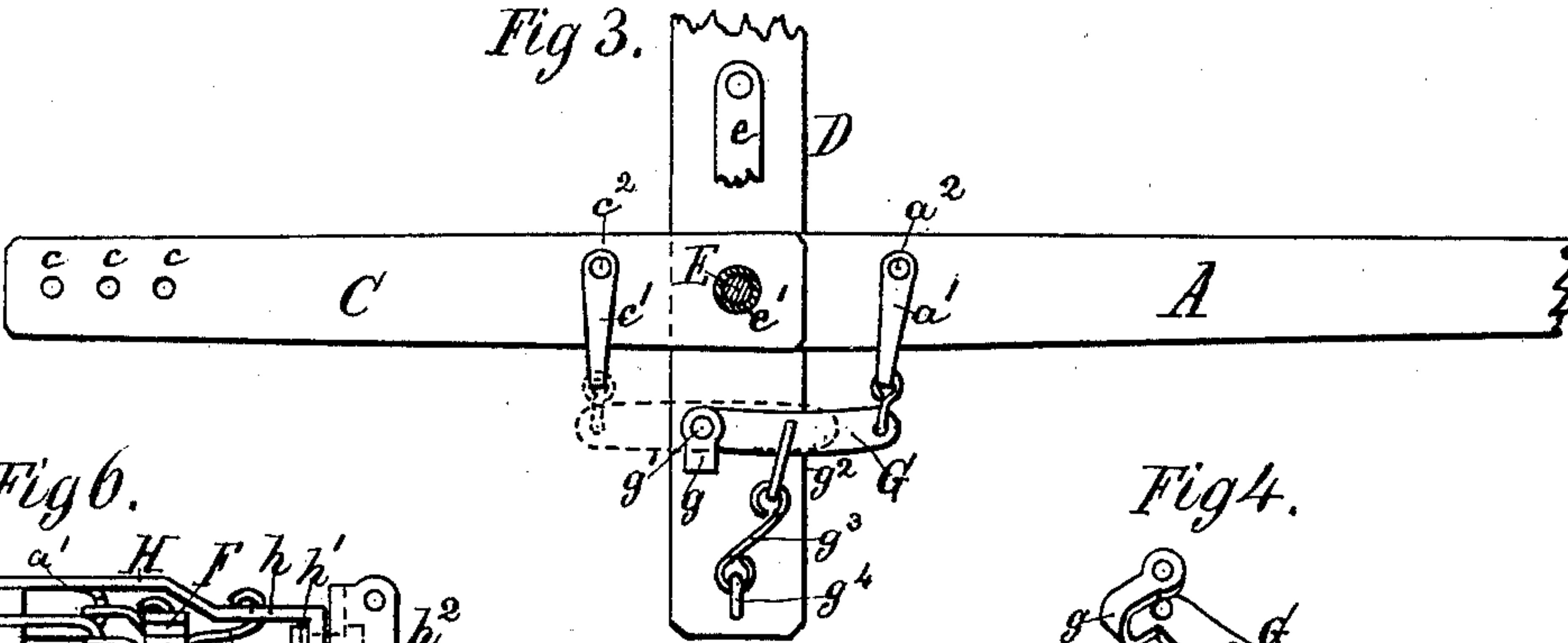
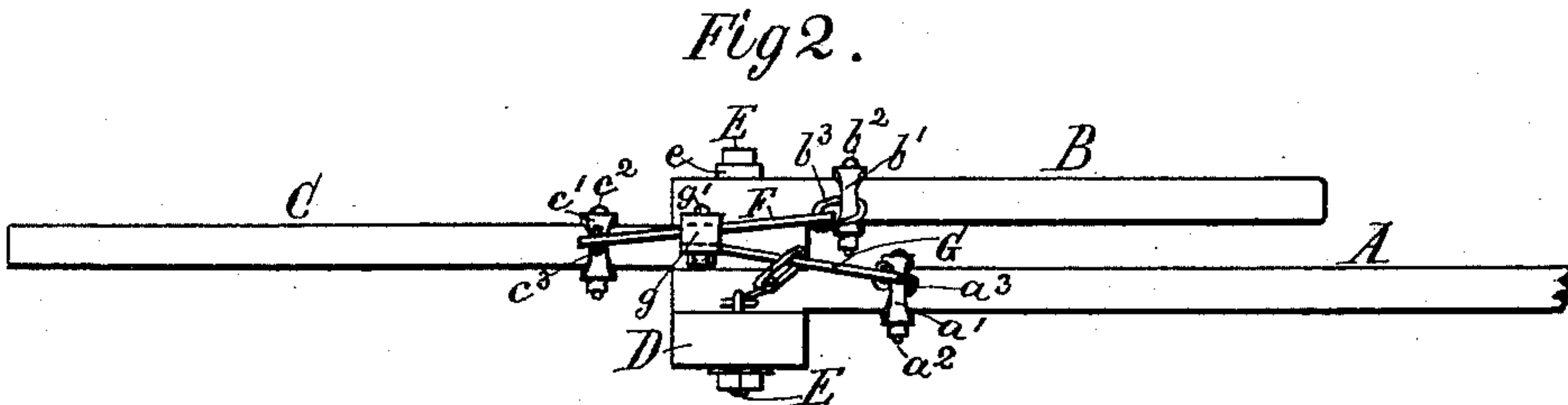
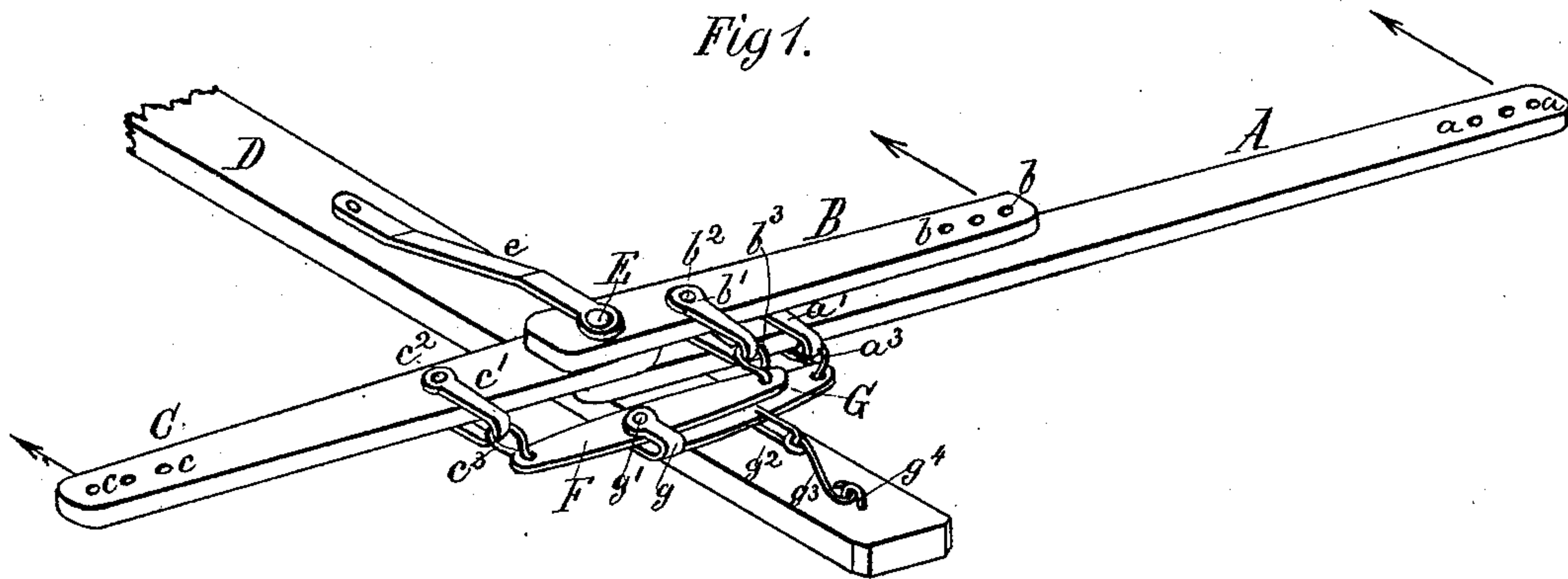


(No Model.)


A. SELLERS.
DRAFT EQUALIZER.

No. 358,891.

Patented Mar. 8, 1887.



Witnesses
J. P. Theo. Lang,
Robt. S. Fenwick,


 Inventor
Albert Sellers
 by his attys.
 By his Attorneys *Mason Fenwick Lawrence*

UNITED STATES PATENT OFFICE.

ALBERT SELLERS, OF LITTLETON, ILLINOIS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 358,891, dated March 8, 1887.

Application filed September 4, 1886. Serial No. 212,724. (No model.)

To all whom it may concern:

Be it known that I, ALBERT SELLERS, a citizen of the United States, residing at Littleton, in the county of Schuyler and State of Illinois, have invented certain new and useful Improvements in Draft-Equalizers; 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.

My invention relates to draft-equalizers for three horses; and it consists in novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims, the same rendering such equalizers more efficient than heretofore, and not interfering with their being changed from right to left hand equalizers.

In the accompanying drawings, Figure 1 is a perspective view of my invention as applied to a vehicle-tongue. Fig. 2 is a rear view of the same. Fig. 3 is a top view of the same, the top lever being removed and the hammer-pin of the tongue being sectioned. Fig. 4 is a perspective view of one of the equalizing-levers. Fig. 5 is a top view of a modified construction of my invention as adapted for tongueless implements. Fig. 6 is an enlarged elevation showing the ends of the levers and the sides of the other parts. Fig. 7 is a modified construction of my clevis, and Fig. 8 a mode of reversing the last lever.

The letter A in the drawings, Figs. 1, 2, and 3, represents a long draft-lever bar; B and C, short draft-lever bars, all pivoted to a tongue, D. The end portions of these bars are provided with holes a b c , respectively, by means of which the single-trees for the horses are attached to said lever-bars.

The lever-bars A B C are attached to the tongue D by means of a hammer-pin, E, passed through a hammer-strap, e , suitably fastened to the tongue.

In order to facilitate the removal of the draft-lever bars from the hammer-pin E when such change in their arrangement necessitates the same, I provide the hammer-pin with a tube-bearing, e' , by which the lever-bars are held together when removed from the tongue.

After the lever-bars are removed from this tubular bearing and changed as desired, they are again placed upon it and bodily read-

justed to their position between the hammer-strap and tongue and confined, as before, by means of the hammer-pin. Thus time is saved and inconvenience avoided.

The lever-bars A B C are provided, respectively, with a clevis, as a' b' c' , said clevises being fastened by means of bolts a^2 b^2 c^2 to their respective lever-bars, as shown. Each clevis is provided with a link, as a^3 , b^3 , and c^3 . The links a^3 and b^3 are attached to the ends of a lever, F, and the link c^3 is attached by one end to the end of a lever, G, while its other end is formed with a clevis, g , to which the lever F is pivoted by means of a bolt, g' .

The lever G is pivoted to a link, g^2 , as shown, which link is provided with a hook, g^3 , which latter is hooked to the tongue of the vehicle in a suitable manner, a staple, g^4 , as shown, serving the purpose.

In manufacturing my equalizer the distances of the pins or bolts a^2 b^2 c^2 from the hammer-pin E are made in proportion with the lengths of the respective lever-bars A B C, and the fulcrums of the levers F and G are in the centers of said levers, by which construction the draft-leverage is, as nearly as possible, equally divided between the three horses, and each horse is constrained to pull with, as nearly as possible, the same force, and thus keep the three lever-bars in line.

While the two horses at the tongue generally keep abreast, relatively—and seldom is it that one or the other starts ahead or lags behind—it is different with the third horse, which works without a holdback. By equalizing the draft force of the third horse with that of the two other horses at the tongue the control of the equalization is thrown upon the two horses harnessed to the short lever-bars, which are coupled to the equalizing-lever F, the long lever-bar being coupled to the lever G, which is pivoted to the fulcrum g' of lever F.

This equalizer can be reversed bodily by taking out the hammer-pin and withdrawing the equalizer from the hammer-strap and turning it over from right to left, then replacing it in the hammer-strap and securing it by the hammer-pin.

By this mode of reversing the equalizer the lever G would occupy a position above the lever F. I prefer, however, to detach the lever-bars from the tubular bearing and from

their respective clevises, and so replace them upon the tubular bearing that they shall occupy positions just the reverse laterally of their former positions, but arranged in the same vertical order; and this done, the lever-bars are reattached to their respective clevises, and the so-reversed parts are refastened to the tongue and hammer-strap by means of the hammer-pin, as before stated.

10 If my equalizer is to be used for plows or other implements which have no tongues, a double hammer-strap, H, is attached to both ends of the hammer-pin, as seen in Figs. 5 and 6, between which strap the lever-bars are secured in the above-described way, the hook g^3 being secured in a suitable hole, h , of the said strap. This strap is provided with a clevis, h^2 , connected to it by means of a swivel, h' , said clevis being provided with holes for pins 20 and suitably shaped for attachment to a plow-beam. By this construction the plow can be turned as desired without moving the equalizer out of its horizontal position.

In lieu of the link g^2 , I propose as an equivalent therefor a clevis, d , which can easily be detached from one position and reattached in an opposite position on the lever G, as seen in Fig. 8, whenever it is desired to reverse the lever G from a right to a left hand 30 lever. The clevises, as shown in Fig. 7, may be provided with two sets of bolt-holes, which may be alternately used to suit different circumstances, and with these sets of bolt-holes exchangeable links g^3 , of different lengths to

suit the change from one bolt-hole to another, 35 will be used, in order to keep the different parts of the equalizing mechanism in proper relative working condition. When this modification is adopted, the equalizer can be reversed from a right to a left hand equalizer by 40 first removing the clevises $a' b' c'$ from the levers A B C, and then detaching in a united condition the three levers A B C from the tongue and turning them end for end, and then removing clevis from lever G and turning le- 45 vers F and G bodily end for end and securing the whole as before.

What I claim as my invention is—

1. In a draft-equalizer, the combination of draft-pin E, hammer-strap e , lever-bars A B 50 C, levers F and G, suitable connections, and hook g^3 , substantially as and for the purpose described.

2. The tongue D, having hammer-strap e and hammer-pin E, in combination with the 55 lever-bars A B C and tubular bearing e' , substantially as and for the purpose described.

3. The lever-bars A B C, having clevises $a' b' c'$, which are removable, in combination with the equalizing-levers F G, having links $a^3 b^3$ 60 $c^3 g^2$ and hook g^3 .

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT SELLERS.

Witnesses:

DAVID W. WELLS,
AUG. F. MILLER.