

(No Model.)

J. GLUECKSMANN.

SPRING SHOE.

No. 337,146.

Patented Mar. 2, 1886.

Fig. 1.

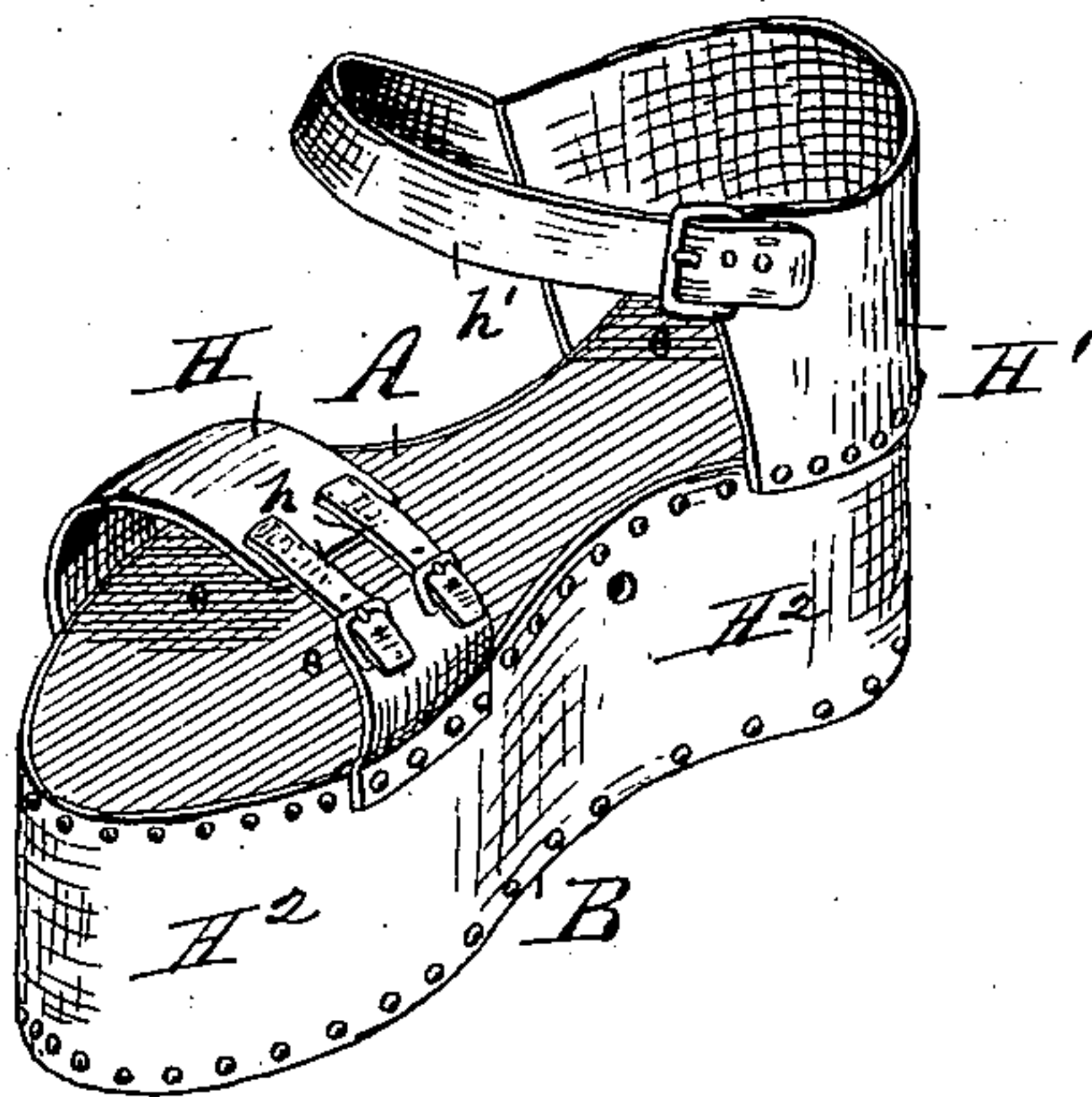


Fig. 2.

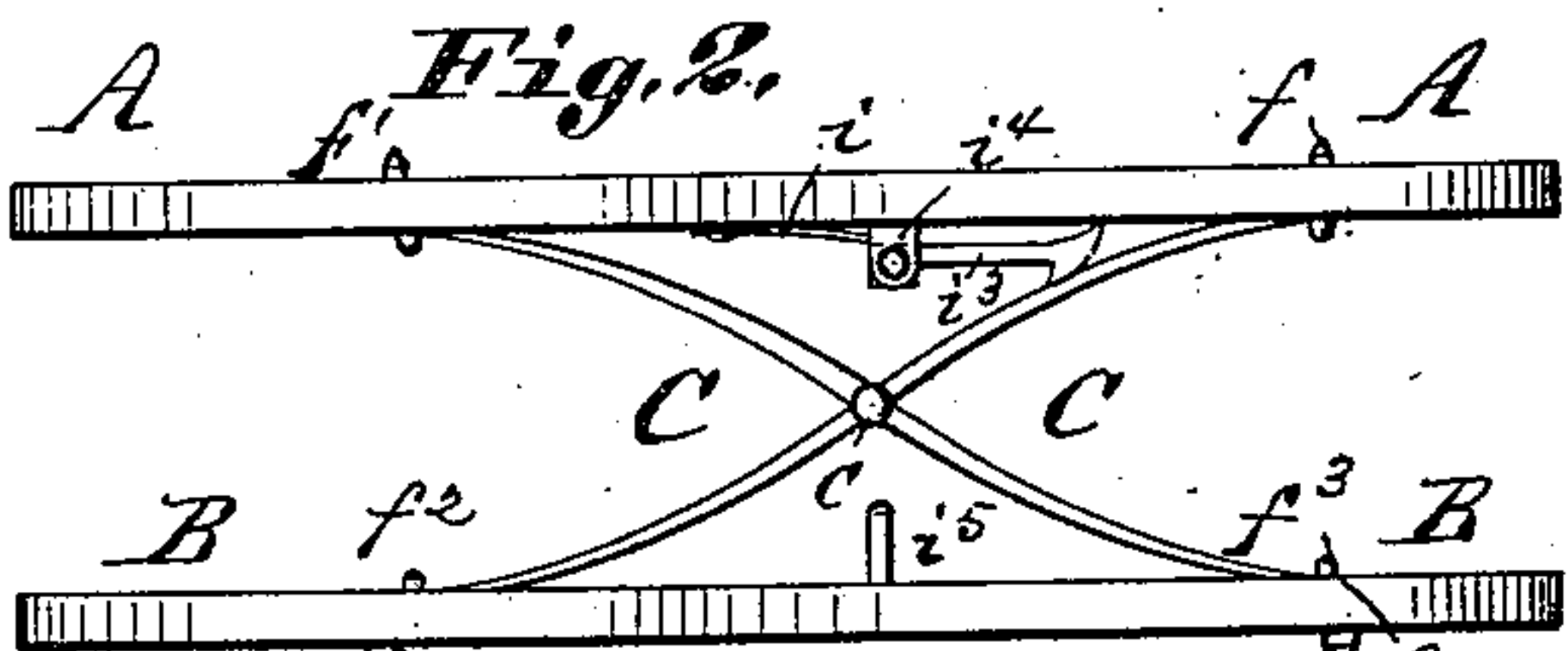


Fig. 3.

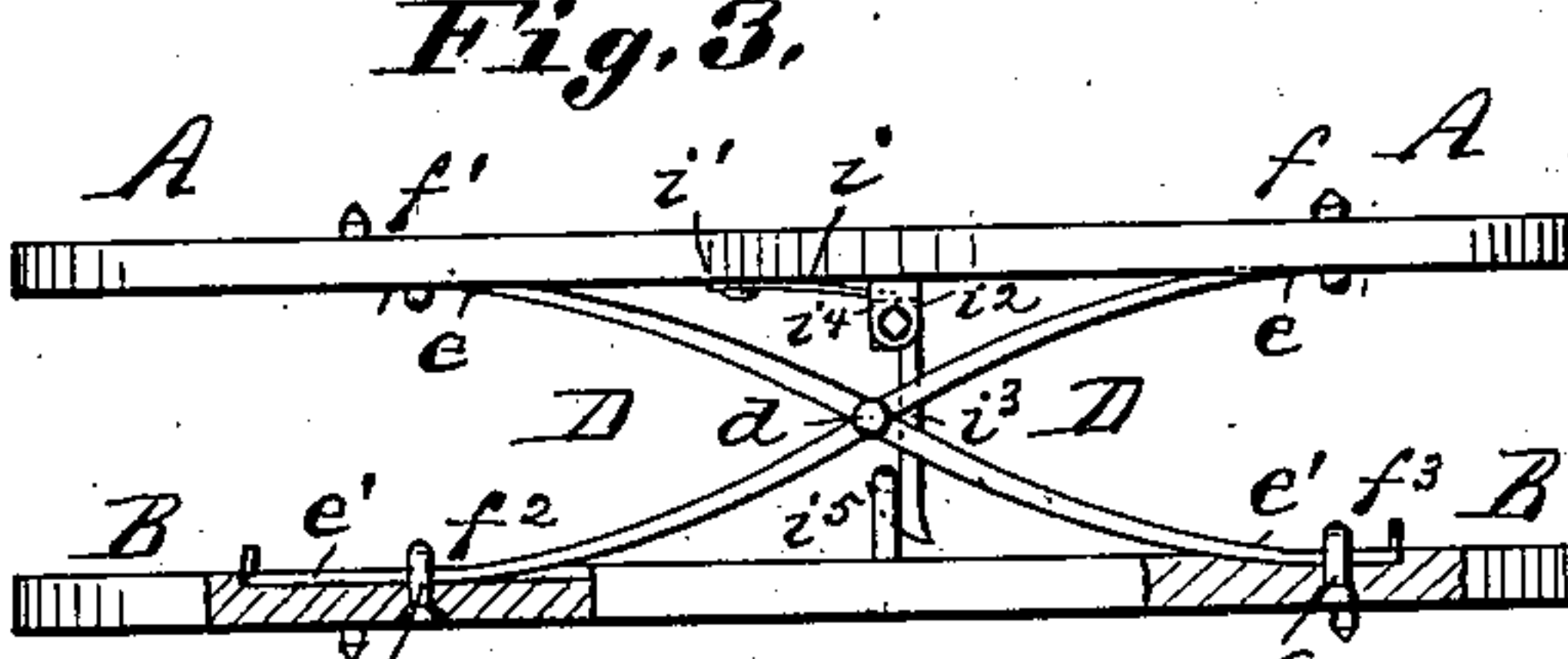


Fig. 4.

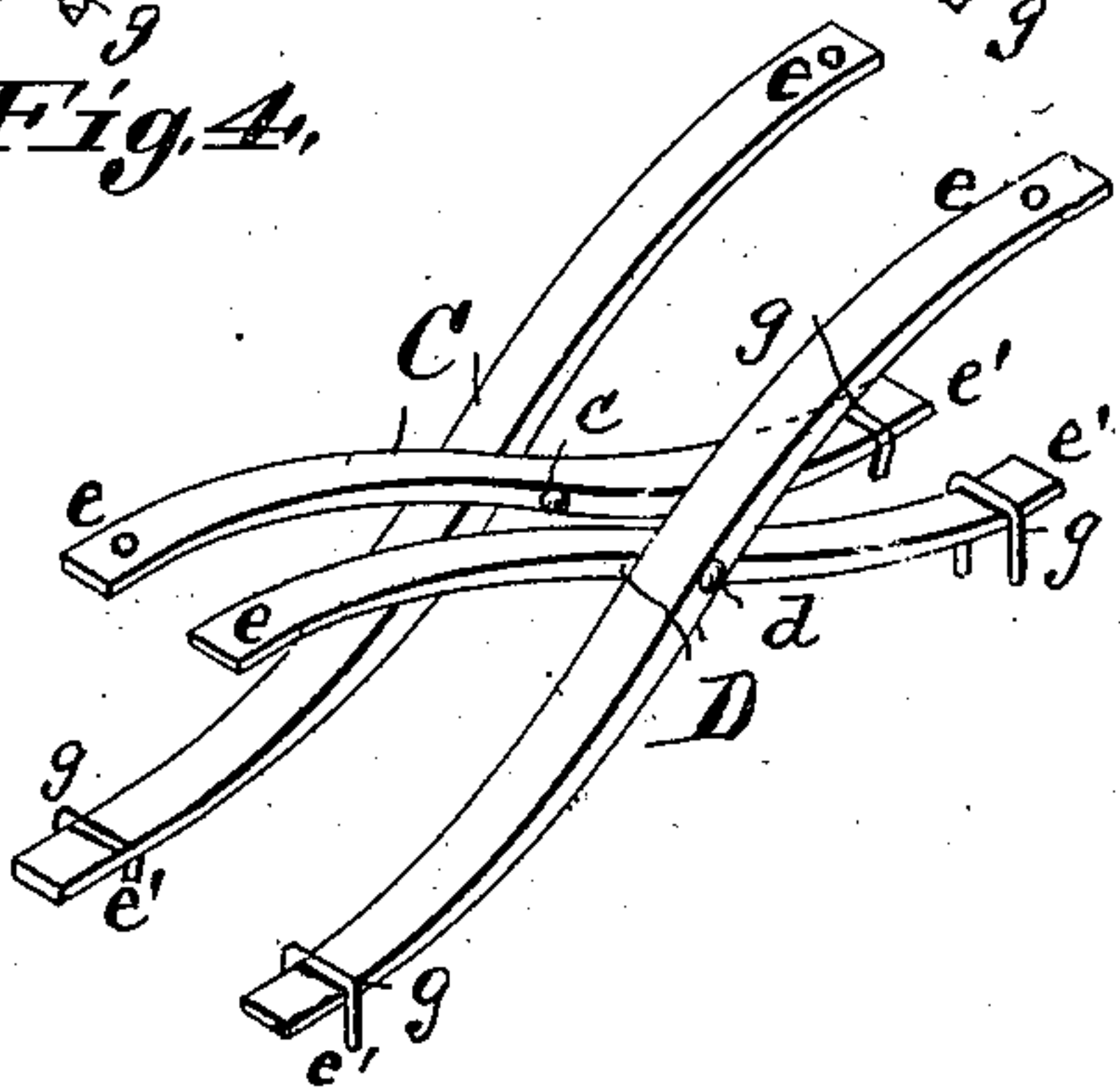


Fig. 5.

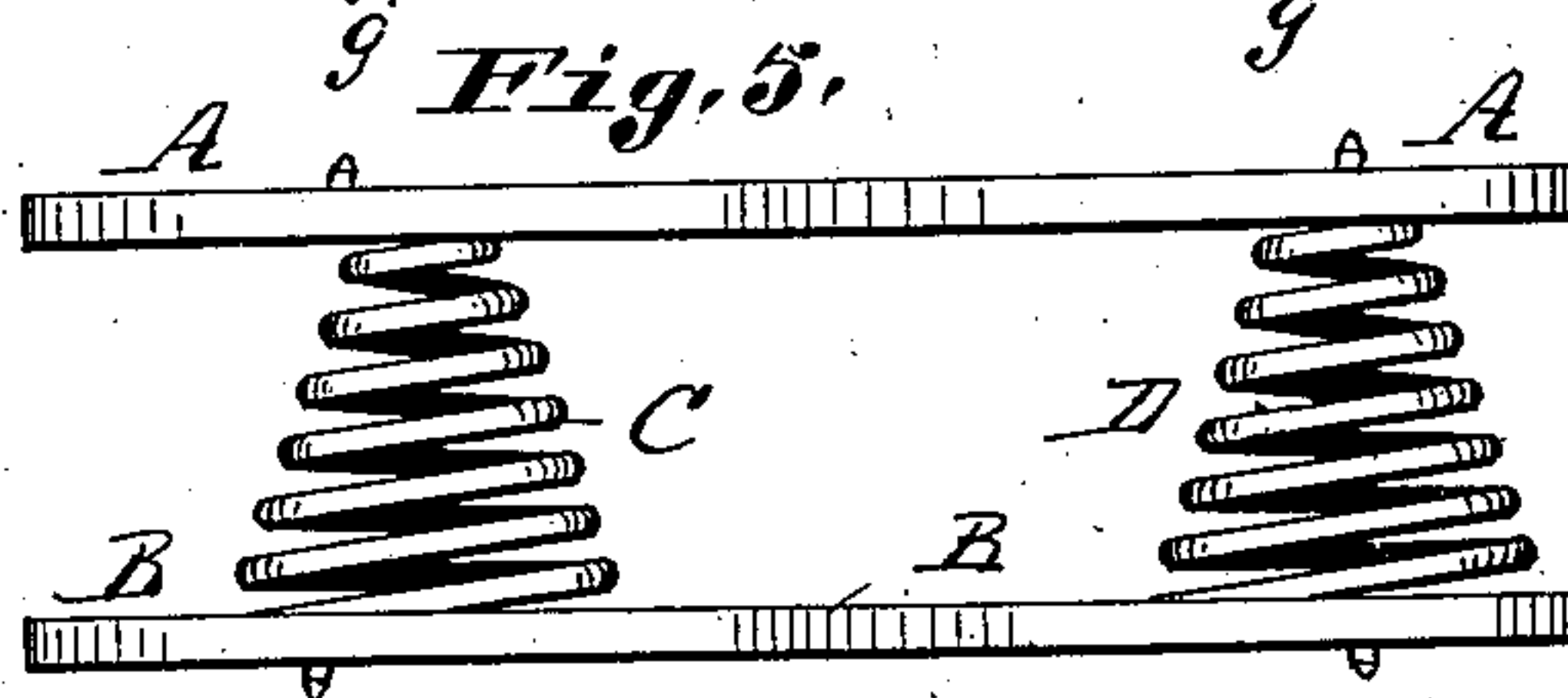


Fig. 6.

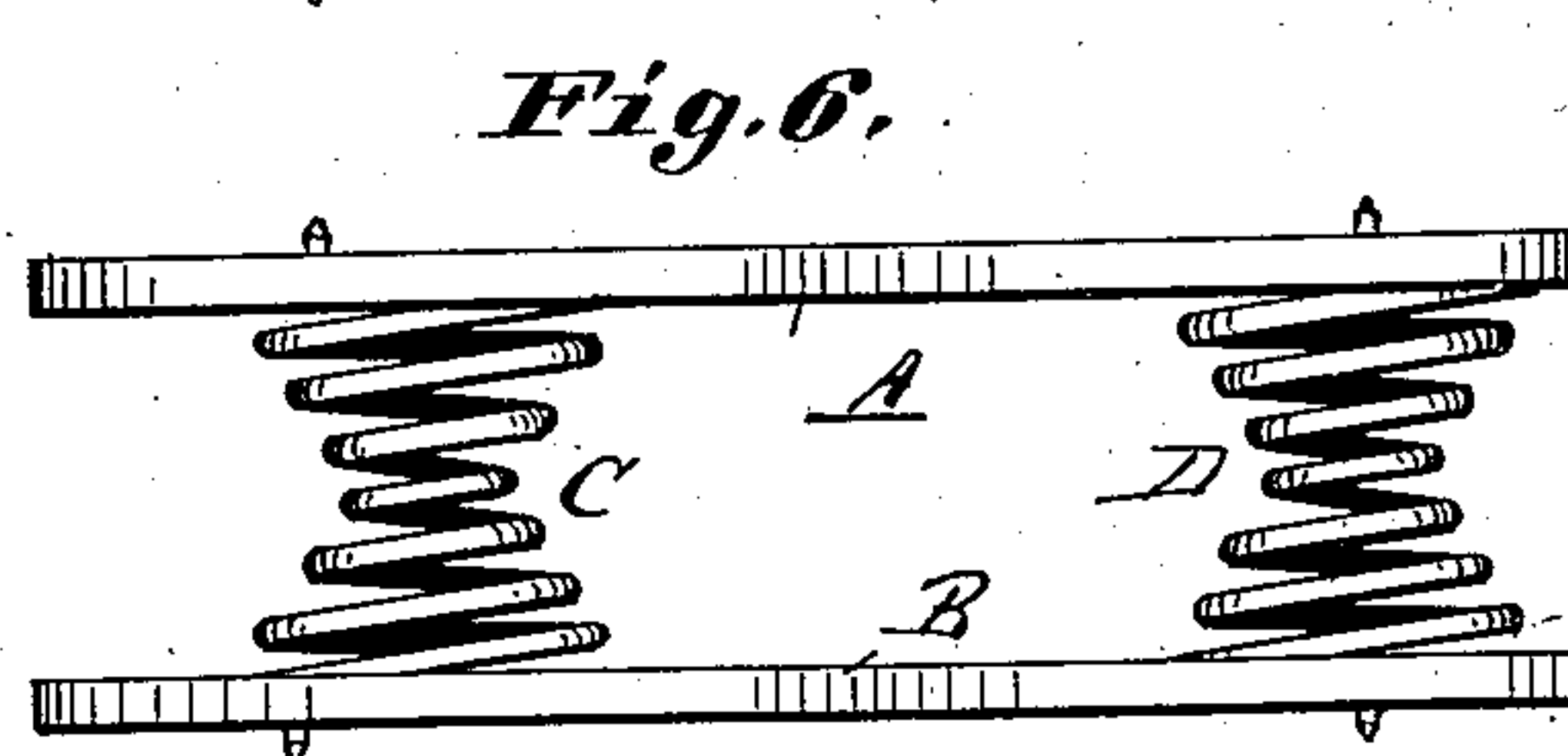
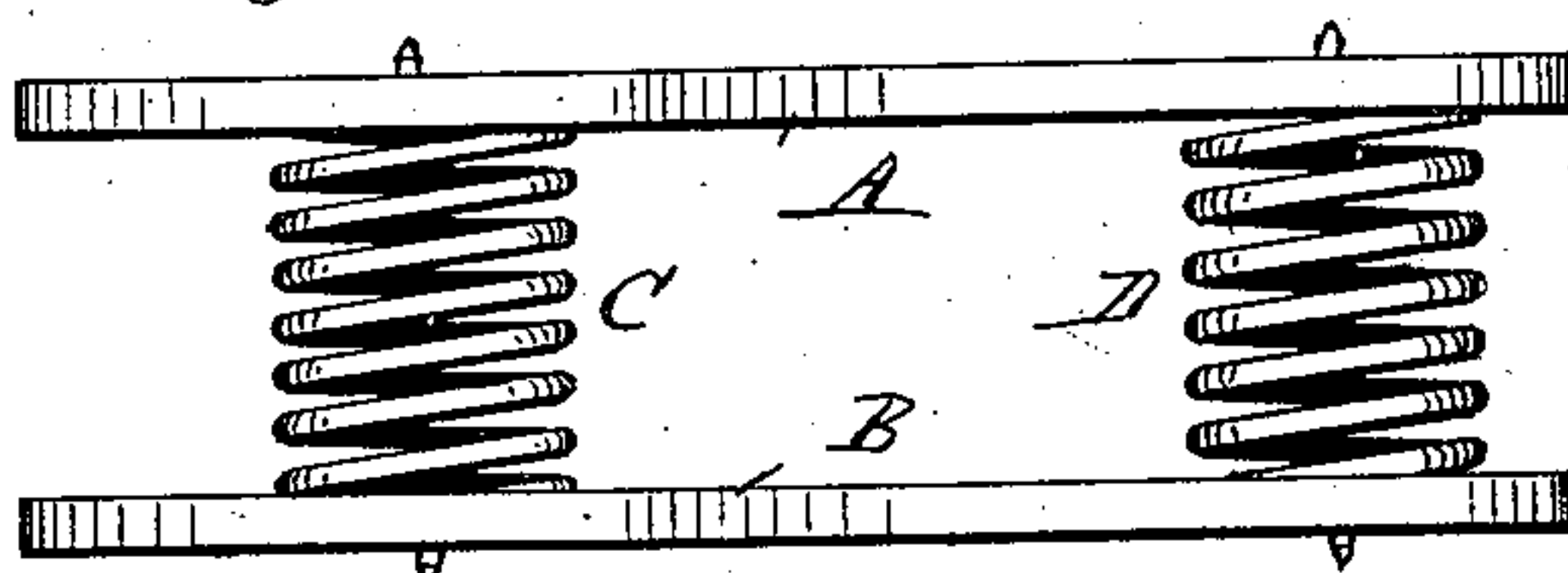


Fig. 7.



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JOSEPH GLUECKSMANN, OF ST. LOUIS, MISSOURI.

SPRING-SHOE.

SPECIFICATION forming part of Letters Patent No. 337,146, dated March 2, 1886.

Application filed October 15, 1885. Serial No. 180,028. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GLUECKSMANN, a subject of the Czar of Russia, and residing at St. Louis, in the State of Missouri, have invented a new and useful Spring-Shoe, of which the following is a specification.

The chief object of my invention is to provide a shoe or similar foot-gear with a suitable spring or springs, all adapted to be applied to, worn, and used by the operator, person, or user for purposes of utilizing the elasticity of said springs to better facilitate walking, running, jumping, vaulting, gymnastic, and similar exercises. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved spring-shoe as the same appears ready for use. Figs. 2 and 3 represent, respectively, in side elevation the upper and lower platens or foot-boards joined together with the springs, also showing in Fig. 2 the springs in unlocked condition, while in Fig. 3 they are shown locked together. Fig. 4 represents perspective view of the same springs pivoted in pairs and the manner of their arrangement and fastening between the two foot-boards. Figs. 5, 6, and 7 represent modifications of my invention, chiefly showing the different kinds of springs that can be substituted.

Similar letters refer to similar parts throughout the several views.

A and B represent the respective upper and lower foot-boards. In Fig. 1 these are shown as shaped, sized, and otherwise made to conform to a fit for the wearer. Said foot-boards can be of wood, leather, or metal.

C and D represent the pairs of springs shown interposed between and fastened to both foot-boards. The arrangement is such that one pair, C, shall be on one side, the other pair, D, on the opposite side. (See Figs. 2, 3, 4.) The central space is left free for the operation of the spring-clasp or locking device herein-
after to be described.

In Figs. 2, 3, and 4 I show the same set of longitudinal springs having a pivotal joint at *e* and *d*, each pivot joining each pair in the middle. Further, the form of the springs presents one end, *e*, as the upper extreme, the opposite end, *e'*, as the lower extreme. It is the upper extreme ends, *e e*, of each pair of

springs that is rigidly fastened to the upper foot-board at *f f'*, while the opposite lower extreme ends, *e e'*, of the same pair of springs are fastened movably at *f' f'* to the lower foot-board. The fastening of the lower ends of the springs C D (shown in Figs. 2, 3, 4) is by means of staples *g*, which permit the said spring ends to freely slide along the foot-board to accommodate the elasticity of the springs when contracted and expanded. The upper foot-board, together with the springs, can therefore have a vibratory action, it being the return motion of the released springs more particularly that imparts an elastic force and impetus to the wearer of the device.

To the upper foot-board the insole-strap H and heel-strap H' are properly attached with their hand-straps *h h'*, by means whereof the device can be properly strapped to the wearer's foot or shoe. (See Fig. 1.)

H² represents an outside covering, of canvas, leather, or other suitable material, fastened properly to both the upper and lower foot-boards, as shown.

To apply and use my improved spring-shoe, the wearer simply straps the same to the soles of his feet or shoes, and by bringing the weight of his person or pressure to bear down the top foot-board readily causes the springs below to contract. This done, by releasing the pressure in the act of jumping, vaulting, and similar up motion, the return action of the springs greatly accelerates the person's motion.

In case it is desired not to use the reciprocation of the springs, the same can be kept immovable or in locked condition. For this purpose I have provided the spring-clasp shown in Figs. 2, 3. It consists of the spring *i*, having one end fastened at *i'*, the remaining end of said spring-blade bearing against the short arm *i''* of the lever-clasp *i'''*. This lever-clasp has its pivot-bearing in a bracket, *i''*, and its lower end is fitted to engage a catch, *i'''*, in manner shown in Fig. 3.

In open condition the spring-blade retains the lever-clasp in the horizontal position shown in Fig. 2. To lock the lever-clasp, a key is inserted in the opening shown in Fig. 1 to engage the pivotal bearing of the lever-clasp and force it down to engage the catch. (See Fig. 3.) In this latter condition the springs are kept locked.

The modifications represent in Fig. 5 the application and use of coil-springs, in Fig. 6 double helical springs, and in Fig. 7 spiral springs, all for the same purposes. The said
5 several springs are likewise all fastened by their upper ends to the upper board, the lower end to the lower board, each spring being opposite to each other, and giving the same vibratory action to the remaining shoe portions.
10 As apparent, my improved spring-shoe can be made of all sizes to suit.

What I claim is—

1. The combination of the upper and lower foot-boards having springs interposed between
15 same, the upper ends of said springs fastened immovably to said upper board, the lower

ends of said springs rendered movable along the lower foot-board, and the fastening-straps, substantially as and for the purposes set forth.

2. In combination with a spring-shoe consisting of the upper and lower foot-boards, having springs interposed capable of vibrating between said boards, the lever-clasp consisting of the spring-blade, the lever-clasp proper, and catch, by means whereof said springs can
25 be kept in locked or unlocked condition.

JOSEPH GLUECKSMANN.

Witnesses:

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