

(No Model.)

H. M. JACOBS.
Wagon Seat Support.

Patented Nov. 2, 1880.

No. 233,933.

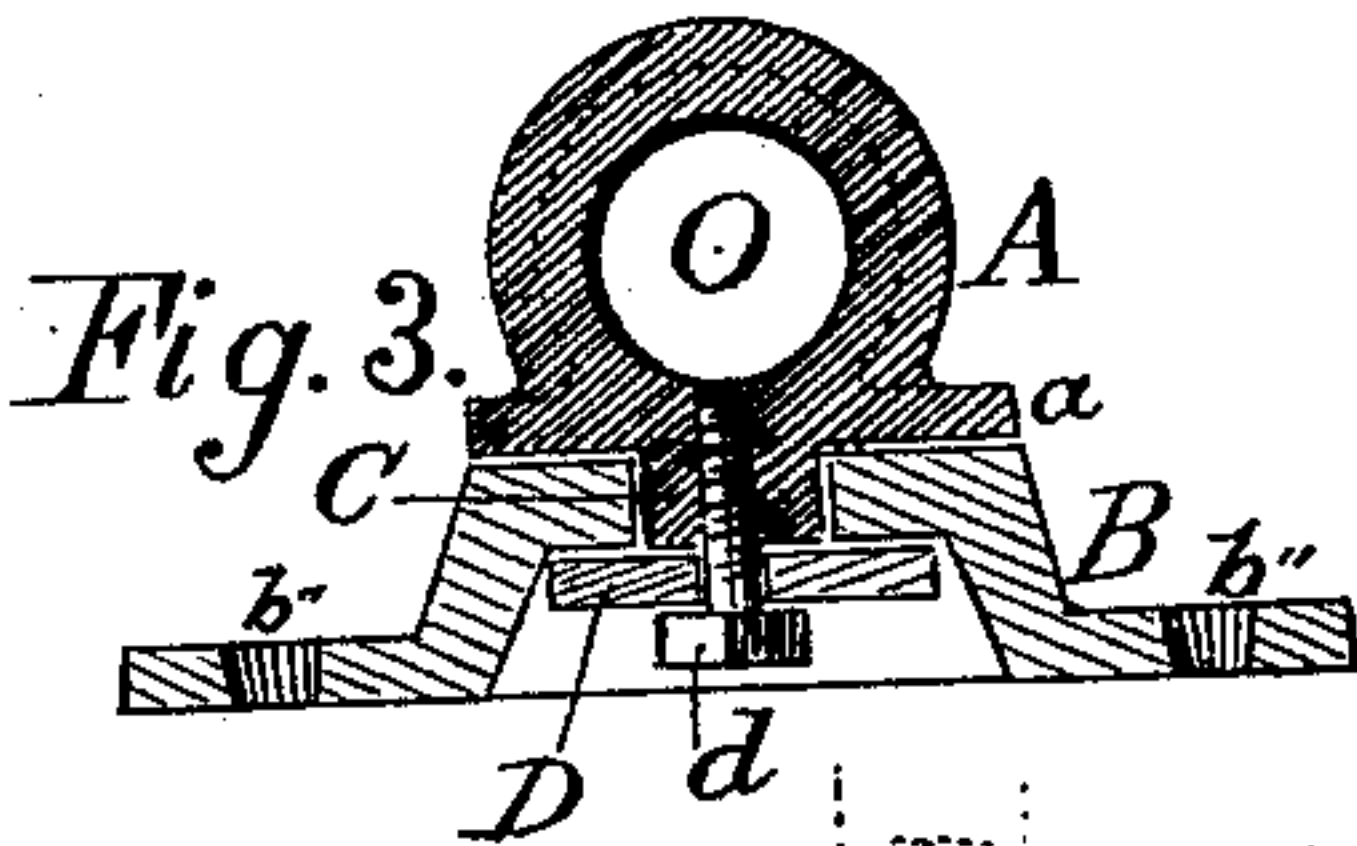
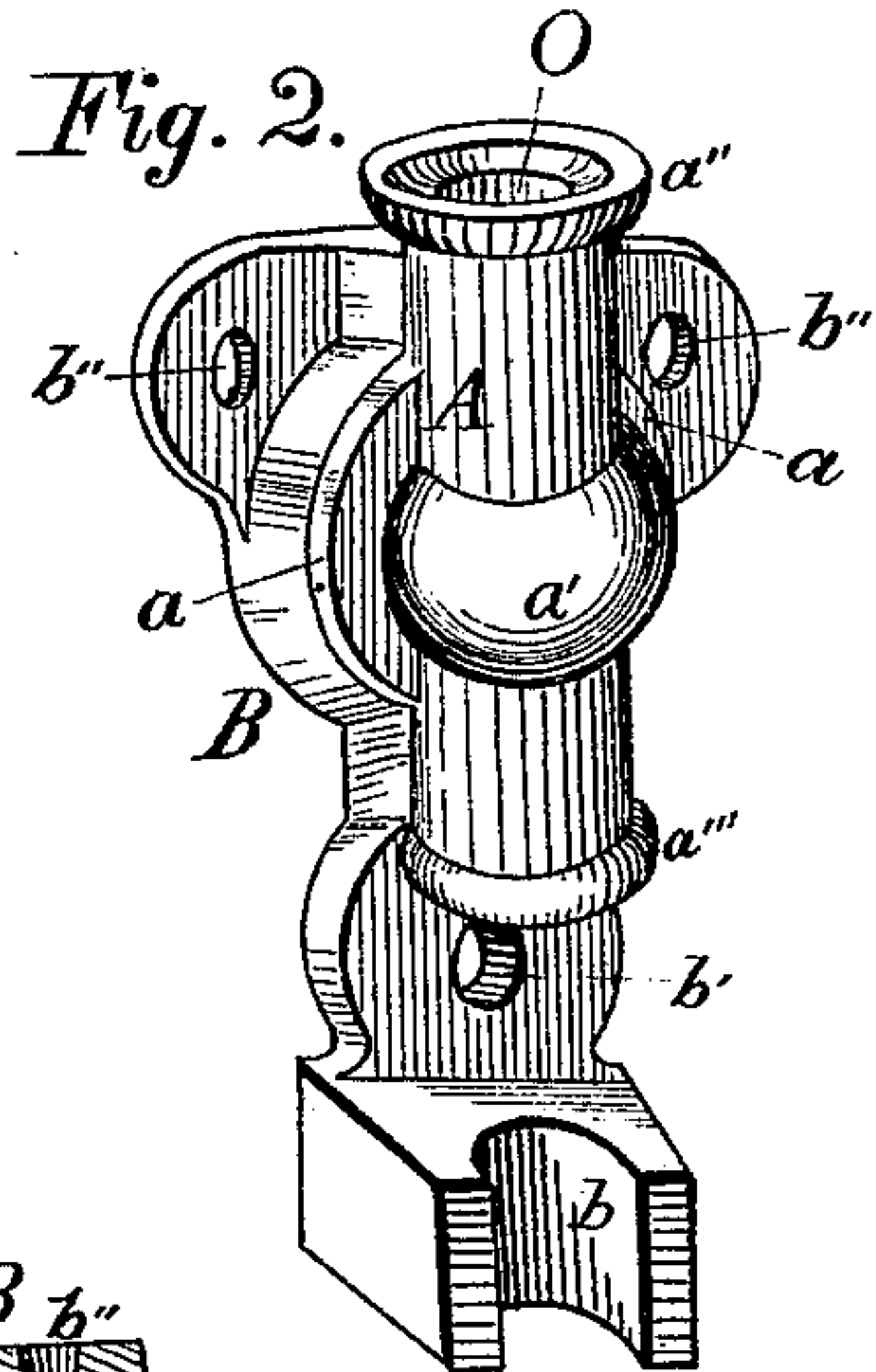
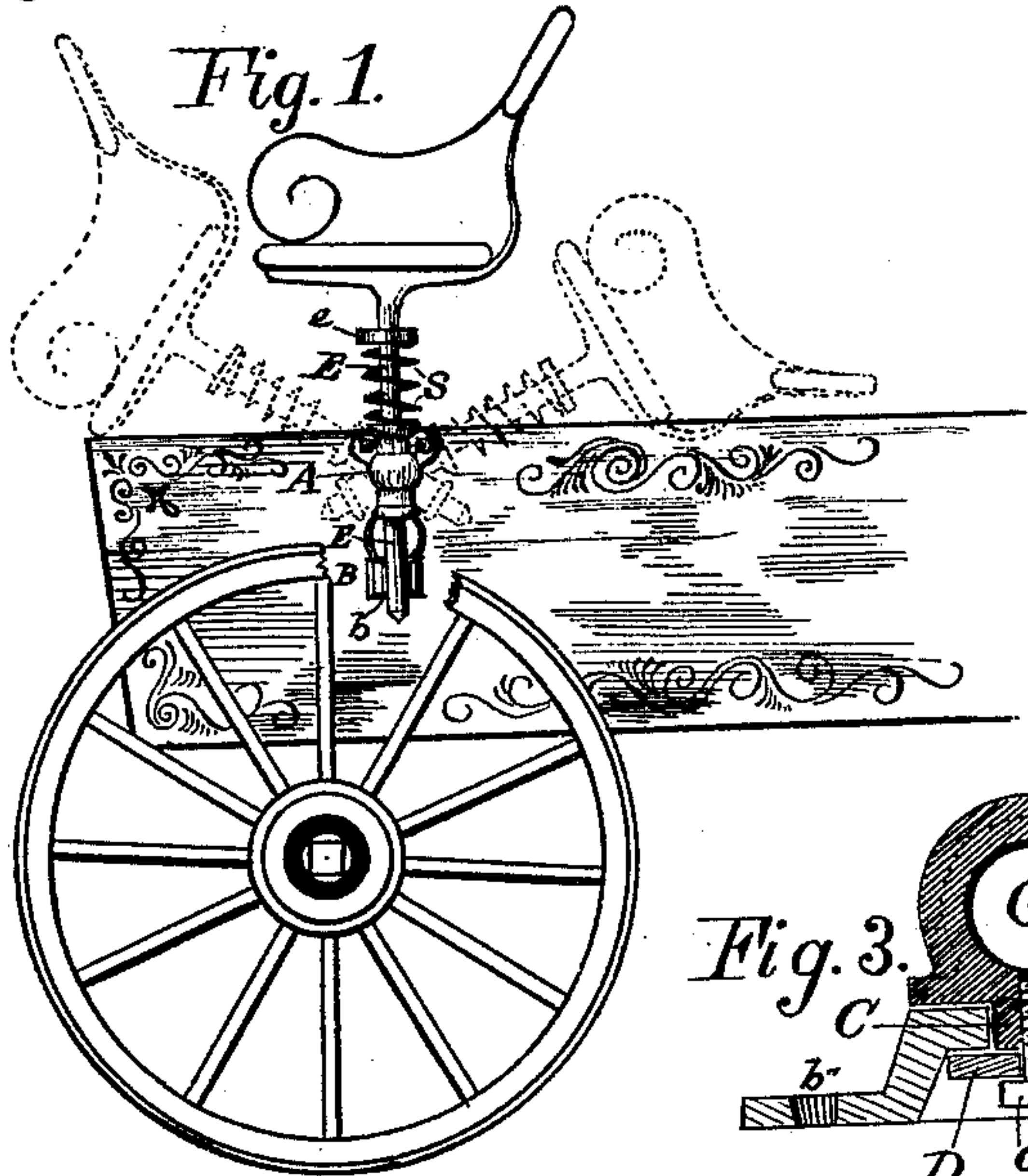


Fig. 4.

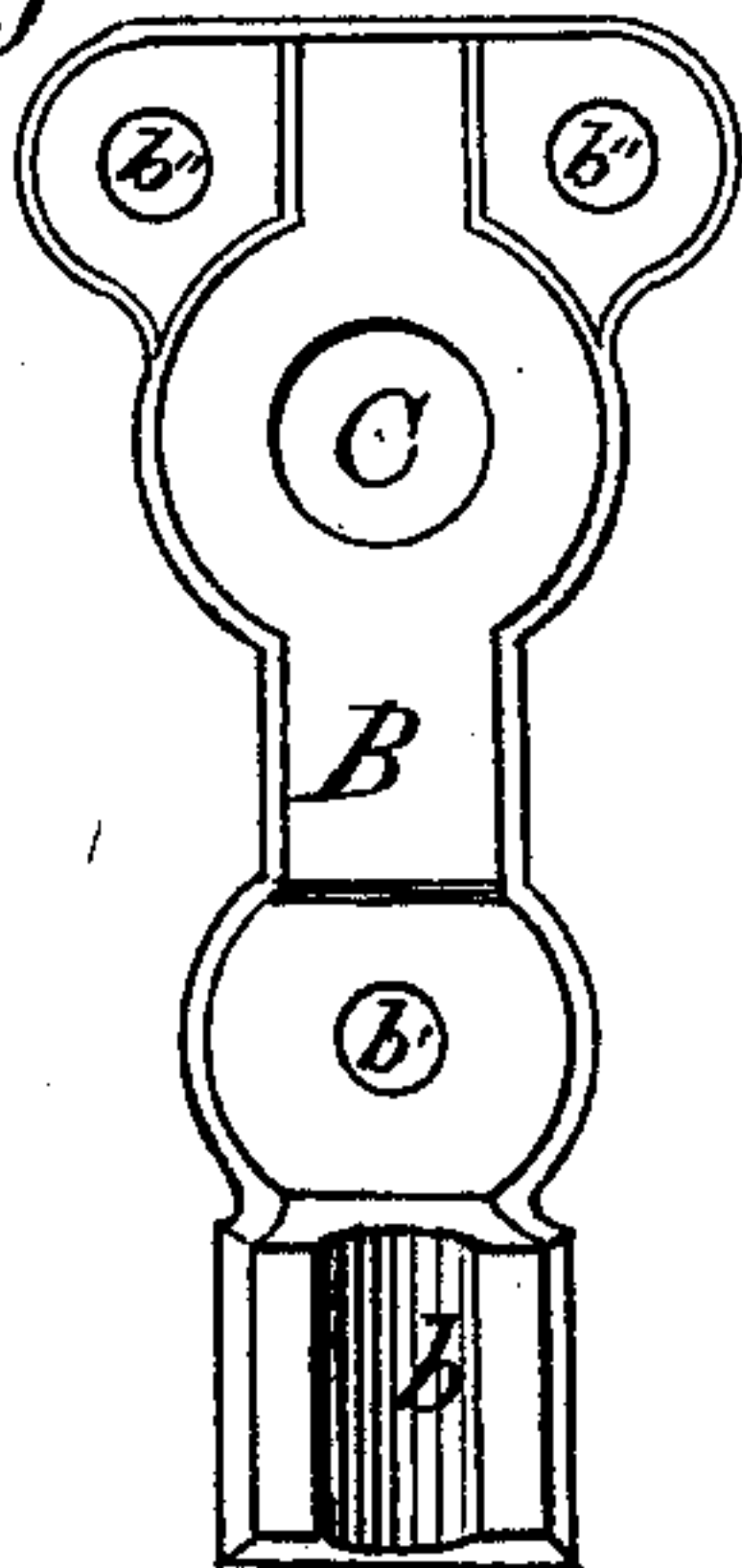


Fig. 7.

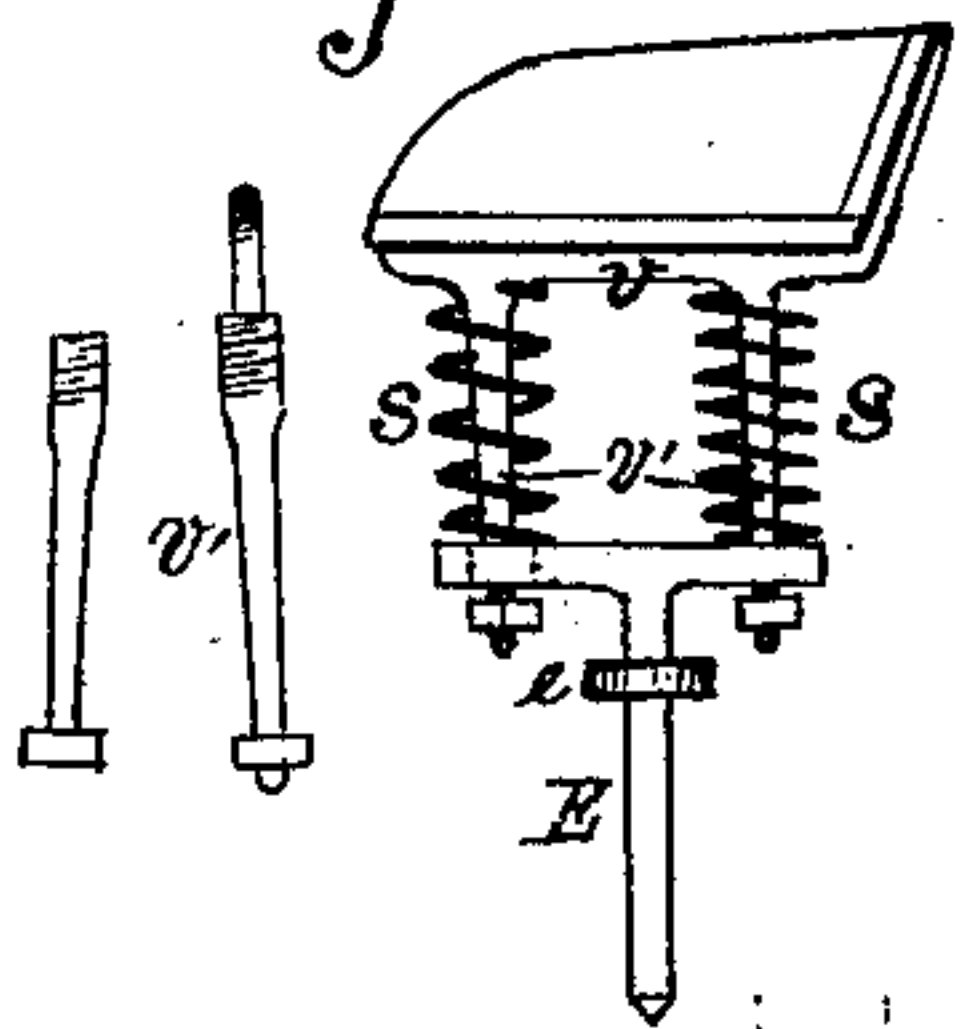


Fig. 8.

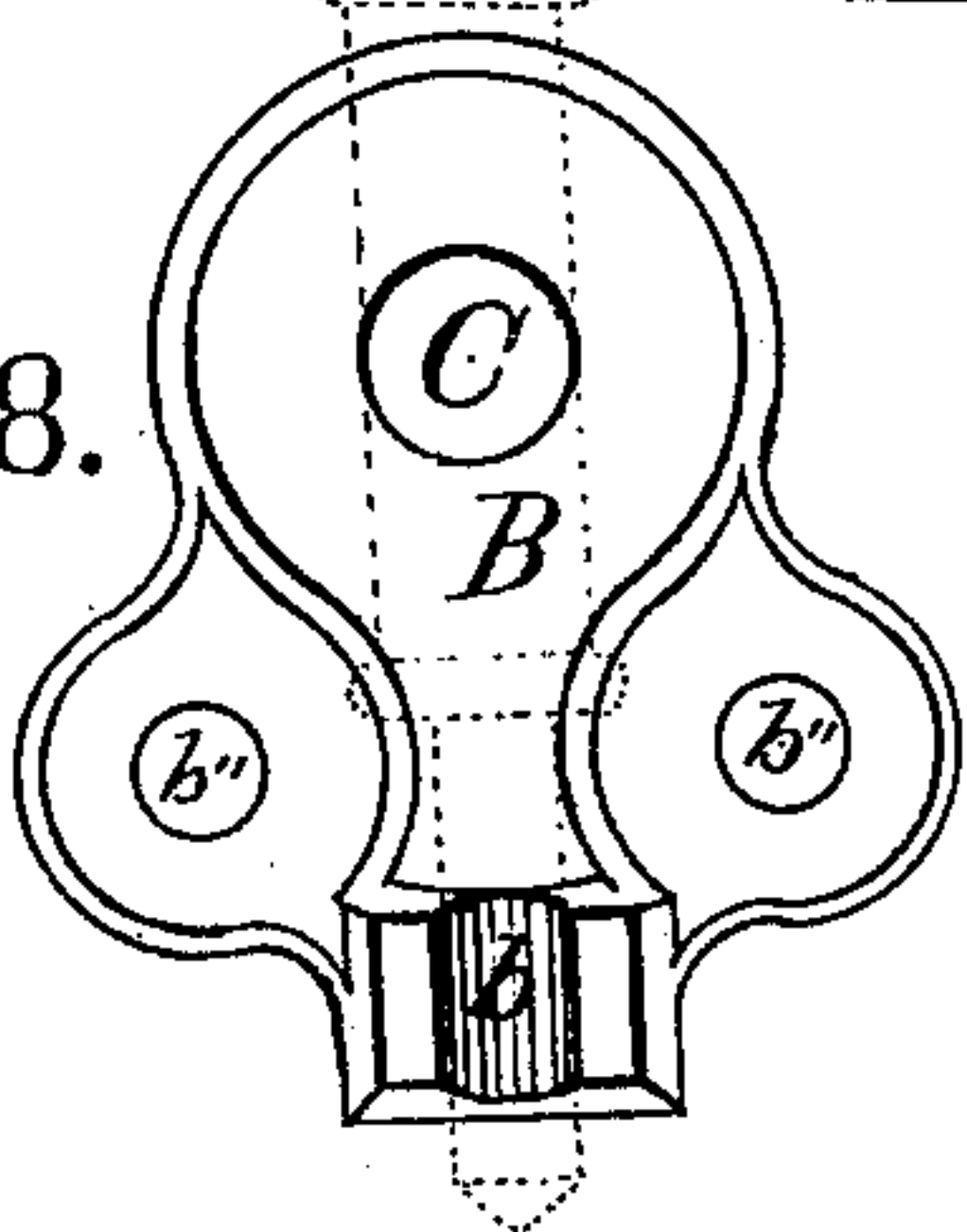


Fig. 5.

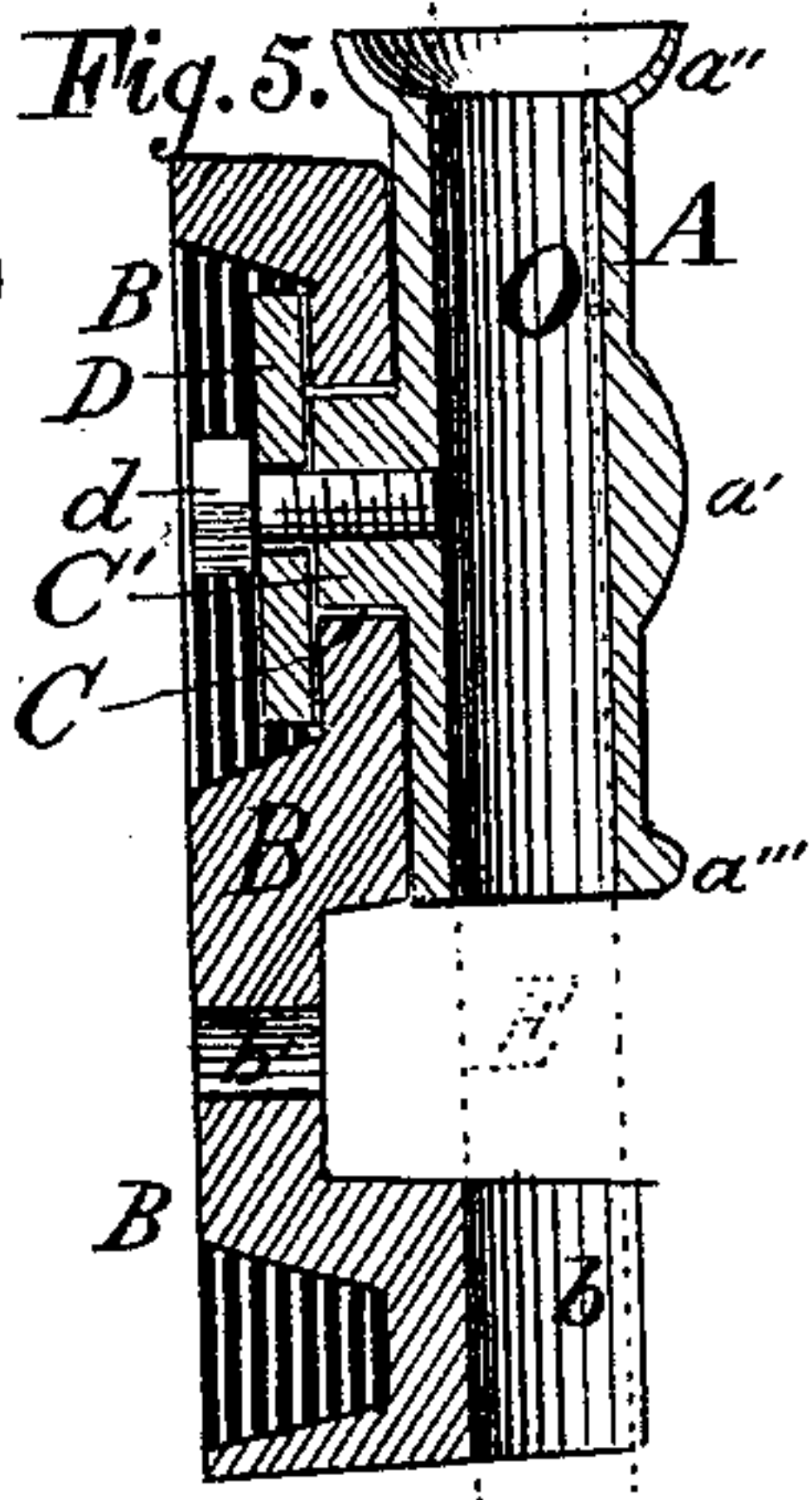


Fig. 6.

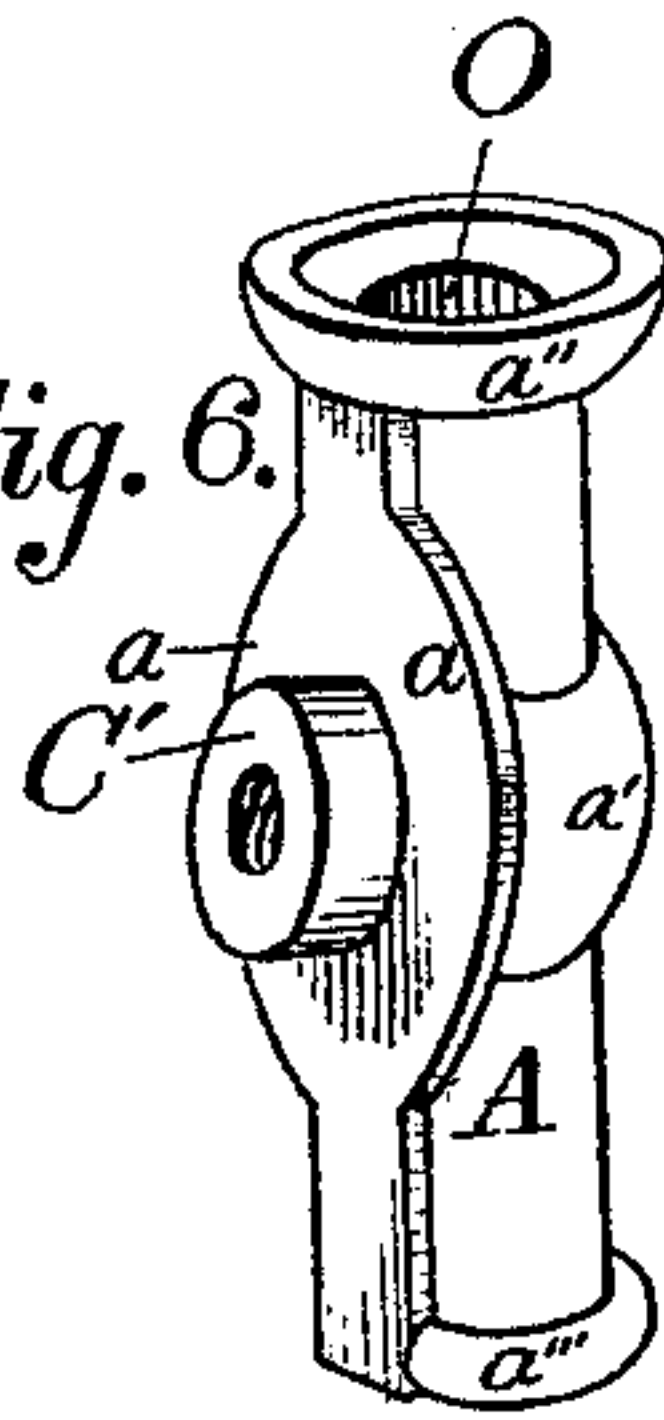


Fig. 9.

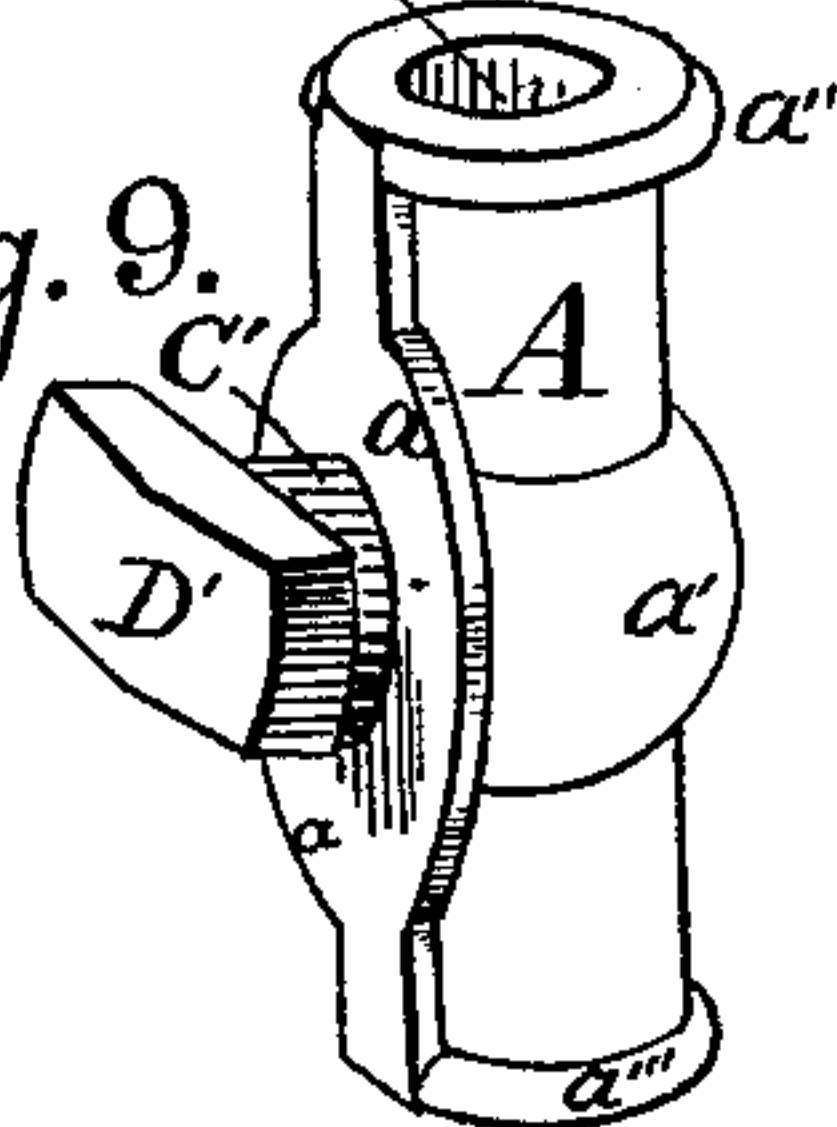
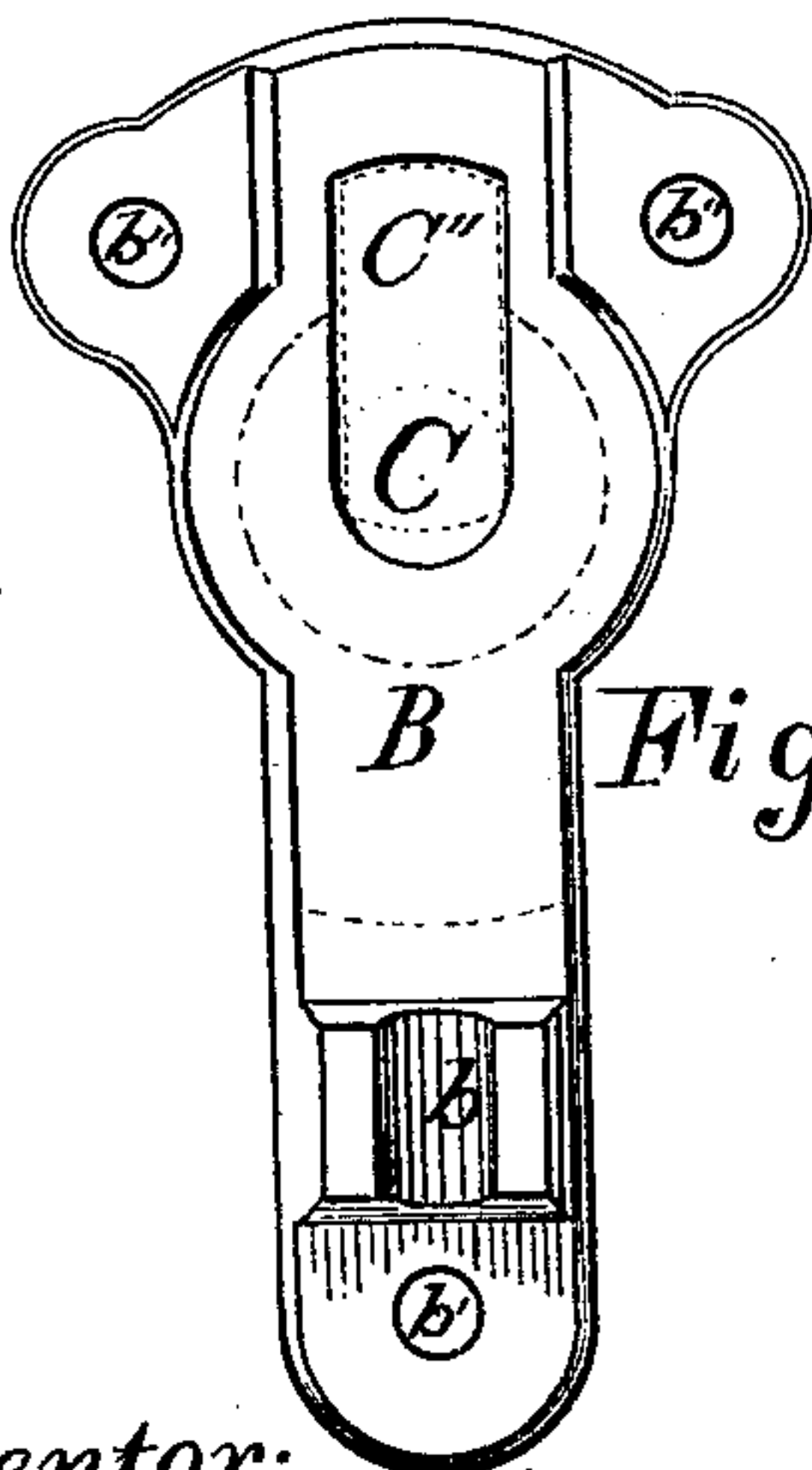


Fig. 10.



Witnesses:

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HENRY M. JACOBS, OF WAYNESBURG, PENNSYLVANIA.

WAGON-SEAT SUPPORT.

SPECIFICATION forming part of Letters Patent No. 233,933, dated November 2, 1880.

Application filed August 28, 1880. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. JACOBS, of Waynesburg, in the county of Greene and State of Pennsylvania, have invented a new and
5 useful Improvement in Wagon-Seat Supports, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the front end
10 of a wagon-body with a seat thereon supported by my invention. Fig. 2 is a perspective view of the cast plate B, which is to be bolted to the side of the wagon-body, and into which the socket A is pivotally secured for
15 the reception of the rod E, which extends downward from the seat which it supports. Fig. 3 is a horizontal cross-section taken through the enlarged central part of Fig. 2. Fig. 5 is a central vertical section of the same.
20 Fig. 4 is a front elevation of the plate B with the socket A removed. Fig. 6 shows the removed socket A in perspective. Figs. 7, 8, 9, and 10 show modifications hereinafter described.

25 The same letters show like parts in each figure.

The object of my invention is to provide a simple, cheap spring seat bearer that will permit the seat to be easily turned over, either
30 backward or forward, into the positions indicated by dotted lines in Fig. 1, or to be lifted entirely off the wagon for convenience in loading, unloading, &c., and without having to unfasten or remove any nuts, pins, or other
35 fixtures whatever.

The vertical rod E, Fig. 1, terminates at its upper end in any form required for proper attachment to the seat, while its lower end passes
40 loosely-fitting through the hole O in the socket A, and through the semicircular bearing *b* in the projecting lug on the lower end of the plate B. Upon the back side of A is cast a disk, *a*, with upward and downward extensions, as shown in Fig. 6. Upon the outer
45 face of plate B is a similar-shaped disk with similar extensions, to form a bearing-surface for disk *a*. In the center of disk *a* is a circular projecting hub or gudgeon, C', as shown, which fits loosely into the open hole C through
50 B, in which it rotates or turns to any angle in the vertical plane. To the back end of C',

within the shaded hollow cavity, is secured the round flat washer D, by the screw-bolt *d* screwing into the threaded hole in C', as shown. This holds the socket-iron A securely in place, 55 with the two bearing-faces in loose contact to admit of the rotary or oscillatory motion of A upon B. Now, when the rod E is introduced through the hole O in A—not far enough through it to come in contact with the lug *b*— 60 the rod E with the socket A can oscillate freely upon C' as a fulcrum, and occupy the positions shown in Fig. 1; but whenever the rod E descends low enough to enter the bearing-notch *b* it thereby becomes locked and holds the 65 rod and attached seat rigidly in the upright position shown. To displace the seat from its proper position for use, it is only necessary to lift each end up an inch or two until the lower end of rods E will swing over lugs *b* in either 70 direction. By lifting it higher it may be lifted clear off the wagon without any unlocking or unfastening, and is replaced by simply setting it back by passing the end of the rods E through holes O and notches *b* under each end 75 of the seat.

Another advantage is the convenience afforded for using spiral instead of elliptical springs, the spiral springs being preferable upon account of their being much cheaper and 80 being much less in the way; but if any prefer the elliptical spring it of course can be used by bolting it to a short T-head formed upon E at the required height above the socket A; or my invention can be used without any 85 springs by putting a solid or adjustable collar upon E at a suitable height to rest upon top of A, which in that case, and in the modification shown in Fig. 7, may be made flat upon top, as shown in Fig. 9; but when the spiral 90 spring is used the top *a''* of A is flanged out with a concavity for the reception and retention of the lower end of the springs, while its upper end acts against a collar, *e*, upon E. The lower end of the spring *s* simply rests 95 upon the socket A, while its upper end is secured to the collar *e* so as to lift off with the rod E when the seat is removed, and may not be in contact with *a''* when partly lifted and turned over, as shown in Fig. 1. 100

The collar *e* may be made solid on E, or it may be held with a set-screw, so that it can

be adjusted up or down on E to adjust the seat to different heights, the rod E passing through A more or less for this purpose, and also according to the amount of compression upon spring *s*. The collar *e* may be dispensed with, if desired, by using a longer spring, *s*, with its upper end against the T-shaped top of E.

In the modification shown in Fig. 7 the rod E is made shorter, with a cross-bar on top with a hole near each end, through each of which one of the bolts or studs *v'* passes, with heads or nuts to prevent their withdrawal, while the upper ends of *v'* are rigidly secured to the plate *v*, attached to the bottom and back of the seat.

v and *v'* may all be made in one solid piece, or bolts *v'* formed as shown and screwed into *v*. A spiral spring, *s*, is used upon each stud *v'*. The holes through which the lower ends of *v'* pass are made much larger than the studs, to give play, so that when one end of the seat is pressed much lower than the other the studs will not bind by side pressure, and also so that the seat can rock back and forth, or in all directions, like the universal motion of elliptical springs, instead of having the disagreeable rigidity of all strictly vertically-moving springs. Besides this important advantage, it also has that of receiving all side strains and wrenching at the top of E, close down to the socket A, so that the leverage strain upon A and B is very much less than when the long unjointed lever E is used. This allows all parts of A, B, and E to be made much lighter, and therefore cheaper and preferable, while but little is added to the upper parts, *v* and *v'*.

Fig. 8 is a modified form of the plate B, with but two bolt-holes, *b''*, instead of three, as in the other figures.

Fig. 9 is a modification of A, in which a cross-head, D', is cast solid on the hub C', instead of having the circular plate D bolted to it; and Fig. 10 shows a corresponding modification of the plate B, with the hole C elongated into a slot, as shown at C'', so that the cross-head D' can be passed through the slot

and slipped down until C' comes to the lower end, C, when the ends of the cross-bar D' will swing around, fitting inside of the circular wall indicated by dotted circle, the ends of D' being cut to fit that circle, so that it cannot come out or move upward, except when one end of D' is turned square up, so it can pass into the open notch behind C'', which position it cannot assume while the rod E is through it, and with the seat above the top of the wagon-body. This modification requires fewer pieces and less fitting, but is without means for taking up play caused by wear that are afforded by the use of plate D and set-screw *d*. The enlargements *a'* and *a''* are to improve the strength and appearance.

The hole O in socket A may be made large enough, if preferred, to take part or all of the spring *s* inside of it, with an intumed flange at its bottom for a stop, instead of placing it upon top at *a''*.

My invention may be made partly of wrought and partly of cast metal, or wholly of malleable cast-iron, or of cast cast-steel, except the springs and screw-bolts.

I am aware that seats have been made to turn over backward and forward and endwise, and hinged or locked by various modes, which I do not claim; but

I claim as my invention—

1. The socket A, pivotally secured to the plate B, having notched lug *b*, in combination with rod E, for the purpose set forth.
2. The socket-piece A, having the loosely-fitting rod E, in combination with the plate B, with notched lug *b*, secured to the wagon-body, all substantially as set forth.
3. The plate B, with the hole C, inwardly enlarged for the reception of the head or washer D, and lug with a hole or notch, *b*, in combination with the pivoted socket A and removable rod E, substantially as shown.

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Witnesses:

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