

(No Model.)

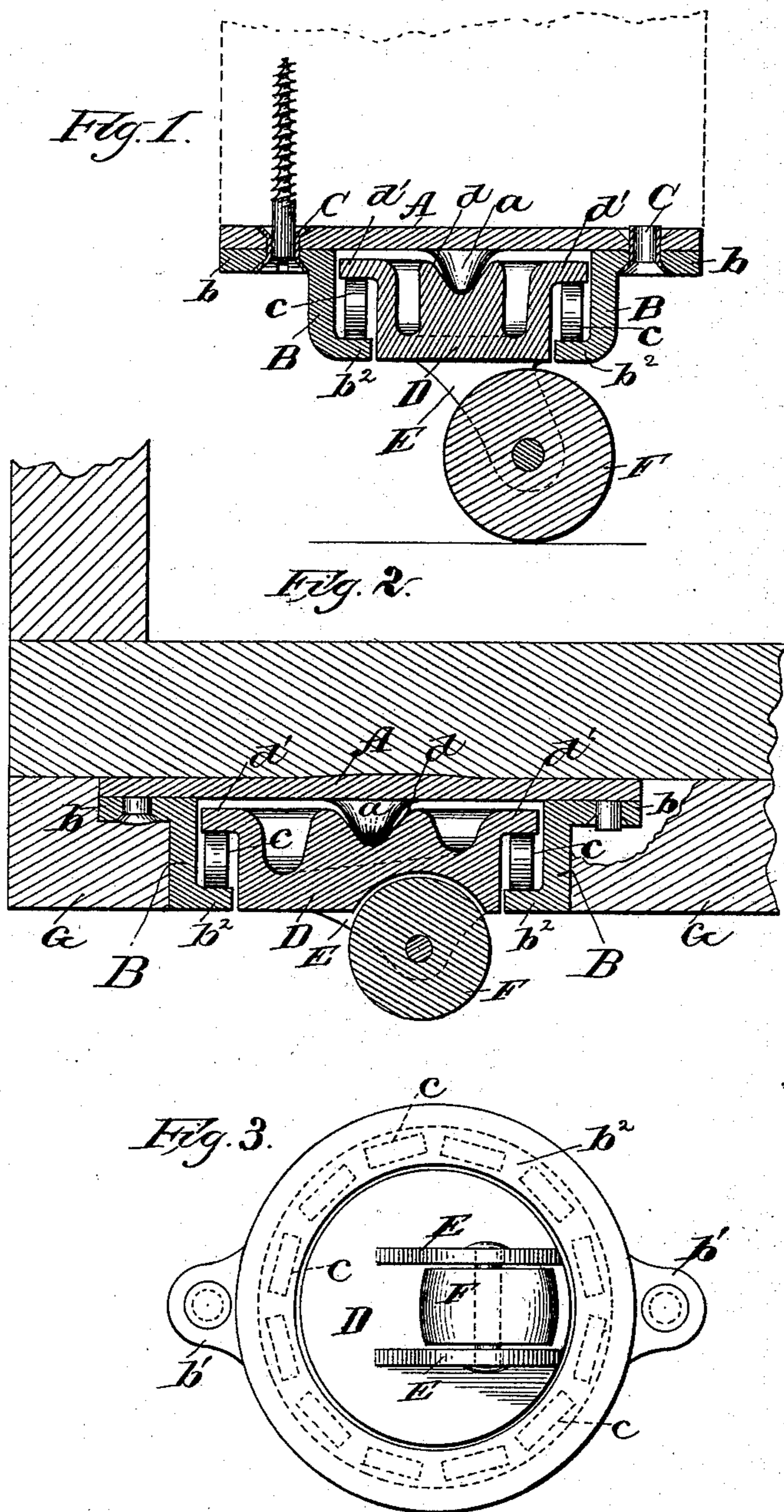
2 Sheets—Sheet 1.

E. G. ASMUS.

CASTER.

No. 384,886.

Patented June 19, 1888.



Witnesses:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 4

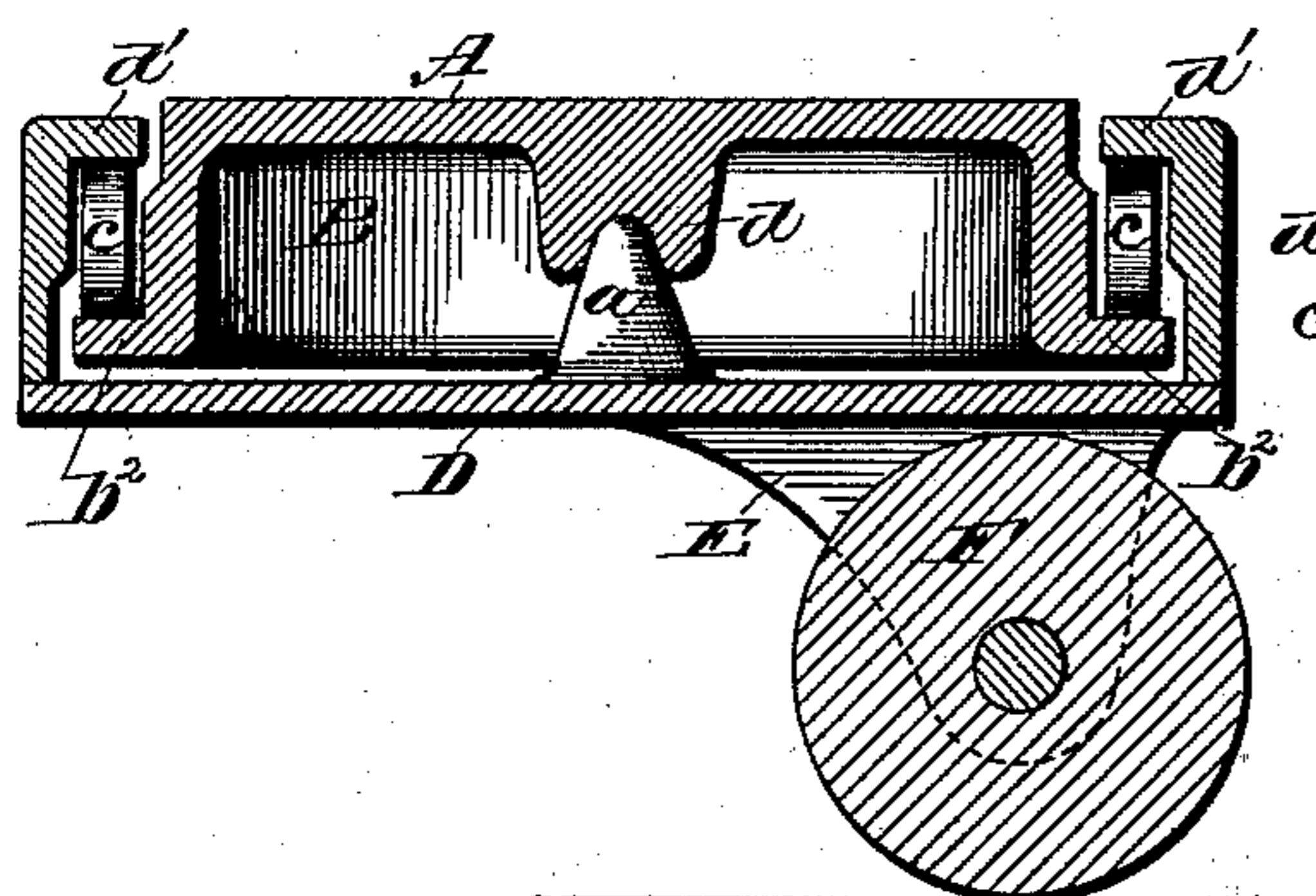


Fig. 5

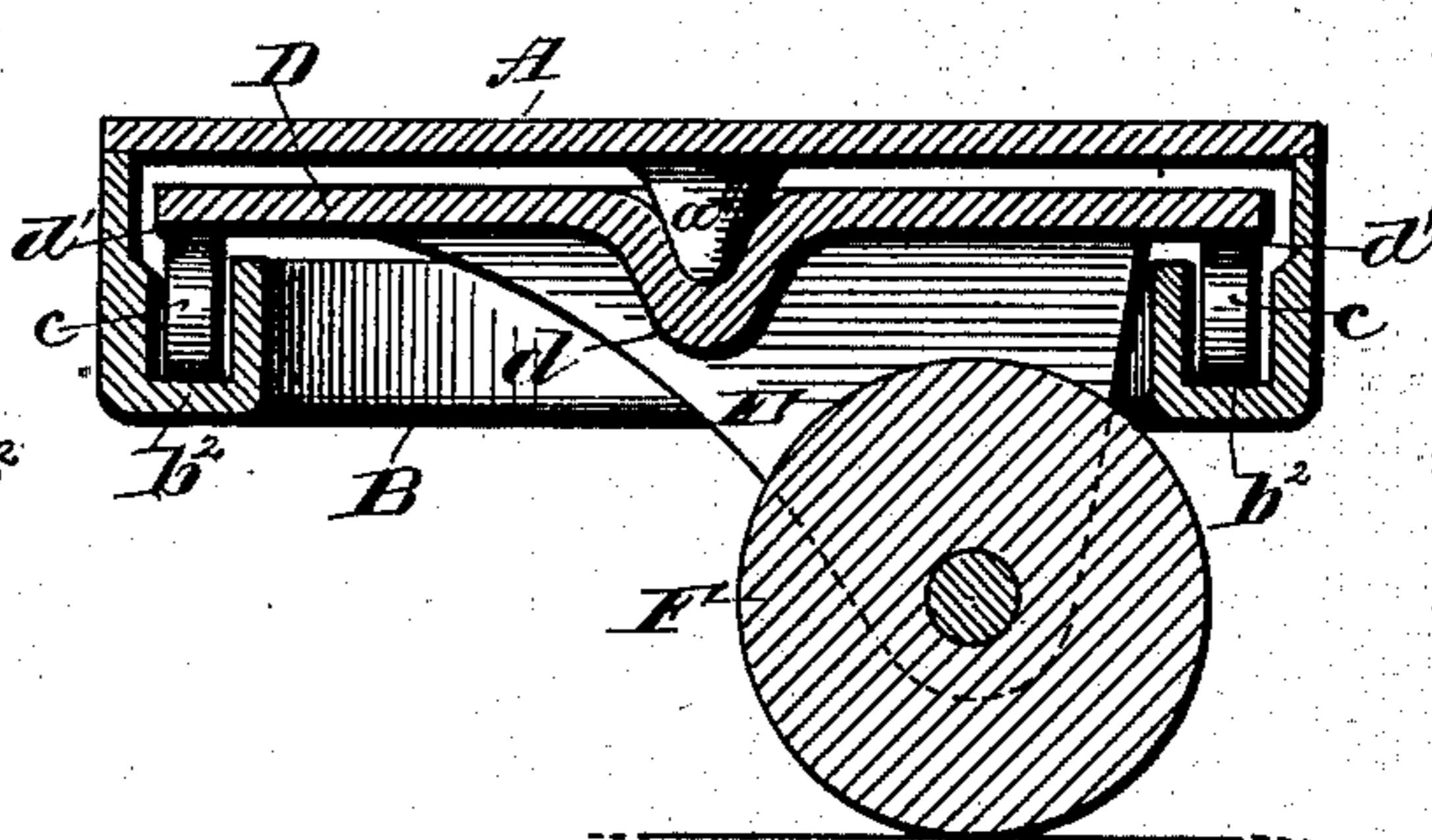
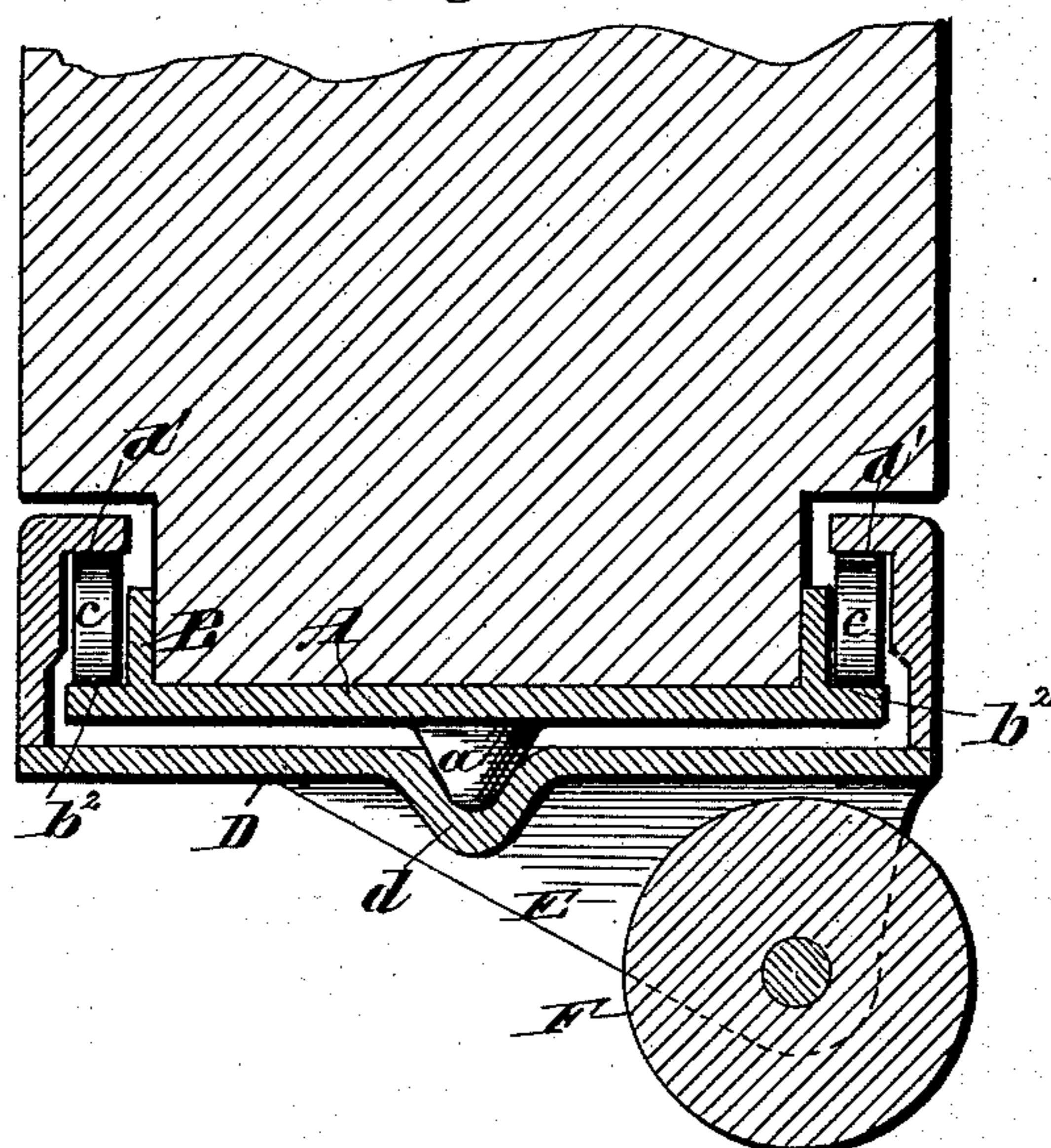


Fig. 6



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UNITED STATES PATENT OFFICE.

EDWARD G. ASMUS, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF
TO CHARLES J. WALSER, OF SAME PLACE.

CASTER.

SPECIFICATION forming part of Letters Patent No. 384,886, dated June 19, 1888.

Application filed June 23, 1885. Serial No. 169,544. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. ASMUS, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Casters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The objects of my invention are, first, to dispense with the long spindle in common use with casters, and thereby to prevent the consequent splitting, breaking, and mutilation of the furniture to which the caster is applied; second, to reduce the friction between the wheel-frame and its bearings, and thereby facilitate its turning about the base-plate; third, to relieve the parts of the caster and its fastenings from strain; fourth, to dispense with the central fastening between the wheel-frame and base-plate; and, fifth, to reduce to a minimum machine work and fitting; and it consists, essentially, of certain peculiarities of construction and arrangement hereinafter specifically set forth, and pointed out in the claims.

In the accompanying drawings like letters designate the same or similar parts in the several figures.

Figure 1 is a vertical medial section of my improved caster. Fig. 2 is a like view of a modification of the same, shown as applied to the section of a trunk. Fig. 3 is a plan view of the modified form shown in Fig. 2, as seen from the under side. Fig. 4 is a vertical medial section of a modification of my caster, in which the flange on the wheel-frame projects inwardly, while that on the base projects outwardly, and the pivotal stud is formed on the wheel-frame; and Figs. 5 and 6 are like views of modifications, all illustrative of the essential features of my invention.

A is a base-plate, consisting of a plain metallic disk, provided on its under side with the conical stud *a*, and about the edge with suitable perforations for fastening the caster to the furniture.

B is a circular wall formed about its upper

edge with the outwardly-projecting flange *b*, and about its lower edge with the inwardly-projecting flange *b*².

D is the wheel-frame, inclosed, when in position, by the wall B, and provided about its upper edge with the outwardly-projecting flange *d'*, and at the center of its upper face with a conical depression, *d*, to receive the stud *a*.

To cause the stud *a* to bear at its apex only in the wheel-frame D, and thereby prevent unnecessary friction, the conical depression in said wheel-frame is made more obtuse than said stud. By thus arranging the flange *d'* to overhang the flange *b*² the wheel-frame is secured to the stationary base, and the central fastening between said wheel-frame and base is thus dispensed with. The strictly pivotal bearing upon which the wheel-frame turns does not require hand or machine work, and the cost of making the caster is thereby materially reduced. Upon the under side of the wheel-frame D are formed depending ears E E, between which the caster-wheel F is mounted, as shown in Figs. 1 and 2, a little to one side of the vertical axial line of said wheel-frame, so as to cause the caster to turn or shift, according to the movement of the furniture, &c.

Between the flange *d'* on the wheel-frame and the flange *b*² on the circular wall B are loosely inserted small friction-disks *c c*, which are inclosed and retained in position in an annular chamber formed by said flanges, the wall B, and the outer face of the wheel-frame D. In place of the disks *c c*, balls may be employed, and the flanges *d'* and *b*² concaved and made to conform more or less to the contour of said balls.

For the purpose of transporting and of holding the wall B and base-plate A temporarily together, eyelets C C are inserted through perforations in flange *b* of wall B and corresponding perforations in the base-plate A, and upset at both ends so as to prevent the separation of the said parts.

In attaching the caster to the furniture, &c., screws may be inserted through these eyelets, and the caster thereby rigidly secured in place and the parts thereof firmly locked together, as shown in Fig. 1.

The wheel-frame D is preferably recessed or cut away on the upper side about its central conical bearing, d , to render the casting lighter. In practical operation the superposed weight of the furniture, &c., bearing through the central stud, a , is transmitted through the wheel-frame D to the caster-wheel F, upon which it rests, and to the disk or disks c on the opposite side of stud a . Said disks, forming a continuous bearing about said central stud, a , for said wheel-frame, facilitates the shifting of the caster-wheel about said stud and relieves the caster and its fastenings of torsional strain.

In the modification shown in Figs. 2 and 3 the wheel-frame is made broader and the caster-wheel let into the same, so as to bring the trunk or furniture nearer the floor. When the caster is made of malleable iron, pins may be cast upon the base-plate A, as shown in Fig. 2, and inserted through perforations in the flange b of wall B (or vice versa) and upset at the protruding ends, so as to secure the parts named together. In this case the caster is fastened to the furniture by means of other perforations formed in the flange b and base-plate A, or in the base-plate A alone.

The caster is secured to trunks in the manner shown in Fig. 2 by means of a cleat, G, cut away to receive the depending wall B, the flange b , and the base-plate A, which are sandwiched between and snugly held in place by the body of the trunk and said cleat G.

The flange b may be made continuous about the wall B, or formed in the shape of ears b' , as shown in Fig. 3, and the base-plate, if desired, made to conform thereto. The stud a may be applied to the wheel-frame D and bear upward against the base-plate A.

It is obvious that the flanges upon the base-plate and wheel-frame may be reversed, the flange on the wheel-frame made to project inwardly and that on the base-plate made to project outwardly, without material effect upon the operation of my improved caster.

Referring to Figs. 4 and 6, the flange or track b^2 on the base-plate A is made to project outwardly, while the flange d' on the wheel-frame projects inwardly, without effect, however, upon the leverage of the wheel-frame or the mode of operation of the caster. In Fig. 4 the

stud a , upon which the wheel-frame B is fulcrumed and turns, is formed upon said wheel-frame. In Fig. 6 the base-plate is formed without a depending wall, the track b^2 being simply the projecting rim of said base-plate. In Fig. 5, showing the same general arrangement of the flanges as illustrated in Figs. 1 and 2, the flange or track b^2 is turned up at its inner edge to form a retaining-wall for the friction-rollers c , while the wheel from B is formed without a depending wall adjacent to said friction-rollers.

For the purpose of assembling the parts of the caster, the flange d' is formed, as shown in the construction illustrated in Figs. 4 and 6, separate from the wheel-frame D, to which it is attached by any suitable fastenings, and in the construction illustrated in Fig. 5 the track or flange b^2 is made, as shown by the drawings, separate from the base-plate A, to which it may be attached in a manner similar to that shown in Figs. 1 and 2, or by any suitable fastenings.

The details of my invention may be variously modified without departing from its spirit.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a caster, the combination of a stationary base having an annular track, a wheel-frame provided with a flange overhanging and retaining it in connection therewith, a pivotal stud upon which said wheel-frame is fulcrumed and retained in its central position with reference to said base, a caster-wheel journaled in said wheel-frame, and a friction roller or rollers interposed between said flange and base, substantially as and for the purposes set forth.

2. The combination, in a caster, of the base-plate A, wall B, formed separate therefrom and secured thereto by eyelets C, eyelets C, wheel-frame D, and caster-wheel F, substantially as and for the purposes set forth.

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

EDWARD G. ASMUS.

Witnesses:

CHAS. L. GOSS,
GEORGE GOLL.