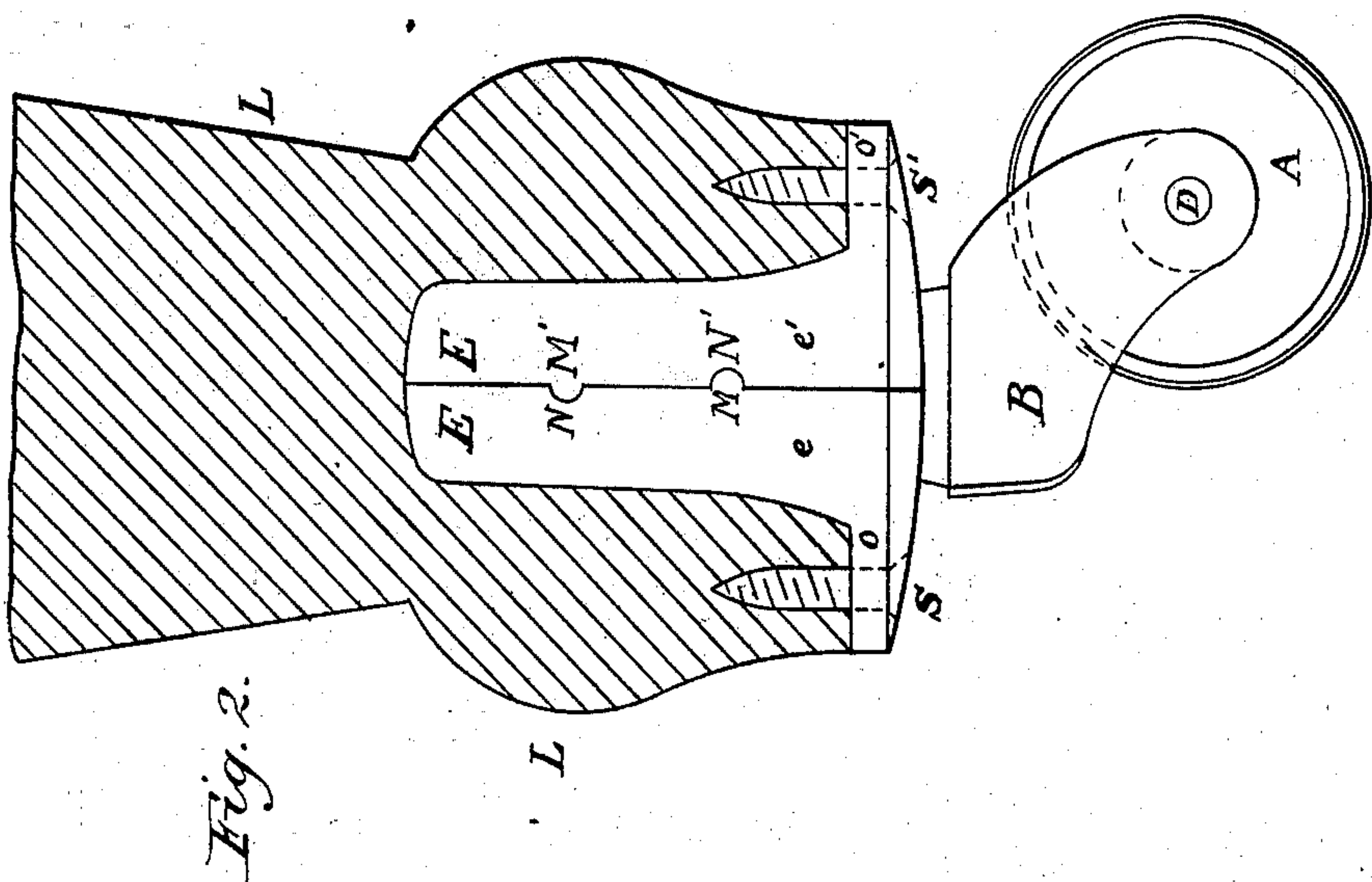
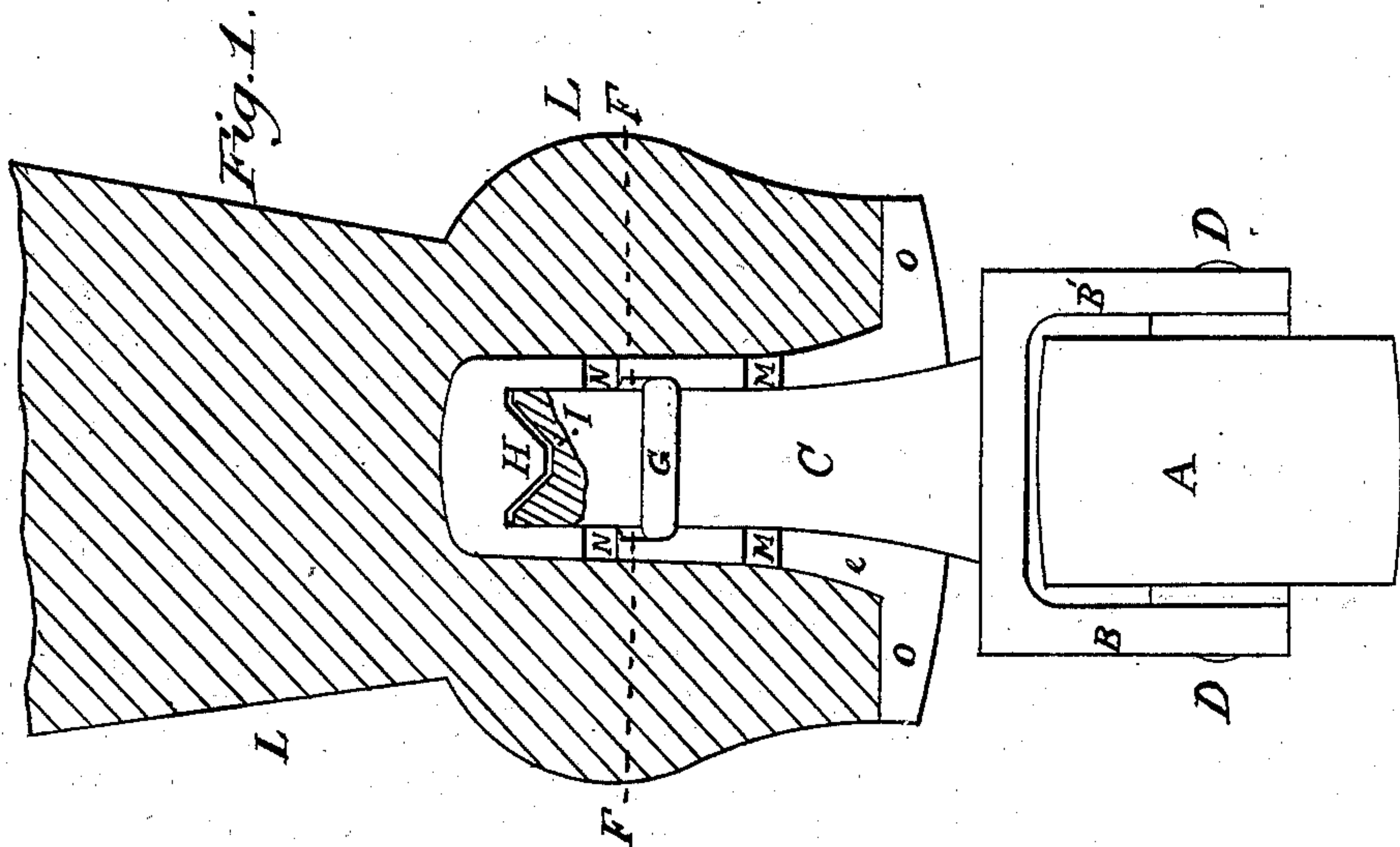


I. LEONARD.
Caster.

No. 219,104.

Patented Sept. 2, 1879.



Witnesses.
Geo. H. M. Gray
Erving & Porter.

Inventor -
Ira Leonard,
By *Albert M. Moore,*
His Attorney.

UNITED STATES PATENT OFFICE.

IRA LEONARD, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN CASTERS.

Specification forming part of Letters Patent No. **219,104**, dated September 2, 1879; application filed March 31, 1879.

To all whom it may concern:

Be it known that I, IRA LEONARD, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Furniture-Casters, of which the following is a specification.

My invention consists in providing a central conical bearing on the inside of the socket at the top of the caster, which bearing enters a conical hole in the top of the spindle, the cavity in the top of the spindle holding the halves of the socket together, and being also a receptacle for oil.

In the accompanying drawings, Figure 1 is a front view of the caster with one half of the socket removed, and the upper part of the spindle being in section to show the conical bearing; and Fig. 2 is a side view of the caster, the leg in which the caster is placed being shown in section in both figures.

A is a small wheel placed between the arms B B', (which arms are curved to carry said wheel out from under the spindle C,) and turning upon an arbor, D, in the usual manner.

The socket E is made in halves *e e'*, and is provided with an internal annular groove, F, which receives an external annular bead, G, on the spindle C, so that when the halves *e e'* are in place on the spindle the spindle cannot be withdrawn without separating the halves. The socket is also provided with an inverted conical center, H, at the top of the inside of the same, which center enters a conical hole, I, in the top of the spindle C, (one half of the inverted cone H being on each half of the socket,) so that the effect of a downward pressure or weight on the top of the socket is to press the halves *e e'* more firmly together at the top. The hole I also serves to contain oil to lubricate the bearing.

Each half of the socket, on its edges, is provided with one or more tongues, M M', and grooves N N', which respectively enter and receive corresponding grooves and tongues on

the other half of the socket, so that when the socket is in its place in the leg L of any article of furniture one half of the socket cannot be removed without removing the other half of the same. If the tongues of one half be placed opposite each other, two patterns will be required for the socket—one pattern for each half; but it will be easier to finish the castings—that is, you can, in this case, file both grooves or both tongues at once. With any other arrangement of the tongues both halves *e e'* (each having two tongues and two grooves) can be cast from one pattern.

Each half of the socket is provided with a semicircular flange, *o o'*, at the bottom, through which flanges screws S S' pass to secure the caster in the leg L.

It will be seen that the socket retains the spindle without running the top of the spindle through the top of the socket and heading the spindle, or putting a pin through a hole drilled through the spindle, as is commonly done where the socket is in one piece; also that, whereas in ordinary sockets made in halves the rounded upper end of the spindle has a tendency to crowd apart said halves and to wear itself on the edges of said halves, in my caster the greater the weight above it the more closely the halves keep together at the top; also, that I provide a receptacle for oil at the top of the spindle, where lubrication is most needed; also, that as long as either half of the socket keeps in place in the leg, the other half must also keep in place.

I claim as my invention—

The socket E, made in halves *e e'*, and provided with the central cone, H, in combination with the spindle C, provided with the conical hole I, as and for the purpose described.

IRA LEONARD.

Witnesses:

ALBERT M. MOORE,
GEO. A. McEVoy.