

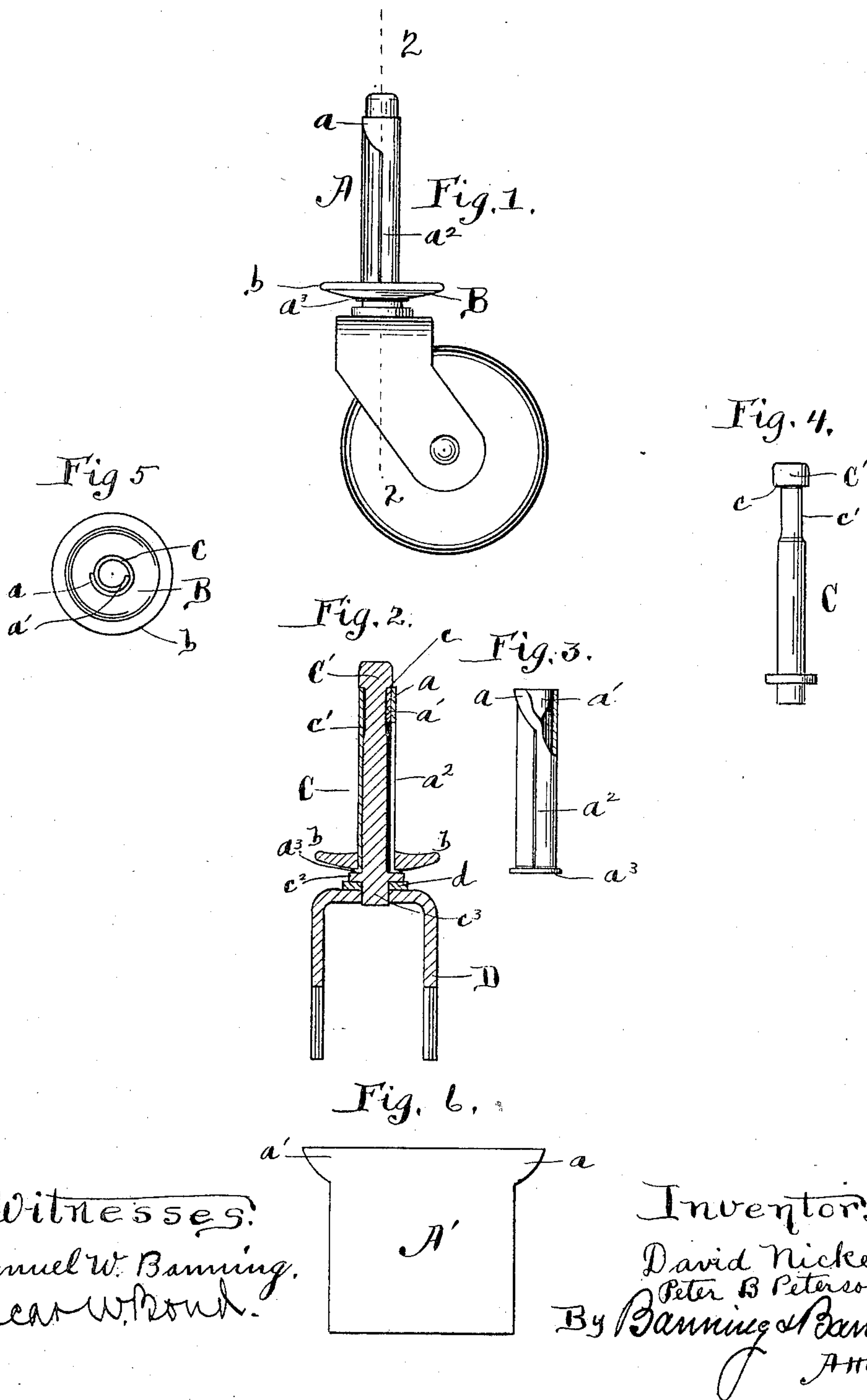
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Patented Aug. 5, 1902.

D. NICKEL & P. B. PETERSON.
CASTER.

(Application filed Dec. 20, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

DAVID NICKEL AND PETER B. PETERSON, OF MORRIS, ILLINOIS, ASSIGNORS
TO NICKEL MANUFACTURING COMPANY, OF MORRIS, ILLINOIS.

CASTER.

SPECIFICATION forming part of Letters Patent No. 706,337, dated August 5, 1902.

Application filed December 20, 1901. Serial No. 86,671. (No model.)

To all whom it may concern:

Be it known that we, DAVID NICKEL and PETER B. PETERSON, citizens of the United States, residing at Morris, in the county of Grundy and State of Illinois, have invented certain new and useful Improvements in Casters, of which the following is a specification.

The objects of this invention are to construct a strong, reliable, and inexpensive socket for casters that may be readily inserted into place or removed therefrom and into which the pintle carrying the roller may be quickly and easily inserted or from which it may be readily removed and to improve and simplify generally the construction of the caster as a whole; and the invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings illustrating the invention, Figure 1 is a side elevation of the entire caster; Fig. 2, a longitudinal sectional view taken on line 2 of Fig. 1; Fig. 3, a view, partly in section, of the retaining-socket, which forms the principal feature of the invention; Fig. 4, a side elevation of the pintle; Fig. 5, a top or plan view of the retaining-socket and base-disk carried thereon, and Fig. 6 a plan view of the blank from which the socket is made.

The retainer or retaining-socket A in its preferred form is made from a blank A' of sheet metal or other material of a spring or elastic nature and of a shape rectangular in general outline, with ears or wings *a* and *a'* projecting laterally from the top edge of the blank to lap or fold over one another when the blank is rolled into cylindrical shape to form the retainer or retaining-socket. After the socket has been rolled into shape a slit *a*², formed by the edges of the blank, extends along one side thereof, and the ear or wing *a* overlaps the ear or wing *a'*, as shown in Fig. 3. A circular base-disk B, having a peripheral contact edge *b*, is attached to the lower end of the retaining-socket and is held in place thereon by the outwardly-turned flange *a*³ of the socket. The pintle or spindle C, having a head C', is inserted into the retaining-socket, the head C' projecting above

the top of the socket and the upper edge of the retaining-socket being under the shoulder *c*, formed at the juncture of the head with the pintle. The pintle is made of a lesser diameter directly beneath the head, thereby presenting a depressed portion or recess *c'*, and near its lower end is provided with a collar or flange *c*². The end *c*³ of the pintle beyond the collar is riveted or otherwise fixedly fastened to the top plate of the stirrup D, carrying a roller, and a bearing or washer *d* encircles the end of the pintle between the collar or flange *c*² and the top plate of the stirrup. It is obvious, however, that the collar and washer may be made in a single piece, provided that their general arrangement is that above described.

In use the pintle is forced into the retaining-socket until its head comes in contact with the spirally-extending edge of the inner ear or wing *a'*, which forms, in effect, a cam-surface. The contact of the head with the ear or wing upon the application of pressure causes the walls of the retaining-socket to be sprung apart, permitting the passage of the head through the socket, the walls of which spring back to place when the head has been forced beyond the spring-walls. The depression *c* affords sufficient space for the inner ear or wing to lie within the outer surface of the pintle when the same is in place. The collar or flange affords a supporting-surface for the outwardly-extending flange on the retaining-socket, and the bearing or washer serves to increase the rigidity of contact between the pintle and the top plate of the stirrup, thereby strengthening the joint. The base-disk B serves not only as a base-support when the retaining-socket has been driven into place in a table, chair, or otherwise, but prevents the spring-socket from being unduly expanded and increases the rigidity of the parts when assembled.

The efficiency of the retaining-socket of this invention lies in the fact that it is made from a blank, rectangular in general outline, which may be easily cut by means of dies or otherwise from a continuous sheet of metal with but slight loss of material, in the fact that the method of forming this blank into

the retaining-socket is extremely simple, and, finally, in the fact that the completed caster is thoroughly efficient in operation and durable when subjected to long-continued and hard usage.

The overlap of the ear or wing affords a rigid bearing surface or edge for the shoulder formed by the connection of the head with the pintle from the fact that the wall is doubled at the point of greatest strain. Moreover, this overlap while not interfering with the insertion of the pintle allows of a double spring action, the inner ear or wing being sprung by the passage of the pintle and the outer ear or wing serving to reinforce the spring action or effect of the inner ear or wing. Furthermore, when the two lateral edges of the blank have been bent or rolled to contact with one another in forming the slit in the retaining-socket their contact prevents the socket from being unduly diminished in diameter when the same is driven into place.

What we regard as new, and desire to secure by Letters Patent, is—

1. A retainer or retaining-socket for casters consisting of a split tubular body of springy material provided at its upper end with a wing or ear extending onto the tubular body and crossing the slit therein, substantially as described.

2. A retainer or retaining-socket for casters consisting of a split tubular body of springy material provided at its upper end with two wings or ears extending onto the tubular body, crossing the slot therein and overlapping one

another to increase the spring action of the socket, substantially as described.

3. A retainer or retaining-socket for casters consisting of a split tubular body of springy material provided at its upper end with two wings or ears extending onto the tubular body, crossing the slot therein and overlapping one another to increase the spring action of the socket, and a base-disk encircling and fixedly attached to the lower end of the tubular body, in combination with a pintle carrying a caster-wheel provided at its upper end with a head adapted to be forced through the socket and project above the wings and upper edge thereof, substantially as described.

4. A retainer or retaining-spring for casters consisting of a split tubular body of springy material provided at its upper end with two wings or ears extending onto the tubular body crossing the slit therein and overlapping one another to increase the spring action of the socket, in combination with a pintle carrying a caster-wheel and provided with a head adapted to be forced through the spring-socket expanding the same and to project beyond and rest upon the upper edge of the wings and the socket and further provided with a collar near its lower end for contact with the lower end of the socket, substantially as described.

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