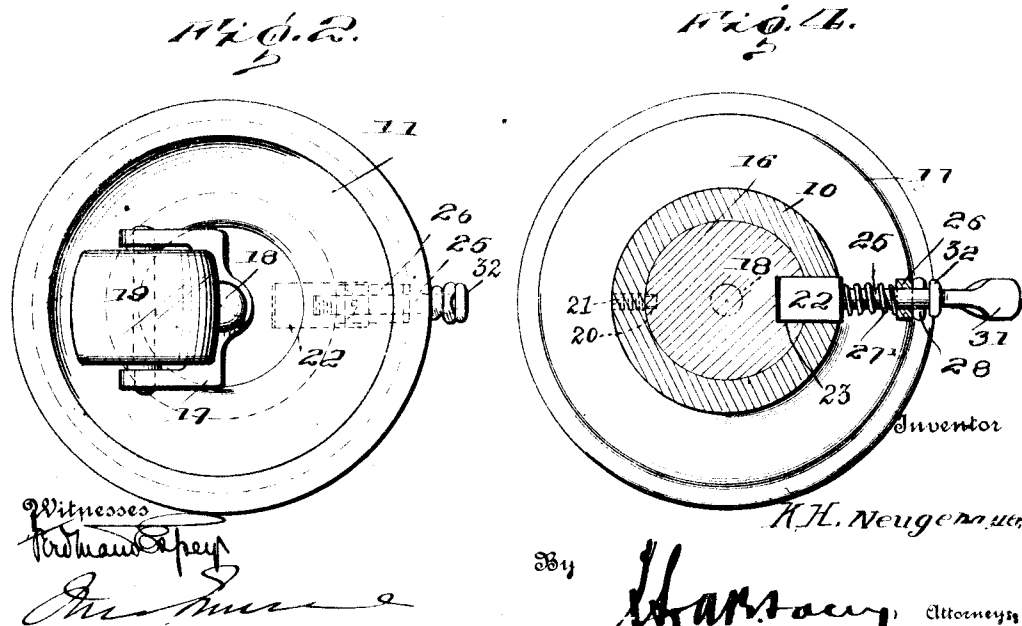
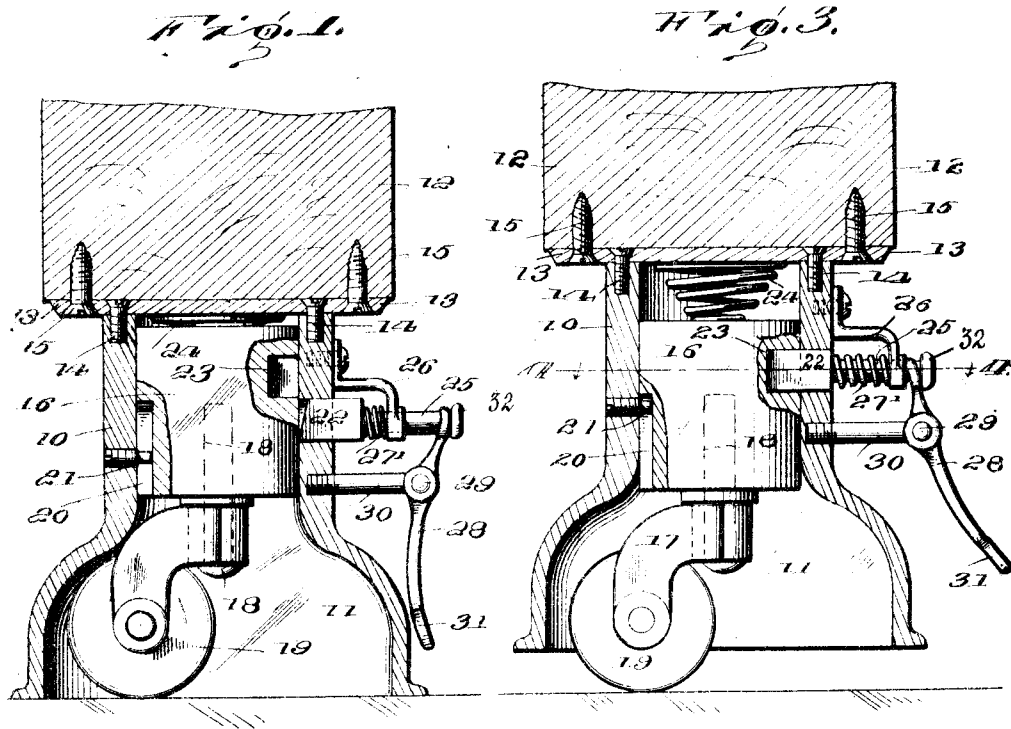


K. H. NEUGEBAUER.
DISAPPEARING CASTER.
APPLICATION FILED JUNE 10, 1912.

1,064,244.

Patented June 10, 1913.



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DISAPPEARING CASTER.

1,064,244.

Specification of Letters Patent.

Patented June 10, 1913.

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To all whom it may concern:

Be it known that I, KUNIBERT H. NEUGEBAUER, subject of the Emperor of Germany, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Disappearing Casters, of which the following is a specification.

This invention relates to improvements in disappearing casters, and has for one of its objects to simplify and improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to produce a simply constructed structure which may be constructed of different sizes for attachment to various forms of furniture and whereby a caster is produced which may be projected when the article of furniture is to be moved from place to place and withdrawn when the article is to remain stationary.

Another object of the invention is to provide a simply constructed device which is partially automatic in its action and which may be readily operated and which is not objectionable in appearance and does not therefore detract from the furniture to which it is applied.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described, and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a sectional side elevation of the improved device with the caster shown in its withdrawn position; Fig. 2 is a bottom plan view of the parts arranged as in Fig. 1; Fig. 3 is a view similar to Fig. 1 illustrating the relative position of the parts when the caster is in its projected position; Fig. 4 is a transverse section on the line 4-4 of Fig. 3, viewed in the direction of the arrow.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device comprises a shell or casing having an upper cylindrical portion 10, and a lower outwardly flaring portion 11, the latter designed to contain the caster and its wheel when in withdrawn position. The cylindrical portion 10 of the casing is

designed to be attached in any suitable manner to a piece of furniture, preferably to the legs of the same.

The caster is adapted for use in connection with various kinds of furniture, such as pianos, tables, chairs, couches and the like, and it is not desired therefore to limit the invention to any specific article of furniture, but for the purpose of illustration the device is shown applied to a conventional leg portion 12 of a piece of furniture, and is secured in place by a plate or disk 13, the latter being secured by screws or other fastening devices 14 to the shell 10, and by screws or other fastening devices 15 to the leg 12 or other portion of the furniture. By this simple means the shell and its enlargement 11 is firmly secured in place and anchored to the leg portion of the furniture, as shown.

Slidably disposed within the cylindrical portion 10 of the shell, is a plug member 16 to which the caster frame 17 is mounted for rotation by the pivot 18. The frame 17 carries the caster wheel 19 of the usual construction. By this simple arrangement it will be obvious that the caster frame 11 together with its wheel 19, is rotatably connected to the plug 16, and the latter movable vertically within the cylindrical portion 10 of the shell, so that when withdrawn as shown in Fig. 1, the flaring portion 11 of the shell rests upon the ground, while the caster is entirely withdrawn within the shell, and then when the plug 16 is projected as shown in Fig. 3, the caster wheel 19 will likewise be projected and support the leg 12 in the ordinary manner. The plug 16 is of sufficient length so that it will retain its place both in projected and withdrawn position, and thus correspondingly support the caster. The plug 16 is provided at one side with a longitudinally extending slot 20 in which a threaded plug 21 fits, the latter being disposed through the side of the cylindrical portion 10 of the shell. By this simple means the plug 16 is free to move vertically within the slot, but is limited in its movement by the plug 21, and will not therefore drop from the leg in event of the furniture being elevated bodily from the floor, while at the same time the caster may be readily removed by detaching the plug 21.

Slidably disposed through the cylindrical portion 10 of the shell at one side, is a lock bolt 22 which is designed to engage in a

socket 23 in the plug 16 when the latter is in its downward position, and thus hold the caster positively projected. The plug 16 is thus held from rotation within the casing, while the caster is free to rotate thereon as shown. Located between the upper end of the plug 16 and the holding plate 13, is a spring 24 operating to maintain the plug 16 yieldably in its outward or projected position.

The bolt 22 is provided with an extended stem 25 which projects through the hanger 26 and is provided with a spring 27 which operates between the bolt and the hanger to maintain the bolt yieldably in its inward position. At its outer end the stem 25 is provided with a laterally enlarged head 32 in the rear of which the short end of a lever 28 operates. The lever is mounted to swing at 29 upon a stud 30 which extends from the cylindrical portion 10 of the shell. At its lower end the lever 28 is provided with a finger grip 31 to facilitate its operation. By this simple means it will be obvious that by manipulating the lever 28, the plug 22 may be withdrawn from engagement with the socket 23 of the plug 16 and thus release the latter and permit the spring 24 to exert its force to project the plug in its caster.

With the device thus constructed, the operation is as follows: The weight of the article of furniture will be sufficient to overcome the resistance of the spring 24 when the block 22 is released and thus cause the lateral enlargement 11 of the shell to bear upon the floor or other support of the furniture and hold the caster within the shell against the resistance of the spring. By this arrangement so long as the plug 22 is retained in its withdrawn position the article of furniture will rest by the lower end of the flaring portion 11 of the shell upon the floor with the caster in withdrawn position and within the shell. When it is desired to dis-
pose the caster in operative position, the article of furniture is elevated manually to correspondingly elevate the shell 10--11 and permit the spring 24 to project the plug and its caster until the socket 23 comes opposite the bolt 22 when the latter will be forced into the socket through the reaction of the spring 27 and thus lock the caster in its projected position as shown in Fig. 3. The spring 27 will be of sufficient strength to hold the bolt firmly within the socket of the plug and thus retain the caster in its projected position and prevent its accidental withdrawal. When it is desired to again withdraw the caster the lever 28 is depressed by pressure applied to the enlarged terminal 31 with the result of causing the withdrawal

of the bolt 22 against the resistance of the spring 24 and thus releasing the plug when the weight of the article of furniture will immediately depress the shell and cause the downward movement of the shell over the caster which will be returned in its withdrawn position. The operation is therefore partially automatic, and the only operation necessary will be for the operator to manipulate the lever 28 when setting the caster or disposing it in operative position. It will be obvious that the device requires no manipulation of any of the parts when the casters are to be projected, as the simple elevating of the article of furniture will release the pressure from the spring 24 and permit the latter to project the caster and cause it to automatically engage with the locking bolt.

The improved device is simple in construction, can be manufactured of any required size and of any suitable material, and may be adapted to articles of furniture of different kinds without material structural change either in the furniture or in the improved device.

Having thus described the invention, what is claimed as new is:

1. A disappearing caster including a shell having an upper and a lower portion, said lower shell portion being provided with a floor engaging face, a plunger slidable in said upper shell portion, a caster mounted for rotation in said plunger and extending into said lower shell portion, a spring operating to maintain said plunger yieldably in projected position, and means for locking said plunger in withdrawn position against the resistance of said spring and above the floor engaging face of the lower shell portion.

2. A disappearing caster including a shell having an upper and a lower portion, said lower shell portion being provided with a floor engaging face, a plunger slidable in said upper shell portion and having a transverse socket, a caster mounted for rotation in said plunger and extending into said lower shell portion, a bolt operating through said upper shell portion and engaging in said socket to lock said plunger in withdrawn position and above the floor engaging face of the lower shell portion, and means for actuating said bolt.

In testimony whereof I affix my signature in presence of two witnesses.

KUNIBERT H. NEUGEBAUER. [L. S.]

Witnesses:

ERIST FRIEDEL,
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