

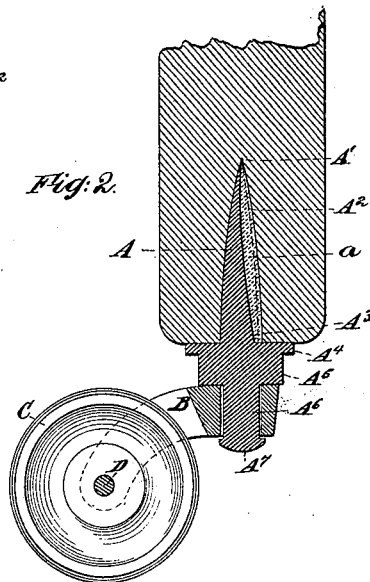
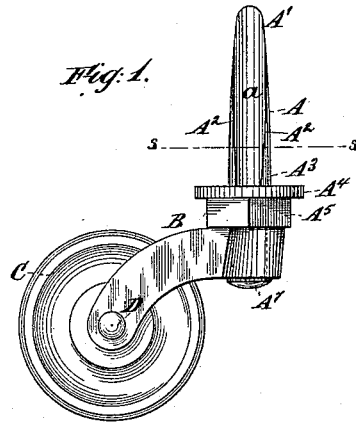
(Model.)

A. THOMPSON.

CASTER.

No. 267,380.

Patented Nov. 14, 1882.



WITNESSES—
Charles R. Searle,
A. H. Putnam

INVENTOR—
Arthur Thompson
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UNITED STATES PATENT OFFICE.

ARTHUR THOMPSON, OF BROOKLYN, NEW YORK.

CASTER.

SPECIFICATION forming part of Letters Patent No. 267,380, dated November 14, 1882.

Application filed August 9, 1882. (Model.)

To all whom it may concern:

Be it known that I, ARTHUR THOMPSON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Casters for Furniture, of which the following is a specification.

The object of the invention is to facilitate the easy and firm setting of casters into the legs of tables and other articles of furniture without risk of splitting. I provide the caster with a shank having a construction analogous to what is known as the "pod-auger." The lower end of this shank, when in position, serves as the stud or stem on which the caster is supported and around which it turns. A collar formed in one therewith, or firmly attached, affords the stock a support by pressing firmly against the wood of the leg, and is provided with a squared portion adapted to receive a suitable wrench or tool, by which the shank may be conveniently turned. The swiveling portion of the caster having been previously reliably united to the shank with liberty for the required swiveling motion, the setting of the shank in the leg is effected by simply applying it in the proper position and direction, pressing it gently, and turning it. The shank is so formed that it presents a cutting-edge, which smoothly cuts the wood and excavates the required hole, the shavings or cuttings remaining in the cavity or pod and becoming gradually compressed therein as the shank is driven farther into the leg. The cavity or pod in the shank is formed smaller near the base of the shank than near the extremity, so that when the caster is being inserted the cuttings or chips formed by the cutting-edge are prevented from falling out, and as the shank penetrates farther into the wood become compressed and permanently remain in said cavity.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is an elevation of my improved caster; and Fig. 2 is a corresponding vertical section, showing the caster inserted in the leg of a piece of furniture, the shank being shown in this figure in section at right angles to Fig. 1. Fig. 3 is a cross-section on the line s s, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

A is the shank, of steel or hard iron, certain portions being designated, when necessary, by additional marks, as A' A². The upper end of the shank is contracted, as indicated by A'. A cavity, *a*, extends along a considerable length of the shank. This cavity is large at the upper end and grows less downward. The shank presents sharp cutting-edges A², extending up and down.

A³ is the cylindrical exterior of the portion which is inserted in the wood of the leg.

A⁴ is a broad collar, and A⁵ a squared portion immediately adjacent thereto.

A⁶ is a cylindrical portion of the shank.

A⁷ is a riveted head.

B is the revolving or swiveling frame of the caster, C the wheel, and D the pin or rivet on which the wheel turns. These parts B C D may be of any ordinary or suitable construction.

The shank may be conveniently formed by making the main portion A' A² A³ A⁶ A⁷ from a round bar of steel and casting the portion A⁴ A⁵ thereon; or the whole may be made as a drop-forging or as a casting.

The cavity *a* may be made partially by forging or casting and completed by an ordinary milling-tool. It is important that the edges A² be sharp, especially on that side of the cavity *a* which is required to cut when the device is inserted in the wood.

The action will be readily understood. When the device is presented against the ends of the grain of the table-leg or other article of furniture in the proper central position and in the proper line, and, being gently pressed toward the leg, is turned forcibly around, the cutting-edge A² of the contraction A' cuts or shaves a quantity of the wood, the shank device traverses upward into the leg, and in so doing gradually compresses the shavings, as they are formed by the cutting-edge, in the cavity *a*.

I believe that under some circumstances a core of uncut wood may remain in the center of the hole; but my experiments do not show such result. If such does remain it will contribute to still further brace and stiffly support the shank.

The operation of the boring-shank, as described, precludes the liability to split the wood into which it is inserted, as it holds the

cuttings in the pod or cavity *a* of the shank and compresses them therein without exerting any considerable pressure on the interior surface of the hole formed in the act of inserting.

- 5 The action is the opposite of the displacing by forcing the wood aside, as is the effect of a pointed screw-shank.

- Modifications may be made in the forms and proportions of all the parts. The portion A^5 ,
10 which I have described as square, may be six-sided, or in various other forms; but it is essential that it be adapted to be readily engaged by a suitable tool to turn the shank forcibly around. The outer face of the collar
15 A^4 should be plane and adapted to receive a forcible end-thrust from a suitable device fitted on the squared portion A^5 , and through which is transmitted both a turning and a thrusting force.

The device may be used in various sizes, 20 and as a caster for heavy articles—as pianos, bedsteads, and the like—and for lighter articles, as tables, stands, chairs, &c.

I claim as my invention—

The caster described, having the shank A , 25 formed with a contraction, A' , pod or cavity *a*, and a cutting-edge, A^2 , adapted to serve as and for the purposes herein specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 30 witnesses.

ARTHUR THOMPSON.

Witnesses:

A. H. GENTNER,
MARY F. BOYLE.