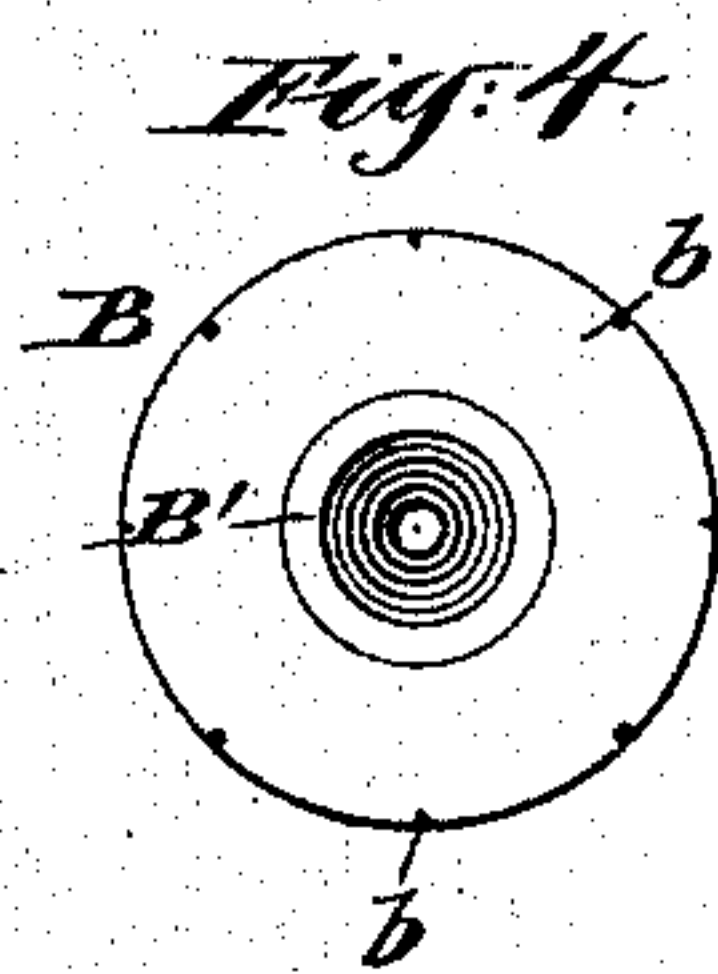
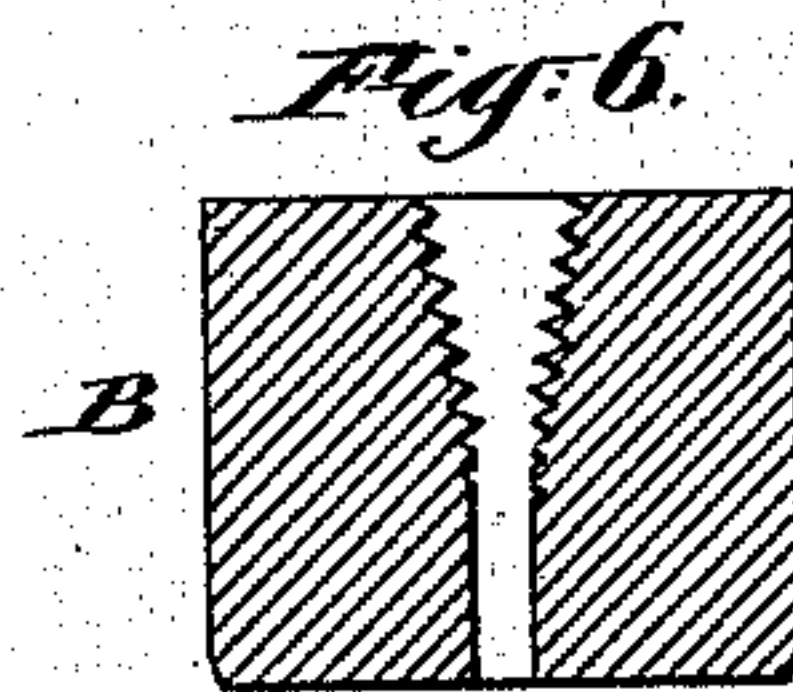
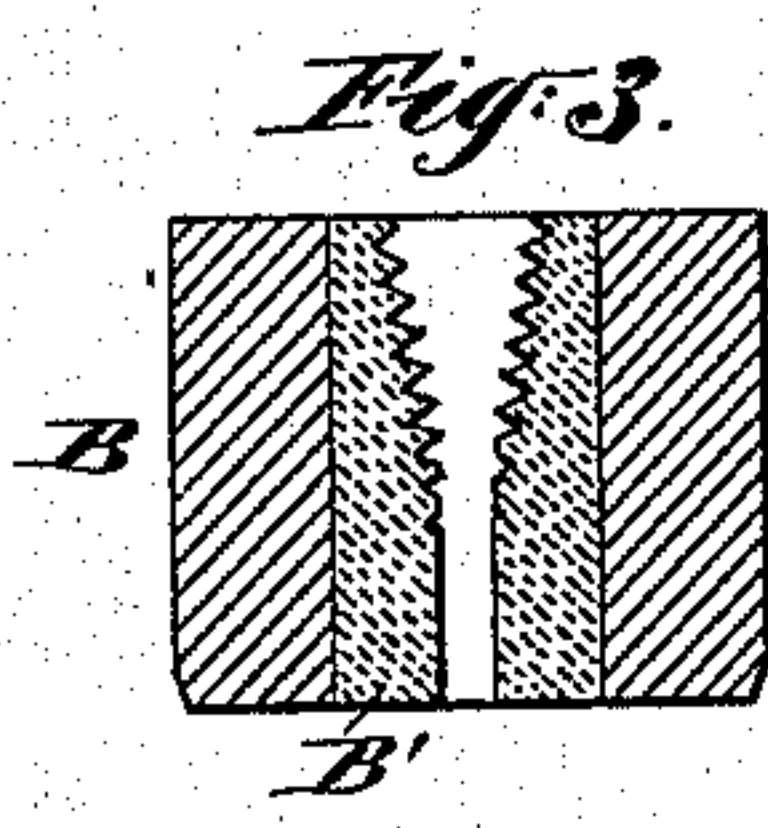
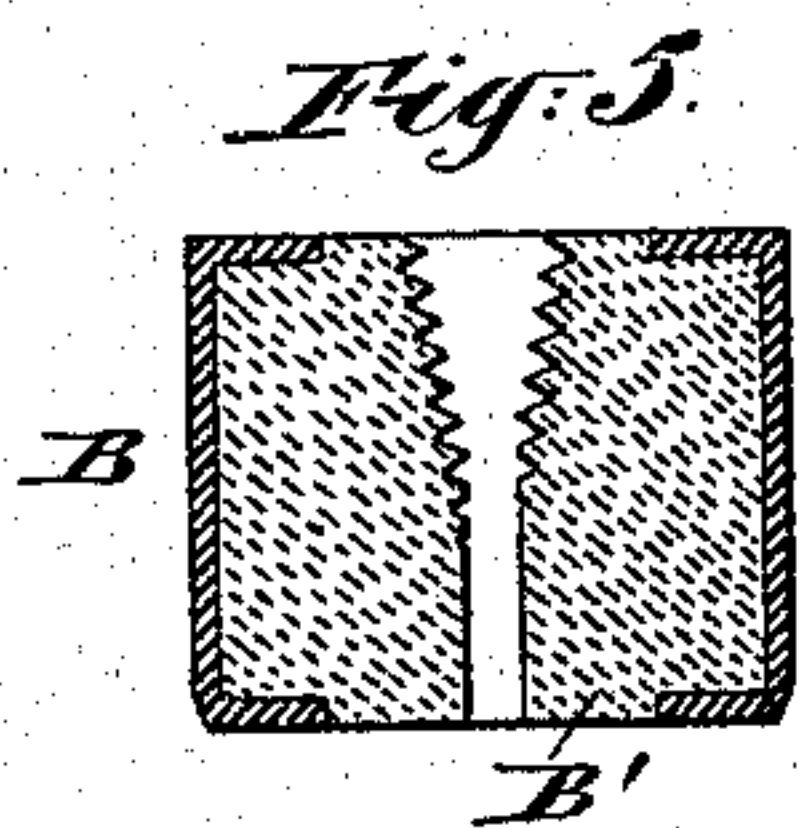
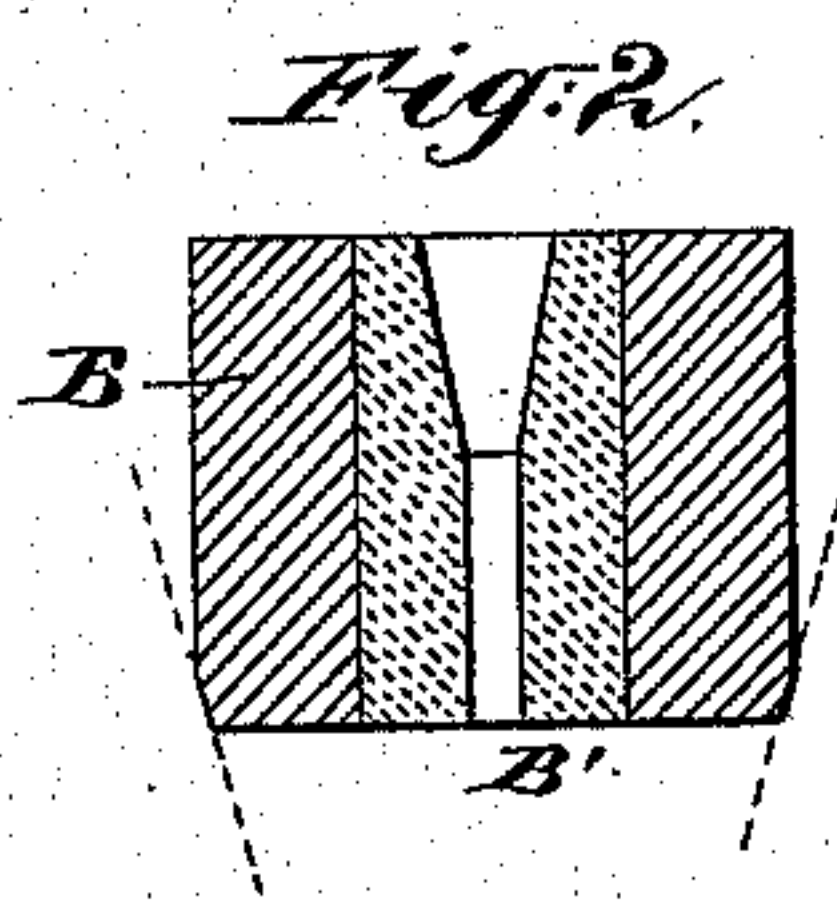
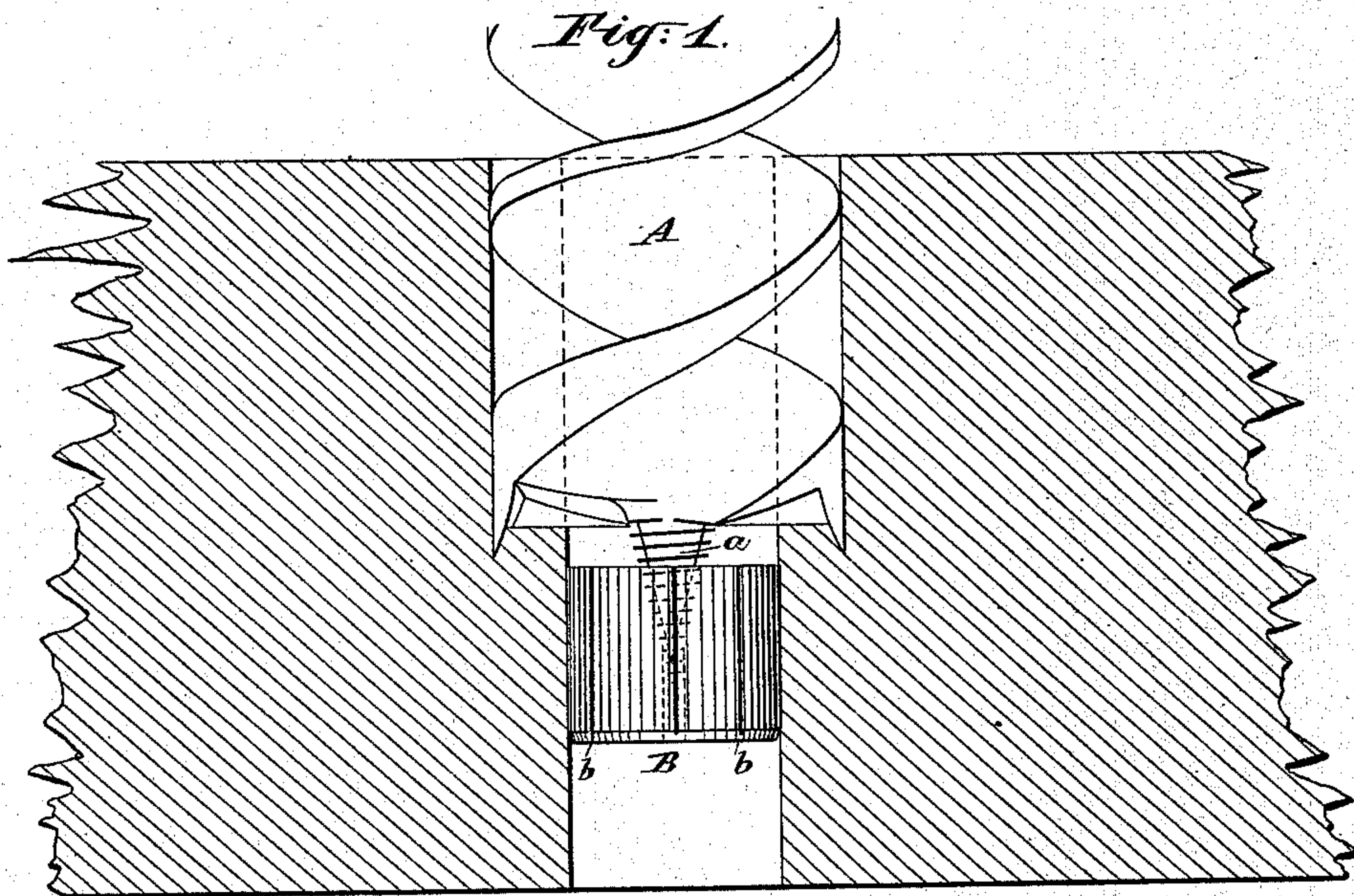


(No Model.)

W. J. M. DOBSON.
ATTACHMENT FOR AUGERS.

No. 413,316.

Patented Oct. 22, 1889.



Witnesses:
Charles R. Searle,
Chas. F. Barter.

Inventor:
William J. M. Dobson,
by his attorney
Thomas Lee Stetson

UNITED STATES PATENT OFFICE.

WILLIAM J. M. DOBSON, OF BROOKLYN, NEW YORK.

ATTACHMENT FOR AUGERS.

SPECIFICATION forming part of Letters Patent No. 413,316, dated October 22, 1889.

Application filed March 12, 1889. Serial No. 302,982. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. M. DOBSON, of Brooklyn, Kings county, in the State of New York, have invented a certain new and useful Improvement in Attachments for Augers, of which the following is a specification.

My attachment is intended to facilitate the enlargement of the whole or a portion of the length of a hole after it has been bored. This is frequently necessary, and the absence of any hold for the screw-spur at the point of the auger in the act of reboring renders it so difficult that it may be called impracticable except by first filling the small hole by a plug of wood. Even with such filling and its attendant difficulties there is no assurance that the large auger used for the reboring will be directed exactly the same as the small one first used, and the result is liable to be imperfect.

My invention overcomes all difficulties, avoids the necessity for any plugging with wood and any removal of the remainder of such plug after an enlargement of a portion of the length of a hole, and insures that the enlargement shall be exactly concentric to the original small hole. I attain this by providing a block of a size and form to fit tightly in the small hole. In such block the screw-spur of the larger auger is engaged, and as the large auger, of the diameter required to produce the enlarged hole, is inserted and revolved the smooth round block travels ahead of it in the small hole and keeps it exactly guided.

In what I esteem the most complete form of the invention the block is of soft metal near its axis, and is prepared beforehand with a tapering hole without threads, and the hole is afterward threaded by the introduction of the screw-spur of the larger auger. This insures that the block shall accurately match the large auger on which it is used; but if care is taken to make the screw-spur of a certain size and pitch the block may be previously threaded to an exactly corresponding condition.

I propose to provide a set of my blocks, one or more for each size of auger used.

The term "pilot" may be applied to my block as indicating its function of guiding accurately the center of the large auger.

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 a portion of an auger equipped with my attachment in operation. The timber is shown in section. The remaining figures show the block or pilot detached. Fig. 2 is a central vertical section. It shows the block before the screw-threads are formed. Fig. 3 is a corresponding view showing the completed block. Fig. 4 is a plan or top view of the same. Figs. 5 and 6 are vertical central sections. They show modified forms of the invention.

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

A is the "twist," and *a* the screw-spur, of an ordinary screw-auger. It will be understood that the twist has the diameter of the enlarged hole to be bored, and that the auger has the usual provisions—lips, &c.—for cutting away the wood as it advances and making a clean-cut cylindrical hole.

B is a round block of less diameter, engaged on the screw-spur *a*. When the block B is removed, the auger A *a* may be used in the usual manner to bore fresh holes in wood and analogous material. When block B is applied and screwed tightly upon the spur *a*, the auger thus provided with a round smooth-surfaced block to precede it is ready to be used to enlarge a previously-formed hole. The block B should be of the same diameter as the previously-formed hole, or only a little less, so that as the auger with the attachment is turned the smooth round block B will traverse the previously-formed smaller hole and keep it exactly centered.

Referring to Fig. 3, B' is a soft-metal interior of the block B, adapted to receive and be shaped by the screw-spur *a*. This soft-metal interior is cast within a previously-turned rim of brass or other harder metal. It is formed originally with a smooth tapering hole. When the screw-spur *a* is introduced, it causes its interior to conform thereto. The conformation may, if found expedient, be made very complete by forcibly turning the block upon the spur by the aid of pipe-tongs or the like before the auger thus equipped is used.

Fig. 5 shows a still larger proportion of the block soft metal. In this form the hard brass is a thin shell forming nearly the entire exterior—not only the cylindrical or slightly-tapered exterior, but also both the plane faces. The preferable form for the exterior in all constructions is a cylinder slightly tapered at the forward end.

Fig. 6 shows the whole block of homogeneous metal. It may be entirely brass or iron or steel threaded by the insertion of a taper tap or by other means to match the screw-spur on which it is to be used. It may be entirely a soft metal. In the latter case the hole is preferably threaded beforehand; but it may be used with some success with a smooth conical hole, allowing the threads to be formed by the screw-spur itself, as described for Figs. 3 and 4.

In general, when the blocks are furnished with the augers, the threads of the augers being known, I prefer to provide the blocks with corresponding threads; but when the blocks are furnished to be used with any augers I prefer to have the hole in the interior of the

block tapered and smooth, and the metal soft enough to take the impression of the threads of any spur.

I provide notches or grooves *b* on the periphery of the block B to facilitate securing the block firmly upon the spur *a*.

I claim as my invention—

1. The round block B, having a tapering hole and a slightly-tapered exterior adapted to match on a screw-auger of larger diameter and to serve therewith, as herein specified.

2. The combination of a screw-auger A *a*, for boring wood, and a round block B of less diameter, the latter being provided with a hole adapted to fit on the tapering screw-point and to be readily applied and removed, as herein specified.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 11th day of March, 1889, in the presence of two subscribing witnesses.

WM. J. M. DOBSON.

Witnesses:

CHAS. F. BARTER,

CHARLES R. SEARLE.