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L. K. ROBBINS.
WELL BORING TOOL.

APPLICATION FILED NOV. 30, 1906.

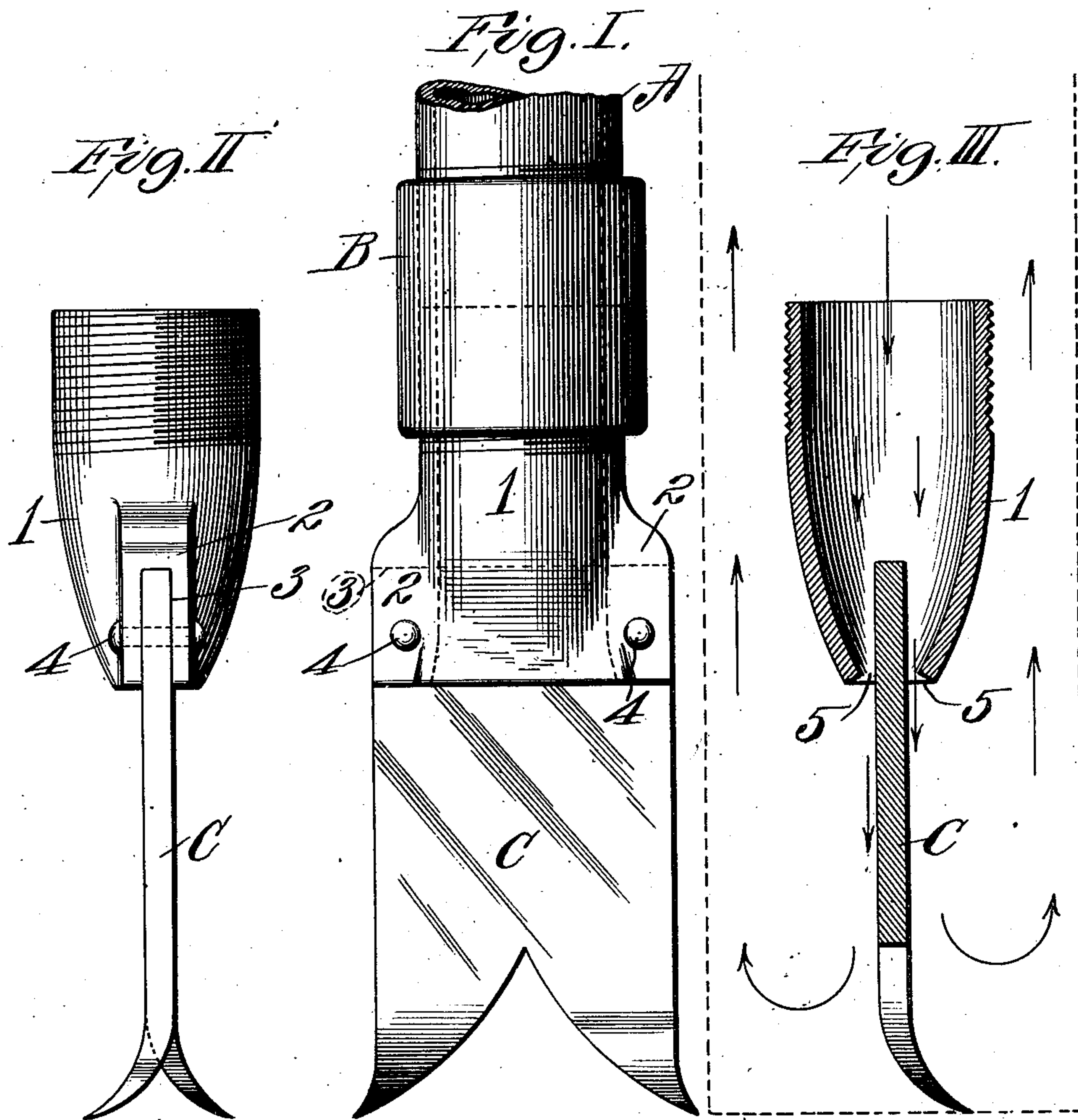
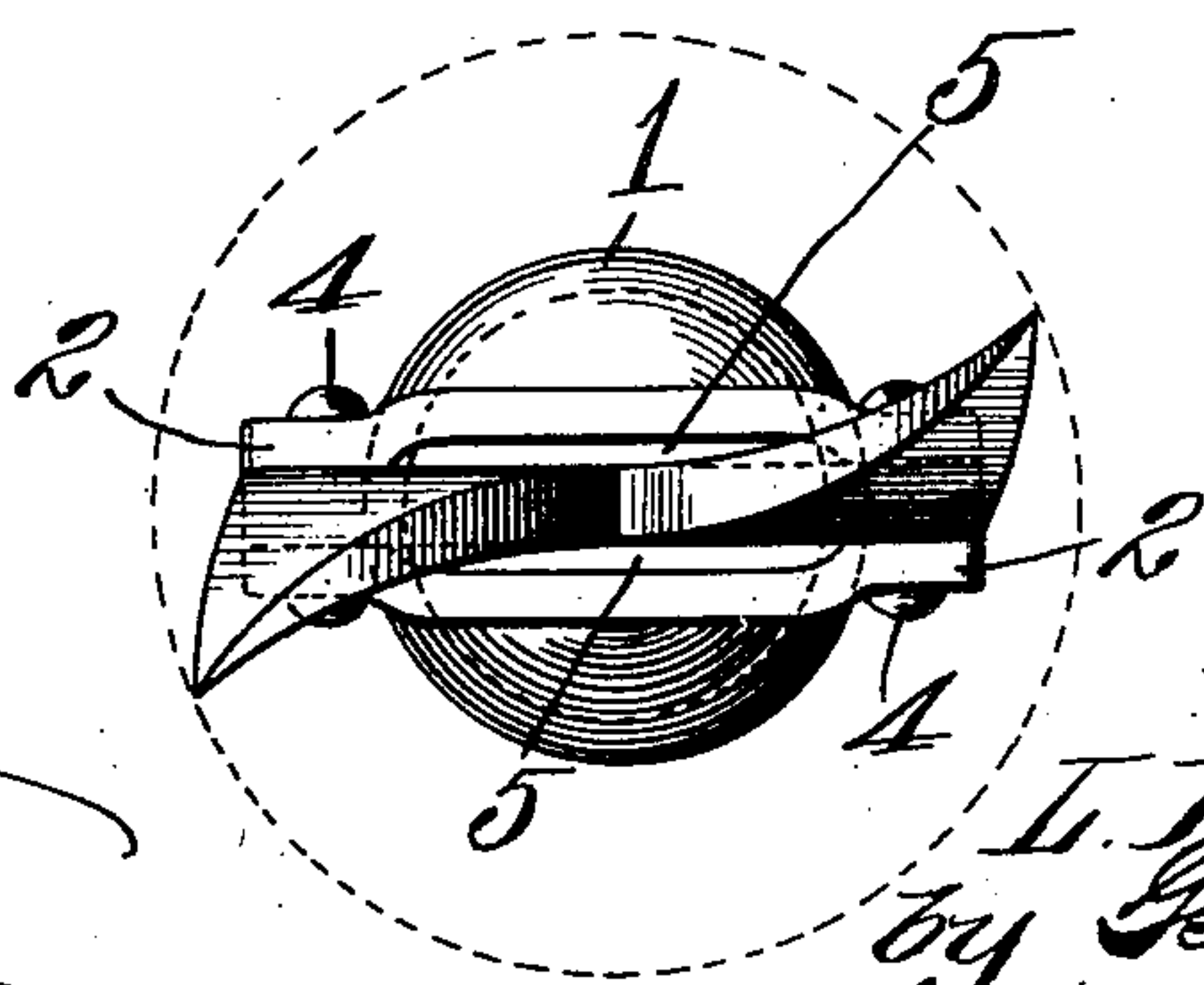


Fig. IV.



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UNITED STATES PATENT OFFICE.

LEROY K. ROBBINS, OF ST. LOUIS, MISSOURI.

WELL-BORING TOOL.

No. 846,950.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed November 30, 1906. Serial No. 345,692.

To all whom it may concern:

Be it known that I, LEROY K. ROBBINS, a citizen of the United States of America, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Well-Boring Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of tools utilized for well-drilling; and, briefly stated, my invention consists in providing a tool of this character having a hollow shank for the reception of a boring-bit that is provided with laterally-extending slotted ears projecting beyond the shank through which the fastenings for the bit are introduced as distinguished from the present constructions of shanks in which provision is made for the fastening of the boring-bits to the shanks by passing fastening members through the central portions of the shanks. The object in making the shank as stated is to provide a more secure and rigid fastening for the boring-bit to the shank than is possible to secure in producing the fastening in the common manner just referred to.

My invention further consists in a construction of the boring-bit receiving-shank that provides for a restricted even flow of water in flat streams onto the boring-bit from the shank as the water is conducted to said shank from the boring-tool-carrying tubing, as usual.

Figure I is a side elevation of my boring-tool. Fig. II is an edge elevation of the tool. Fig. III is a longitudinal section taken through the tool. Fig. IV is an end view.

A designates a fragment of tubing such as commonly used to carry well-boring tools, and B is a coupling of common form attached to said tubing.

C is a boring-bit of ordinary type.

1 designates the boring-tool shank, which is attached to the coupling B and is of hollow form. This shank is provided with two lat-

erally-extending ears 2, that project beyond the shank and contain slots 3 for the reception of the bit C. When the bit is introduced into the slots in these ears, it is secured therein by any suitable means of fastening, such as rivets 4, that pass through the ears and the bit, adjacent to the outer edges of the bit, thereby firmly clamping the bit to the shank. By this construction a much wider bearing for the bit is provided, and the probability of the bit becoming loosened or displaced from the shank is reduced to a minimum.

The side walls of the shank 1 are contracted at their lower ends, as seen most clearly in Figs. III and IV, thereby providing narrow or restricted water-outlet passage-ways 5 at each side of the boring-bit. By thus contracting the walls of the shank and providing the restricted water passage-ways I am enabled to secure a more powerful force and flat streams of water against the boring-bit when discharged through the shank, and as a consequence the bit is kept in a much cleaner condition and more satisfactory work may be accomplished thereby.

I claim—

1. In a boring-tool, the combination of a bit and a hollow shank for the reception of said bit contracted at its end which receives said bit, providing narrow passage-ways for directing flat streams of water onto the sides of the bit, substantially as set forth.

2. A boring-tool comprising a bit, a hollow shank formed with laterally-extending slotted ears projecting beyond the shank providing an extended support for the bit and contracted at its lower end so as to provide narrow passage-ways for directing flat streams of water onto the sides of the bit, and means for securing the bit to the ears of the shank.

LEROY K. ROBBINS.

In presence of—

BLANCHE HOGAN,
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