

No. 768,396.

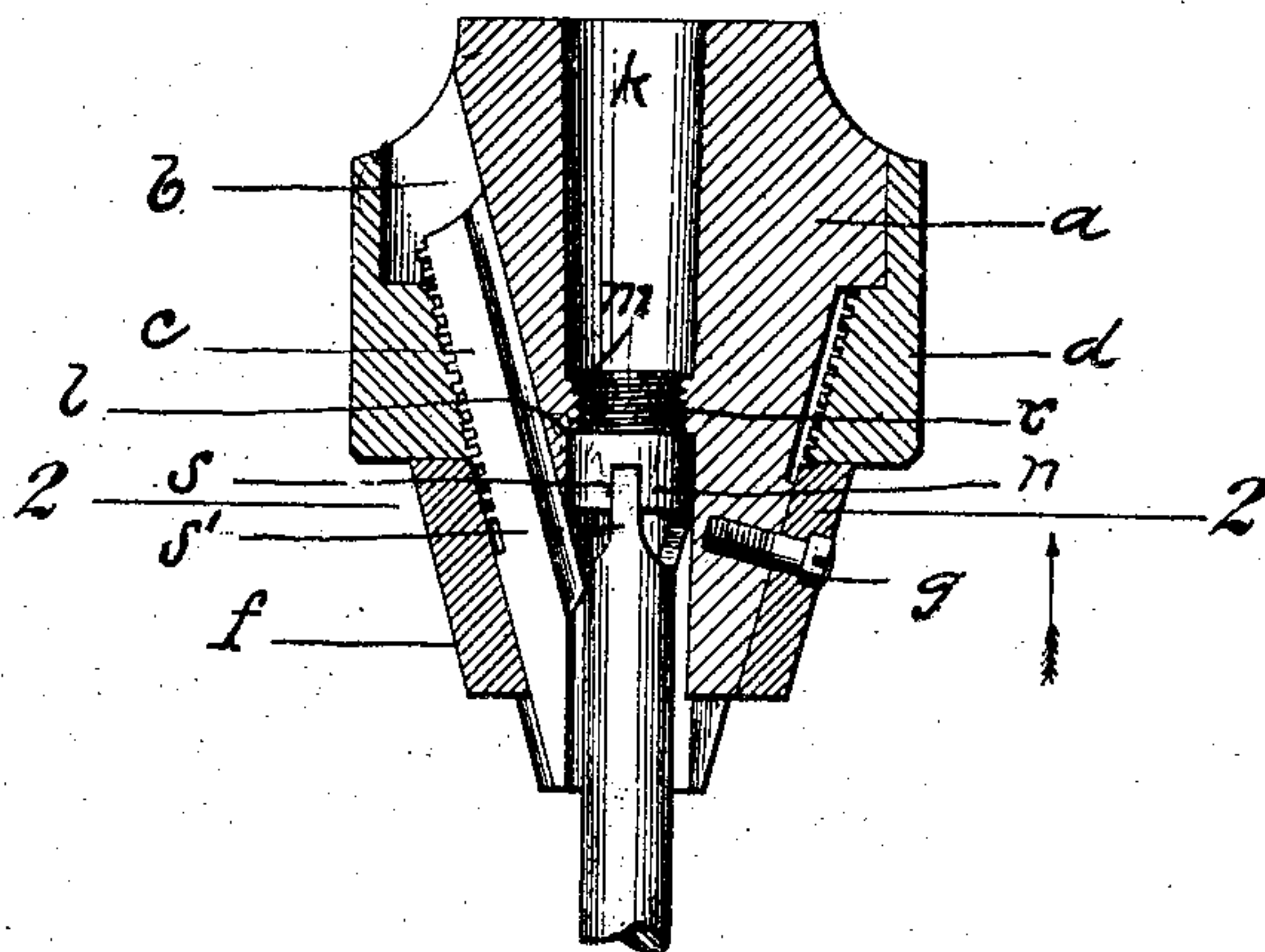
PATENTED AUG. 23, 1904.

A. A. NORTH.  
CHUCK.

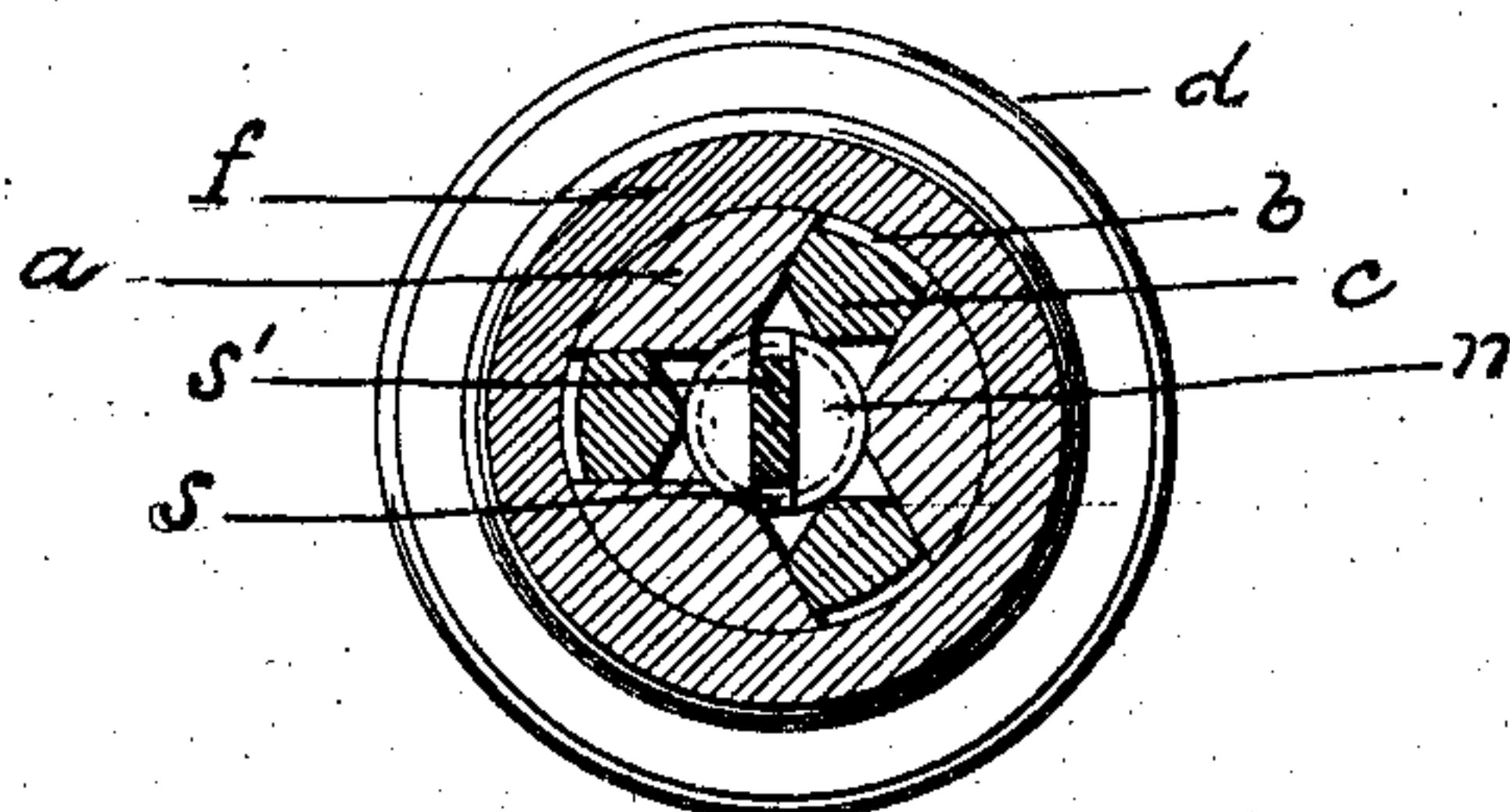
APPLICATION FILED FEB. 9, 1904.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

Wolke L. Burke

St. Meinradahl.

*Inventor:*

Albert A. North

By his Attorney

J. E. Hart

# UNITED STATES PATENT OFFICE.

ALBERT A. NORTH, OF NEW BRITAIN, CONNECTICUT.

## CHUCK.

SPECIFICATION forming part of Letters Patent No. 768,396, dated August 23, 1904.

Application filed February 9, 1904. Serial No. 192,792. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT A. NORTH, a citizen of the United States of America, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Chucks, of which the following is a specification.

This invention relates to improvements in drill-chucks; and the object of the invention is to provide a positive driving mechanism of a construction which will permit of a wide range of use of chucks of this description.

In the drawings, Figure 1 represents a central vertical section of a chuck embodying my invention. Fig. 2 is a sectional view on the line 2 2 of Fig. 1.

The embodiment of the invention shown provides a positive driving attachment, which may be used either for drilling or tapping and which may be removed when the character of work requires a continuous opening through the chuck-body.

In the chuck-body *a* are converging slots *b*, in which are located the jaws *c*, which are engaged by the nut *d* to move them in and out of the chuck-body, the cap *f*, secured to the chuck-body by the screws *g*, holding the nut in place. The chuck-body has a central opening, as at *k*. When the jaws are in their extreme open position, their faces lie flush with the walls of this opening through the chuck-body, and, as is evident, the capacity of the chuck is limited by the size of this central opening. A shoulder *l* is left in this central opening, the walls of the opening back of the shoulder being screw-threaded, as at *m*. The positive driving member *n* rests on this shoulder, and is thereby held against movement in one direction. This driving member has a shank *r*, which has threads engaging with the threaded portion *m* back of the shoulder *l* to hold the driving member in position. The outer face of this driving member is slotted, as at *s*, the tools having slatted-off ends *s'*, which fit in the slot.

The depth of the driving member fills the

space between the shoulder and the points at which the jaws enter the central opening in the chuck. Consequently if the chuck is reversed the driving member will not be displaced, because of its contact with the jaws, which will prevent its outward movement. It will thus be seen that the chuck is adaptable for use with taps as well as for drilling.

A further advantage of this construction is the removable feature of the driving member, which leaves an opening entirely through the chuck, so that if occasion arises for passing the work clear through the chuck this same chuck can be used. In order to remove the driving member, it is only necessary to open the jaws to the widest extent and unscrew the driving member with the aid of a suitable tool.

I claim as my invention—

1. The combination with a chuck-body having a central bore with a portion thereof diminished or reduced in diameter, and a plurality of converging ways, of slidable jaws fitted in said ways, means for moving said jaws, and a driving member fitted in the reduced portion of the bore in the body, said driving member having a slotted head of greater diameter than the diminished bore and the said head being of a less area than the space between the sliding jaws when the latter are at their fully-open position.

2. In a chuck, the combination of a body having a bore with a threaded portion of less diameter than the rest of the bore, and a driving member screwing into said body and having a slotted head and a shoulder abutting against the said diminished portion of the bore, with annularly-disposed sliding jaws adapted in one position to embrace said head and prevent the same from screwing out of its seat in the bore of the body.

3. The combination with a chuck-body having converging ways, a central bore with a portion thereof threaded and with a shoulder at the end of said threaded portion and a driving member screwing into said threaded portion of the bore and abutting against said



shoulder, the said driving member having a  
slotted head of a diameter equal to the diam-  
eter of the bore; of jaws arranged in said con-  
verging ways, means for moving said jaws in  
5 the ways, the said jaws and the said converg-  
ing ways being so disposed that when the jaws  
are moved inwardly they will embrace the  
outer end of said driving member and prevent

the same from being screwed out of the thread-  
ed portion of the bore. 10

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

ALBERT A. NORTH.

Witnesses:

E. J. SKINNER,  
L. D. CARTER.