

(No Model.)

A. H. McNEAL.  
PROCESS OF MAKING PIPE CORES.

No. 570,708.

Patented Nov. 3, 1896.

FIG. 2

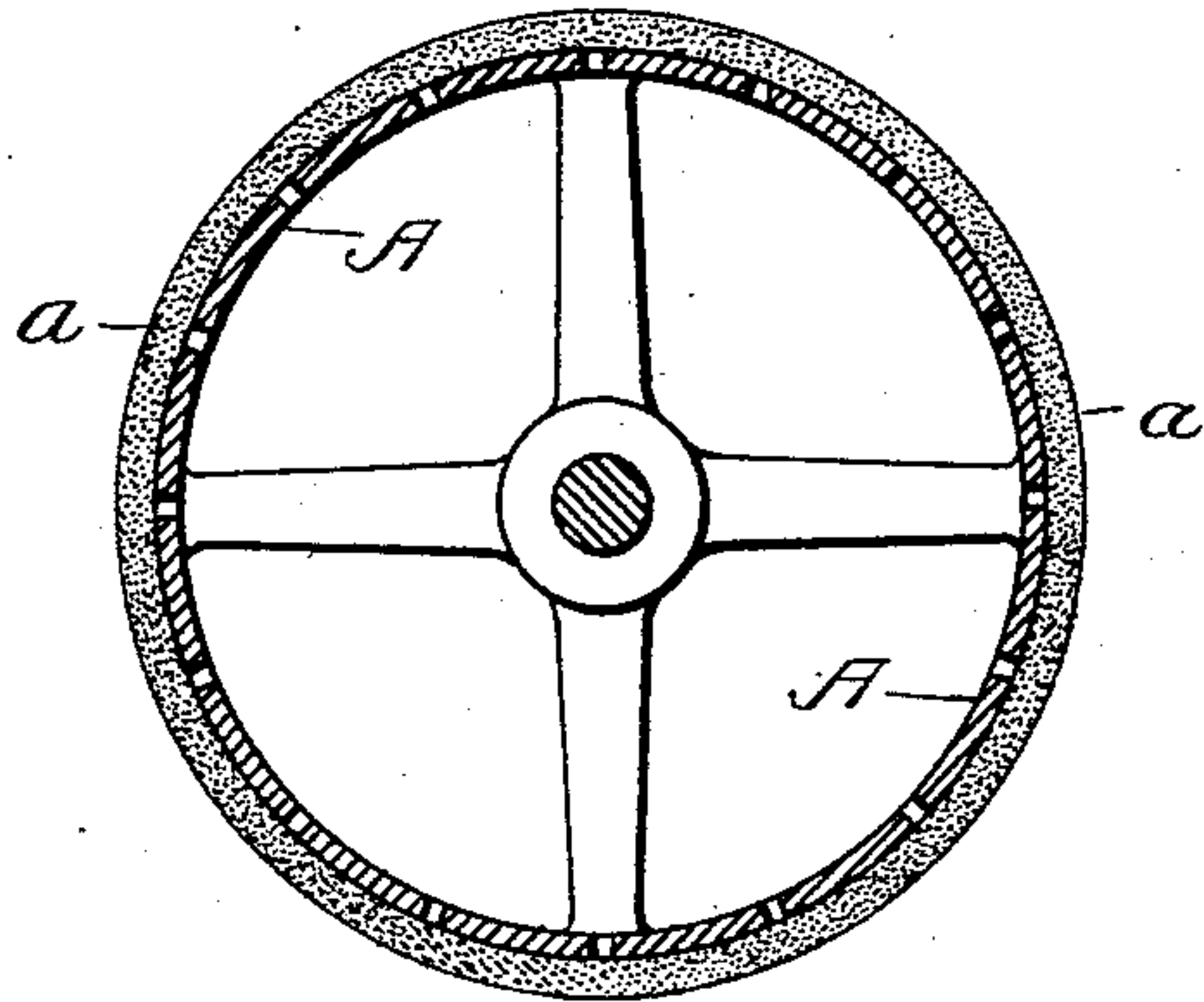


FIG. 4



FIG. 1

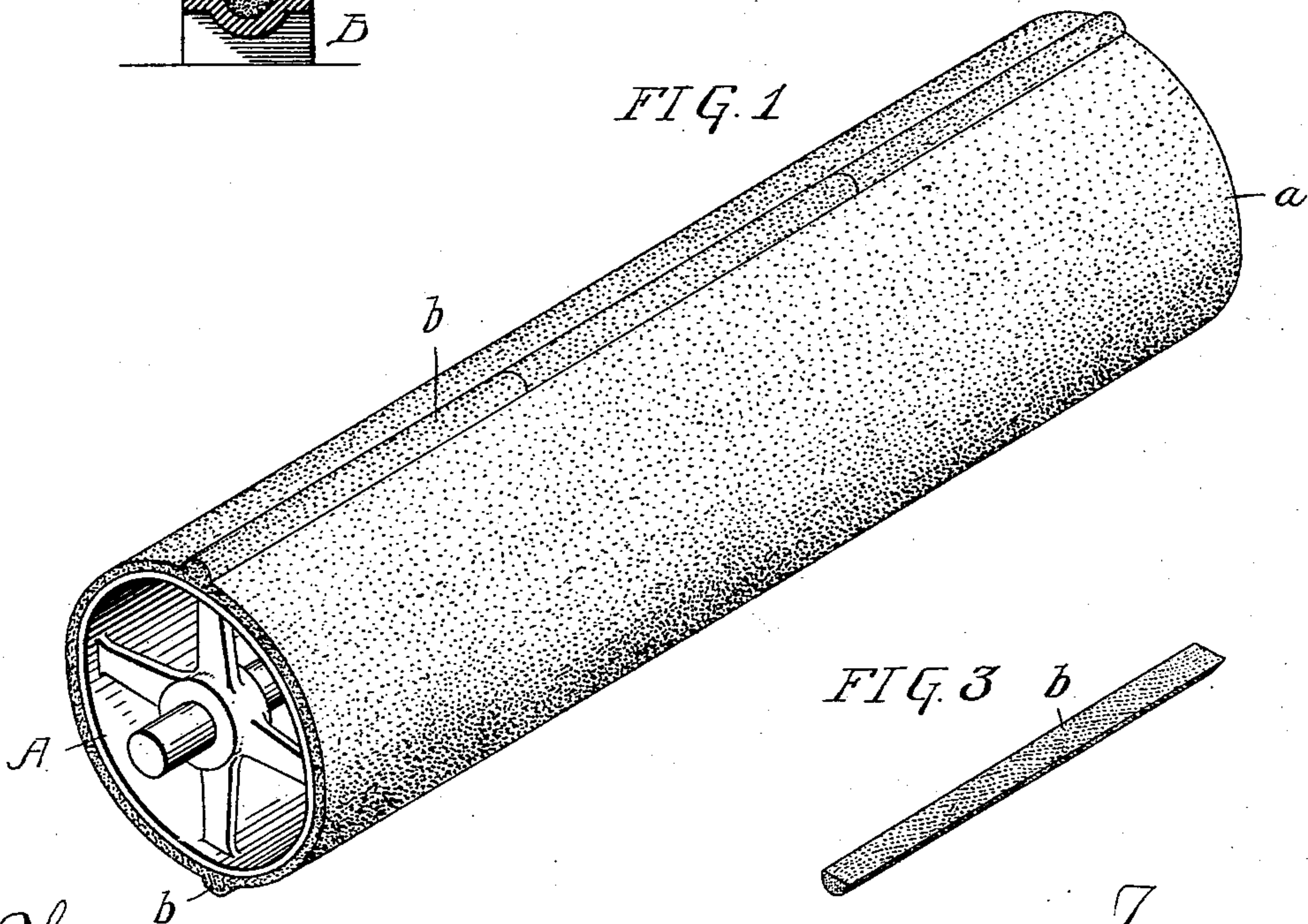
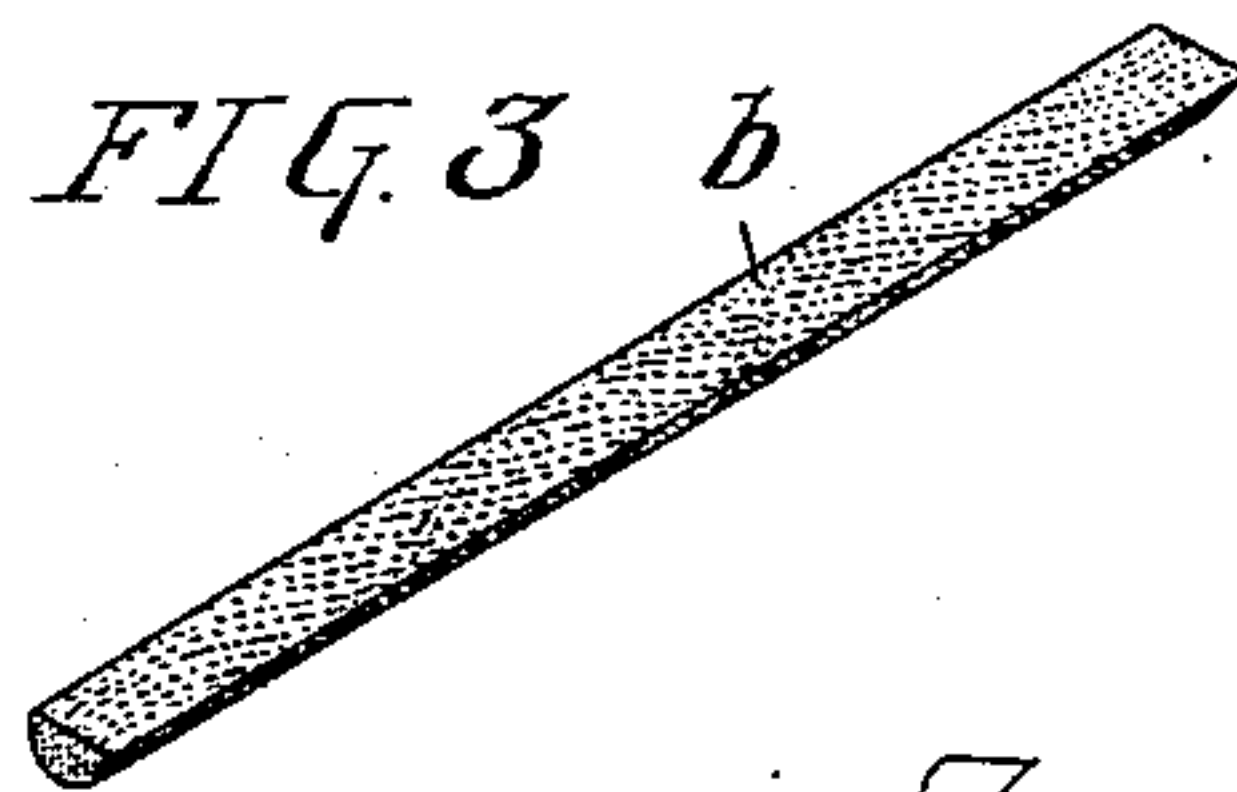


FIG. 3



Witnesses:  
*John E. Porter*  
*J. Henderson.*

Inventor:  
*Andrew H. McNeal.*  
by his Attorney,  
*James Bell.*



# UNITED STATES PATENT OFFICE.

ANDREW H. McNEAL, OF BURLINGTON, NEW JERSEY.

## PROCESS OF MAKING PIPE-CORES.

SPECIFICATION forming part of Letters Patent No. 570,708, dated November 3, 1896.

Application filed September 19, 1896. Serial No. 606,450. (No specimens.)

*To all whom it may concern:*

Be it known that I, ANDREW H. McNEAL, a citizen of the United States, and a resident of the city of Burlington, county of Burlington, State of New Jersey, have invented a certain new and Improved Process of Making Pipe-Cores, 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 certain improvements in the formation of cores for pipe-casting, and has for its object to improve, simplify, and cheapen the process of manufacturing such cores, as more fully set forth hereinafter.

The core which I desire to produce is one designed especially for the casting of pipes provided with internal grooves, and in the manufacture of the core it is desired to avoid the expense incidental to the use of the ordinary core-box in which such articles are usually made.

In the accompanying drawings, Figure 1 is a perspective view of a pipe-core manufactured in accordance with my improved process. Fig. 2 is a transverse sectional elevation of the same without the groove-forming ribs. Fig. 3 is a perspective view of a portion of one of the groove-forming ribs, and Fig. 4 is a sectional elevation of one of the ribs in position in the core-box in which it is manufactured.

In the process of manufacturing my improved pipe-core I first take an ordinary perforated metallic cylinder A and place upon this a layer or ring *a* of loam, sand, or other suitable molding material to form the main body of the core, the thickness of the layer of molding material being increased until the main body of the core has reached a diameter equal to the inner diameter of the pipe subsequently to be cast thereon.

In a suitable core-box, as B, I separately form the rib-sections *b*, which are to be subsequently attached to the main body of the core, and which in the casting operation serve to form grooves in the finished pipe. These ribs *b* are made in short sections convenient for handling and are placed in an oven until partially dry, and at the same time the main body of the core is separately partially dried.

The main core-body and the ribs when partially dried or baked are taken from the ovens and the sections of the rib are laid in straight lines along the length of the main body of the core and secured thereon by cementing or otherwise, and then the finished core is placed in the baking-oven again and thoroughly dried, ready for use in the casting operation.

By my improved process pipe-cores of the character described may be very readily and economically manufactured, and the use of a core-box for the core as a whole is avoided.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The herein-described process of manufacturing cores for the casting of internally-grooved pipes, said process consisting in first forming the main body of the core of the proper diameter and partially baking or drying the same; second, forming in a core-box the ribs for the internal grooves of the pipe, in sections, and partially baking said sectional ribs; third, securing said partially-baked ribs to the partially-baked main body of the core; and finally, baking the finished core in readiness for the casting operation.

In witness whereof I have hereunto set my hand, this 31st day of August, A. D. 1896.

ANDREW H. McNEAL.

Witnesses:

JNO. E. PARKER,  
MARY B. JUSTICE.