

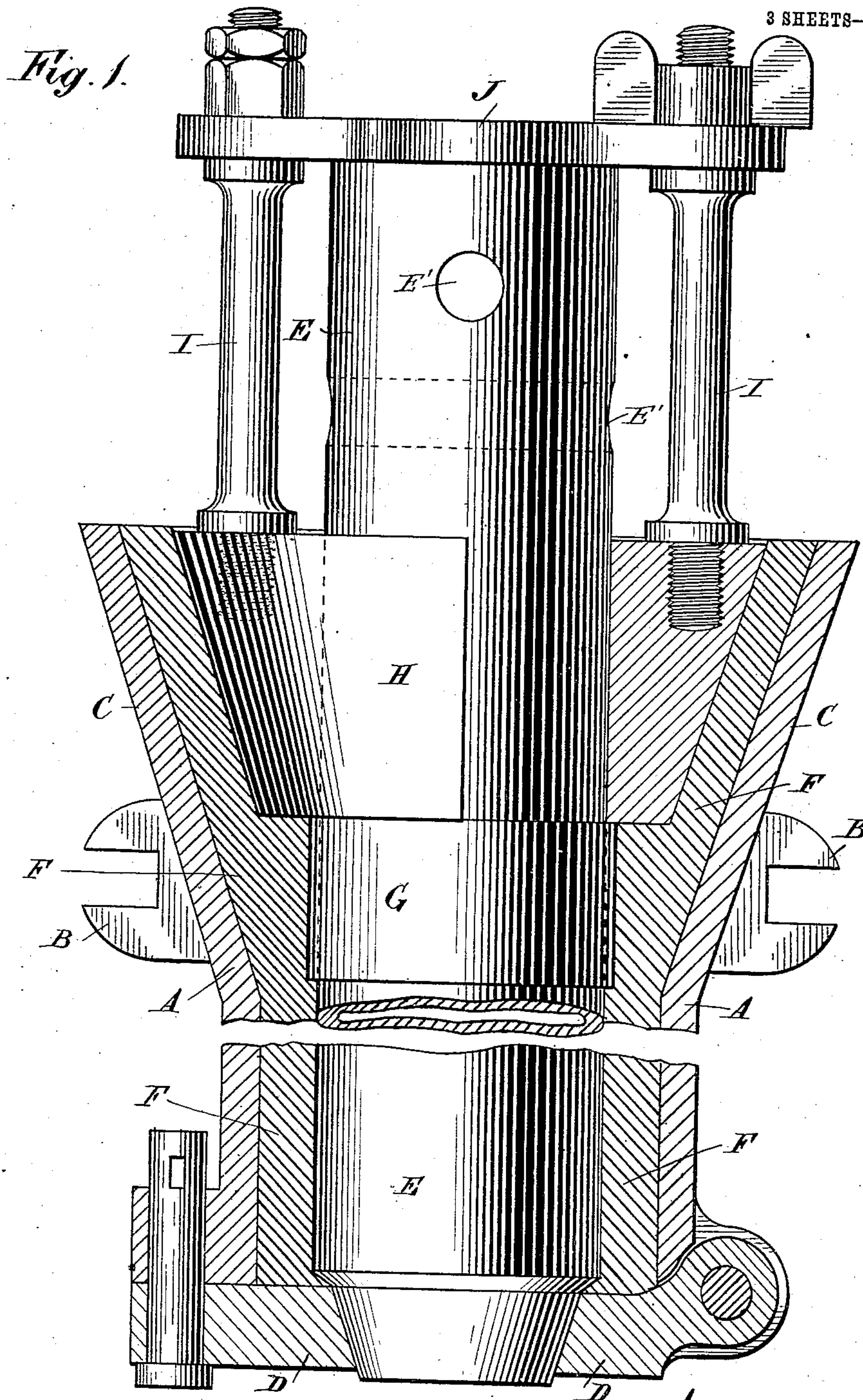
No. 854,765.

PATENTED MAY 28, 1907.

H. SLADE.
PIPE PATTERN.

APPLICATION FILED SEPT, 8, 1903.

3 SHEETS—SHEET 1.



Witnesses:
Thos. J. Byrnes
A. S. Dunham

D
Inventor,
Harry Slade,
by Kerr, Page & Cooper, Attys.

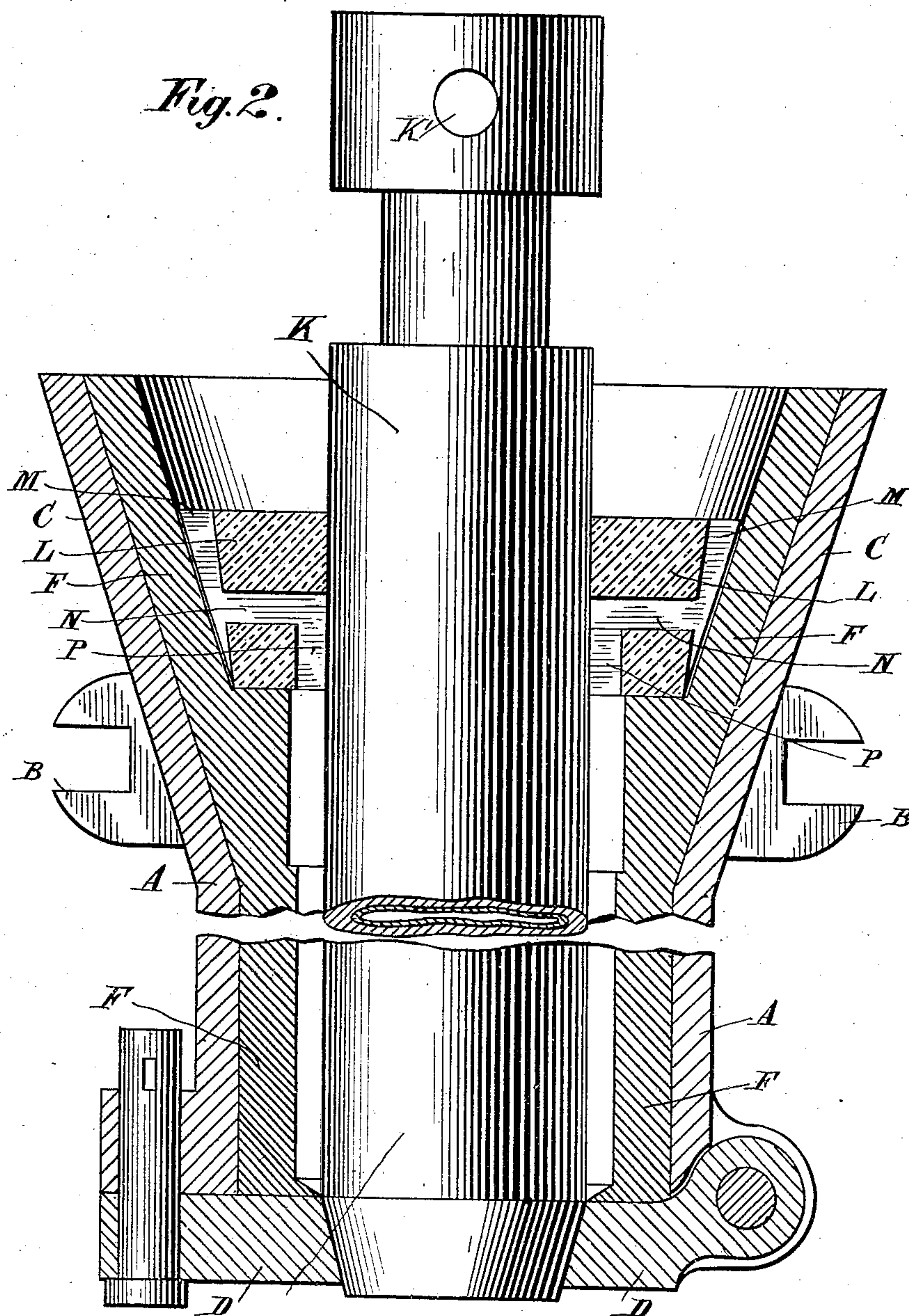
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3 SHEETS—SHEET 2.



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S. S. Dunham.

Inventor,
Harry Slade,
by Kerr, Page & Cooper, Attys

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3 SHEETS—SHEET 3.

Fig. 3.

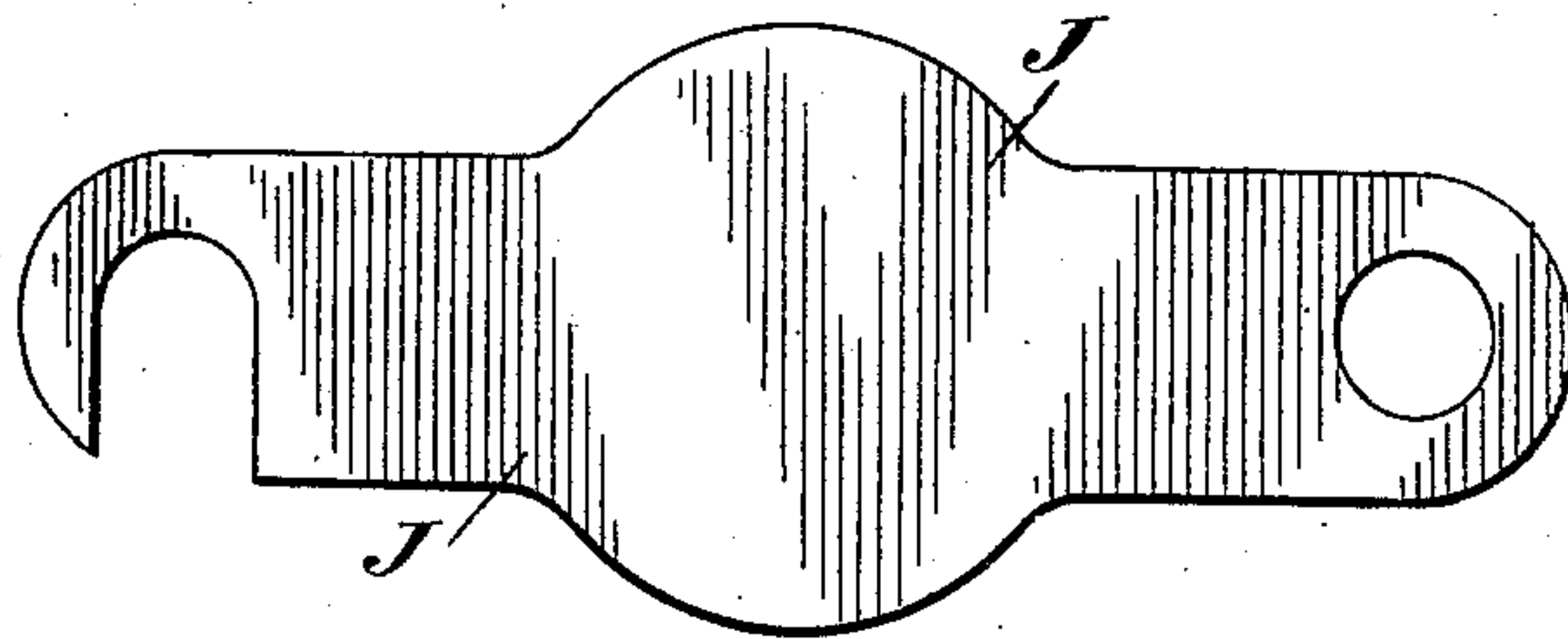
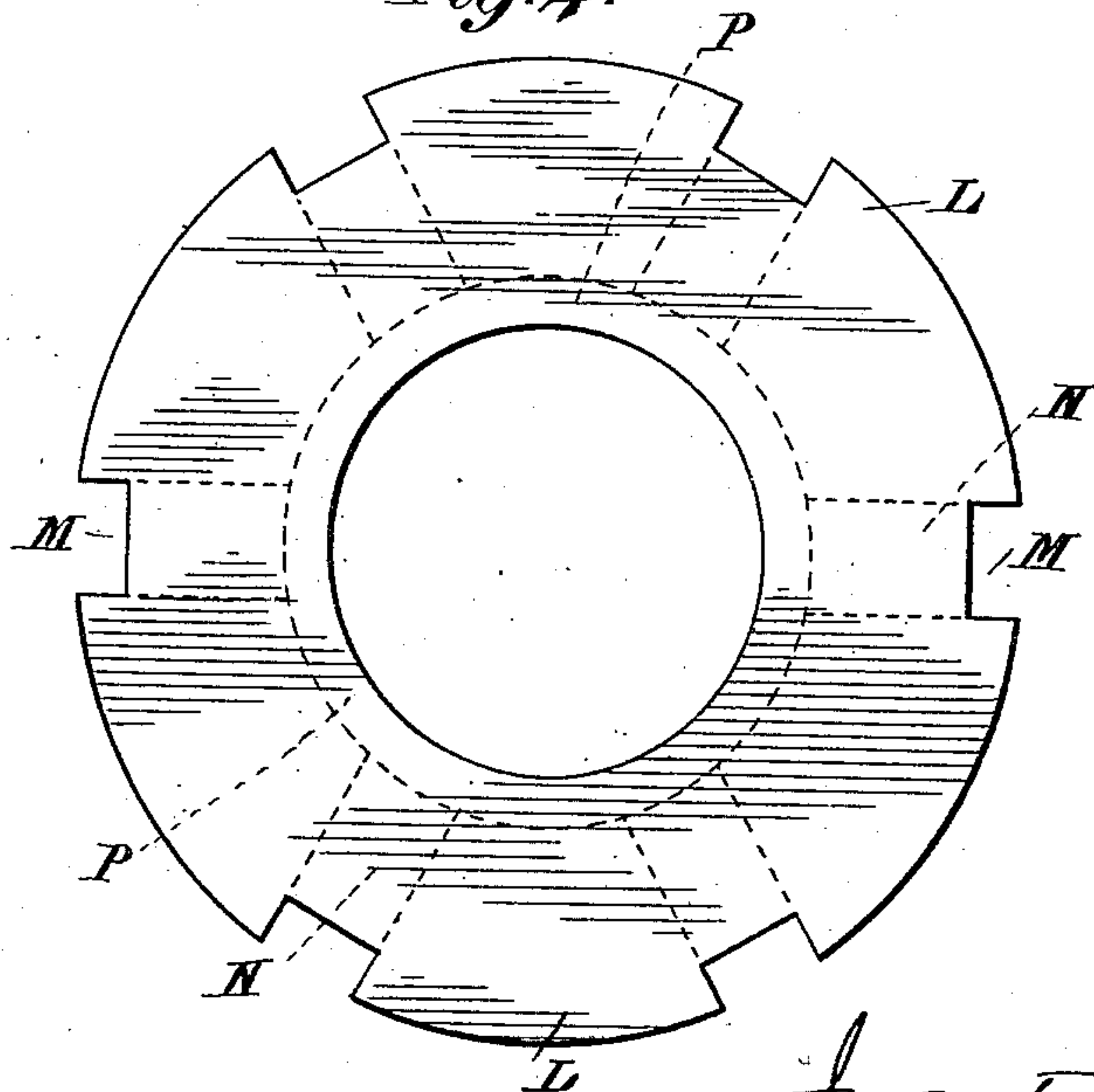


Fig. 4.



Witnesses:
Thos. J. Byrnes.
A. S. Dunham.

Inventor,
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UNITED STATES PATENT OFFICE.

HARRY SLADE, OF WAKEFIELD, ENGLAND, ASSIGNOR TO E. GREEN AND SON LIMITED, OF WAKEFIELD, ENGLAND.

PIPE-PATTERN.

No. 854,765.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed September 9, 1903. Serial No. 172,451.

To all whom it may concern:

Be it known that I, HARRY SLADE, a subject of the King of Great Britain, residing at Sandal, Wakefield, Yorks, England, have invented certain new and useful Improvements in Pipe-Patterns, of which the following is a specification.

The object of this invention is improvements connected with patterns for casting pipes, so that each pipe when cast shall be of equal length and thickness, of proper shape and non-spongy at the ends.

The invention will be clearly understood from the following description aided by the accompanying drawings in which

Figure 1 is a sectional elevation of the apparatus with the required parts in position when making the mold ready for the core. Fig. 2 is a sectional elevation of the apparatus with the core and cake in position ready for casting. Fig. 3 is a plan of the catch employed for determining the proper position the cake seating is to take. Fig. 4 is a plan of the cake.

The casing A is formed in halves bolted together by bolts connecting the lugs B as also other lugs (not shown) to form a tube, and is provided at its upper part with a bell shaped mouth C and at the bottom with a hinged shoe D; such casing being so made that the cast pipe may be readily removed and the casing easily put together for a fresh casting.

A polished pattern E is made of the outer diameter of the pipe to be cast and such pattern E is inserted in the casing A and centralized by having its bottom edge tapered to find a bearing in a tapered hole or recess in the shoe D. When this pattern is placed in position the sand F is rammed down between the pattern E and the casing A to the top about halfway up the mouth C so that all the space is filled up to that part, the pattern E being central, a polished ring G may then be placed around the pattern E at the required position so that a collar may be formed on the end of the pipe. The cake seating H is then dropped over the pattern E to rest on the ring G and forces it down into the sand and such cake seating is provided with columns I carrying at their upper part a catch J which rests on the top of the pattern E and determines the position of the cake seating H in the bell mouth C, so that each pipe is of the same length. More sand is now rammed between the cake seating H and the bell

mouth C so that a complete wall of sand is formed from one end of the casing A to the other. The catch J is now released and the pattern E drawn through the cake seating H, and ring G and seating H are taken out whereupon the mold is ready to receive the core K. The sand coated core K which is also provided with a tapered bottom to fit the shoe D is then placed in position in the same manner as the pattern E and the dry sand cake L is placed on the dry sand core K and dropped into the mold to rest on the flange in the sand F created by the core seating H this centralizing the core K in the mold.

To give extra support to the core K at the top of the mold the cake L is made to fit all round the core.

The transverse openings E' and K', in the pattern and core respectively are to receive a bar or other device to be grasped in withdrawing such parts from the mold and casting.

The cake L is made with the outer side edges tapered and recesses M are formed therein, these with the space surrounding the cake communicating by holes N formed radially in the cake at the center to a recess P formed in the cake and surrounding the core K so that when molten metal is poured in, it will pass through the holes N and recess P down the outside of the core K direct down the space between the core and the mold and fill same without risk of uneven thickness, blow holes or the ends being spongy when set.

What I claim and desire to secure by Letters Patent is:—

1. The combination of a pipe pattern, a cake seating pattern through which the former extends, columns on the cake seating pattern, and a catch carried by and adjustable on the columns, engaging the pipe pattern to determine the position of the cake seating pattern in the mold, as set forth.

2. The combination of a cake seating pattern comprising a centrally apertured frusto-conical member, having a plurality of supports thereon, a plate adjustably carried by the supports, and a pipe pattern extending through the frusto-conical member into engagement with the said plate, as set forth.

3. The combination of a casing having a flaring mouth at one end and a closure at the other end, a pipe pattern positioned within

the casing and having one end exposed, a frusto-conical member fitting around the exposed end of the pipe pattern within the flowing mouth of the casing, supports on the said member, extending beyond the end of the pipe pattern, and a plate carried by the said frusto-conical member and resting on the end of the pipe pattern, as set forth.

In testimony whereof I have hereunto set my hands in presence of two subscribing witnesses.

HARRY SLADE.

Witnesses:

ALFRED STANLEY HOUGHTON,
ROBERT WATSON.