

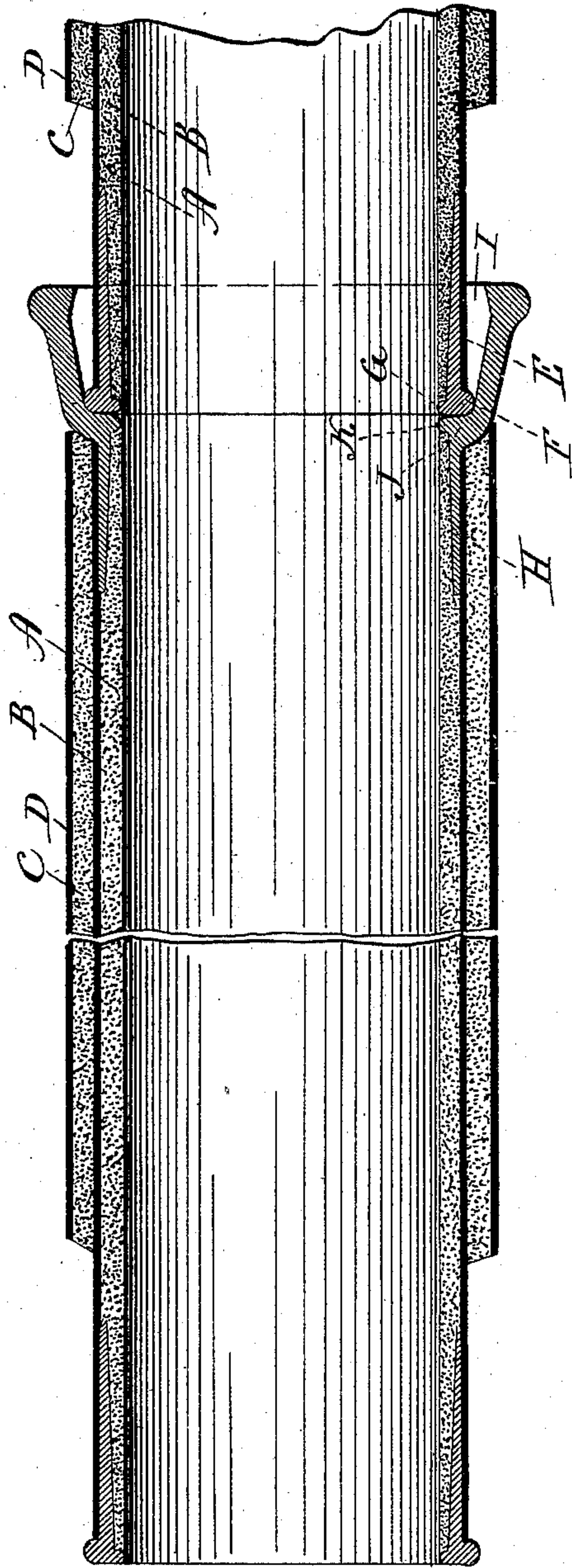
(No Model.)

E. H. PHIPPS.

BELL AND SPIGOT JOINT FOR CEMENT LINED PIPES.

No. 474,779.

Patented May 10, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD H. PHIPPS, OF NEW HAVEN, ASSIGNOR TO THE CONNECTICUT
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BELL-AND-SPIGOT JOINT FOR CEMENT-LINED PIPES.

SPECIFICATION forming part of Letters Patent No. 474,779, dated May 10, 1892.

Application filed July 6, 1891. Serial No. 398,452. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. PHIPPS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Bell-and-Spigot Joints for Cement-Lined Pipes; and I do hereby declare the following, when taken in connection with accompanying drawing and the letters of reference marked thereon, to be a full, clear,
10 and exact description of the same, and which said drawing constitutes part of this specification, and represents a broken view, partly in section and partly in elevation, of two pipe-sections provided with bell-and-spigot-joint
15 members constructed in accordance with my invention.

My invention relates to bell-and-spigot joints for cement-lined pipes, the object being to produce bell and spigot members of simple
20 and effective construction.

With these ends in view my invention consists in a spigot member having a ring adapted to fit within the end of a pipe-shell and two beads respectively located upon the outer
25 and inner faces of the outer edge of the said ring, and a bell member having a ring adapted to fit within the end of a pipe-shell, a flaring mouth shaped to form a shoulder for the exterior coating of the pipe to abut against, and
30 a bead formed upon the inner face of the said head at the base of the flaring mouth thereof.

The sheet-metal pipe-shell A, the cement lining B, the exterior cement coating C, and
35 the sheet-metal outer pipe-shell D are all of well-known construction and do not need special description.

The spigot member of my improved joint consists of a ring E, adapted to fit closely
40 within a pipe-shell and having an annular bead F formed upon the outer face of its outer edge and a corresponding bead G formed upon the inner face of the said edge.

The bell member of my improved joint consists of a ring H, adapted to fit closely within
45 a pipe-shell, a flaring mouth I, adapted to receive the spigot member of another pipe-section and having a shoulder J formed between it and the said ring, and a bead K formed
50 upon the inner face of the said member at the base of the flaring mouth.

The rings E and H of the respective members adapt them to be fitted into the ends of the pipe-sections, while their beads G and K form shoulders to center the pipe when it is
55 being lined and to protect the lining, which is flush with them, when the pipes are being handled and also when they are in use. The shoulder J of the bell member also provides an abutment for the exterior coating of cement
60 applied over the pipe-shell A. As thus constructed the bell and spigot members are very easily applied, and not only assist in the application of the inner and outer coatings of cement, but also protect the same after the
65 pipes have been finished.

It will be understood, of course, that after one of the spigot members has been introduced into one of the bell members the space
70 in the open mouth of the latter is filled in with molten lead or some other material to form a tight joint.

I am aware that prior to my invention the respective members of bell-and-spigot joints for cement-lined pipes have been cast upon
75 the outer faces of the ends of the pipe-sections. I do not, therefore, broadly claim bell-and-spigot-joint members for cement-lined pipes, but only my particular construction, which, by locating the ring of the bell member
80 within the shell of its pipe-section, permits an envelope of cement to be applied to the same and continued in full thickness to the exterior shoulder of the flaring mouth of the said member, while the location of the
85 ring of the spigot member within the shell of its pipe-section not only secures the maximum space for the sealing material—such as lead—within the mouth of the bell member, but also leaves the said mouth open and readily
90 accessible after the two members have been set together, none of the said advantages inuring to the prior construction.

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

In a cement-lined pipe, the combination, with a pipe-shell, of a spigot member comprising a ring the exterior surface whereof is adapted to fit closely within one end of said
100 shell and two beads respectively located upon the outer and inner faces of said ring

at the outer edge thereof, another pipe-shell,
a bell member comprising a ring the exterior
surface whereof is adapted to fit closely within
the said shell, a flaring mouth having a shoul-
5 der formed between it and the said ring and
an inwardly-projecting bead located at the
base of said mouth, and coatings of cement
enveloping the exterior surface of the said
shells, that on the shell containing the bell
10 member abutting against the shoulder thereof
and that on the shell containing the spigot

member being constructed to give clearance
to the mouth of the bell when the two spigot
members are brought together, substantially
as described.

In testimony whereof I have signed this
specification in the presence of two subscrib-
ing witnesses.

EDW. H. PHIPPS.

Witnesses:

FRED C. EARLE,
JOHN E. EARLE.

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