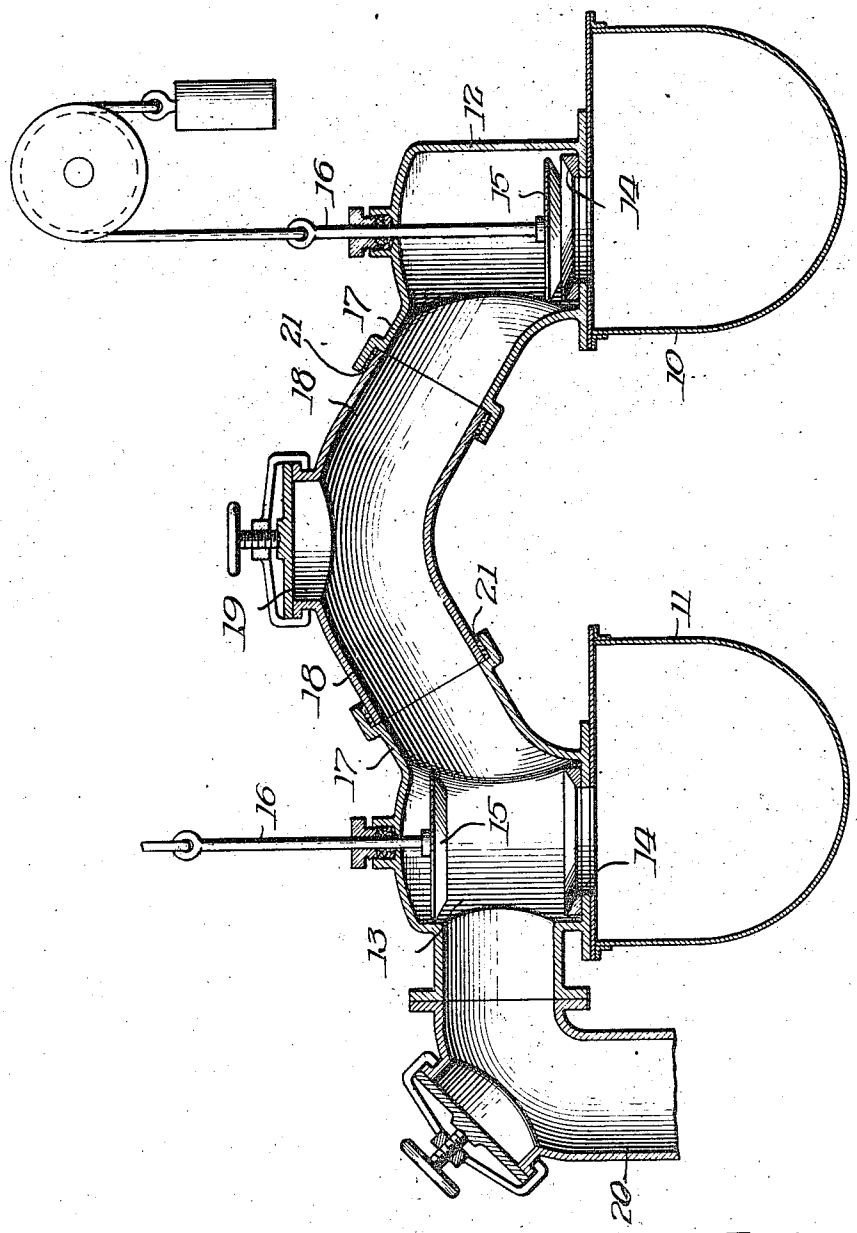
S. B. SHELDON & K. C. HOXIE.

CONNECTION FOR GAS MAINS.

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1,230,808.

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Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL B. SHELDON AND KINNEY C. HOXIE, OF DULUTH, MINNESOTA.

CONNECTION FOR GAS-MAINS.

1,230,808. Specification of Letters Patent. Patented June 19, 1917.

Application filed April 1, 1915. Serial No. 18,601.

To all whom it may concern:

Be it known that we, SAMUEL B. SHELDON and KINNEY C. HOXIE, citizens of the United States, and residents of Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Connections for Gas-Mains, of which the following is a specification.

Our invention relates to gas mains for coke ovens and has particular reference to a novel connection between adjacent mains.

In the construction of by-product coke ovens it is customary to use two gas mains, one for rich gas and one for lean gas. From each oven there is but one exit pipe for gas; consequently it becomes necessary to install upon this gas pipe two valves with a connecting pipe between, which valves control the inlet of either the rich or the lean gas to their respective mains. For structural reasons it is necessary that these mains be parallel and but a short distance from each other; and as a consequence, troubles have arisen owing to expansion and contraction of the gas pipe, commonly known as the "collecting pipe", which connects the two gas mains. Furthermore, owing to deposit of pitch and tar in the connecting pipe, it is necessary that convenient means should be provided whereby access to the interior of the pipe and the valves can be readily had.

Our invention comprises an arrangement of parts whereby the difficulties heretofore experienced by expansion are overcome; the valves are accessible both for observation and removal, and the entire interior of the gas pipes are accessible for examination and cleaning.

Our invention will be more readily understood by reference to the drawing wherein the figure is a transverse section through two gas mains and our novel connection between the same.

Referring more particularly to the drawing it will be seen that we provide adjacent rich and lean gas mains 10, 11. Mounted upon the mains are valve housings 12, 13, having at their lower ends removable valve seats 14, upon which the valves 15, may rest. These valves are connected to the stems 16, and suitable operating means may be employed for actuating the valves. The valve housings are constructed with bell connections 17, adapted to engage with the spigot ends 18, of the connecting pipe. This connecting pipe has at its highest point a covered opening 19, providing ready access to the pipe. Stand pipe 20, leading from a coke oven, connects with valve casing 13, on the gas main 11. In order to obviate trouble caused by the expansion of the connecting pipe between the two valve casings and the difference of expansion between mains 10 and 11, the bell and spigot joints between the casings and the connecting pipe are packed with clay 21, or similar material which will not afford sufficient resistance to expansion and contraction to cause breakage of the parts.

The construction is so arranged that all of the parts are readily accessible for cleaning or repair; the parts will not become broken due to unequal expansion and the structural advantages heretofore sought are attained. Obviously the construction is capable of much modification and such modifications as are within the scope of our claims we consider within the spirit of our invention.

We claim:

1. In a gas plant, the combination of adjacent gas mains, upwardly-extending bell connections on said mains, said mains provided with valve seats within said bell connections, valves acting within said bell connections and adapted to coöperate with said seats, an inverted substantially U-shaped pipe joining said bell connections and adapted to form spigot joints therewith, said pipe provided with an opening permitting inspection and cleaning.

2. In a gas plant, the combination of adjacent gas mains, a valve casing mounted on each of said mains, each of said casings being provided with a bell-mouthed extension, said extensions projecting toward each other, and a U-shaped pipe connecting said extensions and having spigot ends, said U-shaped pipe being provided with a cleaning opening, substantially as described.

Signed at Duluth, St. Louis county, Minnesota, this 26th day of March, 1915.

SAMUEL B. SHELDON.
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Witnesses:
ARTHUR E. MANTHEY,
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