

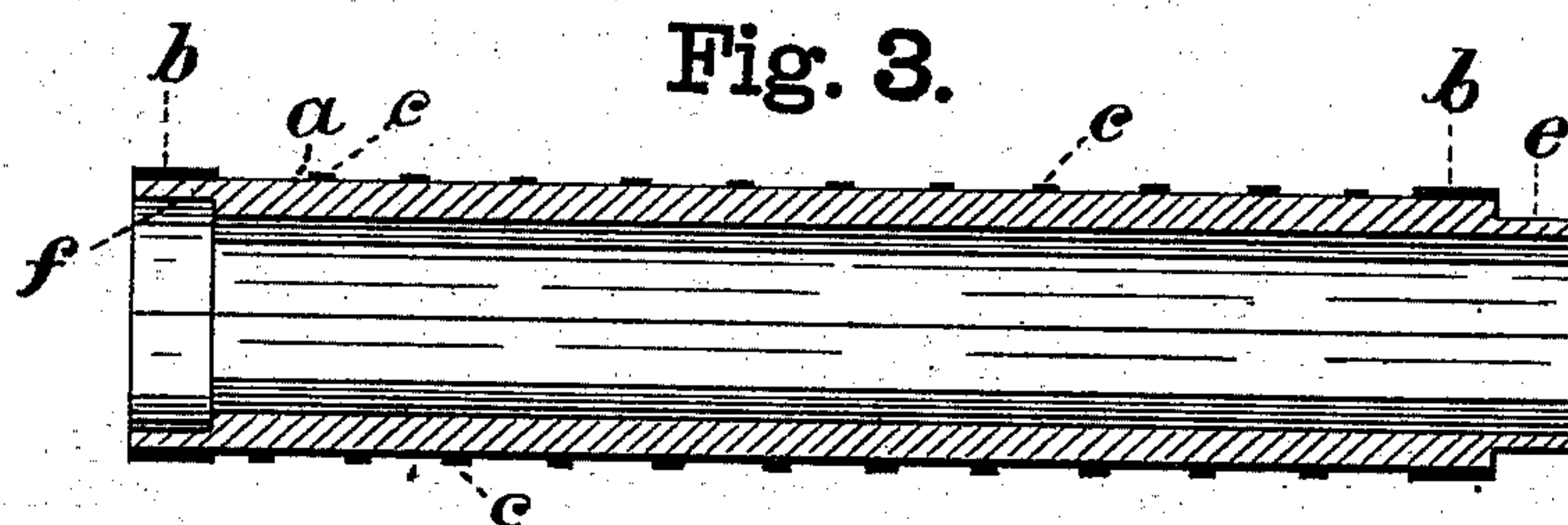
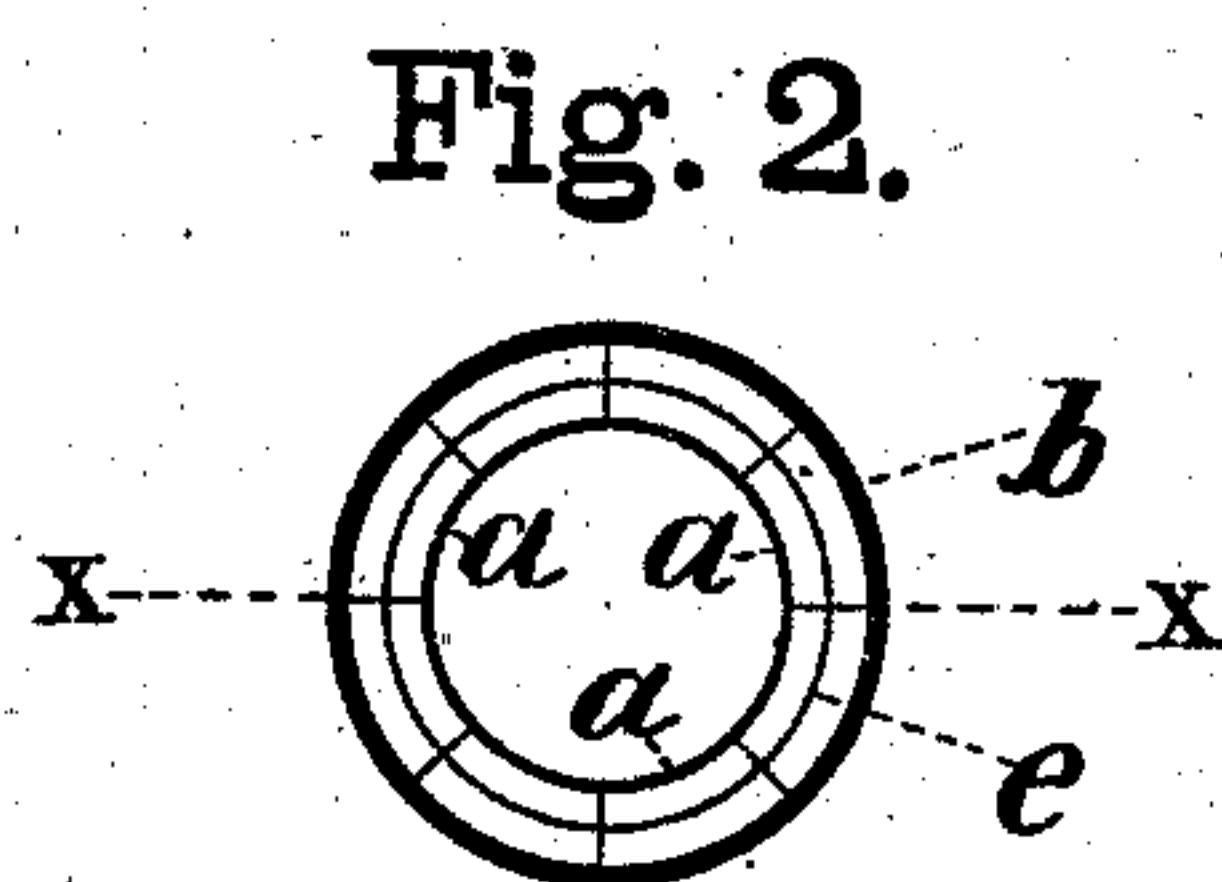
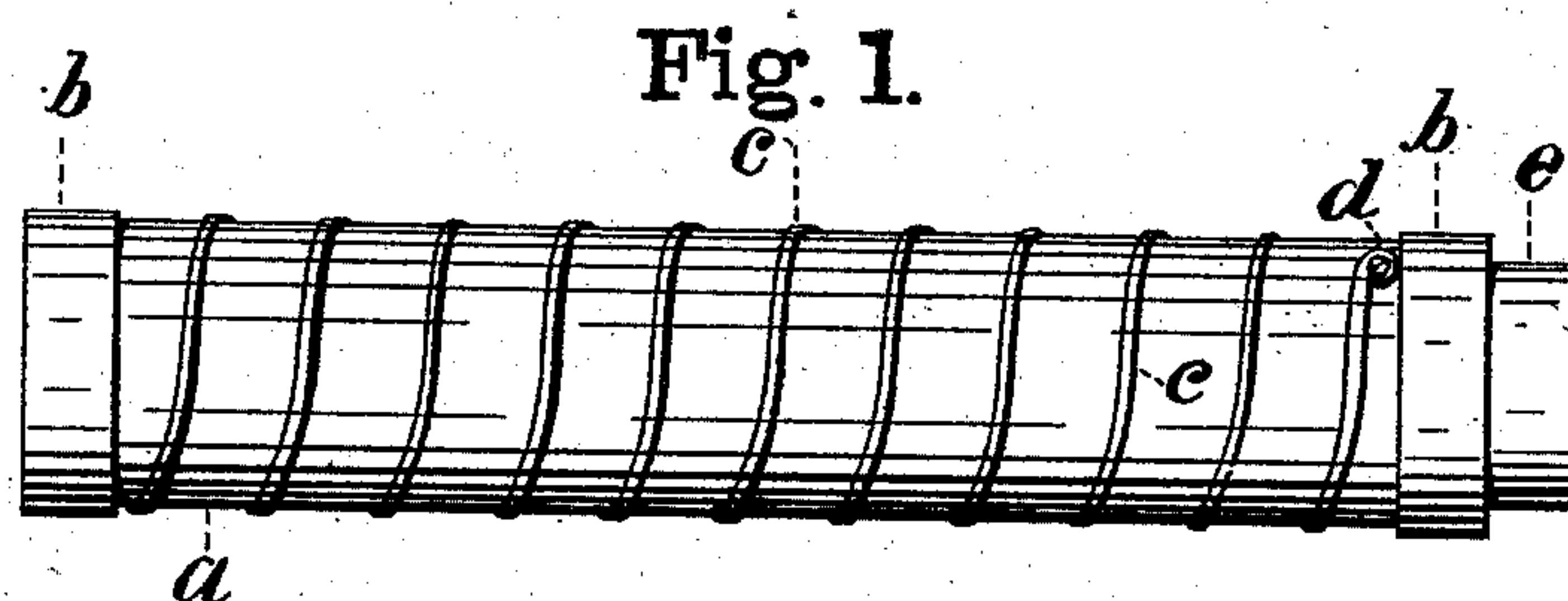
(No Model.)

L. F. JOHNSON & I. E. WILLIAMS.

WOODEN PIPE.

No. 268,024.

Patented Nov. 28, 1882.



Witnesses.

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*By James Sangster, atty.*

# UNITED STATES PATENT OFFICE.

LUMAN F. JOHNSON AND IRA E. WILLIAMS, OF PALMYRA, NEW YORK.

## WOODEN PIPE.

SPECIFICATION forming part of Letters Patent No. 268,024, dated November 28, 1882.

Application filed August 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, LUMAN FORD JOHNSON and IRA EARLL WILLIAMS, citizens of the United States, residing in Palmyra, in the county of Wayne and State of New York, have invented certain new and useful Improvements in Wooden Pipe, of which the following is a specification.

The object of this invention is to produce a cheap, light, strong, and durable pipe for conducting water through towns or cities, or for irrigation, or any other purpose to which it may be adapted, all of which will be more clearly hereinafter shown by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a joint of pipe; Fig. 2, an end view; and Fig. 3 is a vertical longitudinal section through line *x x*, Fig. 2.

The pipe is made of wood or other suitable material, wood being preferable as the cheapest, lightest, and best. It is made in sections or strips *a*, (see Fig. 2,) which are put together and held securely by iron or other suitable bands, *b*. To insure sufficient strength to resist internal pressure, it is bound by wire bands *c*, arranged in the form of a spiral around it, (see Fig. 1,) the end of the wire being secured by screws or other similar means, *d*. The binding-wire *c* may be either flat or round, or any other form; but flat bands are best where great strength is required. Besides, it does not sink into the wood so deeply as round wire. The size and quantity of this wire will be determined by the size of the pipe and the pressure it will have to withstand. One end of each joint of pipe is provided with a smaller portion or neck, *e*, adapted to slip into and fit closely the enlarged inside portion, *f*, of another joint,

the joints being made water-tight where the ends of the pipe are put together in any well-known way. In using this pipe in salt water, or where iron will not stand well, brass or copper may be substituted for the bands or wire. The joints of pipe may be made of any desired length, and to protect them on the outside, when necessary, they are immersed in boiling coal-tar or other suitable material for a sufficient length of time to insure its penetrating to a short distance below the surface or as far as may be desired. In doing this the ends should be stopped up when the inside is not intended to be coated with the tar.

By making the pipe of several narrow strips or staves a great saving of stock is effected and a much larger pipe can be made than when made in two pieces, as heretofore.

The object in coating only the outside with coal-tar or its equivalent is to prevent it from affecting the water, and also to protect it from decay. The inside of the pipe, so long as it is filled with water, is well protected from decay.

We do not claim broadly a wooden pipe constructed of two semicircular pieces and bound together with bands and wire; but

What we do claim as our invention is—

A wooden pipe consisting of a series of narrow strips or staves, *a*, secured together by bands *b c*, and immersed in boiling coal-tar, so as to penetrate and coat the outside surface, substantially as and for the purposes specified.

LUMAN F. JOHNSON.  
IRA E. WILLIAMS.

Witnesses:

R. L. LELAND,  
O. S. SAMMIS.