

(Model.)

3 Sheets—Sheet 1.

C. G. CONN.
CORNET.

No. 261,082.

Patented July 11, 1882.

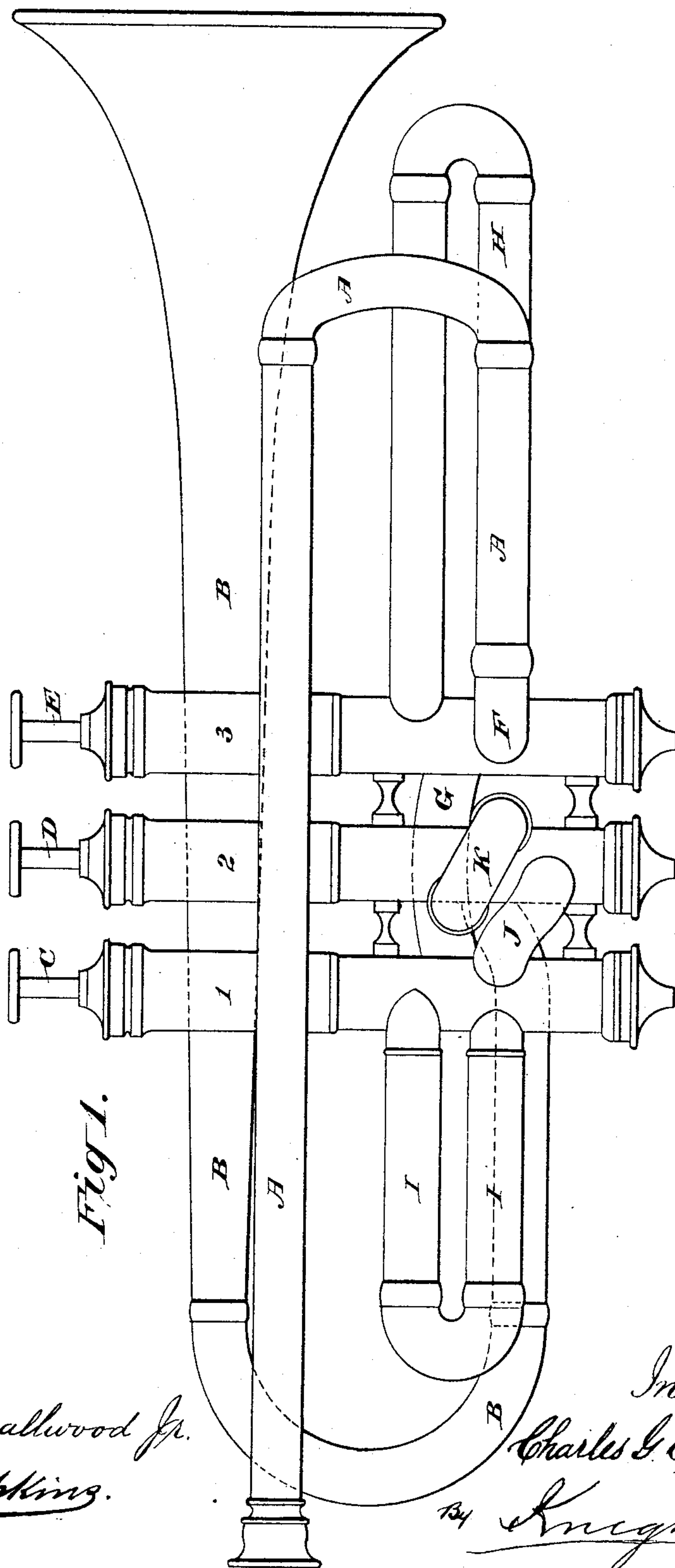


Fig 1.

Attest:
Geo. I. Smallwood Jr.
J. M. Hopkins.

Inventor
Charles G. Conn.
By *Knights*
attys.

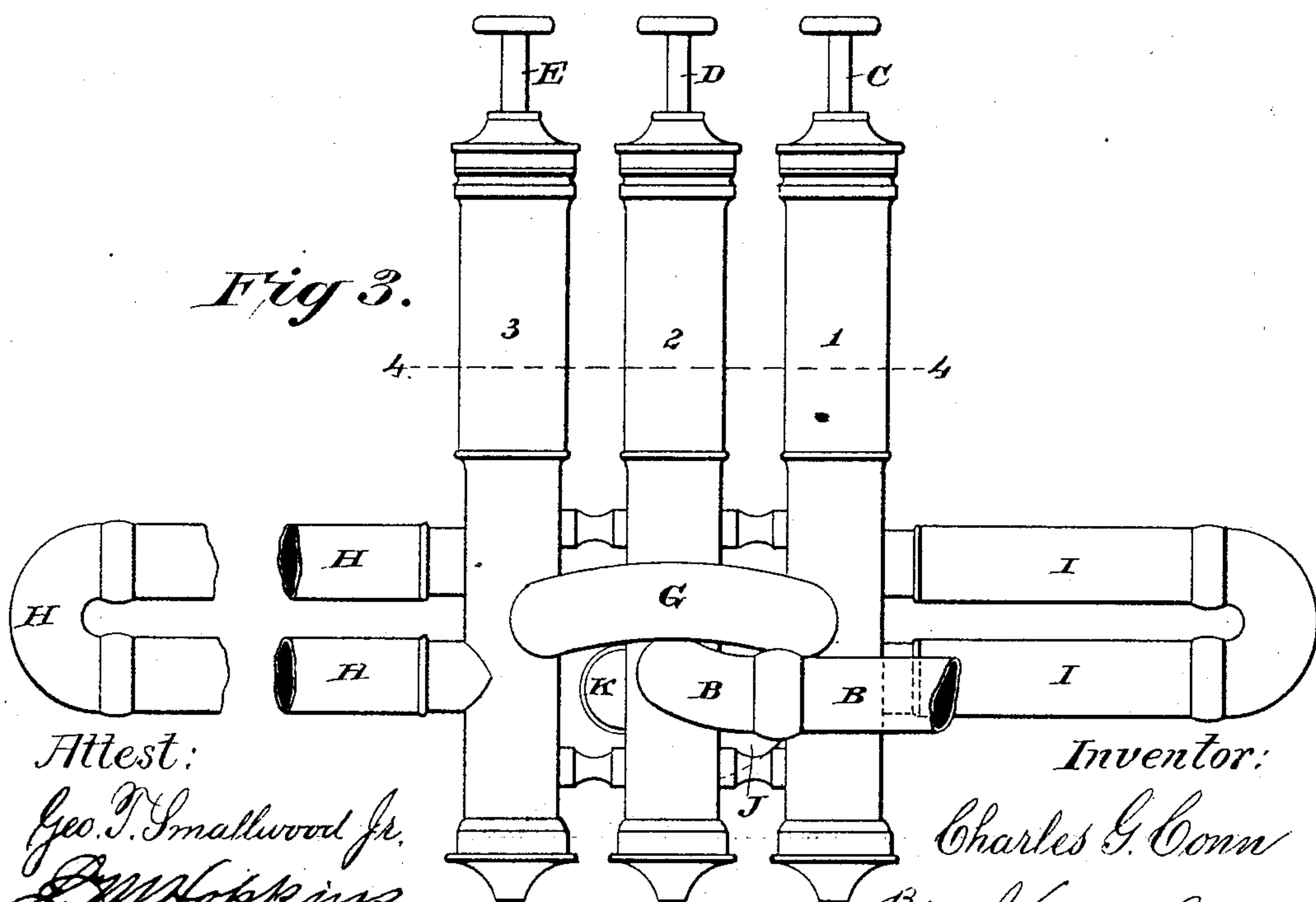
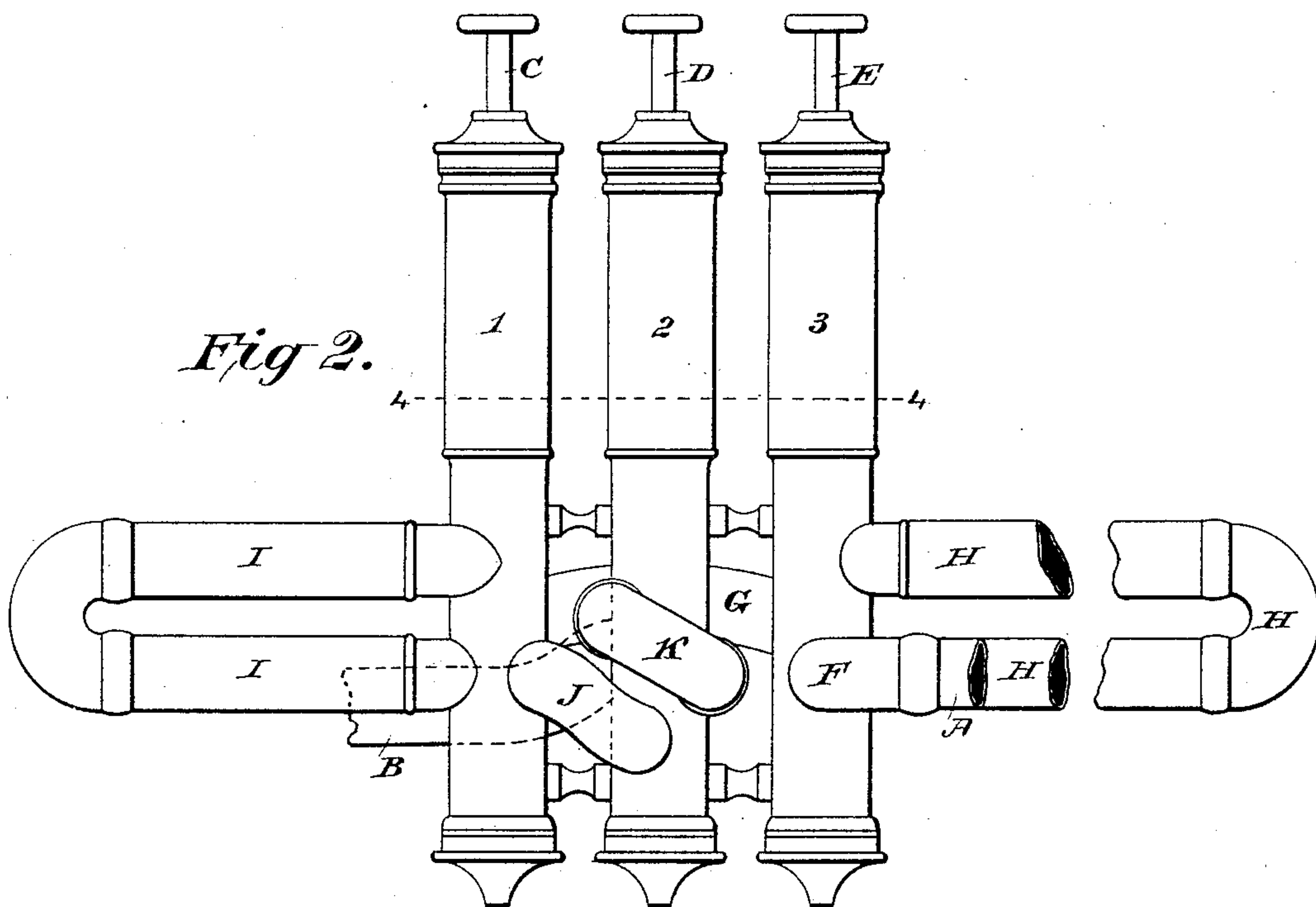
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Attest:

Geo. T. Smallwood Jr.
[Signature]

Inventor:

Charles G. Conn

[Signature]
attys

(Model.)

3 Sheets—Sheet 3

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Fig 4.

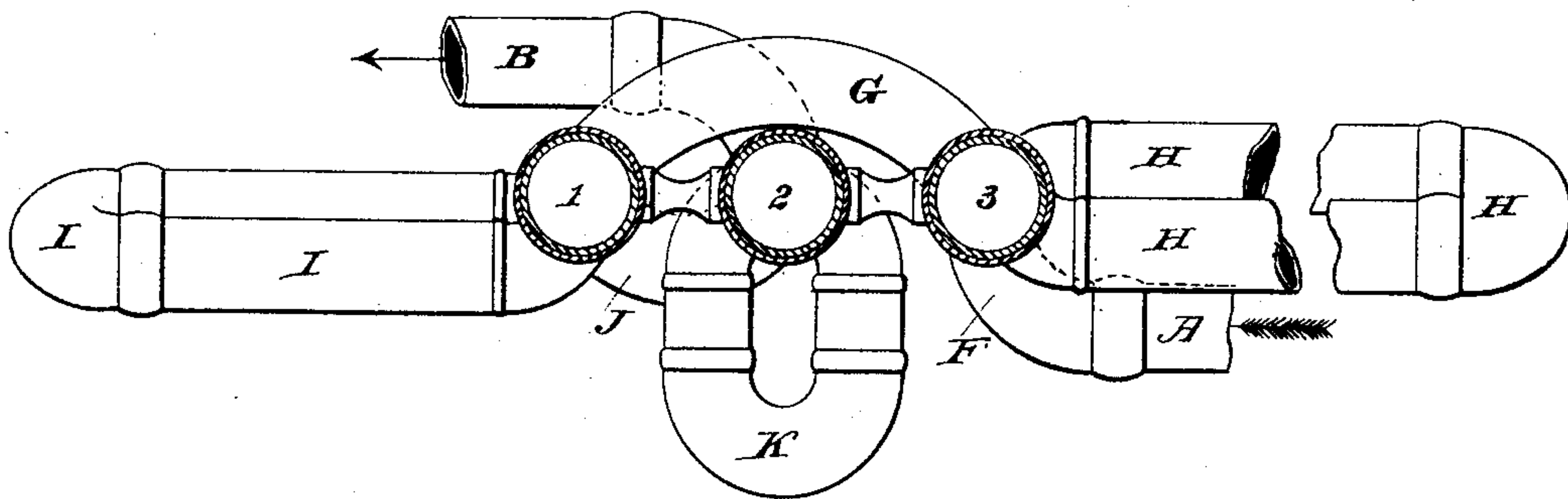
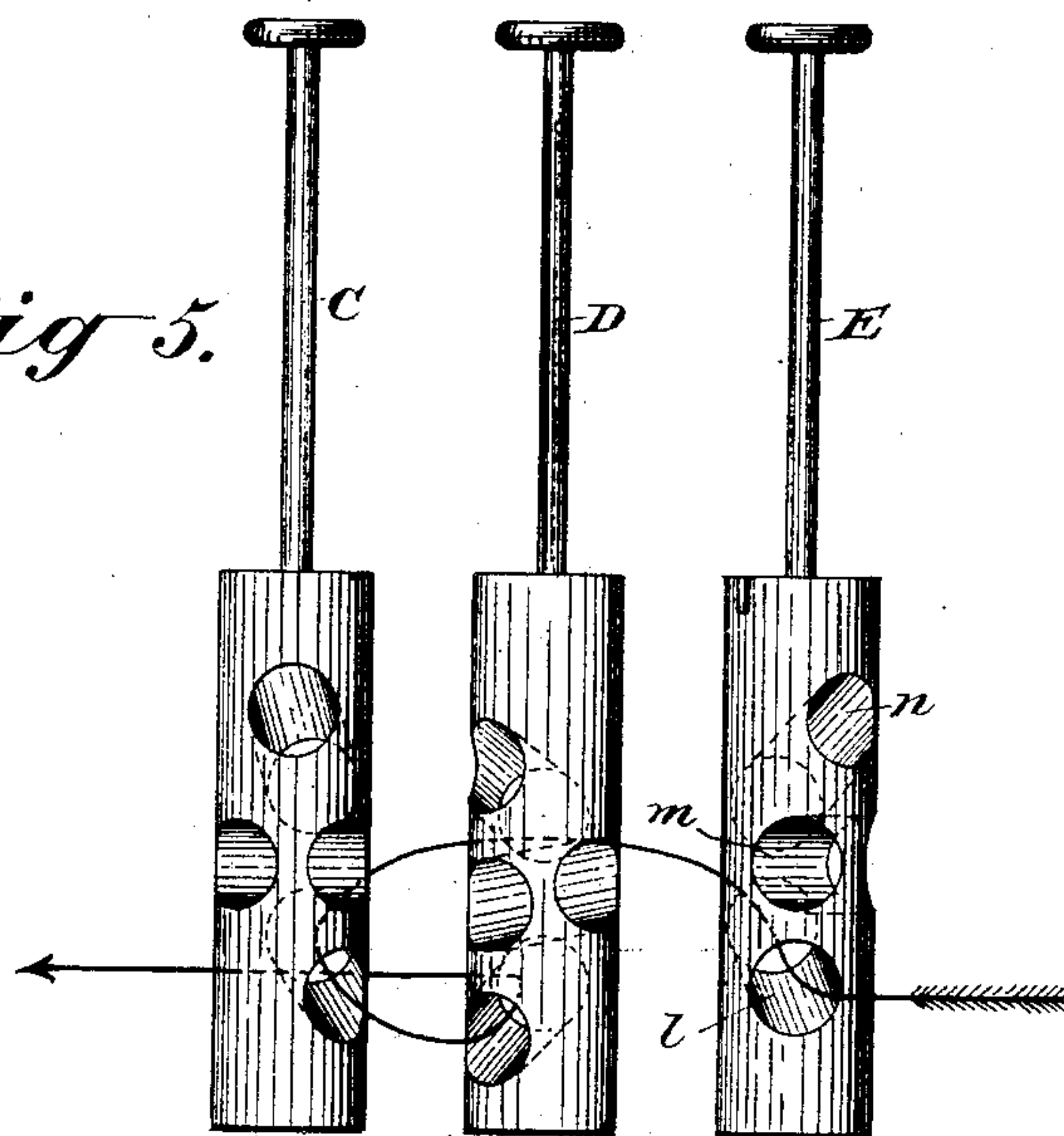


Fig 5.



Attest:
Geo. T. Smallwood Jr.
[Signature]

Inventor:
Charles G. Conn.
By *[Signature]*
attys.

UNITED STATES PATENT OFFICE.

CHARLES G. CONN, OF ELKHART, INDIANA.

CORNET.

SPECIFICATION forming part of Letters Patent No. 261,082, dated July 11, 1882.

Application filed March 16, 1882. (Model.)

To all whom it may concern:

Be it known that I, CHAS. GERARD CONN, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented a new and useful Improvement in Piston-Valve Musical Instruments, of which the following is a specification.

The invention relates to a system of piston-valves for musical instruments in which the two outside valves are connected directly by tubing passing around the middle valve, and by means of valve-pistons having three apertures the wind will be passed once through each valve in producing open tones and twice through the particular valve when a valve-tone is to be produced, the result being the production of tones of more uniform volume and brilliancy throughout the entire register than is possible with either mode heretofore practiced of conducting the wind-passage through the center valve as an intermediate communication between the outer valves or passing the wind through each valve and back again.

In carrying out the invention the mouth-pipe is connected to one or the other of the outer valves, from which a curved tube or bend of any desirable length extends around the middle valve to the other outside valve, whence the wind-passage is conducted to the middle valve, and thence to the bell, or vice versa. The mouth-pipe may be connected with the middle valve, the passage proceeding thence to and through one or other of the outer valves, thence by a curved pipe around and clear of the middle valve to the other outer valve, and thence to the bell.

In order that the invention may be fully understood, it will be described with reference to the accompanying drawings, in which—

Figure 1 is a side view of an instrument embodying my invention. Figs. 2 and 3 are views of the respective sides of the valves. Fig. 4 is a horizontal section of the same on the line 4 4', Figs. 2 and 3. Fig. 5 is a side view of the valve-pistons detached, indicating the course of the wind through and around the same.

The mouth-pipe is shown at A and the bell-pipe at B.

C D E designate the respective pistons of the first, second, and third valves. The valves

are designated as first, second, and third for convenience of description, not as indicating the order of their use. In the illustration given the mouth-pipe entering the third valve at F passes through the same to the curved connecting-pipe G, and through this to the first valve; or, in the case of a valve-tone, the piston E being depressed, the wind passes through the valve-slide H, and thence through the pipe G to the first valve, as before. From the pipe G it passes through the first valve, (and if the piston C be depressed through the valve-slide I,) and thence through the connecting-bend J to the middle valve, and through the same to the bell-pipe B, either directly or through the middle valve-slide, K, as the case may be. The bend J is, when desired, lengthened and provided with a tuning-slide for the purpose of changing the key.

It is immaterial to the invention whether the wind-passage is carried through the instrument in the direction above described or in the reverse direction by entering, first, at the middle valve, thence to one of the outer valves, thence around the middle valve to the other outer valve, and so to the bell. In either case either one or the other of the outer valves may be used for the mouth-pipe or bell-pipe connection, as the case may be, while the other outer valve is connected therewith by a bend extending around the middle valve, and is connected with the middle valve by another bend.

The construction of piston used in this valve system is illustrated in Fig. 5. The improved piston has three ports, *l m n*. Supposing the third valve to be connected with the mouth-pipe, as in Figs. 1 and 2, when the piston is open or elevated, the passage is directly through the lower port, *l*, from the mouth-pipe A and the bend F, and when the piston is depressed the second port, *m*, being brought opposite the mouth-pipe connection F, the wind passes through the said port *m* to the valve-slide H, and, passing through the same, is conducted by the upper port, *n*, to the connecting-pipe G.

With the improved system of valves an instrument may be constructed without the abrupt and reversed angles or turns in the wind-passage, which are found with valve-systems in common use, and which impair the free and brilliant tone of the instrument. The improve-

ment thus enables the performer to produce each tone throughout the entire register of the instrument with equal volume and brilliancy, avoiding stifled tones, which result from con-
5 tracted wind-passages and from abrupt turns therein.

The connections between the valves may be made of different lengths to suit the construction of the instrument without changing the
10 general direction of the wind-passage. The two outside valves being joined together, as described, either may be connected with the middle valve, as the manufacturer may prefer, but without using the second or middle valve in-
15 termediately between the outer valves.

Either of the connecting-bends between the

valves can be used as a tuning-slide. The said connecting-bends can be made long or short, to suit the preference or convenience of the maker.

The following is claimed as new in the above-described invention.

The piston-valves, each having a single air-port for open tones and two ports for valve-tones, in combination with a valve system in
25 which the first and third outer valves are connected by a pipe passing around the middle valve, as set forth.

CHARLES G. CONN.

Witnesses:

EDWIN D. MILLER,
HENRY C. DODGE.