

(No Model.)

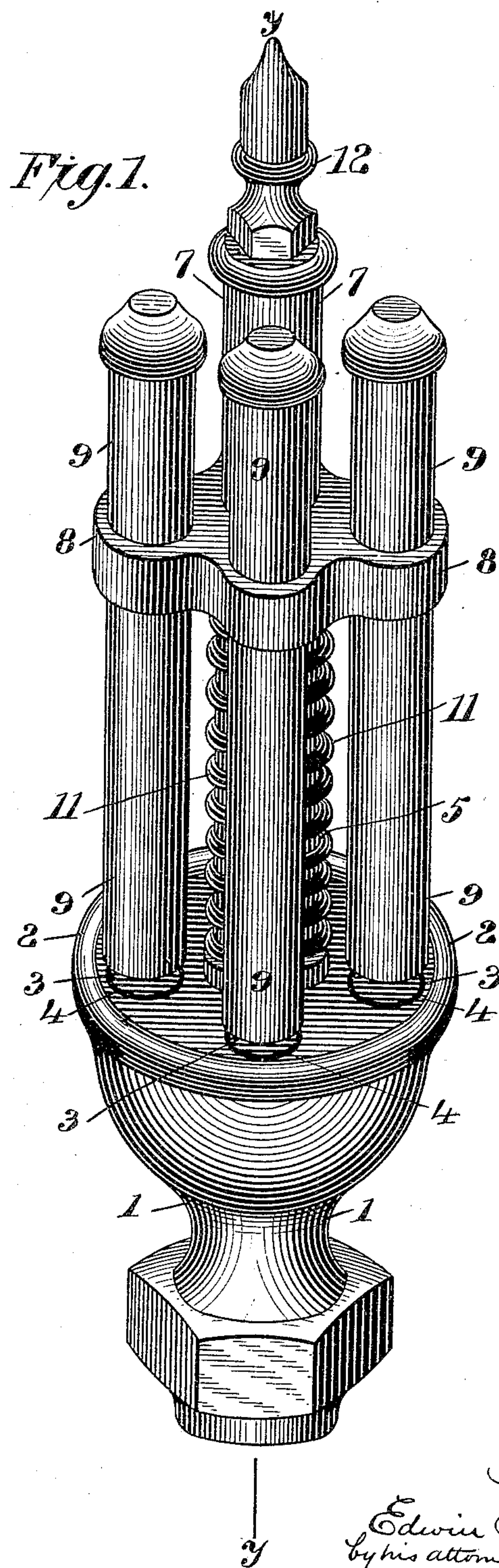
2 Sheets—Sheet 1.

E. R. TOMLINSON.

STEAM WHISTLE.

No. 405,622.

Patented June 18, 1889.



Witnesses
Wm. J. Tanner
H. J. Shetler

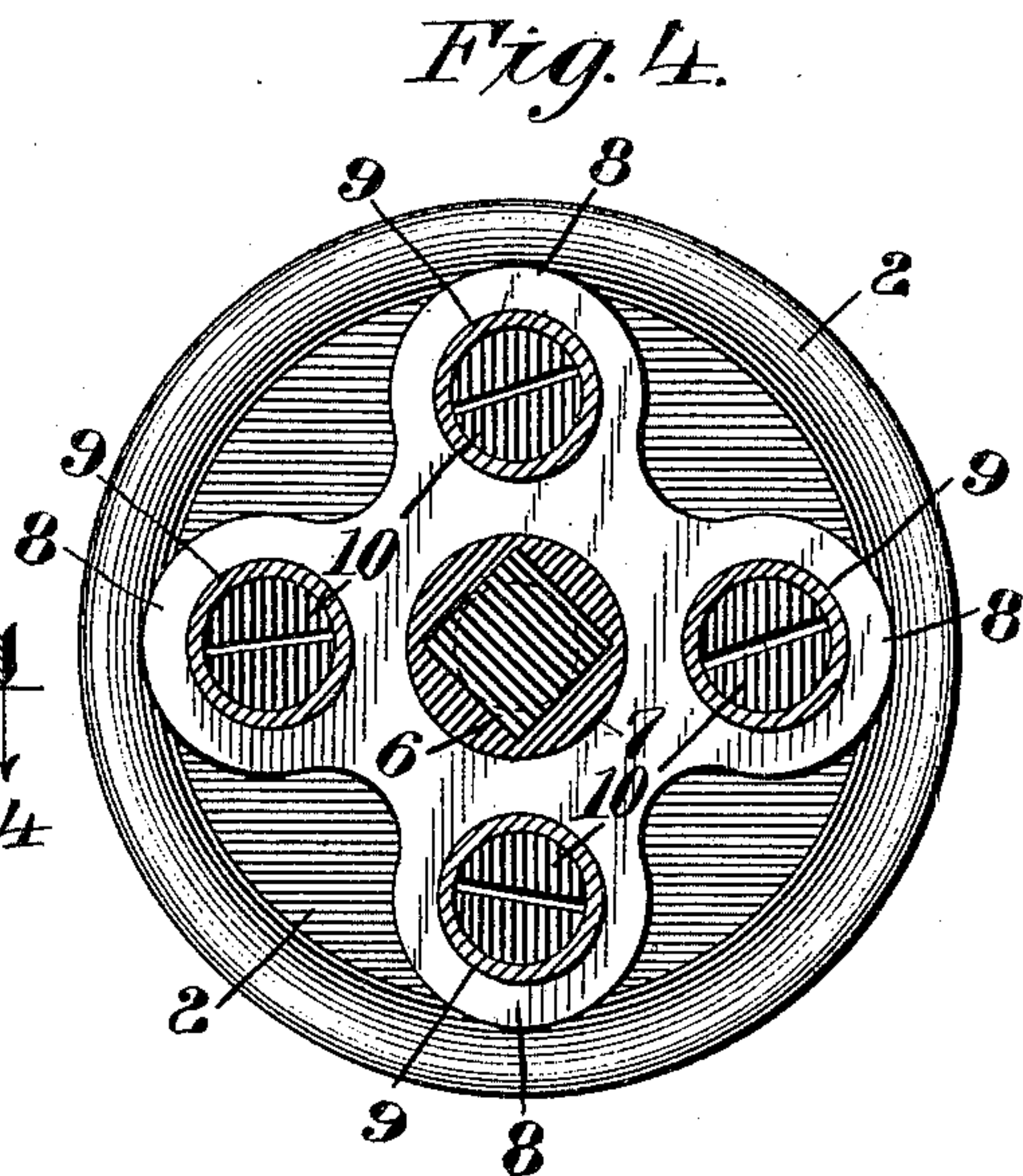
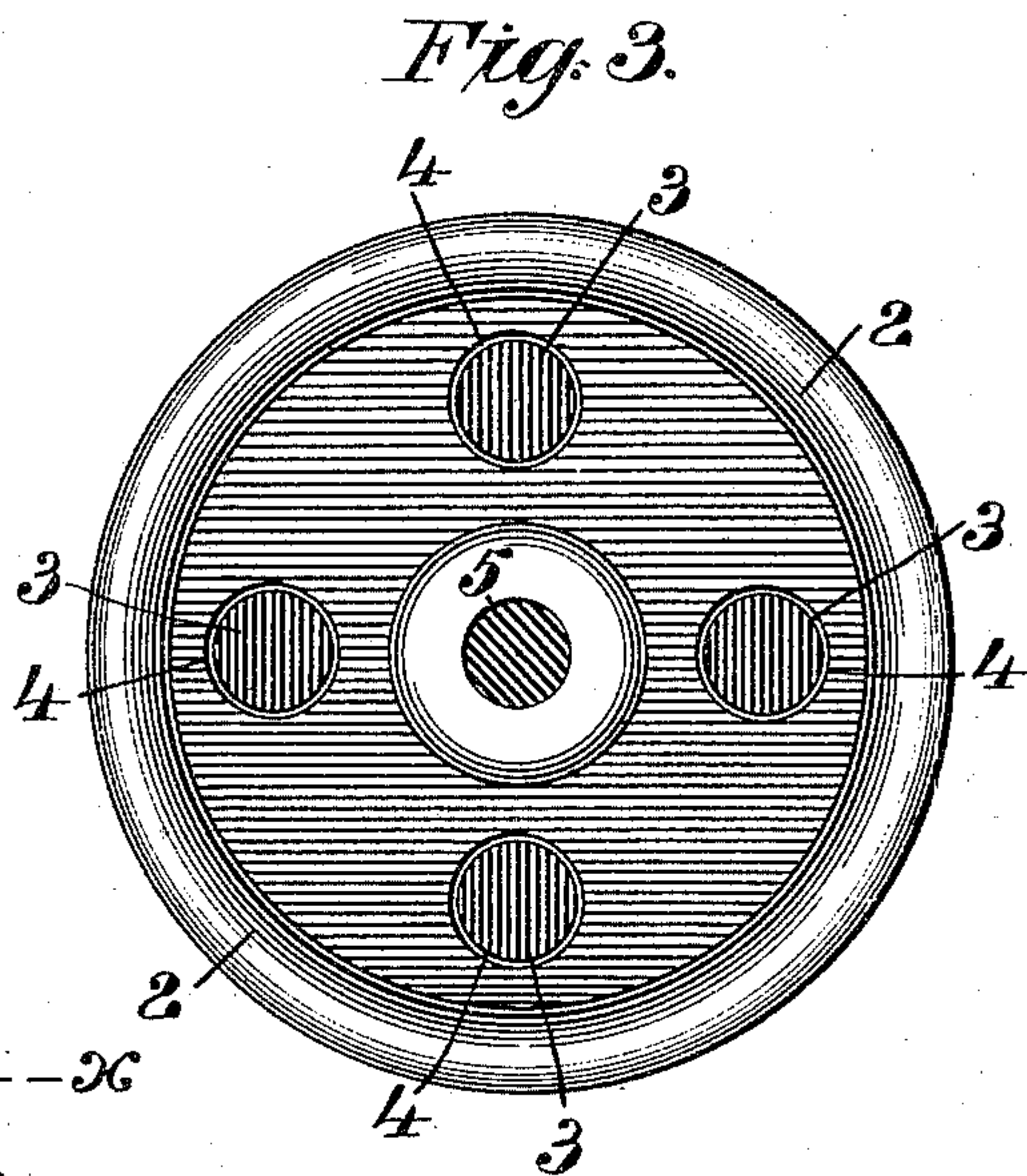
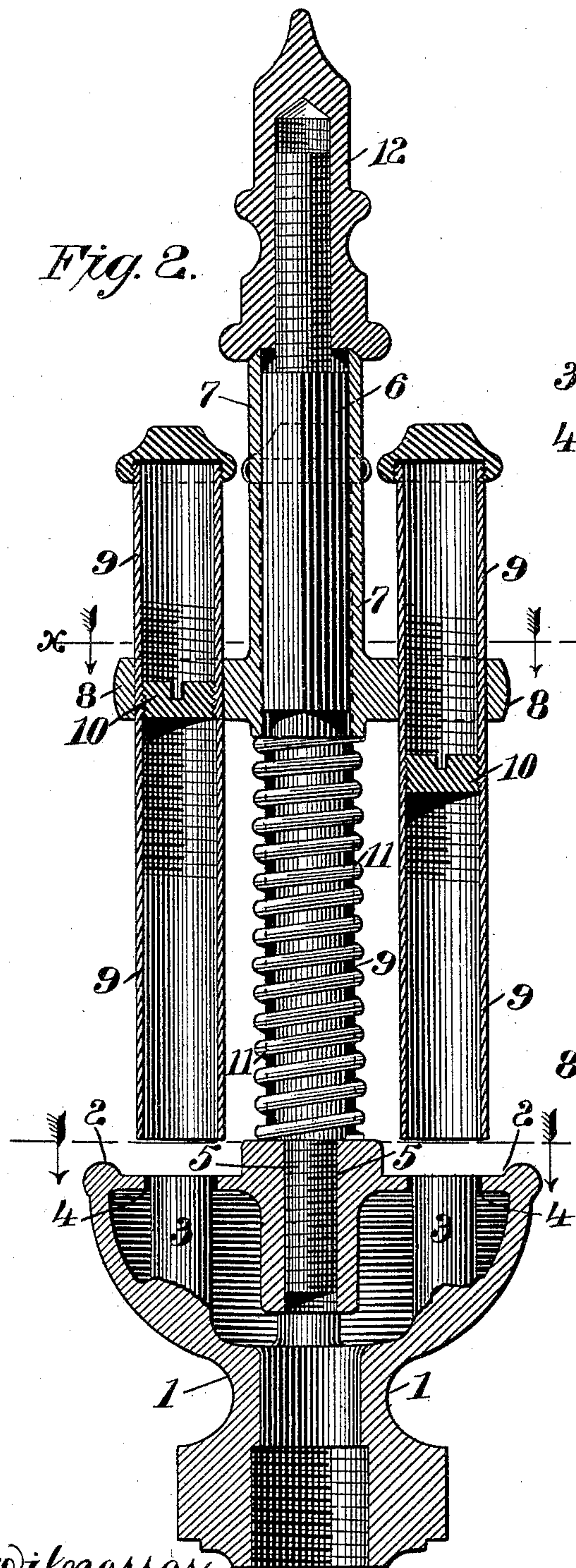
Inventor
Edwin R. Tomlinson
by his attorney
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Inventor
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UNITED STATES PATENT OFFICE.

EDWIN R. TOMLINSON, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF TO THE EATON, COLE & BURNHAM COMPANY, OF SAME PLACE.

STEAM-WHISTLE.

SPECIFICATION forming part of Letters Patent No. 405,622, dated June 18, 1889.

Application filed February 16, 1889. Serial No. 300,132. (No model.)

To all whom it may concern:

Be it known that I, EDWIN R. TOMLINSON, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Steam-Whistles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in steam-whistles, but more particularly to that class of whistles whereby a chime or chord may be produced, and has for its object to provide a whistle which shall be simple in its construction, economical in the expenditure of steam, which may be adjusted relative to the steam-jet for various pressures of steam, and in which the tones and consequently the chord, which is the sum total of the tones of the several tubes, may be varied at pleasure; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully and in detail explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction and operation, I will describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective; Fig. 2, a vertical section upon the line *yy* of Fig. 1; Fig. 3, a plan view of the top of the steam-bowl, and Fig. 4 a transverse section at line *xx* of Fig. 2.

Like reference-numerals denote the same parts in all the figures of the drawings.

1 is the steam-bowl, having the lower end thereof interiorly screw-threaded for attachment to a steam-pipe. The top or cover 2 of the bowl has cut in the face thereof a series of round holes, one for each whistle-tube, and from the bottom of said bowl there projects upward through each of said holes a plug 3 smaller than the hole, so that an annular opening 4 is left around the plug for the proper escape of the steam.

5 is a stem, preferentially screw-threaded into a hub or boss at the center of the bowl-

cover. Said stem is squared, as at 6, and is screw-threaded at its top.

7 is a sleeve of square interior section, and provided at or near its lower end with outwardly-extending brackets 8, in which are mounted vertically-disposed resonant tubes 9, parallel with the central stem. Each of these tubes is interiorly screw-threaded for the reception of a threaded plug 10, having a drive-slot in its top surface, whereby it may be moved in order to lengthen or shorten the tube. The sleeve 7 fits over the squared portion of the stem, and between the tube-supporting bracket and the bowl a spiral spring 11 is disposed about the stem. A nut 12 runs upon the screw-threaded upper extremity of the stem, and by means of this nut the bracket and its tubes may be forced downward toward the bowl against the spring, so that the open ends of the tubes may be properly disposed relative to the annular steamways. It will of course be understood that as the bracket-sleeve slides on the squared portion of the stem each tube will be held always in the same vertical plane relative to the bowl. One of the tubes in practice is disposed above each of the annular steamways, and, whether moved nearer to or farther from said way, is always retained exactly over it.

In the operation of my whistle, by the employment of a separate jet of steam for each tube and disposing the tube directly over the way, all the steam used is projected into one or the other of the tubes, so that none of it is wasted. Furthermore, by the employment of one bowl only for the plurality of tubes, a much less surface is presented for condensation than if a separate bowl were used for each resonant tube.

A whistle constructed as herein shown has also the advantages that it is compact, and that it may be blown with but little pressure of steam, while at the same time both volume and variety of tone are produced.

I claim—

1. The combination, with the steam-bowl, the same having in its upper surface a plurality of annular steamways leading outward from said bowl, of the squared vertical stem, the bracket arranged upon said squared portion, the tubes secured in said brackets, one

over each steamway, and means, as described, for raising and lowering the bracket and tubes, substantially as set forth.

2. The combination, with the steam-bowl, 5 of the pierced cover at the top thereof, the plugs arranged within said bowl and projecting upward through said holes, whereby annular steam-exits are afforded, the central stem mounted upon said bowl, and the plu- 10 rality of tubes mounted on said stem and arranged one over each of the annular steam-exits, substantially as set forth.

3. The combination, with the bowl having the plurality of annular steam-exits in the 15 upper face thereof, of the outwardly-projecting stem, squared for a portion of its length, the bracket mounted upon said squared portion, the resonant tubes secured in said bracket, one above each steam-exit, the spring

coiled about the stem and pressing upward 20 against the bracket, and the nut screw-threaded upon the top of the stem and adapted to control the position of the bracket, substantially as specified.

4. The combination, with the bowl having 25 the steam-exits formed therein, of the stem, the plurality of tubes arranged about said stem, each tube interiorly screw-threaded and provided with a movable plug, whereby the tone of the tube may be varied, and the spring 30 and nut for the elevation or depression of the tubes, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN R. TOMLINSON.

Witnesses:

S. H. HUBBARD,

M. C. HINCHCLIFFE.