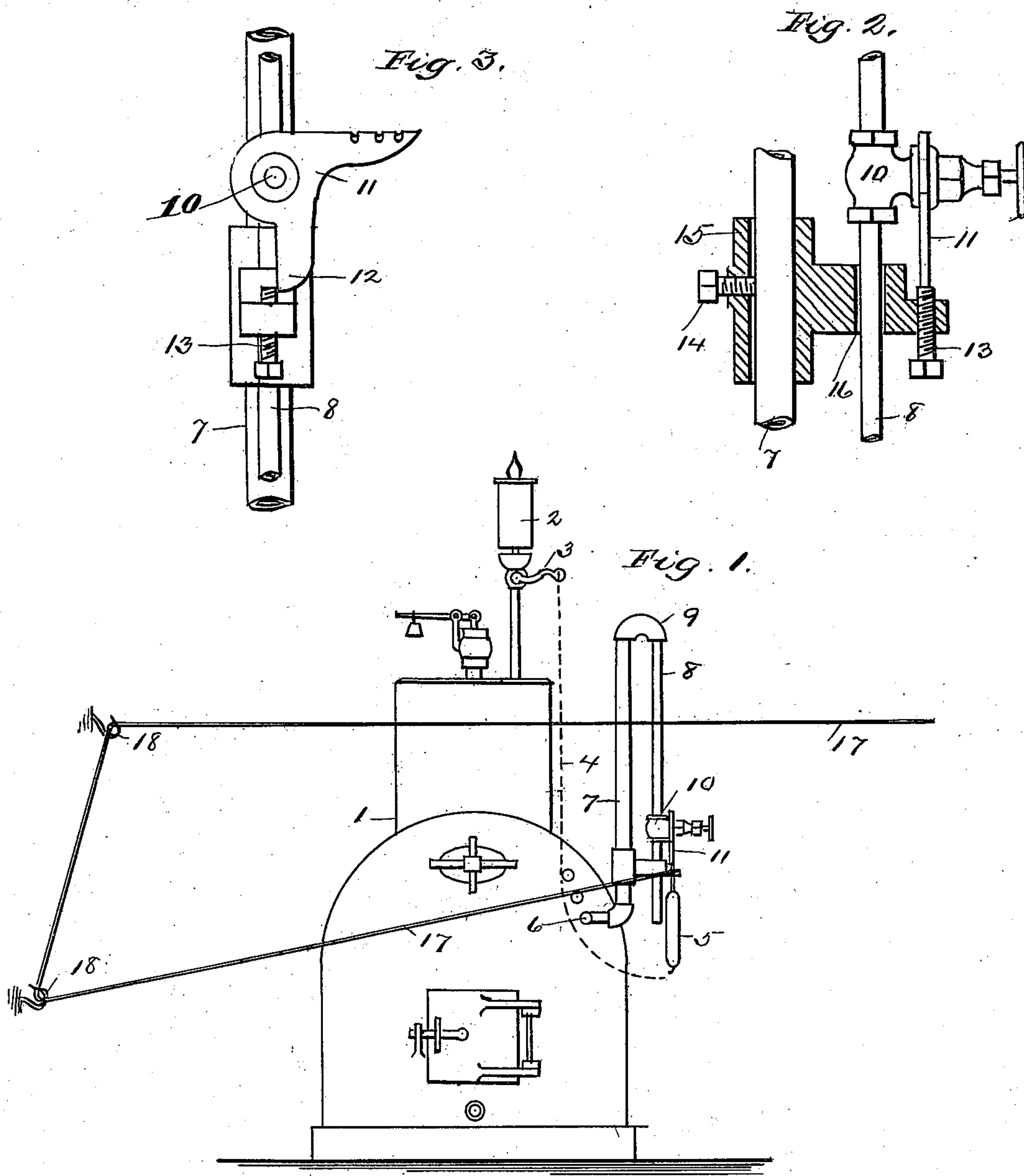


(No Model.)

N. GUYER.
LOW WATER ALARM.

No. 502,815.

Patented Aug. 8, 1893.



Witnesses:
M. E. Harrison,
J. A. Hervey

Inventor:
Nelson Guyer
Per: *O. D. Lewis*
Atty.

UNITED STATES PATENT OFFICE.

NELSON GUYER, OF CYGNET, OHIO.

LOW-WATER ALARM.

SPECIFICATION forming part of Letters Patent No. 502,815, dated August 8, 1893.

Application filed October 13, 1892. Serial No. 448,781. (No model.)

To all whom it may concern:

Be it known that I, NELSON GUYER, a citizen of the United States, residing at Cygnet, in the county of Wood and State of Ohio, have
5 invented certain new and useful Improvements in Low-Water Alarms; 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved low water alarm, and consists in certain details
15 of construction, and combination of parts as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is an end elevation of an ordinary boiler or steam generator provided with my improved
20 low water alarm, which is constructed in accordance with my invention. Fig. 2 is an enlarged front sectional elevation of the expansion trip. Fig. 3 is a side elevation of the same.

25 To put my invention into practice with a steam generator 1, I attach to the lowest or other water gage 6, a vertical pipe 7 provided with an elbow 9, and return pipe 8 in which a rotating valve 10 is arranged. This return
30 pipe 8 is as shown of less diameter than the other pipe 7 but may be of the same diameter and said pipes 7 and 8 are of about the same length. Attached to the pipe 7 by means of a set screw 14 is a casting 15, in which an aperture 16, is formed, through which the small
35 return pipe 8 passes. Pivoted to the neck of the valve 10 is a trip 11, one end of which is adapted to engage with a set screw 13, arranged at the outer end of the casting 15, and
40 the other end provided with several notches

on which a weight 5 is supported. This weight 5 is provided with a link to engage with the notches of trip 11, and is attached to the whistle lever 3, by a chain 4, in a manner that when the weight is released from the trip
45 the same will bring the lever down and sound the whistle 2. When the water in the boiler has reached the lower gage 6, and permitted the hot steam to enter the pipe 7, the same expands, which draws the pipe 8 upward, there-
50 by releasing the point 12, of the trip from the set screw 13, which permits the weight to drop and open the whistle valve to sound an alarm.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—
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In a low water alarm for steam generators, the combination of the U-shaped expansion pipe, one arm of which is adapted for connection with the water gage of the generator and
60 the other arm of which is provided with a valve, the bracket 15, adjustably secured to that arm of the expansion pipe which is connected to the water gage, and having an opening for the passage of the other arm of said
65 pipe and having a set screw beyond said opening, a trip-lever pivoted to the valve in said pipe and having two arms, one of which is arranged to engage said set screw on the bracket and a weight loosely mounted on the
70 other of said arms and adapted to be connected to the whistle levers substantially as set forth.

In testimony that I claim the foregoing I hereunto affix my signature this 5th day of
October, A. D. 1892.

NELSON GUYER. [L. S.]

In presence of—

CHARITY TELLER,
J. F. WOLLAM.