

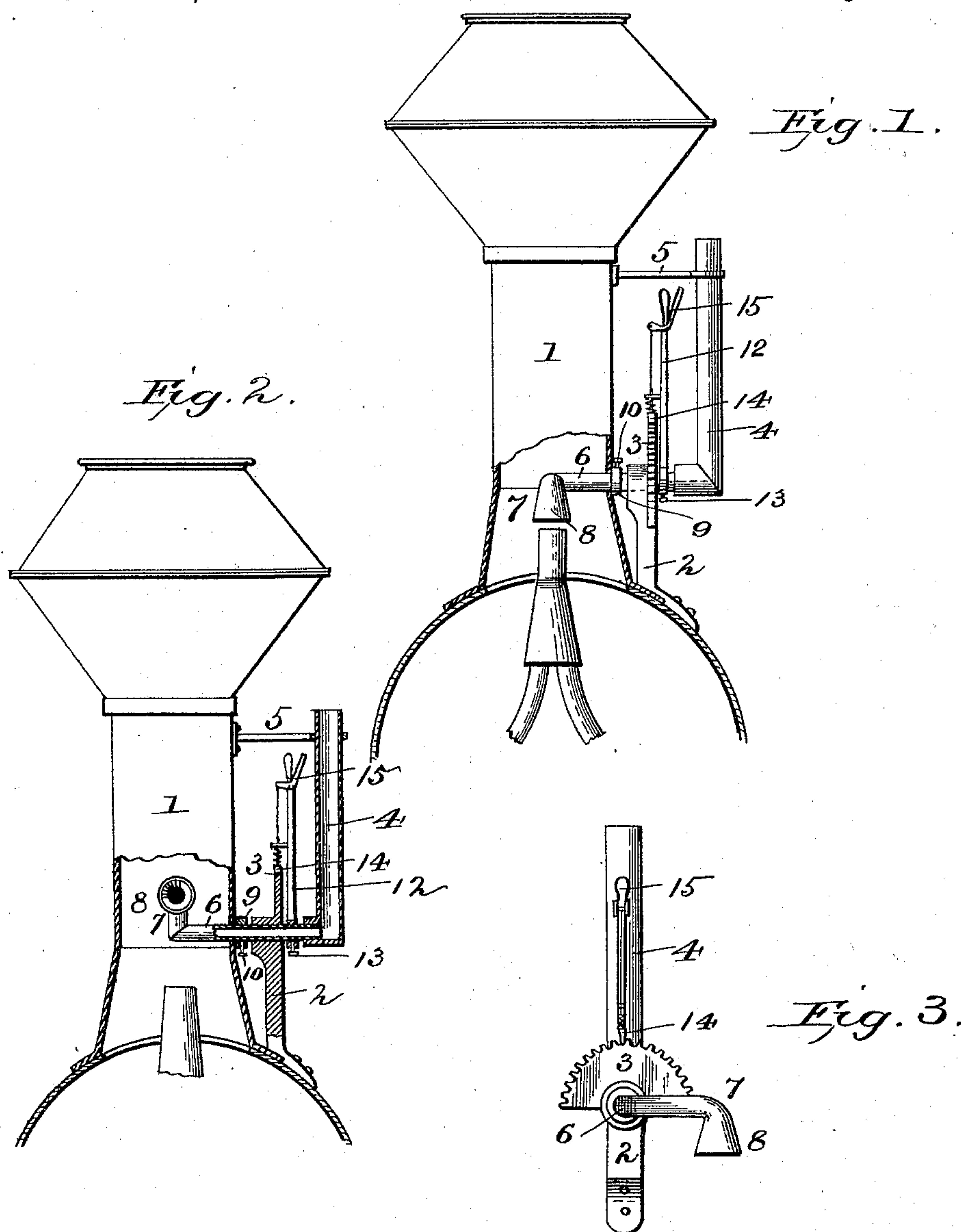
(No Model.)

M. P. BAGSTAD.

DEVICE FOR CONTROLLING DRAFT IN LOCOMOTIVES.

No. 540,132.

Patented May 28, 1895.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

MARTIN P. BAGSTAD, OF MCINTOSH, MINNESOTA.

## DEVICE FOR CONTROLLING DRAFT IN LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 540,132, dated May 28, 1895.

Application filed March 20, 1895. Serial No. 542,561. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN P. BAGSTAD, a citizen of the United States, residing at McIntosh, in the county of Polk and State of Minnesota, have invented certain new and useful Improvements in Devices for Controlling the Draft in Locomotives; and I do 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 means for controlling the draft in steam boilers and more particularly to that class of inventions, in which the draft is made by an exhaust through the smoke stack of the boiler.

The object of the invention is to provide simple means whereby the draft through the smoke stack may be easily controlled.

With this object in view the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a sectional view of a portion of the boiler and the smoke-stack, showing the application of my invention thereto and the parts adjusted to allow the steam passing through the exhaust-nozzle to escape into the open air at the side of the smoke-stack. Fig. 2 is a similar view showing the parts of my invention adjusted to permit the exhaust-steam to pass up through the smoke-stack. Fig. 3 is a front view of the invention.

In the drawings, 1 denotes the smoke stack of a stationary or locomotive boiler. To the boiler or to the lower end of the stack is bolted or otherwise secured a journal block 2 having a segmental rack 3. Secured in the journal block is a pipe 4, which projects upward on the outside of the smoke stack and its upper end is connected thereto by a strap 5. The outer end of a pipe 6 projects through the journal block and has a screw threaded engagement with the lower end of the pipe 4, while the inner end is provided with a lateral extension 7, the end of which is bent downward and is made funnel shaped, as shown at 8. A collar 9 is placed around the pipe 6 and a set screw 10 clamps the collar to the pipe, whereby the funnel extension of the pipe 6 may be adjusted and retained in proper posi-

tion over the nozzle of the exhaust pipe 11, commonly employed for establishing a draft.

12 denotes an operating lever having an enlarged apertured end, which embraces the outer end of the pipe 6 and is secured thereto by a set screw 13. A spring actuated bolt 14 is carried by this lever and is adapted to engage the segmental rack on the journal block. A handle 15 is pivoted to the upper end of the operating lever and is connected to the bolt.

In operation, when it is desired to lessen the draft in the smoke stack, the operating handle is grasped and pulled forward, which will cause the pipe 6 to rotate, and its funnel shaped end to be brought over the exhaust nozzle in the smoke stack. The steam, now, instead of passing through the smoke stack, will be conducted through the pipe 6 and discharged at the upper end of the pipe 4 into the open air. This is found to be necessary when the water in the boiler is low and it is not desired to stop the engine, and it will also prove very useful should the safety valve fail to operate, as it will carry off the steam without increasing the draft. By a reverse movement of the operating lever, the funnel shaped end of the pipe 6 will be moved away from over the exhaust nozzle and close against the side of the smoke stack, thus allowing a free unobstructed passage for the exhaust steam from the nozzle. The bolt carried by the operating lever will engage the segmental rack and securely hold the parts in their adjusted position.

The device is very simple and may be applied with ease to any type of boiler now in use and it will prove a great benefit to the engineer.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with a journal block adapted to be secured to the outside of a boiler in proximity to the smoke stack thereof, a pipe supported on the outside of the smoke stack, and a pipe supported by the journal block and connected to the aforesaid pipe and projecting within the smoke stack, and means for moving the last named pipe over the exhaust nozzle in the smoke stack, substantially as set forth.

2. The combination with a journal block



adapted to be secured to the outside of a boiler in proximity to the smoke stack, a second pipe supported by the journal block and connected to the lower end of the first named  
5 pipe and having a funnel shaped end which projects into the smoke stack, and means for rotating the last named pipe to bring the funnel shaped end over the exhaust nozzle in the smoke stack, substantially as set forth.  
10 3. The combination with a journal block adapted to be secured to the outside of a boiler in proximity to the smoke stack thereof, and provided with a segmental rack, a pipe supported on the outside of the smoke stack,  
15 a second pipe supported by the journal block and connecting with the first named pipe, having an angular extension, the lower end of which is funnel shaped, a lever fixed to the last named pipe, and a locking bolt car-  
20 ried by said lever and adapted to engage the

segmental rack to hold the parts in desired adjustment, substantially as set forth.

4. The combination with a boiler and its smoke stack, an exhaust nozzle projecting into the smoke stack, of a journal block se- 25 cured to the boiler, a pipe journaled in said block and provided with an angular extension, a second pipe secured to the first named pipe and projecting upward and strapped to the smoke stack, and means for rotating the 30 first named pipe to bring its lower angular end over the exhaust nozzle in the smoke stack, substantially as set forth.

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

MARTIN P. BAGSTAD.

Witnesses:

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