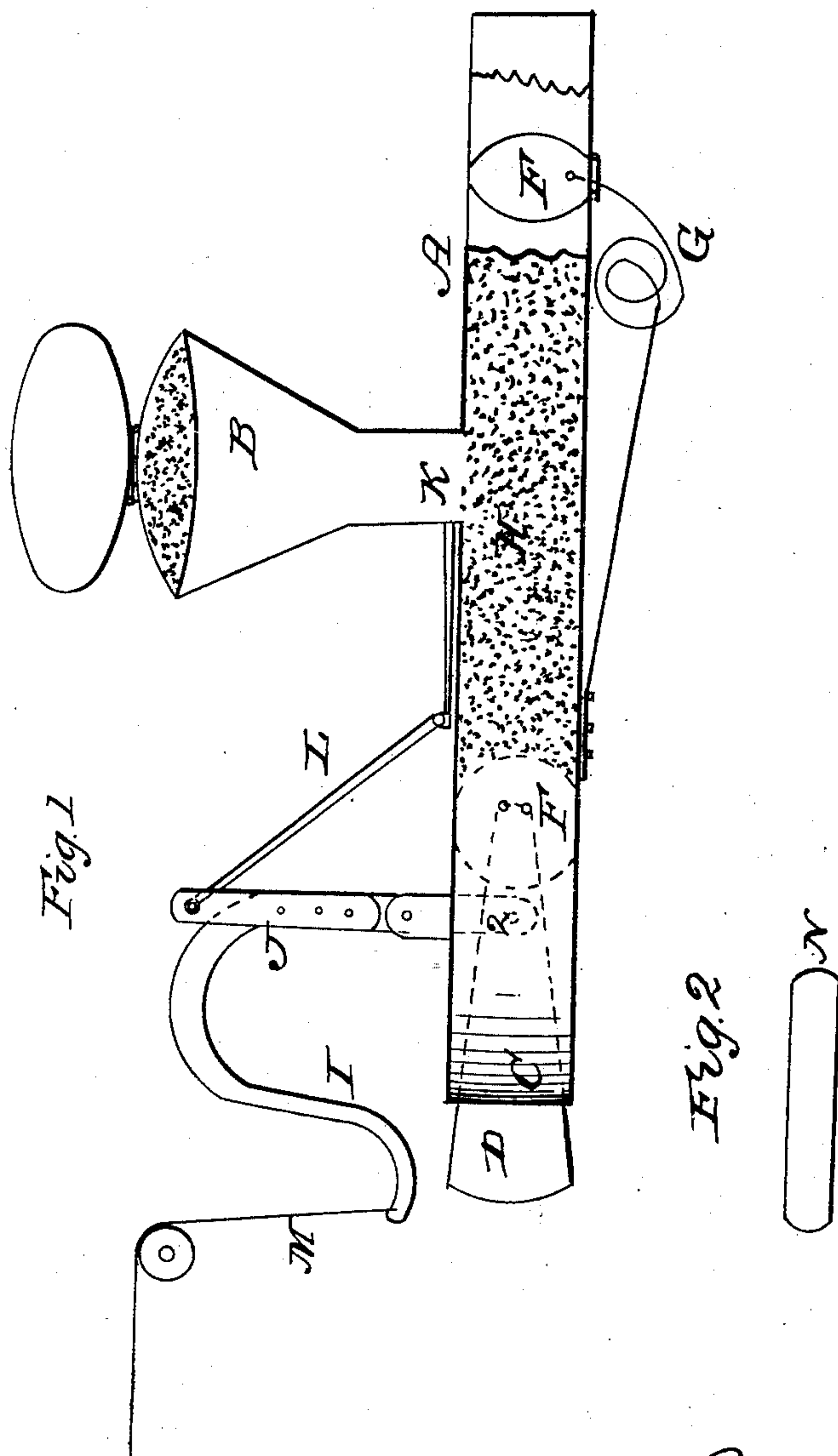


S. SCOTTON.  
Locomotive Gravel Shooter.

No. 20,218.

Patented May 11, 1858.



Inventor  
*Stephen Cotton*

# UNITED STATES PATENT OFFICE.

S. SCOTTON, OF RICHMOND, INDIANA.

IMPLEMENT FOR SHOOTING MISSILES AT COWS, &c., ON RAILROADS.

Specification of Letters Patent No. 20,218, dated May 11, 1858.

*To all whom it may concern:*

Be it known that I, STEPHEN SCOTTON, of Richmond, in the county of Wayne and State of Indiana, have invented a new and  
5 Improved Mode of Shooting Gravel or other Missiles at Live Stock in Front of Locomotives by Means of a Steam-Gun; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in inserting a tube in the front of a locomotive  
15 and connecting said tube with the steam in such a manner that the steam may be allowed to blow off through the tube thereby projecting the contents of said tube along the track in advance of the locomotive.

20 To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, is an iron tube of any suitable size.

25 B, is a funnel shaped box or hopper, secured on the top side of tube A, and emptying into it for the purpose of holding and supplying the gravel or other missiles to be projected from said tube.

30 C, shows a screw thread on the end of tube A, for the purpose of screwing said tube into the boiler or place where the steam is confined.

D, is a tapered plug the head of which is subjected to the full pressure of steam and  
35 fits tight into the end of A, at C. This arrangement is similar to that of the common steam whistle of locomotives.

40 E is a circular piece of india rubber about the same diameter as the bore of tube A, and secured onto the small end of plug D, to prevent the charge of gravel from working back around plug D.

45 F, is a round valve opening on a hinge and closed by the spring C. This is for the purpose of holding the charge of gravel H, and preventing it from dribbling out of the muzzle of tube A, the spring C, allowing the hinged valve F, to open instantly when a discharge is made but closing instantly  
50 when the steam is shut off—ready for hold-

ing in another charge. This valve may be placed in from the muzzle and have a bed made for it to fall into. It may also be made of india rubber or gutta percha, so as to bend into its bed as the blast passes  
55 over it and then regain its upright position. The tube A, may also if preferred be made flat as shown at N, Fig. 2, so as to scatter and spread the discharge laterally. The tube A may also have a joint of gutta percha  
60 or of iron or may be made partly of gutta percha in order to be moved laterally—and directed toward objects on either side of the track.

I, and J, is a lever whose fulcrum is shown  
65 at 1, and is connected with plug D, at 2.

K is a slide connected by rod L, with lever J, so that the pulling of cord M, throws back the tapered plug D, thereby admitting  
70 steam into tube A, and simultaneously closing the connection of hopper B, with tube A, by shoving up slide K. On releasing cord M, the pressure of steam on the head of D, closes it instantly, thereby opening  
75 the communication of gravel box B, with tube A by drawing back the slide K, when another charge is admitted into A. By this arrangement it is rendered self loading.

I do not claim the tube for shooting or squirting steam at stock, in front of a locomotive, for that has been done before.  
80 Neither do I claim separately any of the parts described in the second claim, but

What I claim as my invention and desire  
85 to secure by Letters Patent is—

1. The combination of a tube and gravel feeder with a locomotive for purposes herein described.

2. The arrangement for closing and opening the slide K, when combined with lever  
90 J, and tube A, substantially as herein described.

3. The self adjusting valve F, in combination with tube A, as herein described.

4. The elastic disk E, combined with tube  
95 A, and plug D, for purposes herein set forth.

STEPHEN SCOTTON.

Witnesses:

JAMES M. PAE,  
M. WATSON.