

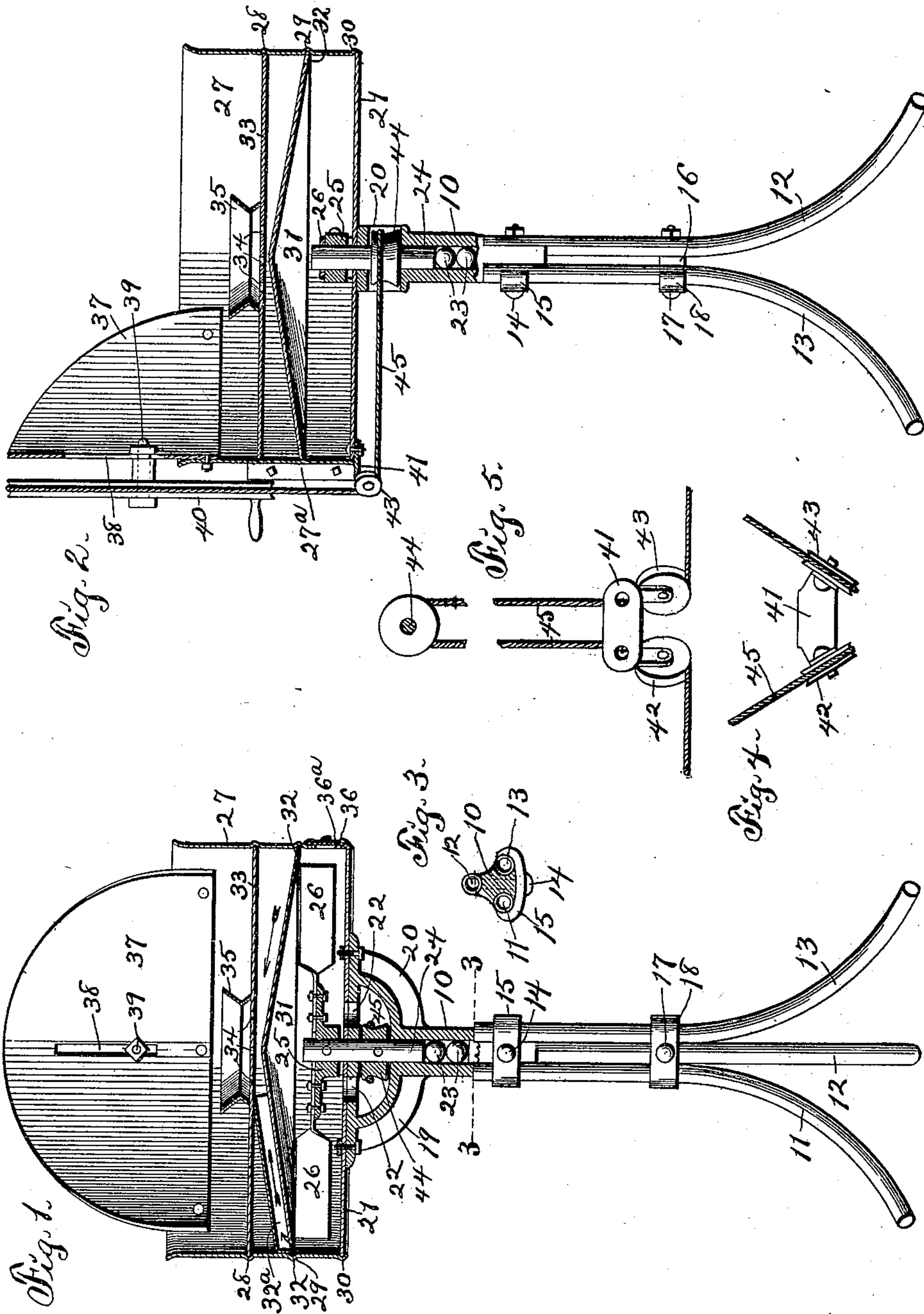
No. 639,817.

Patented Dec. 26, 1899.

T. LENNOX.  
PORTABLE FORGE.

(No Model.)

(Application filed Feb. 16, 1899.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

TALBOT LENNOX, OF AMES, IOWA.

## PORTABLE FORGE.

SPECIFICATION forming part of Letters Patent No. 639,817, dated December 26, 1899.

Application filed February 16, 1899. Serial No. 705,718. (No model.)

*To all whom it may concern:*

Be it known that I, TALBOT LENNOX, a citizen of the United States, residing at Ames, in the county of Story and State of Iowa, have  
5 invented a new and useful Portable Forge, of which the following is a specification.

The object of this invention is to provide improved means for containing and blowing a blacksmith's fire and removing ashes and  
10 waste therefrom.

My invention consists in the construction, arrangement, and combination of elements hereinafter set forth, pointed out in my claims, and illustrated by the accompanying draw-  
15 ings, in which—

Figure 1 is a vertical section of the forge. Fig. 2 is a vertical section of the forge on a line at right angles to the section of Fig. 1. Fig. 3 is a cross-section of the tripod of the  
20 forge on the indicated line 3 3 of Fig. 1. Fig. 4 is a detail front elevation of a bracket employed on the forge. Fig. 5 is a detail plan of the driving rope belt, driven pulley, and guiding-pulleys in operative position.

25 In the construction of the machine as shown the numeral 10 designates a standard formed with longitudinal grooves in the periphery of its lower end portion. Legs 11, 12, and 13, preferably made of gas-pipe, are positioned  
30 with their upper end portions in the grooves of the standard 10 and are secured to the standard by a bolt 14, traversing the standard and the leg 12. A clamping-plate 15 is carried by the bolt 14 and engages and holds  
35 the legs 11 13 to the standard. The legs extend downwardly from the standard in parallel planes a distance approximating to one-half the height of the legs and are provided with a steadying-block 16, located between  
40 the legs and a bolt 17, traversing the block and the leg 12, the bolt also carrying a clamping-plate 18, which engages and holds the legs 11 13 to the block. Those portions of the legs below the steadying-block 16 are curved  
45 outwardly, and the lower ends of the legs are in the same plane and widely separated from each other to provide a firm base or tripod to support the forge.

Arms 19 20 are formed on and curved out-  
50 wardly and upwardly from the standard 10, and a bottom plate 21 of circular form is mounted horizontally on and bolted to said

arms. Air-ingress ports 22 are formed in the bottom plate 21, near the center thereof. An aperture is formed in the center of the bot- 55 tom plate 21, and the standard 10 is bored longitudinally in alinement therewith. Bearing-balls 23 are mounted one upon the other in the bottom of the bore in the standard 10, and a shaft 24 is mounted in the bore, stepped 60 on the upper of the bearing-balls, and traverses the central aperture of the bottom plate 21. A hub 25 is mounted rigidly on the upper end of the shaft 24, and a fan 26 is rigidly mounted on and radially extended in oppo- 65 site directions from said hub. An annular rim 27, preferably made of sheet metal, is mounted on and embraces the periphery of the bottom plate 21, a clamp 27<sup>a</sup> being formed on the rim to contract the same. Three pe- 70 ripheral beads or corrugations 28, 29, and 30 are formed in the rim 27, and the bead 30 engages the periphery of the bottom plate. A dead-plate 31, preferably made of sheet metal and of conical or dome shape, is mounted 75 approximately parallel with the bottom plate 21, and the periphery of the dead-plate is engaged in the bead 29 of the rim 27. Air-ports 32 are formed in the peripheral portion of the dead-plate 31, and a pipe 32<sup>a</sup> leads from one 80 port to center of top plate. A top plate 33 is mounted parallel with the bottom plate and above the dead-plate, and the periphery of said top plate is engaged in the bead 28 of the rim 27. Air-ports 34 are formed in the cen- 85 tral portion of the top plate 33 immediately above the apexed central portion of the dead-plate, and a fire-hopper 35 is mounted on the top plate and surrounds said air-ports. An ash-vent 36 is formed in the lower portion of 90 the rim 27 between the bottom and dead plates and arranged to be closed at times by a door 36<sup>a</sup>, slidingly mounted on the rim.

A shield-plate 37 is mounted on and pro- 95 jects upwardly from one side of the rim 27 and is vertically slotted at 38 in its central portion. A stub-axle 39 is mounted for vertical adjustment in the slot of the shield-plate 37 and projects outwardly therefrom. A grooved hand-wheel 40 of large diameter is 100 mounted for revolution on the outer end of the stub-axle 39. A bracket 41 is mounted on and projects radially from the bottom plate 21 below the stub-axle, and guide-sheaves



42 43 are mounted on said bracket. A belt-wheel 44 is mounted rigidly on the central portion of the shaft 24, and a rope belt 45 runs over the hand-wheel 40, the guide-sheaves 42 5 43, and the belt-wheel 44.

The fan 26 is formed of a bar of metal flat in its central portion and having its wing portions twisted at right angles to each other and at oblique angles to the central portion.

10 In practical use the fan is driven by the shaft 24, operated by the rope belt driven by the hand-wheel, and receives air through the ports 22 and drives said air through the ports 32 34 into the fire contained in the fire-hopper 35. 15 Ashes falling through the ports 34 travel downwardly and outwardly along the inclined upper face of the dead-plate and are discharged through the vent 36 in the rim 27. The tension of the belt may be adjusted by 20 vertical adjustment of the stub-axle in the slot 38 of the shield.

I claim as my invention—

1. The forge comprising the tripod, the bottom plate carried thereby, the rim carried by 25 the bottom plate, the dead-plate carried by the rim and with the bottom plate forming a fan-chamber, the top plate carried by the rim

above the dead-plate and formed with air-ports in its central portion, a fire-hopper on the top plate surrounding the air-ports there- 30 in, the shield on the rim, the stub-axle on the shield, the hand belt-wheel on the axle, the shaft in the tripod, belt connections between the hand belt-wheel and the shaft, a fan on the shaft within the fan-chamber and ports 35 of communication between the fan-chamber and top plate.

2. The forge comprising the tripod, the bottom plate carried thereby, the bottom plate being apertured centrally and the tripod 40 bored in alinement therewith, a shaft in the aperture and bore, a rim carried by the bottom plate, a dead-plate carried by the rim and conical in form, a top plate carried by the rim above the dead-plate, the plates hav- 45 ing properly-located air-ports, the fan on the shaft between the bottom plate and the dead-plate, the ash-vent in the rim, the hopper on the top plate and means for driving the shaft.

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Witnesses:

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