

(No Model.)

A. W. RUMSEY.  
PRAIRIE FIRE EXTINGUISHER.

No. 337,086.

Patented Mar. 2, 1886.

Fig. 1.

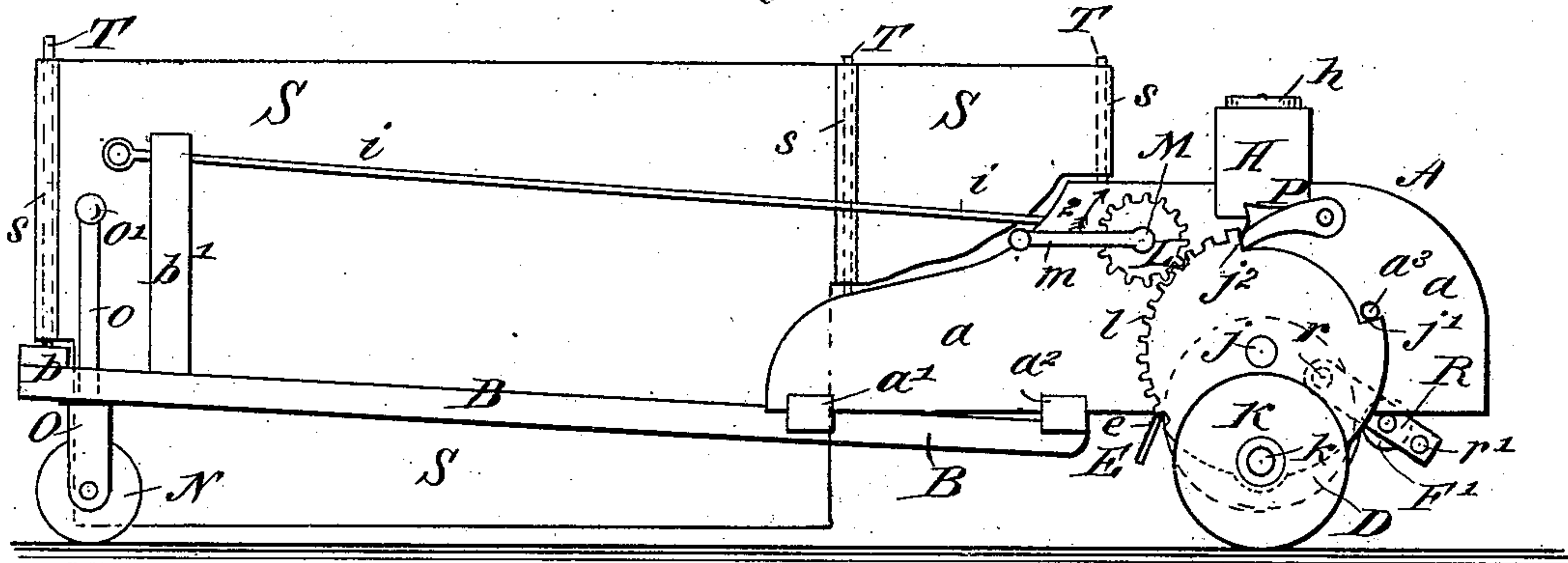


Fig. 3.

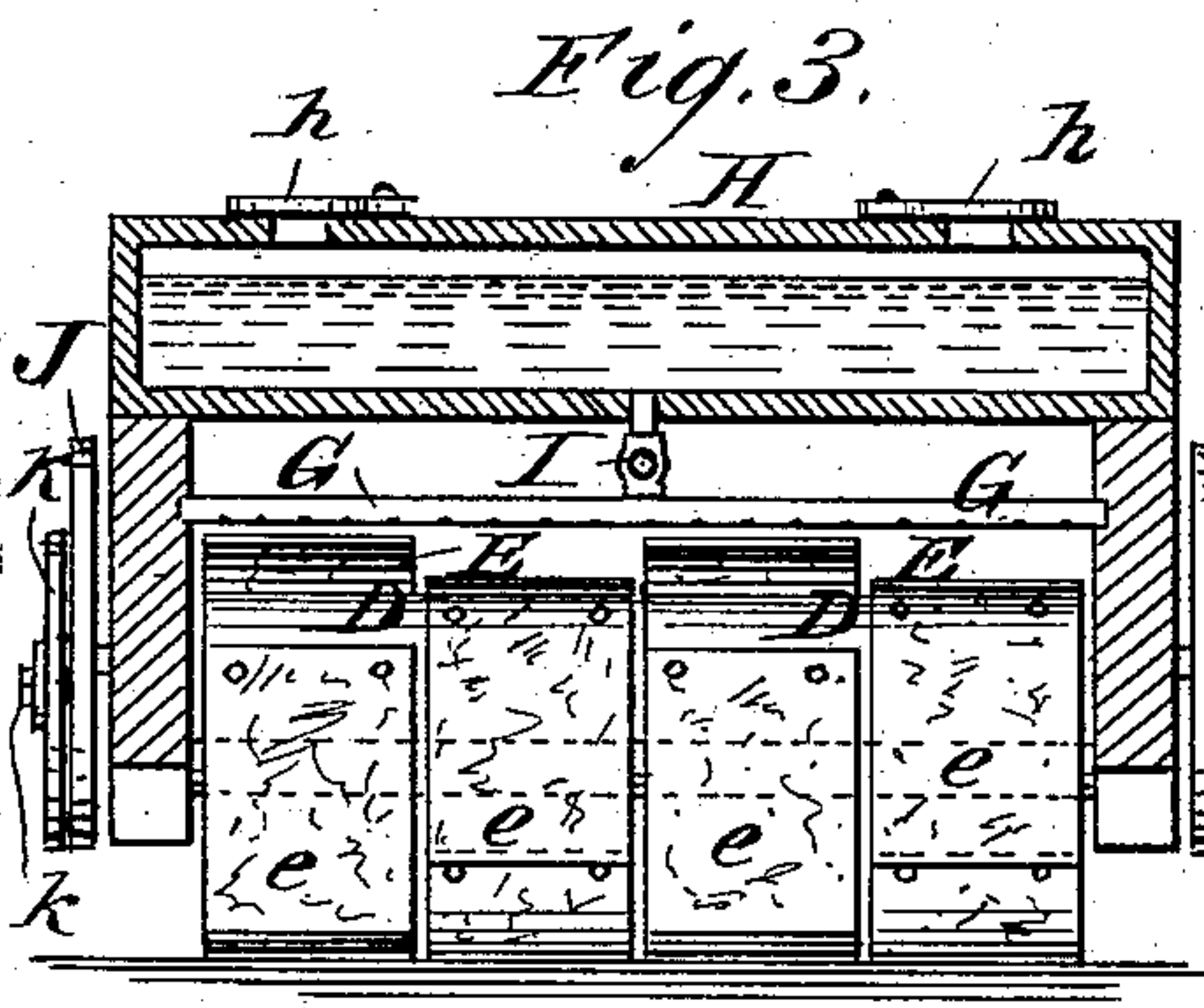


Fig. 2.

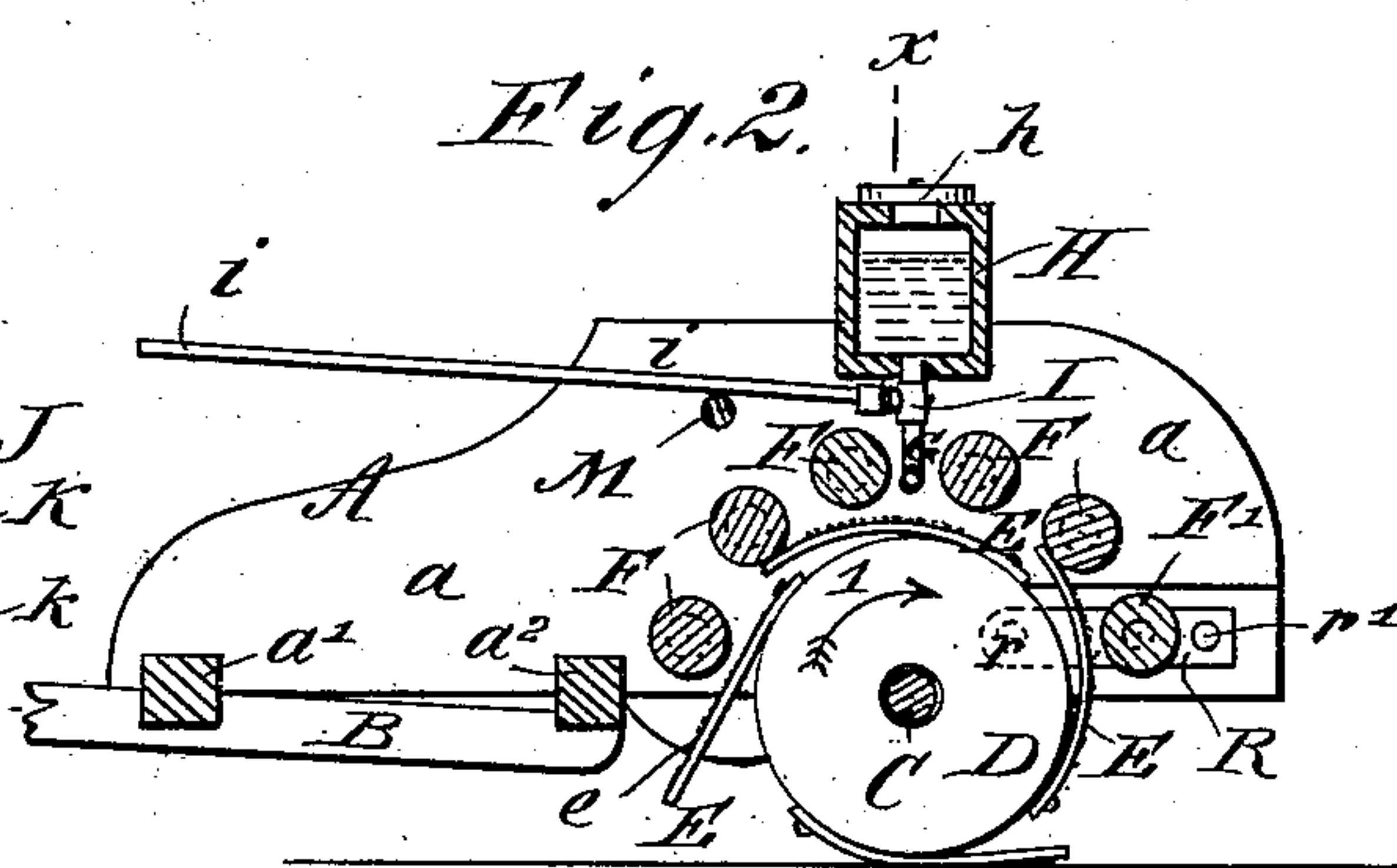
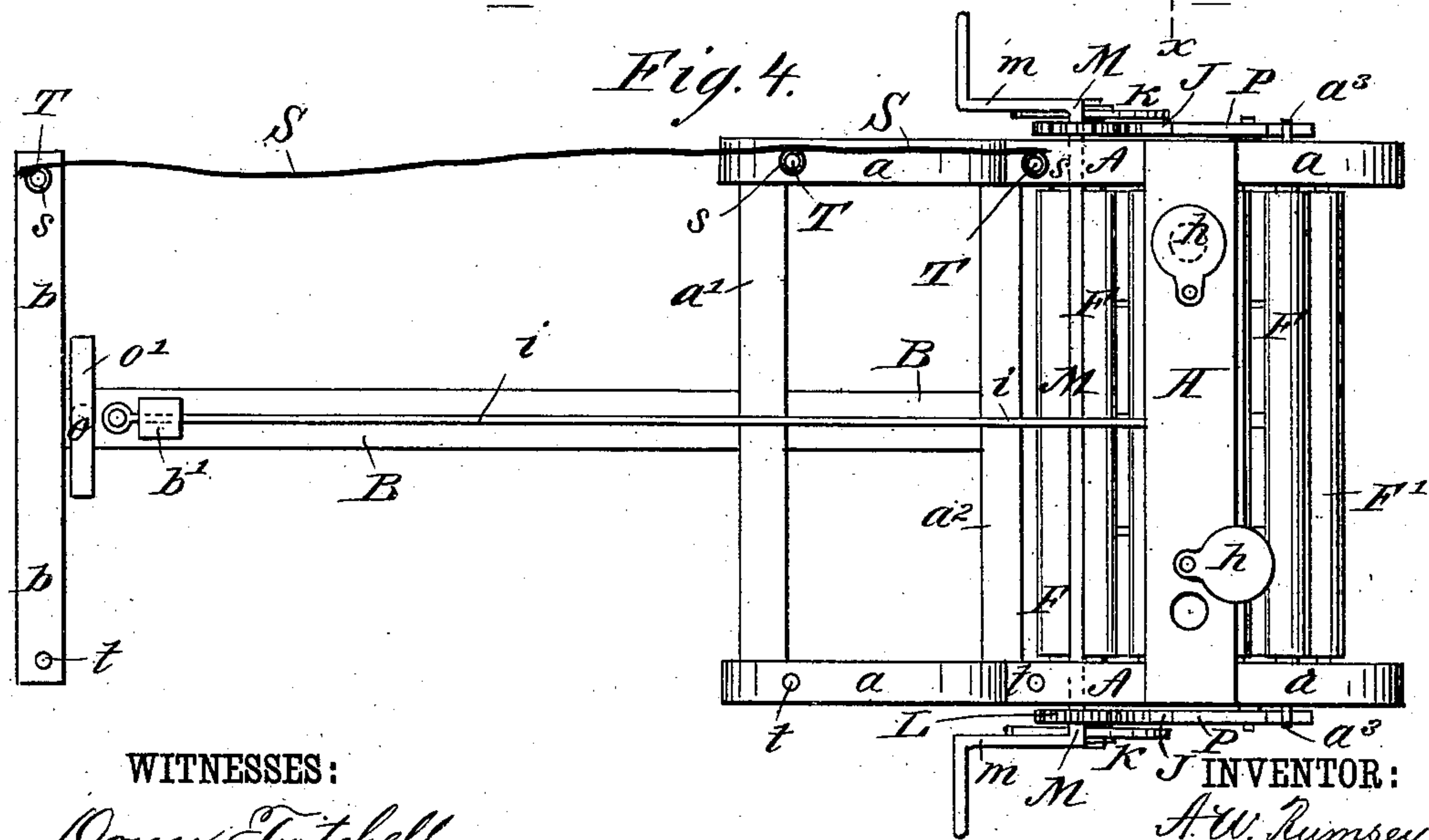


Fig. 4.



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ARTHUR W. RUMSEY, OF NEW KIOWA, KANSAS.

## PRAIRIE-FIRE EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 337,086, dated March 2, 1886.

Application filed January 13, 1886. Serial No. 188,479. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR W. RUMSEY, of New Kiowa, county of Barber, and State of Kansas, have invented a new and Improved  
5 Prairie-Fire Extinguisher, of which the following is a full, clear, and exact description.

My invention relates to a machine for use in extinguishing prairie-fires, and has for its object to provide a simple, inexpensive machine of this character which will operate effectively to beat out lines of fire at each side  
10 of a burned track and to burn a swath or belt of grass at or around hay-stacks or buildings or farms to make a guard for the protection of  
15 property against approaching fires.

The invention consists in certain novel features of construction and combination of parts of the fire-extinguisher, all as hereinafter fully set forth.

20 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improved  
25 prairie-fire extinguisher. Fig. 2 is a vertical sectional elevation of the front part of the machine, with the screen removed. Fig. 3 is a transverse view, partly in vertical section, on the line *x x*, Fig. 2, and Fig. 4 is a plan view  
30 of the machine.

The frame A of the machine consists of opposite side pieces, *a a*, which are connected at their rear bottom parts by cross-bars *a' a'*, to which the tongue B of the machine is bolted,  
35 said tongue extending rearward, whereby animals hitched to the cross-beam *b*, at the end of the tongue, may push the machine-frame A and attachments before them to extinguish the fire, as presently explained.

40 On an axle, C, journaled in boxes on the frame A, is journaled a roller, D, which, for convenience in turning the machine, is or may be made of two or more parts, two parts being shown in the drawings.

45 To the roller D are fixed the elastic plates or beaters E, the free ends of which—as the roller revolves in direction of arrow 1 while the machine moves forward—strike and are bent inward by a series of rollers, F, which  
50 are journaled in the frame A, around the periphery of the main roller D. When the beaters E pass the forward roller, F', of the

series of rollers F, they will tend to straighten out and will strike or beat burning prairie-grass with considerable force, and the roller 55 D also will bear its weight on the beaters to smother and extinguish the fire.

To make the operation of the elastic beaters E more effective, I cover their outer faces, which strike the burning grass, with asbestos 60 cloth or some other fire-proof or partly fire-proof fabric, *e*, which will hold or absorb water which falls on the beaters from a perforated pipe, G, leading from a water tank or reservoir, H, supported on the machine-frame A. 65 The valve I, fitted in pipe G, has a stem, *i*, extending backward and supported in a standard, *b'*, on the tongue B, within reach of the driver of the team, who thus may operate the valve to regulate the supply of water from the 70 tank H to the beaters E, as the intensity or condition of the prairie-fire may require, and whereby waste of water may be prevented. The water is supplied to the tank H through holes in its top, closed by pivoted lids *h*. 75 The front roller, F', or a cross-bar fitted in the frame in the position shown for roller F' in Fig. 2, would bend the beaters E just before they strike the burning grass, but by providing the series of rollers, which range about 80 half-way around and above the main roller D, two other useful purposes are served—first, the rollers F prevent the revolving beaters from striking the water-supply pipe G, and choking up the perforations of the pipe by 85 the embers, which may to some extent cling to the beaters, and which, if allowed, would interfere seriously with the proper supply of water to the beaters, and, secondly, the contact of the beaters with the rollers behind the 90 front roller, F', extinguishes burning embers or grasses which may by chance stick to the beaters, and throws or shakes the dead embers or most of them from the beaters, which thus escape from the front roller, F', in a comparatively clean and properly-wet condition 95 to operate most effectively in extinguishing the fire.

The rollers F F' may be substituted by rigid bars fitted across the frame A of the machine; 100 but the rollers are preferred, as they cause less friction on the faces of the rotating beaters, and hence are less liable to strip the water-absorbing fabric or covering *e* from the beaters.



To each side piece, *a*, of the frame A, is journaled on a gudgeon, *j*, a disk or plate, J, to which is journaled on a gudgeon or sheet-axle, *k*, a wheel, K, and each plate J is provided with a segment of gear-teeth, *l*, which meshes a spur gear-wheel, L, which is fixed to a shaft, M, journaled across the machine-frame, and whereby, when the cranks *m* of shaft M are turned in the direction of arrow 2 in Fig. 1, the wheels K on plates J will be swung downward, and the main roller D will be lifted from the ground, and the forward end of the machine will then be supported on the wheels K, while the rear end of the machine will have support on the pilot-wheel N, which is journaled in a yoke, O, having a standard, *o*, swiveled in the tongue B, and provided with a cross-bar or handle, *o'*, which will be grasped by the driver or attendant to steer the machine as it is moved on the wheels K K N to and from the place of use, or when it is at work.

When the machine is adjusted for transportation over the road, as last above described, a shoulder, *j'*, on each disk or plate J, will stop against a pin, *a''*, in the side *a* of the frame A, and a pawl, P, pivoted to the frame will be swung over to engage a shoulder, *j''*, on the plate J, to hold it securely against turning either way, and effectively support the main body or front portion of the machine on the wheels K.

To prevent the beaters E from striking the ground when the machine is running on the wheels K K, I have journaled the front roller, F', of the series of rollers F, in bars R, which are pivoted at *r* to opposite sides of the frame A, and may be swung downward at the forward ends to carry the roller F' backward to press the free ends of the beaters in closely to the roller D, as seen in Fig. 1. Bolts or screws *r'*, at the forward ends of the bars R, hold said bars and the roller F' in proper position to flex the beaters E when the frame is let down for operating the beaters, and as shown in Figs. 2 and 3.

To lower the frame it is only necessary to lower the crank-shaft M *m*, in direction opposite to that indicated by the arrow 2, after the pawls P have been thrown back from the shoulders *j''* of the plates J, and the transporting-wheels K will thereby be carried rearward and upward to the position indicated in Fig. 2, when the roller D will then roll over the ground and press the elastic beaters onto or into the ground in extinguishing the fire, as above described.

A screen, S, made of asbestos cloth or other suitable fire-proof material, has pockets at *s*, which may be slipped over or onto posts or rods T, which may be set into holes at *t*, along either side of the machine, as may be necessary to guard the animals moving the machine and the attendants from the heat of the prairie-fire.

It is characteristic of prairie-fires to travel with the wind and leave a line of fire at each

side of the burned track. By propelling my machine over these lines of fire, the lateral spread of the fire may be prevented, and by running two of the machines abreast a short distance apart, and with lighted torches on the inside, a swath of sufficient width may be burned, while the standing grass at each side, by being thoroughly wet by the machine, will remain, and thus the forward progress of a prairie-fire may be stayed, and houses, barns, or any particular field or acreage may be surrounded and guarded by a burned band or belt across which the fire will not leap, and much property may in this way be saved from destruction.

If preferred, the pipe G may be plugged at its center, and a valve, I, be fitted therein at each side of the plug and be provided with a handle-rod, *i*, whereby water may be showered upon the beaters at either end or half of the roller D. A seat for the driver may also be fastened to the tongue cross-beam *b*, behind the standard *o*, as will be readily understood.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, in a prairie-fire extinguisher, of a frame, a roller journaled therein, and arms or beaters held to the roller and adapted to strike the burning grass as the roller revolves and to be pressed to the ground by the roller, substantially as herein set forth.

2. The combination, in a prairie-fire extinguisher, of a frame, a main roller journaled therein, elastic arms or beaters held at one end to said roller, and an auxiliary roller or cross-bar on the frame acting to bend the elastic beaters prior to their striking the ground as the main roller revolves, substantially as herein set forth.

3. The combination, in a prairie-fire extinguisher, of a frame, a main roller journaled therein, elastic beaters held at one end to said roller, and a series of auxiliary rollers or cross-bars held in the frame around the upper side of the main roller, substantially as shown and described, whereby the beaters will be put in tension to strike the ground and the embers will be cleared from the beaters herein set forth.

4. The combination, in a prairie-fire extinguisher, of a frame, a main roller journaled therein, beaters held to said roller and adapted to strike the burning grass, and a water-distributing pipe arranged over the beaters to wet them, substantially as herein set forth.

5. The combination, in a prairie-fire extinguisher, of a frame, a main roller journaled therein, beaters held to said roller and provided with an absorbing fabric, as at *e*, and a water-distributing pipe arranged over the beaters to wet them, substantially as herein set forth.

6. The combination, in a prairie-fire extinguisher, of a frame, a main roller journaled therein, elastic beaters held at one end to said roller, and a series of auxiliary rollers or cross-



bars held in the frame around the upper side of the main roller, a water-tank and a water-distributing pipe arranged over the main roller, and beaters between two of the auxiliary rollers, substantially as shown and described, whereby the elastic beaters will be put in tension to strike the ground and the embers will be shaken from the beaters and the water-distributing pipe will be protected for effective supply of water to the beaters, as herein set forth.

7. The combination, in a prairie-fire extinguisher, and with a frame, A, a main roller, D, journaled therein, and beaters held to said roller, substantially as specified, of disks J, journaled to frame A, wheels K, journaled to disks J, and mechanism, substantially as described, for raising the frame A and roller D on the wheels K, as and for the purposes herein set forth.

8. The combination, with the frame A, roller D, journaled therein, and beaters held to said roller, of disks J, journaled to frame A, wheels K, journaled to disks J, teeth *l* on disks J, shaft M, and gears L on shaft M, substantially as and for the purposes herein set forth.

9. The combination, with the frame A, disks J, wheels K, and means, substantially as specified, for turning disks J, of stops *a*<sup>3</sup>, and pawls P on frame A, substantially as and for the purposes herein set forth.

10. The combination, with the frame A, roller D, and beaters E on said roller, of a front auxiliary roller or bar, as at F', held in arms R, pivoted to the frame A, substantially as and for the purpose set forth.

11. A prairie-fire extinguisher comprising a frame, A, a roller, D, journaled therein, beaters E on said roller, a tongue, B, fixed to frame A and extending backward therefrom, and a pilot-wheel, N, swiveled to the tongue, substantially as herein set forth.

12. The combination, in a prairie-fire extinguisher, of a frame, A, a roller, D, journaled therein, beaters E on said roller, a tongue, B, fixed to frame A and extended backward therefrom, disks J, journaled to frame A, wheels K, journaled to disks J, means, substantially as specified, for operating said disks to support frame A on wheels K, and a pilot-wheel, N, swiveled at the back end of the tongue B, substantially as herein set forth.

13. The combination, in a prairie-fire extinguisher, of a frame, A, provided with a backwardly-extending tongue and supporting-wheels, a roller, D, journaled in frame A, beaters E on said roller, a water-distributing pipe, G, arranged over said roller and adapted to wet the beaters, a valve, I, in said pipe, and a stem or rod, *i*, extended from said valve to the back end of the tongue, substantially as and for the purposes herein set forth.

14. The combination, with the frame A and tongue B of a fire-extinguisher provided with holes *t* at each side, of rods T, adapted for support in said holes, and a screen, S, supported by said rods, substantially as herein set forth.

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Witnesses:

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FRANK HOLMES.