(No Model.)

G. PARKER.

FIRE SHIELD.

No. 461,983. Patented Oct. 27, 1891.

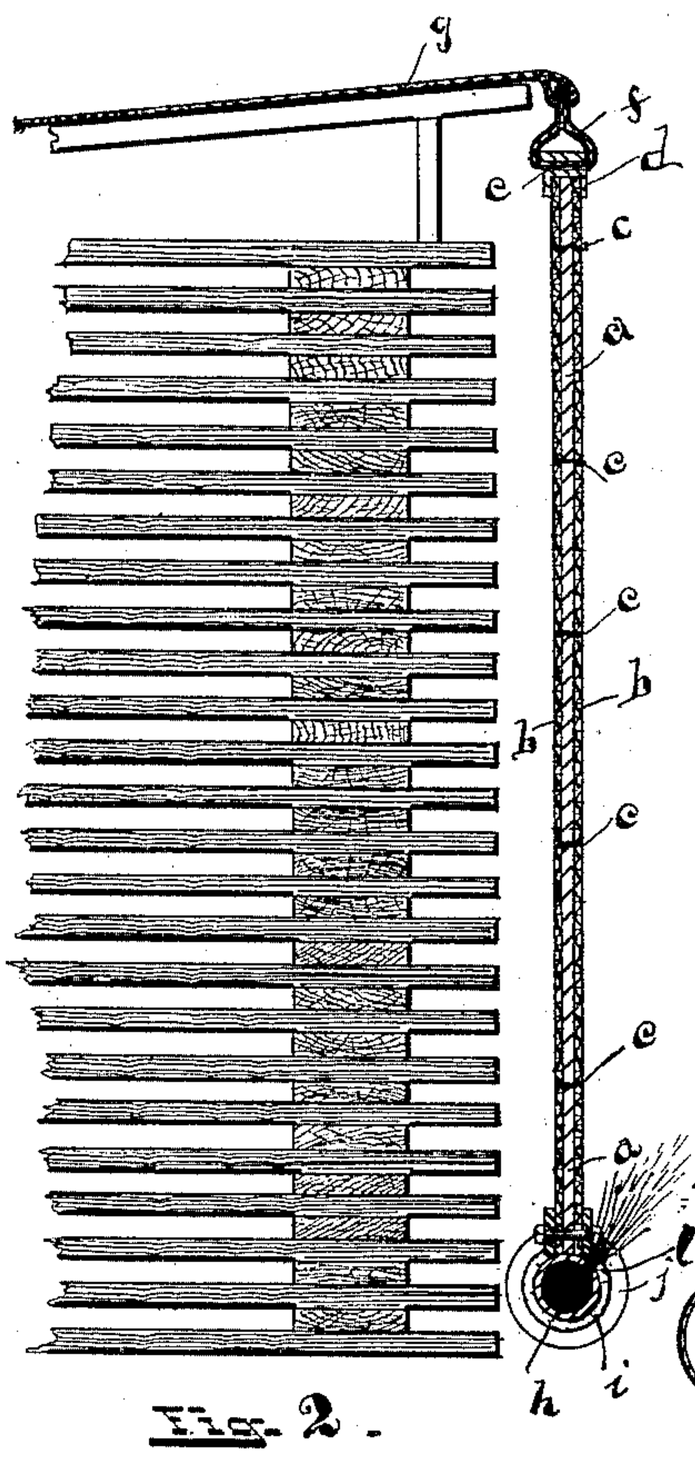

Fig. 2.

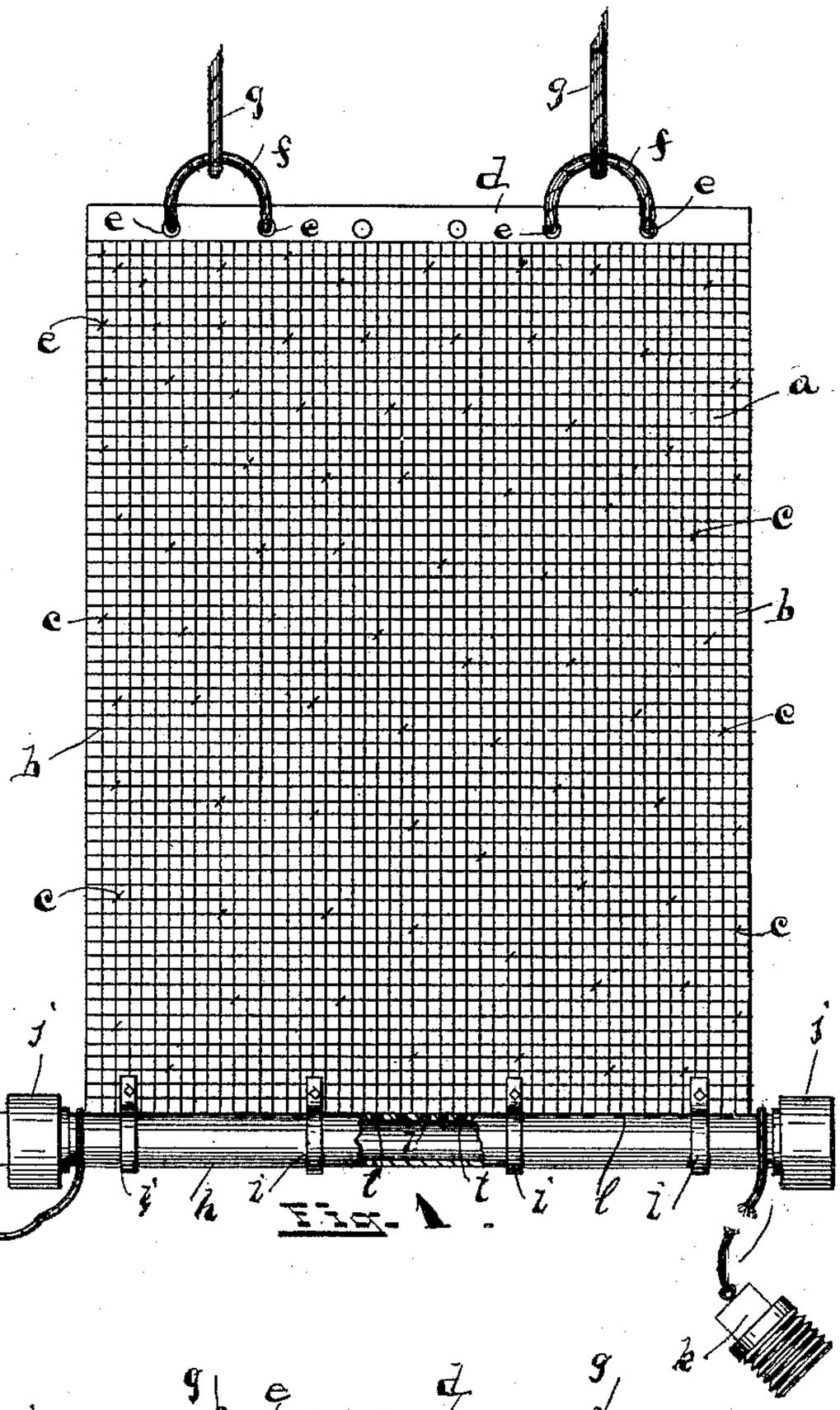

Fig. 1.

Fig. 4.

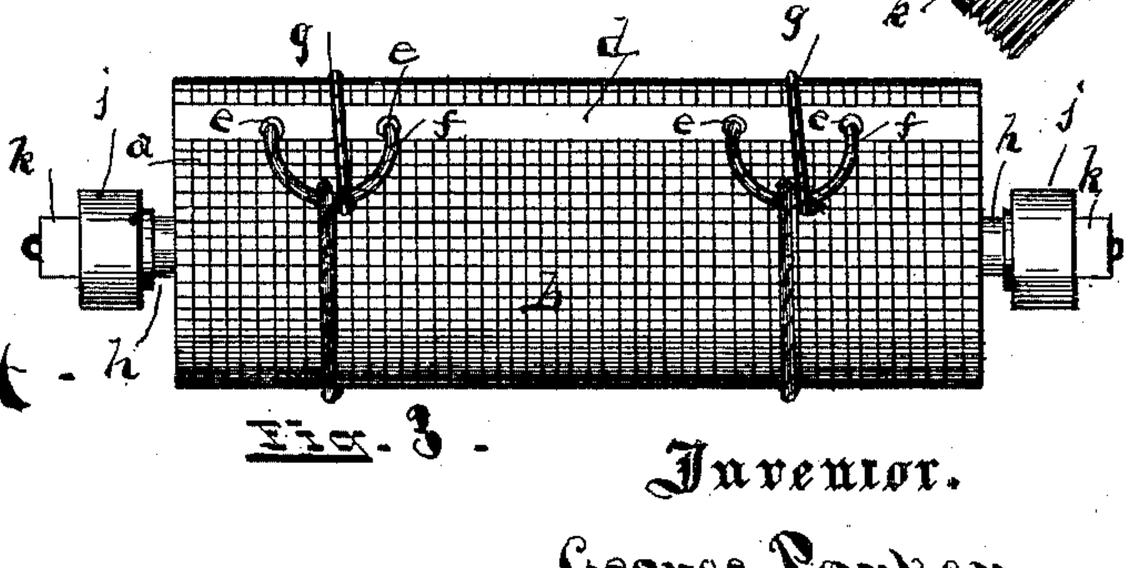

Fig. 3.

Attest.

G. F. Thomas

J. M. Mason.

Inventor.

George Parker.

By Jas E. Thomas

Atty.

UNITED STATES PATENT OFFICE.

GEORGE PARKER, OF BAY CITY, MICHIGAN.

FIRE-SHIELD.

SPECIFICATION forming part of Letters Patent No. 461,983, dated October 27, 1891.

Application filed November 28, 1890. Serial No. 372,769. (No model.)

To all whom it may concern:

Be it known that I, GEORGE PARKER, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Fire-Shields; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention pertains to devices for preventing the spreading of fires or conflagrations, and is more especially adapted for use in saving piles of lumber from taking fire from burning lumber or buildings adjacent, although it is also adapted to prevent the communication of fire from a burning building to those adjacent.

The invention consists in a sheet of fireproof or incombustible material provided on its side surfaces with a pliable metal covering secured to the sheet at intervals and having secured to its lower edge a metallic water-pipe provided on its upper side at intervals throughout its length with a series of holes or openings.

The invention also consists in the combination, arrangement, and construction of the parts, as I shall hereinafter fully explain, and specifically point out in the claims of this specification.

One of the objects of this invention is to provide a means of preventing the spreading of fire from a burning building or lumber-pile or other combustible matter to the adjoining property.

Another object of this invention is to provide a pliable fire-screen sheet for use in the protection of property adjacent to a large fire, which can be quickly and easily formed into a portable package adapted to be easily carried or transported to a fire and easily manipulated and put in place.

Another object is to provide a fire-screen to be interposed between a burning pile of lumber or a building and adjacent lumber or buildings with a means of being continually showered with water when exposed to a heat so great as to prevent the approach of hosemen.

I attain these objects by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a side view, in elevation and partly sectional, of my improved fire-screen extended for use. Fig. 2 is a vertical section of the same as applied to a pile of lumber. Fig. 3 is a side view of the screen rolled up for transportation. Fig. 4 is an end view of the same.

a represents a sheet of fire-proof or incombustible material, as asbestus or similar material, and *b* are sheets of wire-netting, of any convenient construction, spread over the side surfaces of the sheet *a* and secured thereto in any convenient manner, as herein shown, by a series of hooks or wires *c* passed through the sheet and around the wires of the netting on opposite sides of the sheet, the loops being placed at such intervals as to firmly hold the parts together. The upper edges of the sheet and netting are secured together in any convenient manner, one form of fastening being a strip *d*, of metal, bent over on each side of the screen and secured in place by eyelets *e*, through which are secured handles *f*, of wire-rope, with which to manipulate and secure the screen in position by ropes *g*. Upon the lower edge of the screen is secured a pipe *h*, of any convenient size, bands *i*, of metal, bent around the pipe and with their ends riveted to the screen on opposite sides thereof, being a preferable mode of attaching the pipe. The ends of the pipe are provided with suitable devices *j* for attaching a hose from a hydrant thereto, and each end is also provided with a suitable plug or stopper *k* for closing one end of the pipe when the hose is attached to the opposite end. At intervals along the upper side of the pipe and near one side of the screen is arranged a series of small openings *l*, through which water under pressure may spray upon the side of the screen.

The screen is usually handled when in the rolled form shown in Figs. 3 and 4 and is then easily stored or loaded into a vehicle for transportation to a fire. For use in saving piles of lumber the screen is lifted to the top of the pile and held by the loops *f*, while the

screen is allowed to unroll on the side of the pile adjacent to the fire, which brings the pipe *h* in a convenient position for the firemen to attach a hose to one end, from which they remove the plug, while others secure the screen in place by carrying ropes or lines *g* across the pile and securing them to the opposite side. The water is then ejected from the pipe through the openings *l* upon the outside surface of the screen, and no further attention need be given to the screen, as the incombustible sheet prevents all action of the heat from affecting the lumber-pile behind, and the spray of the water along the sheet prevents injury to the wire-netting by the intense heat, and the pipe thus arranged will continue to operate to spray the screen, even should the heat become so great as to preclude the near approach of the firemen.

It is well known that lumber is usually piled open, with cross-boards between the layers, so as to facilitate its seasoning and drying, and it is also well known that firemen experience great difficuly in extinguishing fires in burning lumber-piles on account of the heat and flames forming a draft through the spaces between the openly-piled lumber and also because usually the heat from a burning pile is so great as to preclude the use of water from a hose with efficiency within the limited spaces between the lumber-piles. By the use of my improved screen all contact of the fire to the lumber-pile is shut off, and the screen being close and without openings all draft to the fire is prevented. The radiation of heat from the burning pile is also shut off, and thus the adjoining pile may easily be kept thoroughly wet by the hosemen, so as to entirely prevent its ignition.

I prefer to use asbestus as a fire-proof material for the incombustible sheet, as this material has the capacity of resisting the action of the heat and is incombustible to a sufficient degree for the purpose. It also is a non-conductor of heat, so that it forms a sure protection against the radiation or conduction of heat through the screen to a sufficient intensity to ignite the object behind; but any other substance having a capability of resisting the action and passage of heat can be used instead of the asbestus, if desired. For use to save a building adjoining a fire the screen is used in a similar manner, being let down between the building and the fire, and several sheets may be used, if necessary to completely cover the side and roof adjacent.

Of course I do not confine the construction of my invention to the use of any particular form of wire-netting, as the principal object of the netting is to afford protection to the incombustible sheet against wearing and tearing and also permit the screen to be rolled up for storage or transportation. Neither do I confine my invention to any particular means for securing the parts together, as any well-known means may be used for securing the netting to the sheet or the pipe to the screen.

The screen is preferably of a suitable size to be easily handled and transported, and, if required, several screens of a suitable size may be used by letting the adjacent edges of the screens overlap each other.

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

1. A fire-screen composed of a sheet of asbestus or other incombustible material, having the area of its opposite sides covered with pliable wire-netting secured in position by a series of wire loops passed through the sheet and with their opposite ends looped around the wires of the netting on opposite sides of the sheet, provided on its upper edge with a strip of metal clasped on opposite sides of the screen, and provided with a series of eyelets and the wire-rope handles passed through the eyelets, substantially as and for the purpose set forth.

2. The combination, in a fire-screen, of a sheet of fire-proof material having the surfaces of its opposite sides covered with wire-netting secured in position by a series of wire loops passed through the sheet and with their ends caught over the wires of the netting and provided on its upper edge with handles, a pipe for water secured longitudinally to the lower edge of the screen and provided with a series of openings throughout its length on the side adjacent to the edge of the screen, and means for stopping either end of the pipe, substantially as set forth.

3. The combination, in a fire-screen, with a sheet of fire-proof material having its surfaces provided with a covering of pliable wire screen or netting secured to the sheet at intervals by wire loops, a water-pipe along one edge of the screen and provided throughout its length with a series of openings on the side adjacent to the screen, a series of bands or loops around the pipe and with their end portions projecting on each side of and attached to the screen, a plug for stopping either end of the pipe, and means, as a wire rope or chain, attached to the opposite edge of the screen, for securing the screen in a pendent position, substantially as set forth.

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

GEORGE PARKER.

Witnesses:

G. P. THOMAS,

JAS. E. THOMAS.