G. R. GRUPE.

ILLUMINATING BURNER FOR CHRISTMAS TREES.

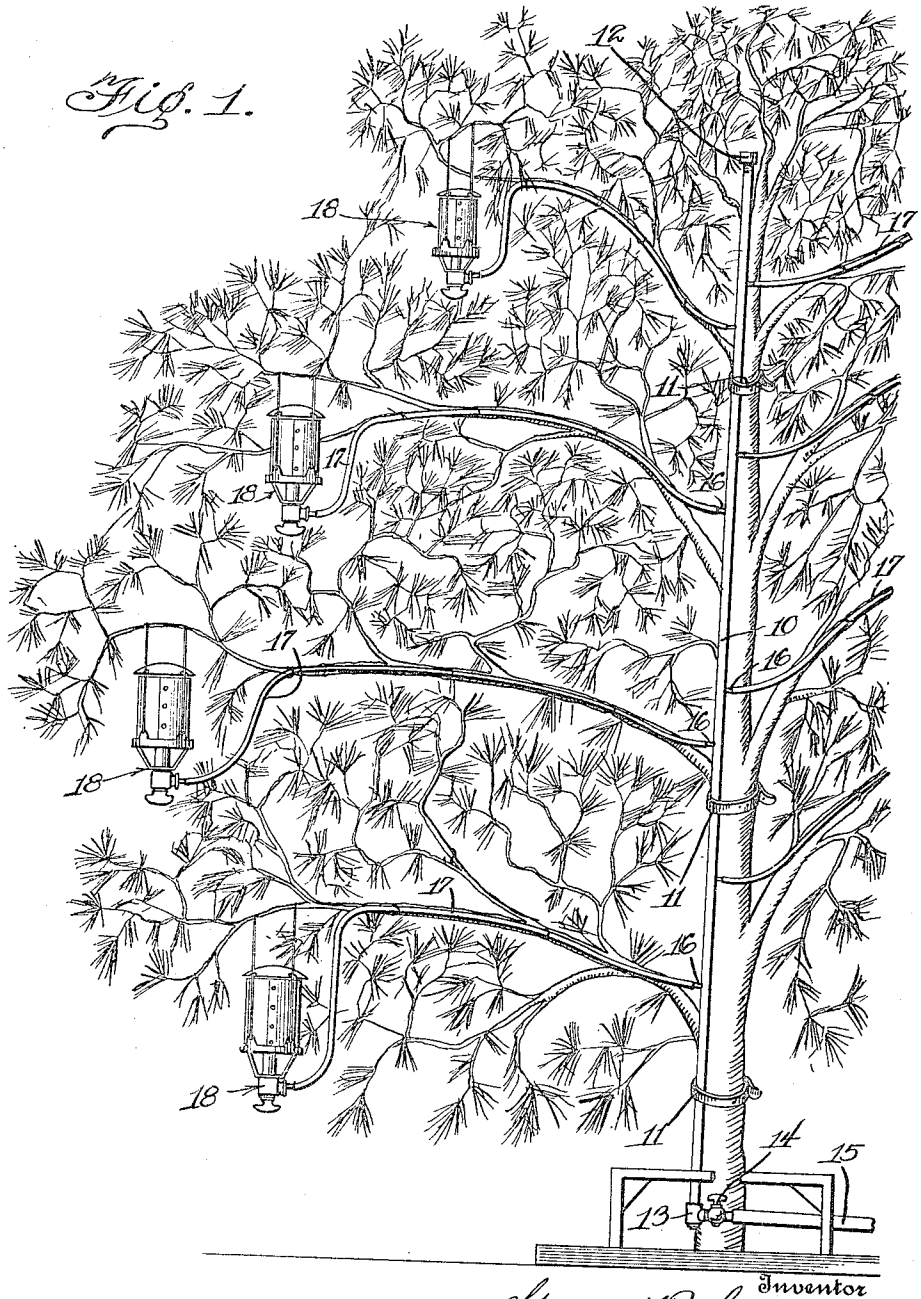
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1,225,241.

Patented May 8, 1917.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

W. B. Mulligan,

C. R. Newbold

Inventor

Grover R. Grupe

By Richard Owen.

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

G. R. GRUPE.

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2 SHEETS—SHEET 2.

Fig. 2.

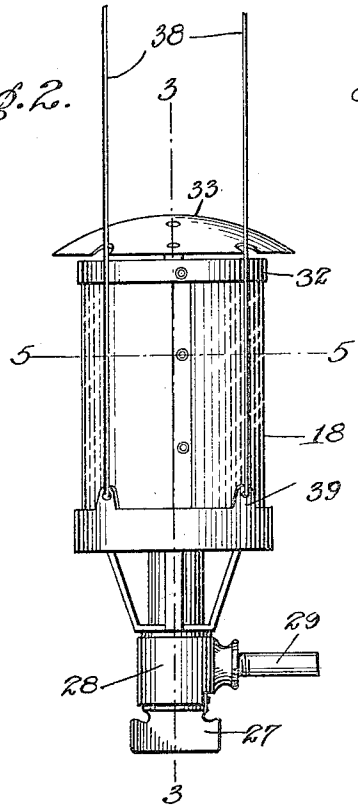


Fig. 3.

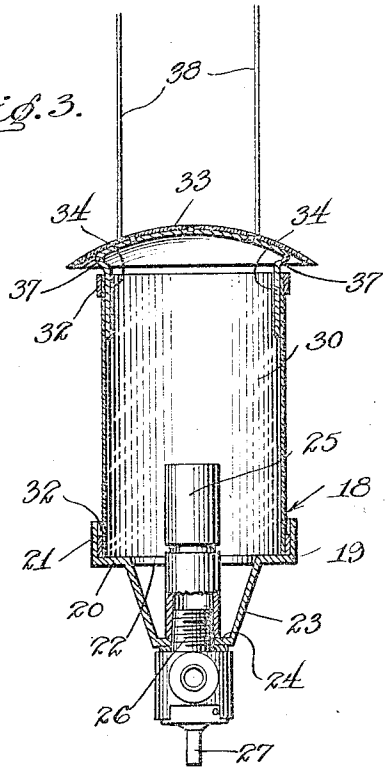


Fig. 4.

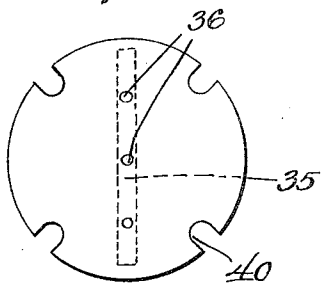
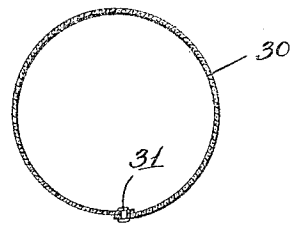


Fig. 5.



Witnesses

W. B. Mulligan

C. W. Newhold

Inventor

Grover R. Grupe

By Richard B. Owen.

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GROVER R. GRUPE, OF ELIZABETH, NEW JERSEY.

ILLUMINATING-BURNER FOR CHRISTMAS TREES.

1,225,241. Specification of Letters Patent. Patented May 8, 1917.

Application filed February 24, 1915. Serial No. 10,302.

To all whom it may concern:

Be it known that I, GROVER R. GRUPE, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Illuminating Burners for Christmas Trees, of which the following is a specification.

This invention relates to a system of illumination particularly adapted for use in connection with Christmas trees, and is more particularly concerned with the provision of a safe and practical system wherewith ordinary illuminating gas may be used so that the cheapness of this form of lighting will be at once combined with the safety of electricity.

As a principal object, it is proposed to provide a system of this type including a main gas pipe to be supported by the trunk of the tree, from which pipe separate feed tubes shall lead which in turn may be supported by the branches at the extremities of which are to be positioned separate burners.

Objects of equal importance but more specific in nature relate to the provision of a particular means of burner support and of guard means for preventing the gas flame from any contact with the adjacent tree portions, while at the same time interfering in no particular with the proper combustion of the gas or use of the illumination ordinarily afforded thereby.

The above and additional objects which will become apparent as this explanatory description proceeds, are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out in the claims which are appended hereto and form a part of this application.

With reference to the drawings, wherein there is illustrated the preferred embodiment of this invention as it is reduced to practice, and throughout the several views of which like characters of reference designate similar parts:

Figure 1 is an elevational view showing the system as a whole in position upon a tree.

Fig. 2 is an enlarged detail elevation of one of the separate burners and its casing,

Fig. 3 is a sectional view of the same matter taken upon the line 3—3 of Fig. 2,

Fig. 4 is a detached plan view of the cover for the combustion casing, and

Fig. 5 is a sectional view on the line 5—5 of Fig. 2.

In disclosing the means whereby the foregoing objects may be attained by this invention, reference will first be had to Fig. 1, in which the system as a whole is illustrated and in which the numeral 10 designates the main gas pipe of the system which is vertically supported by the trunk of the tree through the medium of any suitable and readily removable means such as the straps illustrated at 11. At its upper extremity the pipe 10 is closed by a cap 12, while connecting with its lowermost cap 13 is the turn-cock 14 whereby the amounts of gas fed to the pipe 10 made from the supply pipe 15 may readily be regulated. It will be obvious, of course, that should the tree be of such size as to conveniently permit of manual operation of the stop cock 14, this latter may be placed at the top of the distributing pipe rather than in the position shown, thus saving most of the length of the tube 15 leading from the ordinary gas fixture of the room. At intervals throughout the length of this main pipe are provided suitable apertures to threadingly receive the branch nipples 16 from which flexible tubes 17 lead along the limbs of the tree to which any satisfactory securing means may attach them to their point of connection with the burners designated as a whole by the numerals 18, the specific construction of which is more clearly set forth in the remaining figures of the drawings.

Each burner includes a suspension bracket 19 comprising an annular base portion 20 surrounded by the peripheral rim 21 and centrally apertured as indicated at 22. Integral supporting legs 23 are formed at spaced intervals along the periphery of this aperture and are bent downwardly at an angle and subsequently flanged to form the integral burner supporting plate 24. Upon this latter is positioned the burner proper 25 of any of the customary designs adapted to be used in conjunction with illuminating gas, such burner extending upwardly

through the entire bracket 19 and threadingly receiving as indicated at 26, the stem of the usual stop-cock or valve 27 mounted in its casing 28 in the ordinary manner, communicating with which latter is the nipple 29 adapted to receive the free extremity of the flexible branch tubes 17 connecting each burner to the main pipe 10.

As a means for safe-guarding the tree from the combustion flame of the ignited gas flowing from the burner tip 25 and further as a means in no way interfering with the illumination afforded by such flames, there is provided a mica cylinder 30, the ends of which are overlapped and secured by some cheap yet desirable means such as the rivets 31 of Fig. 5 and the top and bottom of which is suitably bound by light straps 32, preferably metallic in nature. The diameter of this mica casing is such that the same together with the bottom binding strip 32 may readily be accommodated within the rim 31 of the suspension bracket while such casing is of a sufficient height to obviate the liability of any flames reaching out therethrough to come in contact with adjacent tree portions. A further precaution to the same general effect is furnished by the cover 33 which is partially spherical and of sufficient diameter to extend laterally beyond and to completely cover the upper open mouth of the mica casing upon which it is maintained by the slightly resilient clips or fingers 34 formed upon the extremities of a single strip 35 which is riveted interiorly of the cover as indicated at 36, such fingers entering into the casing and being yieldably maintained therein by the resiliency afforded by the bight portions 37 joining each finger with the main strip 35. It should also be noted that these bight portions prevent the positioning of the cover 33 either through ignorance or accident so tight over the mouth of the casing 30 as to prevent the passage of air since they are formed to contact with the upper binding strip 32 in limiting downward movement of the cover. As a means for suspending the burner as a whole there is provided a plurality of wires 38 connected at their lower extremities in ears 39 formed upon the rim 21 of the suspension bracket which thus supports the entire device, such wires passing through suitable slots 40 formed inwardly from the edge of the cover 33 so that the burner as a whole will be maintained from any sidewise tip or displacement which might result in the ignition of the tree itself. These wires 38 may be as long as desired to suspend the bracket and the burner at any distance below the branch which may be termed safest.

It is to be observed that in the construction above outlined, the simplest possible system has been disclosed while the burners themselves may be very cheaply manufactured since the formation of the mica cylinders has been so simply designed, the cover 33 presents no costly attachment, the burner 25 and its adjuncts are of the character which may be purchased in open market and the suspension bracket 19 may be very readily pressed out from a durable metal at a single operation while no previous skill and practically a negligible amount of time is necessary for the assemblage of a complete burner. The installation of the entire system is also one which may be attained by any person having the most rudimentary knowledge of mechanics and it will accordingly be apparent from this, taken together with the previously described operation of the system of this invention which needs no further discussion, that the objects previously presented may be readily attained by means such as shown and described.

While in the foregoing however, there has thus been illustrated in the drawings, and described in the specification such combination and arrangement of elements as constitute the preferred embodiment of this invention, it is desired to emphasize the fact that such minor changes in the matters of proportion and degree may be made in later adaptations of this device as shall not alter the spirit of the invention as defined in the appended claims.

What is claimed is:—

1. Means for illuminating a Christmas tree comprising a gas burner having a nipple for the attachment of a flexible gas pipe and a stop cock for cutting off the flow of gas, a circular bracket having a peripheral rim supported by said burner, suspending wires connected to the bracket for supporting the same and the burner from the branch of the tree, a chimney seated in said bracket and projecting above the burner, a cap for said chimney extending laterally beyond the periphery thereof, and fingers attached to said cap and extending into the chimney for supporting the cap in position.

2. Lighting means for Christmas trees comprising a gas burner including a burner tip, a stop cock screwed to said tip, and a nipple projecting from one end of said stop cock for the attachment of a flexible gas pipe, a circular bracket having a peripheral rim secured to said gas burner between the burner tip and the stop cock and having a central opening therein for the passage of the burner tip, suspending wires connected to the bracket and extending upwardly for attachment to the limb of a tree, a chimney seated in said bracket and projecting above the burner tip, a cap for the chimney extending laterally beyond the periphery thereof, and flexible fingers secured to said

cap and extending downwardly into the chimney for supporting the cap by flexible contact with the inner sides thereof, said fingers having outwardly curved portions that extend beyond the chimney and serve as stops to prevent the closure by the cap of the top of the chimney.

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

GROVER R. GRUPE.

Witnesses:
CHAS. O. LIEB,
GEO. C. WENKE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."