(No Model.) 2 Sheets—Sheet 1.

C. DEAVS.

COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

No. 318,547. Patented May 26, 1885.

FIG. 2.

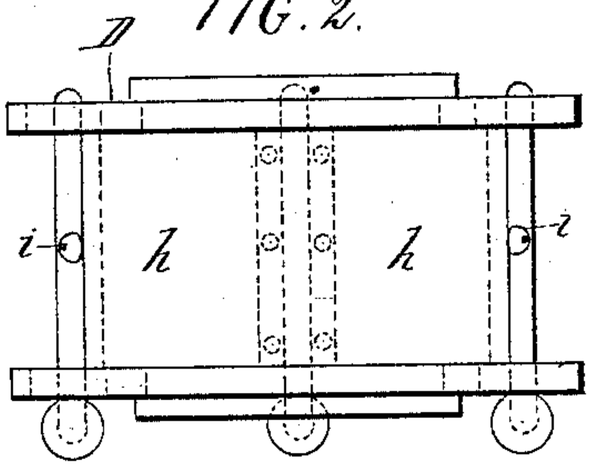


FIG. 1.

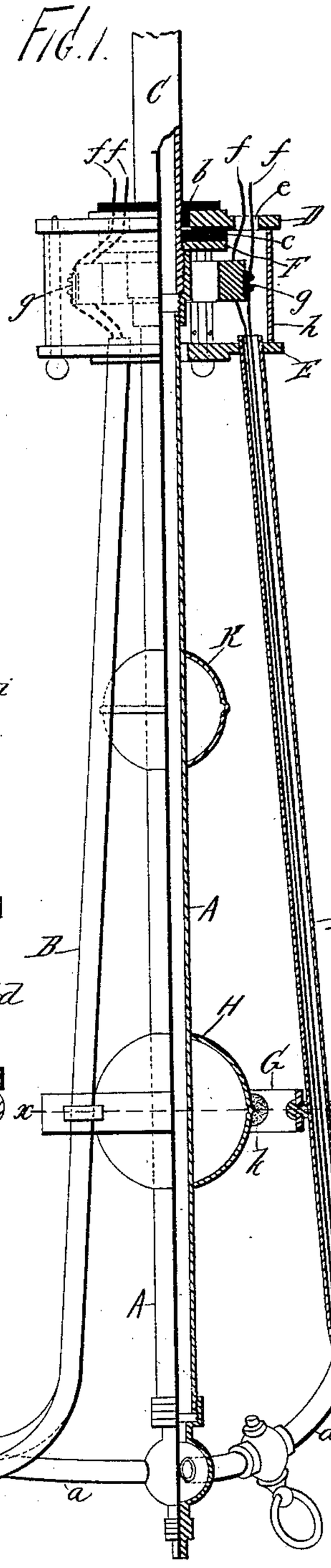


FIG. 3.

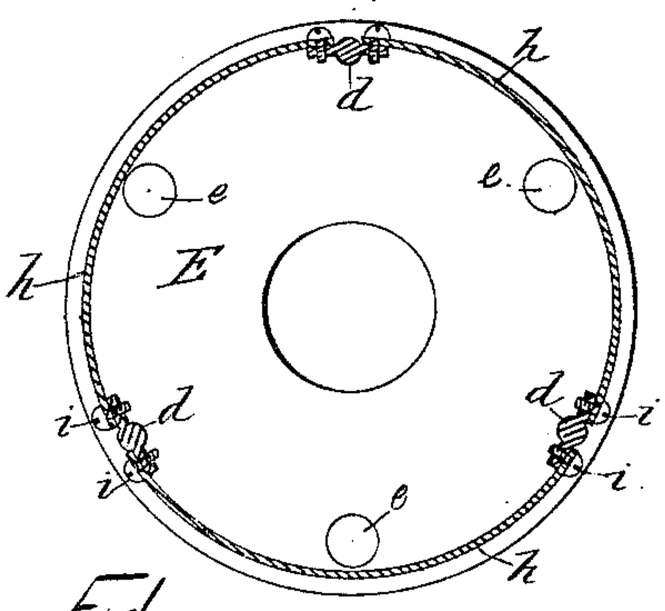


FIG. 4.

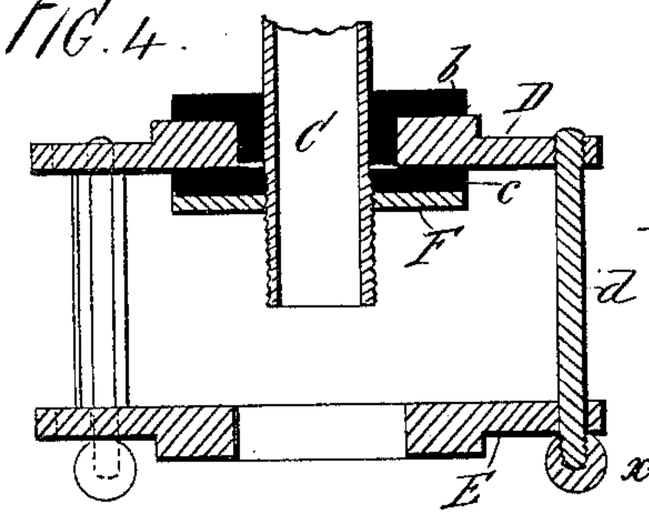
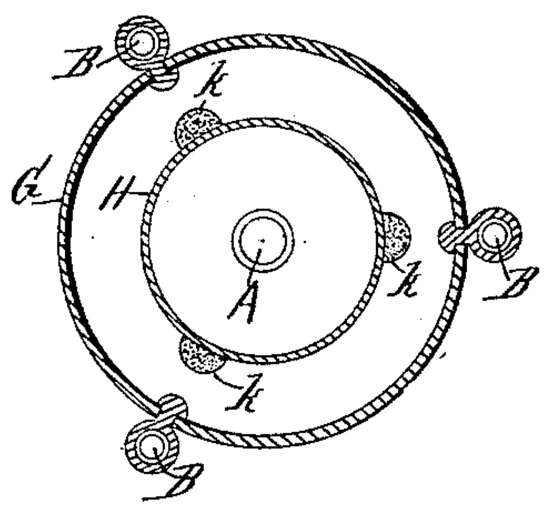


FIG. 5.



Witnesses:
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(No Model.) 2 Sheets—Sheet 2.

C. DEAVS.

COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

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FIG. 6.

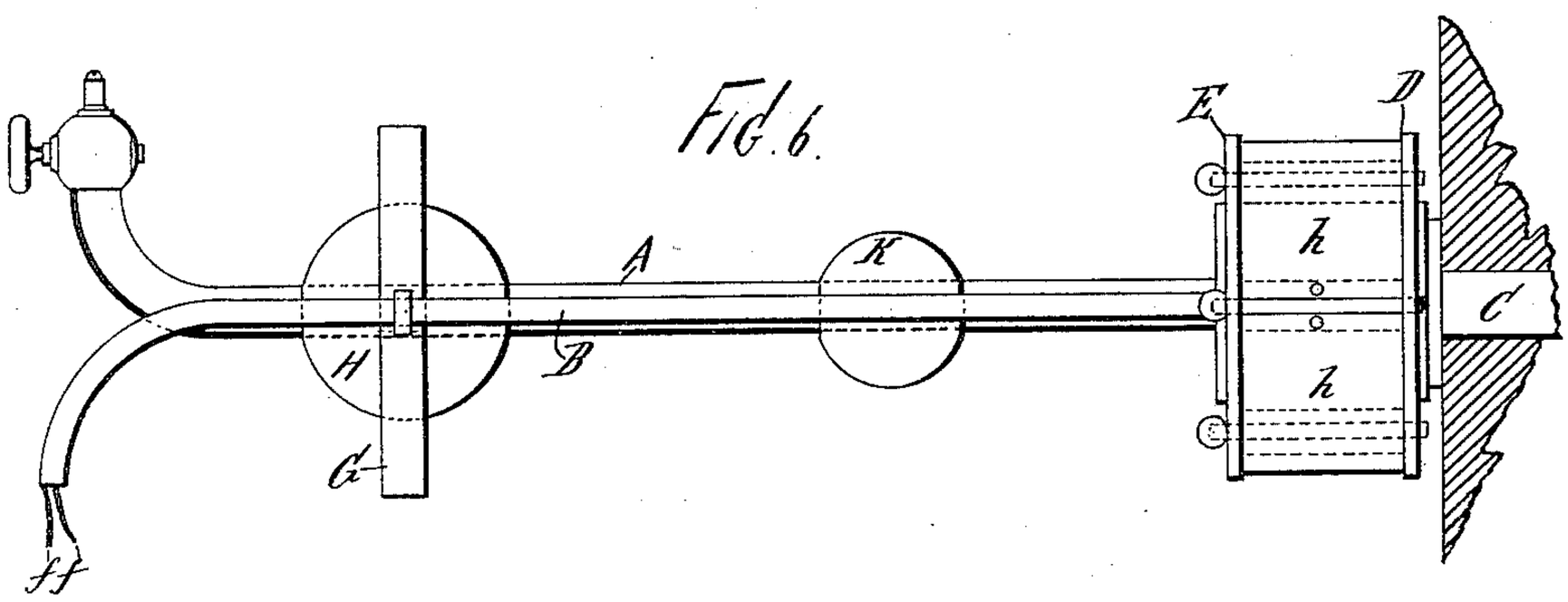


FIG. 7.

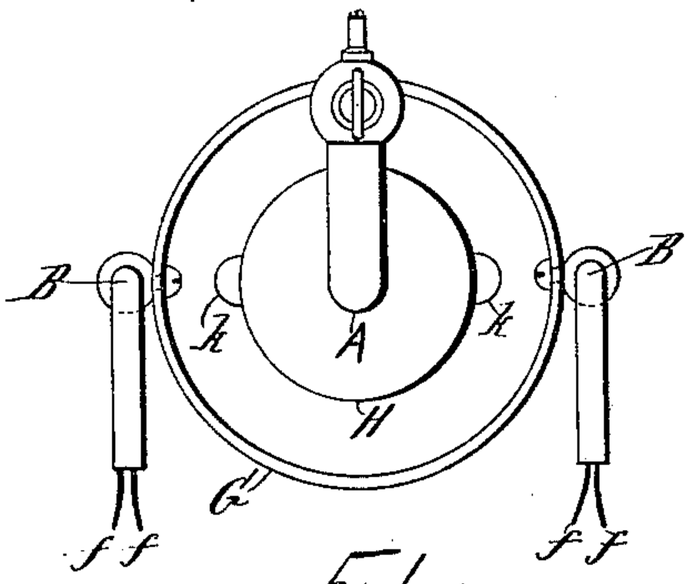
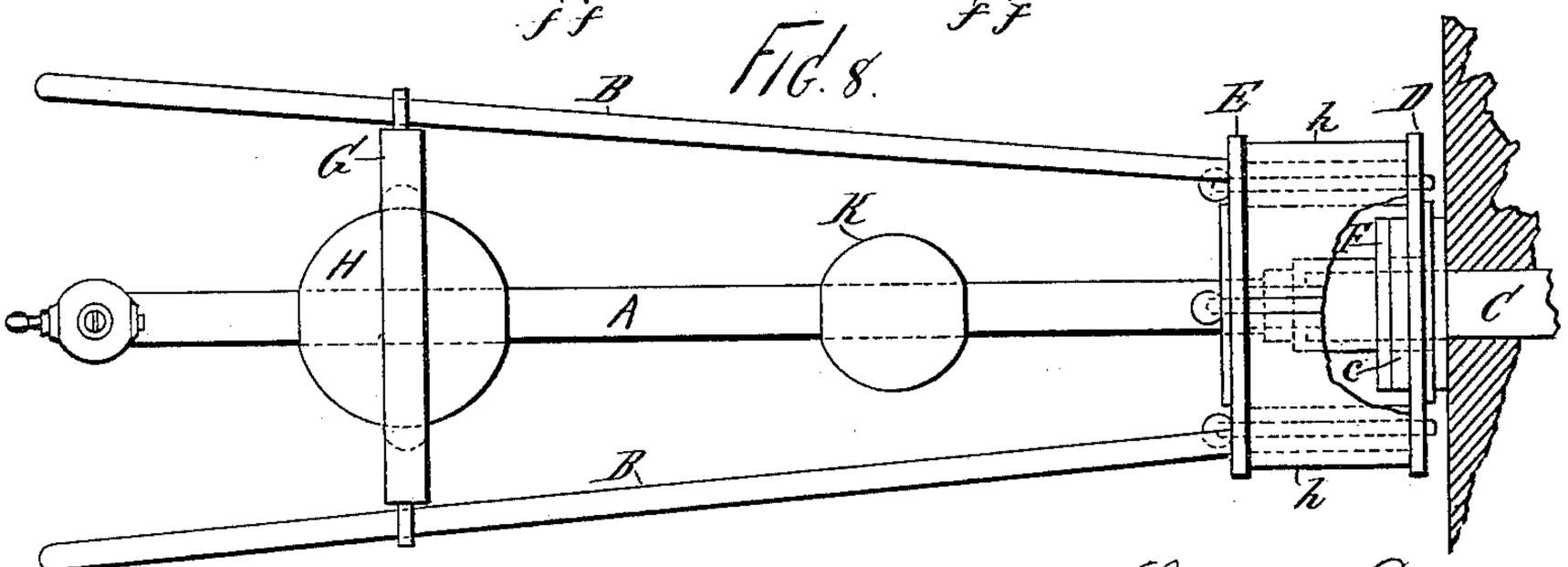


FIG. 8.



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UNITED STATES PATENT OFFICE.

CHARLES DEAVS, OF NEW YORK, N. Y., ASSIGNOR TO THE ARCHER & PANCOAST MANUFACTURING COMPANY, OF SAME PLACE.

COMBINED GAS AND ELECTRIC LIGHT FIXTURE.

SPECIFICATION forming part of Letters Patent No. 318,547, dated May 26, 1885.

Application filed December 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DEAVS, of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Combined Gas and Electric Light Fixtures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention has relation to that class of illuminating devices wherein both gas and electricity are employed for the purpose of producing the light.

The object of my invention is to produce an efficient combined gas and electric light fixture, carrying gas-burners and incandescent electric lamps, in which fixture either the gas or the electricity may be separately employed, or wherein both may be employed at the same time whenever desired, the two parts of the fixture being completely insulated (electrically) one from the other, and together forming a neat, substantial, and convenient illuminating device, whereof the parts are readily accessible, and the manufacture and mounting for use are simple, easy, and inexpensive.

My improvements involve certain novel and useful peculiarities of construction, relative arrangements or combinations of parts, and principles of operation, all of which will be herein first fully explained, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical view of a chandelier constructed and arranged for operation in accordance with my invention, the same being partly in elevation and partly in section. Fig. 2 is an elevation (enlarged beyond Fig. 1) of the upper box or chamber wherein the electric "cut-outs" are located, and Fig. 3 is a horizontal section of the same. Fig. 4 is a central vertical section showing the construction and arrangement of the insulating-coupling for uniting the fixture with the house or service pipe. Fig. 5 is a horizontal section through line *x x* of Fig. 1, showing the means employed for preventing accidental electric contact of the lower portions of the fixture. Fig. 6 is a side elevation, Fig. 7 an end elevation, and Fig. 8 a partial plan and horizontal section, showing the improved fixture arranged and adapted for use as a side or wall bracket (instead of in the form of a chandelier, as in Fig. 1) and involving my improvements.

In all these figures like letters of reference, wherever they occur, indicate corresponding parts.

The fixture is composed of two main or principal parts—viz., a gas-conducting pipe, A, which supplies gas to the projecting arms *a*, whereon the gas-burners are located, and the tubes B, for containing the electric conductors and supporting the incandescent electric lamps. These two parts of the fixture or apparatus are united so as to form one structure—as a chandelier or side bracket—and, as will be readily understood, they may be of various shapes, and the tubes B and arms *a* of various numbers, so as to afford any desired number of lights either of gas or electricity.

The two parts of the fixture are united in one structure when assembled for use together, and they may be readily detached one from the other, or both used at one time, or both united, and one used independently of the other.

The fixture is intended to be supported or sustained by the house or service pipe represented at C. This projects a trifle beyond the ceiling or wall, and is threaded at its outer extremity. Upon the projecting end I place the insulator, (represented at *b c*,) the same being preferably made of the substance known to the trade as "insulating fiber."

The box or chamber within which the cut-outs are located is composed of two plates, D and E, the same being united by ribs, as *d d*, between which there is ample space for affording access to the interior of the box or chamber. The tubes B are threaded into the plate E, or otherwise secured thereto. The plate D is centrally perforated to fit over the service-pipe and over the insulator thereon, and is also perforated, as at *e*, at suitable intervals for the passage of the electric conductors *f f*.

The plates D and E and tubes B being assembled, they are secured upon the service-pipe by means of a metallic nut, F, which operates to sustain them in proper place, and also operates to hold the fixture from acci-

dental displacement in case the insulator should become damaged or softened, as it might do if exposed to moisture or other deteriorating influences. After the above-named parts are in place, the gas-tube A is secured upon the service-pipe by a threaded joint, as shown, or by any of the known means of coupling pipes, the plate E being perforated to admit the passage of pipe A, the perforation being amply large so that no vibration will bring plate E in contact with pipe A. Gas enters tube A from E, and is distributed to the burner-pipes *a* without entering the box at the upper or inner extremity of the fixture. The insulated conducting-wires enter the box from the house side of the fixture, and are passed down into the tubes B, wherein they are protected and concealed, and are then connected with the incandescent lamps in any of the known ways. The space between the two plates D and E affords a convenient receptacle or locality for the cut-outs which are employed to prevent damage to the apparatus or surrounding objects in case of accidents to any of the lamps or conducting-wires. These cut-outs are conventionally illustrated at *g g*, and may be of any of the known forms. The plates *h h* form the walls of the box of the chamber, and they are removably attached to the studs or ribs *d*, which join the two plates, as by the removable screws *i i*. These plates may be easily detached at any time, and access to the interior afforded for replacement, readjustment, or repairs. The two portions of the fixture are completely and effectually insulated one from the other. A ring or band, G, unites the tubes B and prevents them from being disarranged. The central tube, A, or tubes B, by reason of their length, might be vibrated to a considerable extent, and to prevent them from coming in contact with each other, and thus by any accident grounding the electric current through the gas-piping, I surround the tube A with an ornament or other object, as the ball H, and supply this with insulating-knobs, as *k*, or an equivalent insulating-ring, which, in case of the vibration of either part, will come in contact with the ring G and prevent any passage of the electric current. Of course the same result would be attained by locating the knobs or ring upon the interior of G.

At K is a second ornament, indicating that the fixture may be ornamented at various points, if desired. Of course any number of burners or lamps may be employed, and they may be arranged at various points upon the fixture, it being in no way important that they should all be connected with the lowermost or outermost portions of the main tubes. The side or wall fixture operates upon the same principles and is constructed in substantially the same manner as the ceiling fixture or chandelier, as represented in Figs. 6, 7, 8. In this form the ring G and ornaments H and K might be omitted, as the parts are usually quite rigid and not liable to vibrations.

It has not been deemed necessary to show the lamps, which may be of any pattern, as may also the burners.

The parts are all simple of construction and easy to assemble when required, and the whole structure well adapted to answer the purpose or object of the invention, as previously set forth.

Having now fully described my invention, what I claim as new herein, and desire to secure by Letters Patent, is—

1. In a combined gas and electric light fixture, the herein-described box or chamber having removable walls and containing the cut-outs, said box being mounted upon and supported by the gas-service pipe insulated therefrom, and supporting the tubes containing the electric conductors, substantially as shown and described.

2. The combination, with the gas-service pipe, of the box or chamber mounted thereon and insulated therefrom, said box being arranged to sustain the tubes for the electric conductors, and being composed of the two main perforated plates, united as explained, and the movable walls, substantially as and for the purposes set forth.

3. In an apparatus of the character herein set forth, the combination, with the gas-service pipe, of the insulating-disks serving to insulate the box and its attachments, the box containing the cut-outs and having the removable walls, the sustaining metallic nut applied upon the end of the service-pipe, and the tubes supported by said box, substantially in the manner and for the purposes set forth.

4. In an apparatus of the character herein set forth, the tubes for containing the electric conductors, a ring for connecting the same, the central gas-supply tube, and the interposed non-conductors arranged to prevent electric contact of the vibrating parts of the structure, substantially as shown, and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

CHARLES DEAVS.

Witnesses:
JOHN BUCKLER,
WORTH OSGOOD.