

No. 681,273.

Patented Aug. 27, 1901.

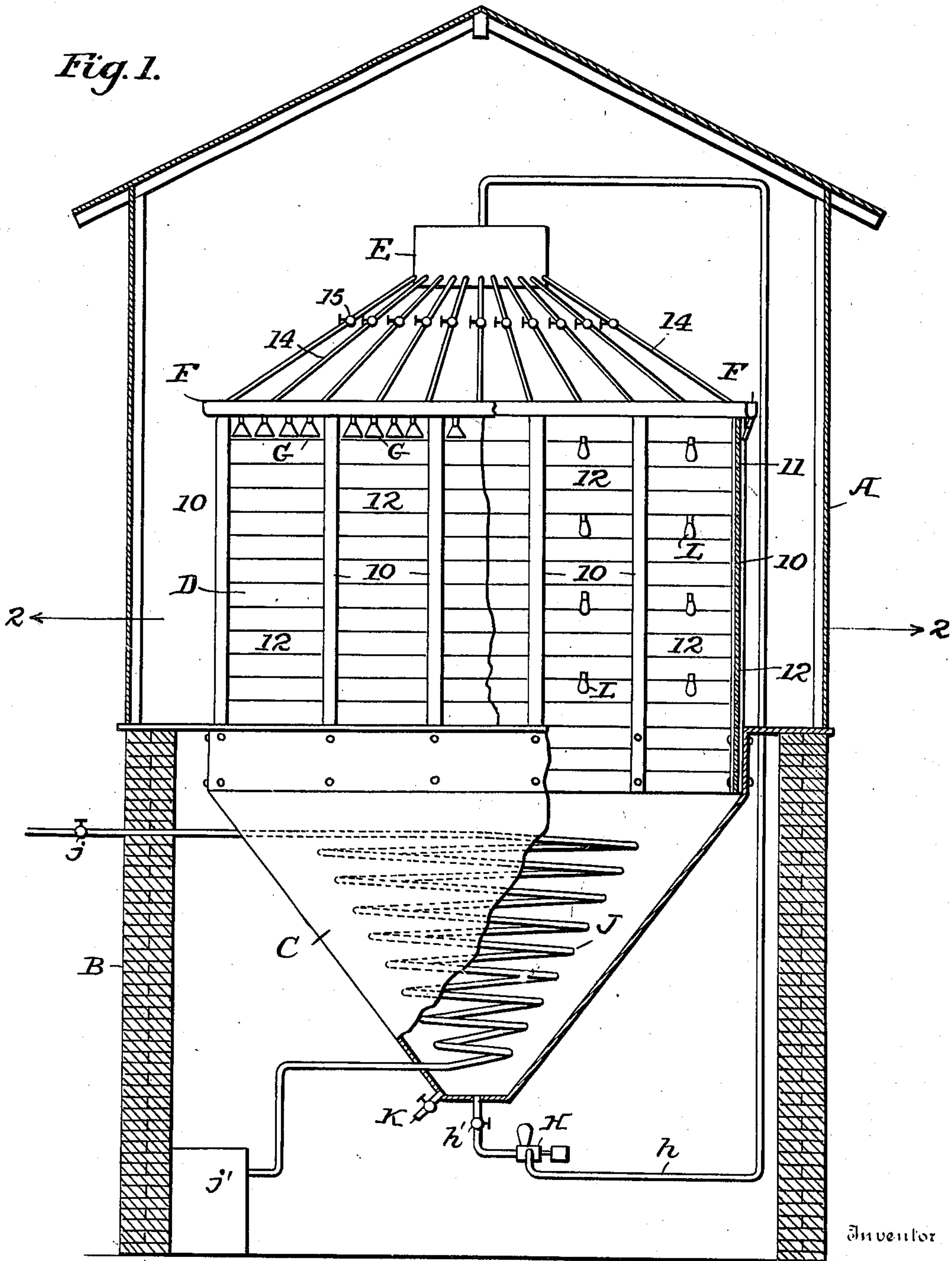
J. C. W. STANLEY.
PROCESS OF BLEACHING OILS.

(Application filed July 28, 1900.)

(No Model.)

2 Sheets--Sheet 1.

Fig. 1.



Witnesses
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Fig. 2.

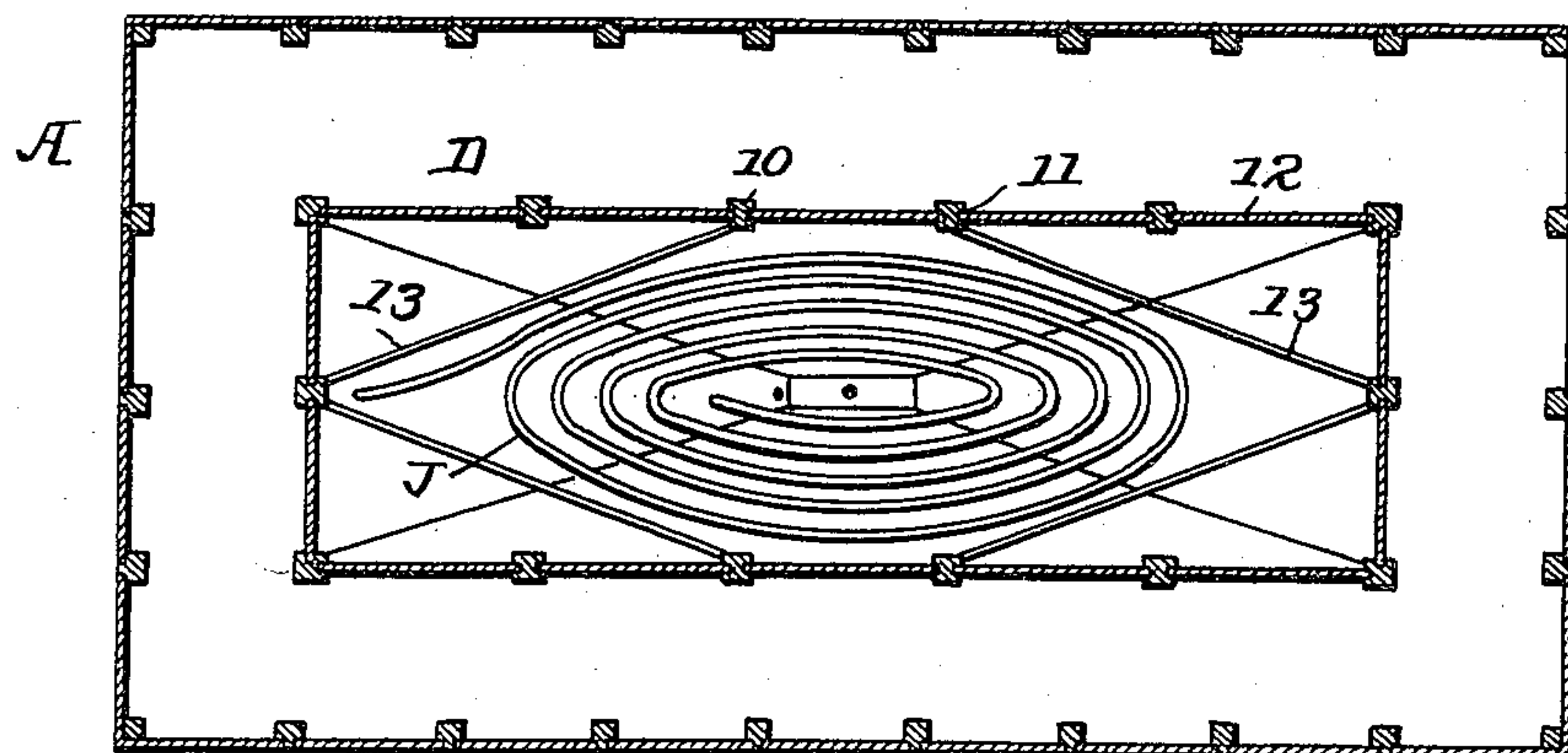
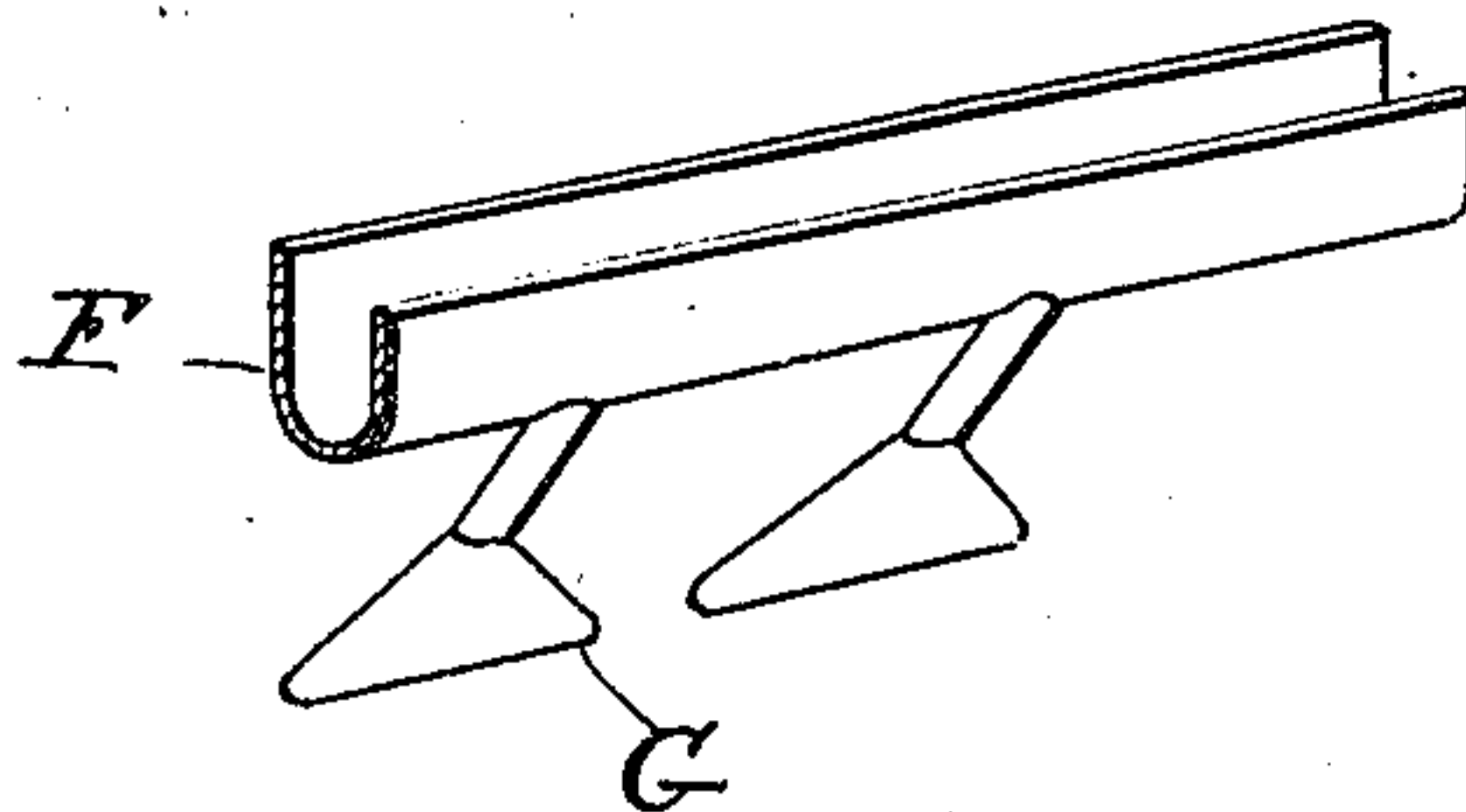


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN C. W. STANLEY, OF LONDON, ENGLAND, ASSIGNOR TO THE COTTON SEED OIL SYNDICATE, LIMITED, OF SAME PLACE.

PROCESS OF BLEACHING OILS.

SPECIFICATION forming part of Letters Patent No. 681,273, dated August 27, 1901.

Application filed July 28, 1900. Serial No. 25,175. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN CHARLES WILLIAM STANLEY, a subject of the Queen of England, and residing at London, England, have invented a certain new and useful Process of Bleaching Oils and Fats, of which the following is a specification.

This invention relates to a process for bleaching oils and fats.

In carrying out the invention I provide an apparatus by which the oil or fat is continuously circulated in a thin film over transparent surfaces, and thereby subjected to the action of the light until the bleaching is accomplished. The process of bleaching by such apparatus can be carried on continuously day and night, it being intended to utilize artificial light whenever necessary, either alone or as an aid to natural light.

The invention will be fully described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section and partly broken away, of an apparatus constructed in accordance with my invention. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1, and Fig. 3 is a detached view of a fantail distributor.

The bleaching apparatus will preferably be entirely inclosed in a glass house, (indicated by A,) and this house may be built in any desired manner and consist of metal or wood framework to support the glass, the idea being that there shall be free access of light to all parts of the bleaching apparatus.

Upon a suitable frame B a tank C is supported, such tank being conical or tapering, with its smaller end downward and closed at its lower end. Above the tank C the bleaching-chamber D is supported. As shown, it consists of a series of vertical posts 10, which are provided with longitudinal grooves 11, into which the panes of glass 12 are fitted. The posts are bolted to the inner side of the tank and are tied together with a series of braces 13. As shown, the chamber D is rectangular; but it may be of any other preferred shape. Above the bleaching-chamber a tank E is supported, such tank being of less dimensions than the bleaching-chamber. A trough F is supported around the upper edge

of the bleaching-chamber, and to this trough a series of pipes 14 lead from the tank E, each pipe being provided with a cock 15. This is for the purpose of insuring a regulated and uniform feed of the oil or fat to all parts of the trough F. A series of fantail distributors G are connected to the trough F and are bent to bring their discharge-orifices against the glass walls of the bleaching-chamber, and the oil or fat will thus be discharged in thin films against the upper portions of the glass walls and will flow down the surface of the glass and be collected in the tank C. The lower end of the bleaching-chamber extends within the upper end of the tank C, with a narrow space between them.

H represents a circulating-pump having a valved connection h' with the lower end of the tank C and a pipe connection h with the tank E. The oil or fat may thus be continuously pumped or circulated from the tank C to the tank E and caused to flow in a thin film over the glass walls until the bleaching is effected.

J represents a coil of pipe within the tank C, and through this coil a heating medium, such as steam, may be circulated in order to keep the oil or fat in a fluid condition for free circulation. The temperature will vary according to the nature of the oil or fat being treated and must be such as to maintain it in condition to flow freely. Sometimes also when oil is being bleached it may be necessary, in order to cool the oil, to circulate cold water through the coil. This coil may be also used for the circulation of a refrigerating fluid for the purpose of separating the stearin and other products. The inlet end of the coil will have a cock j , and its discharge end may lead to a vessel j' . A series of valved pipes K are fitted to the tank C, through which its contents may be drawn off.

Within the bleaching-chamber D a series of illuminating-lamps L are supported for the purpose of supplying the necessary artificial light. In practice I have found that in a bleaching-chamber the sides of which have a superficial area of about four hundred square feet three arc-lights of about fifteen-hundred-candle power each or a number of incandescent lights of a total equivalent candle-power

will bleach the oil or fat caused to flow in films over the walls of such chamber in from five to eight hours. The length of time will vary according to the nature of the oil or fat being treated.

From the foregoing description it will be evident that the tank C may be filled with oil or fat and that such oil or fat may be constantly circulated and caused to flow in thin films over the glass sides of the bleaching-chamber until the desired degree of bleaching has been attained; also, that the operation may be continuous day and night, natural light, supplemented by artificial light, if necessary, being utilized during the day and artificial light during the night. It may be added that the oil or fat may flow over either the inner or the outer surface of the glass sides of the bleaching-chamber.

With an apparatus embodying the principles of that described I can by my process

successfully bleach all vegetable, animal, and fish oils or greases and also waxes.

Without limiting myself to the precise details of construction shown, I claim—

1. The within-described improvement in bleaching oils consisting in causing the same to repeatedly traverse in thin films under the action of artificial light, substantially as described.

2. The within-described improvement in bleaching oils consisting in causing the same at an artificial temperature to repeatedly traverse in thin films under the action of artificial light, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN C. W. STANLEY.

Witnesses:

J. J. MCCARTHY,

W. CLARENCE DUVALL.