

L. VON TRESKOW.
CONTINUOUS DECANTER.
APPLICATION FILED SEPT. 7, 1910.

990,022.

Patented Apr. 18, 1911.

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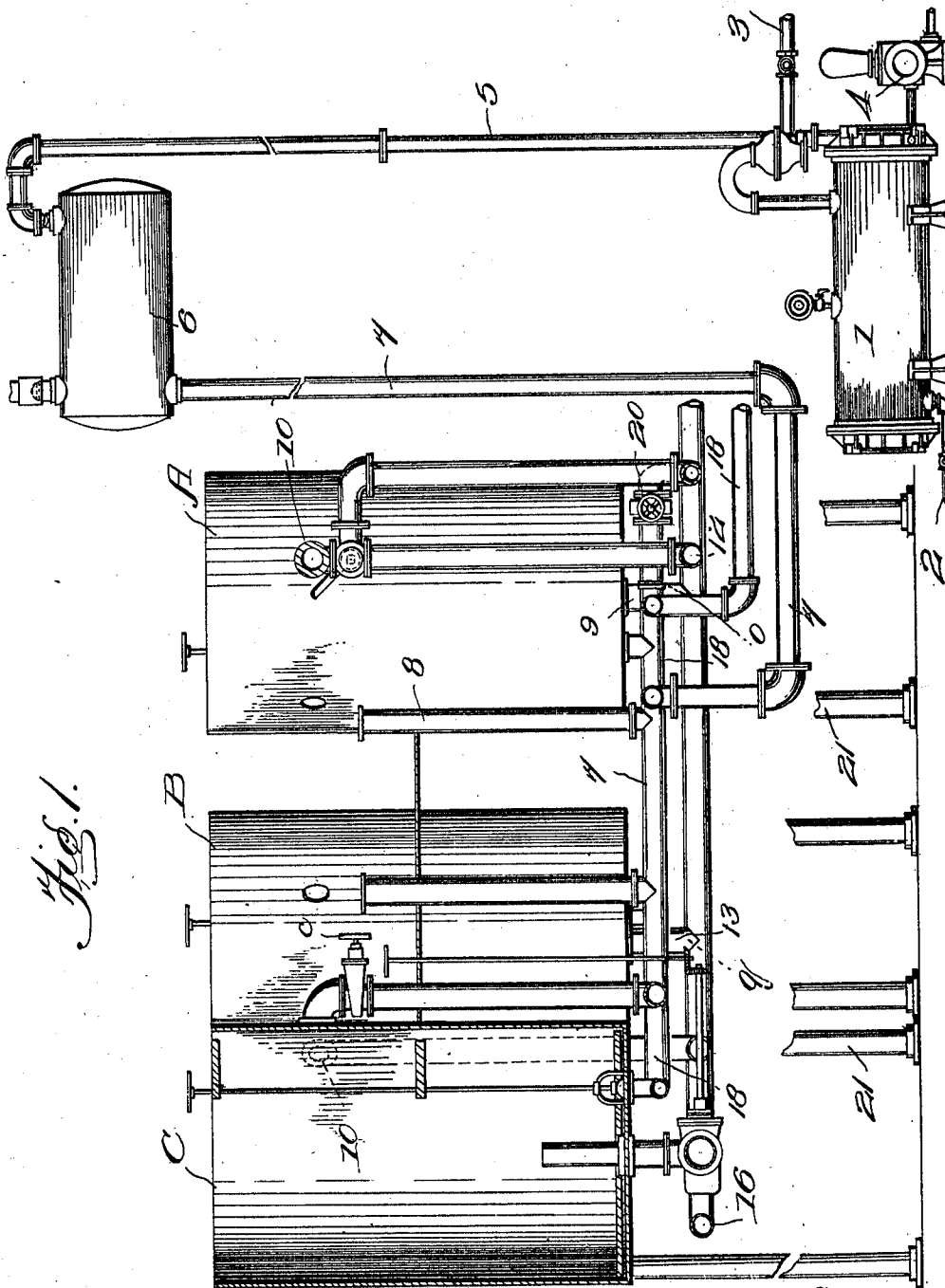


Fig. 1.

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Attorneys.

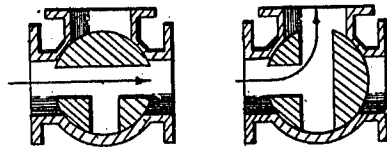
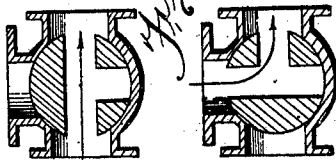
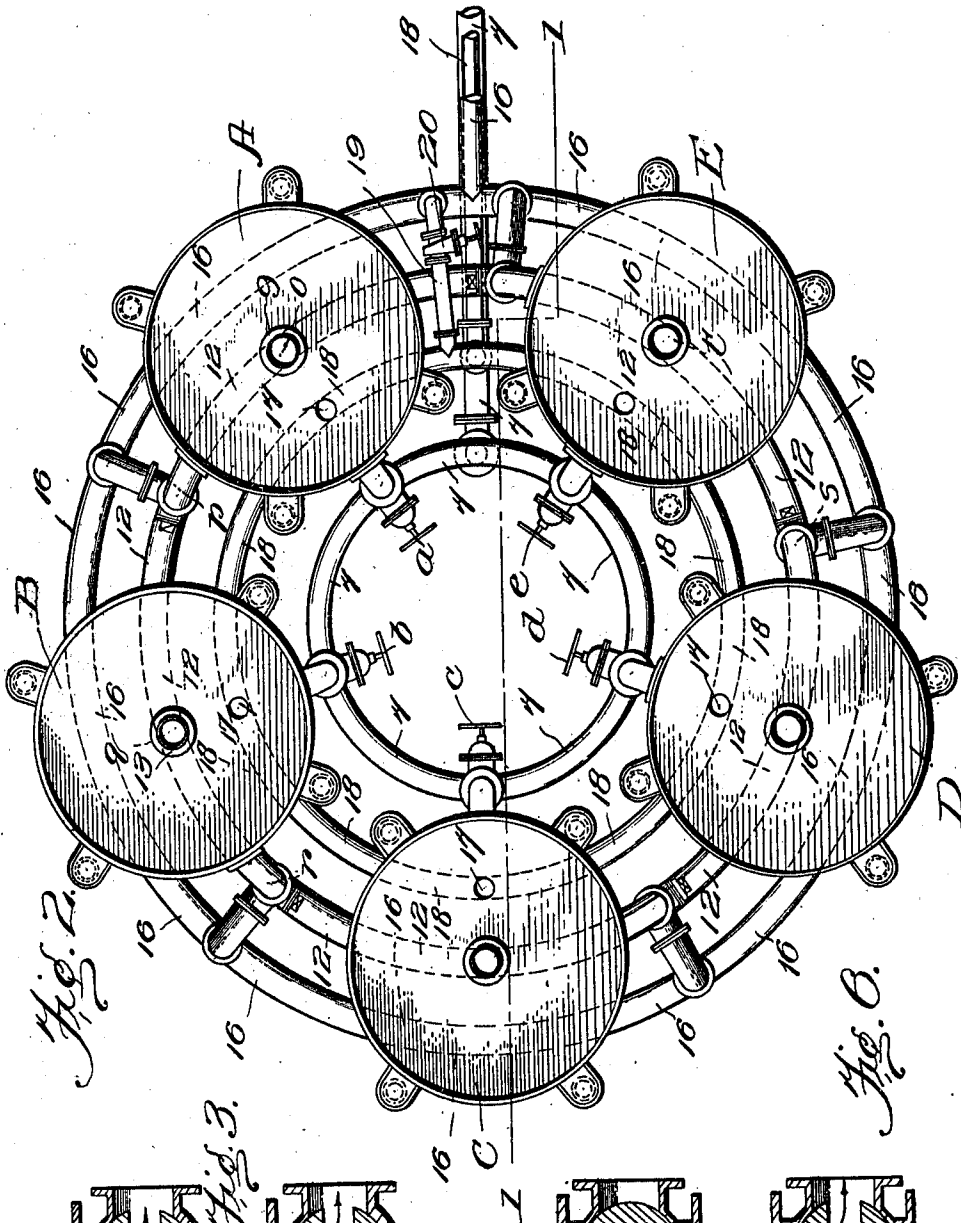
Inventor

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3 SHEETS-SHEET 2.

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Fig. 4.

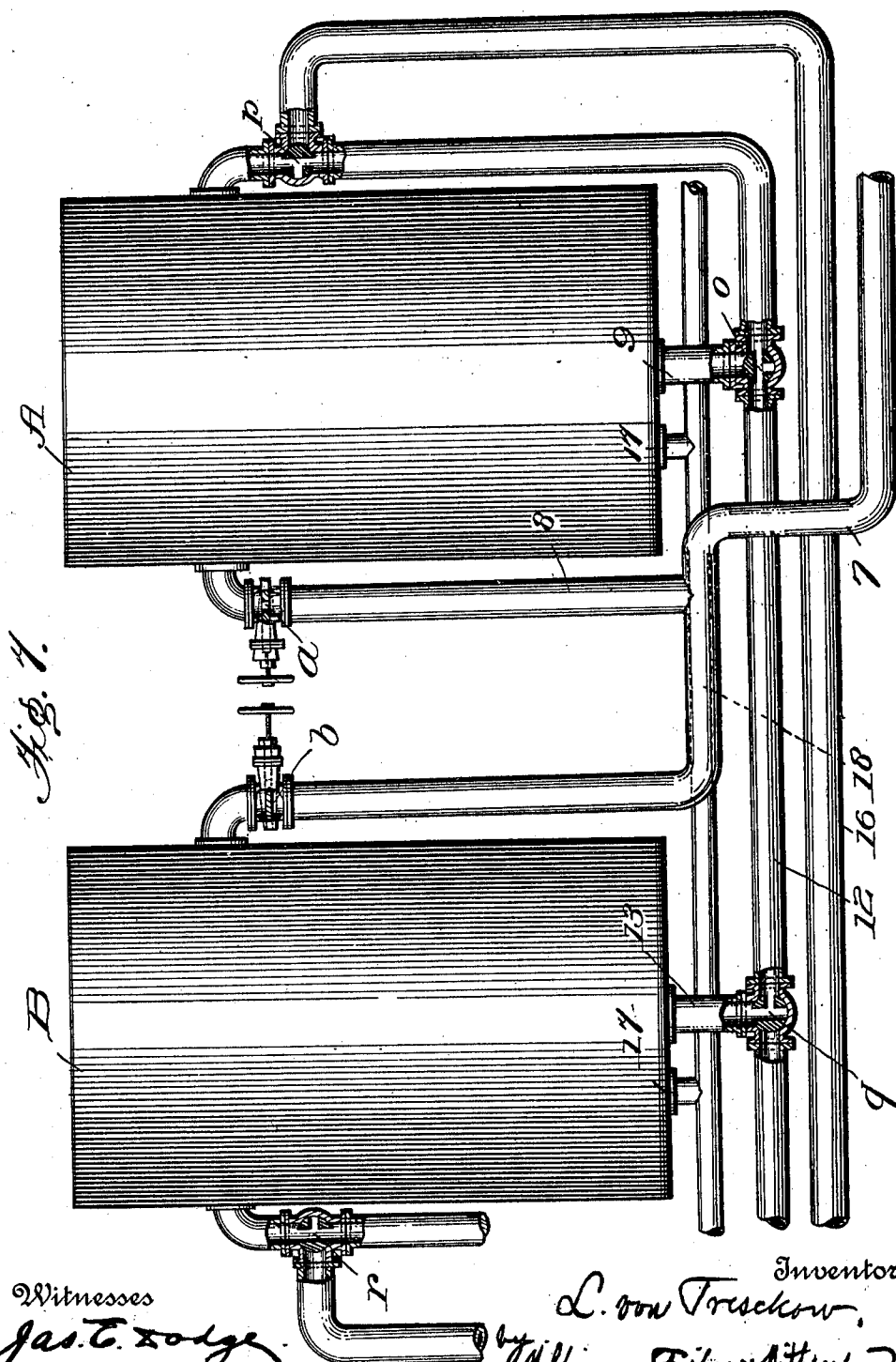
Fig. 5. Inventor
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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

LEON VON TRESCKOW, OF NEW ORLEANS, LOUISIANA.

CONTINUOUS DECANTER.

990,022.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed September 7, 1910. Serial No. 580,851.

To all whom it may concern:

Be it known that I, LEON VON TRESCKOW, a citizen of Germany, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Continuous Decanters; and I do hereby 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.

This invention relates to new and useful improvements in decanting apparatus and has for its object to provide such an apparatus, in which there may be a continuous flow of liquor gently from one vessel to another, these vessels being either round or square, and arranged in a circle, or in two rows facing each other, whereby the vessel surcharged with precipitated impurities may be cut out and a new vessel taken in without interruption.

With these and other objects in view, the invention consists in the arrangement and combinations of parts hereinafter referred to and more particularly pointed out in the claims.

Reference is had to the accompanying drawings illustrating a practical embodiment of the invention, in which drawings like numerals designate the same parts in the several views, and in which:—

Figure 1 is a front elevation, partly in section, of the improved decanting apparatus, a portion of the figure being a section taken on the line 1—1 of Fig. 2; Fig. 2, is a top plan view of the same, with the reservoir and juice heater omitted; Fig. 3, is a sectional view of a three-way cock for the circulating header, and located in the bottom of the decanters; Fig. 4 is a similar view to Fig. 3, showing the three-way cock in a different position; Fig. 5 shows a three-way cock for the circulating and evaporator pipes located at the side of the decanters; Fig. 6, is a similar view to Fig. 5, showing the three-way cock in a changed position. Fig. 7 is a development of the circular arrangement of decanting vessels, two only being shown, showing the course of the liquid and illustrating the different positions of the valves.

A, B, C, D, and E, represent a plurality of decanting vessels, connected by pipe line 7 for the supplying or feeding of the liquor to be decanted. They are also connected by

several other pipes, namely, 12 the circulating header for circulating the liquor, 16 the evaporator header for leading to the evaporator, and 18 the filter header for leading to the filter press or scum tank. Each of these vessels are provided with charging valves *a, b, c, d, and e* with a three-way cock, shown in Figs. 3 and 4, at the bottom, which leads into the circulating pipe. These decanting vessels are further provided with a three-way cock shown in Figs. 5 and 6, and located on the side of the decanter leading into the circulating as well as the evaporator pipe line. A valve 17 in the bottom of each decanter leads into the filter press or scum pipe. The filter header 18 is connected with the evaporator line by pipe and valve 20. The whole apparatus is supported by a plurality of columns 21.

The operation of the device is as follows:—A conventional form of juice heater 1 supplied with live steam by means of a pipe 2, is filled with the liquor to be decanted through pipe 3. Connected with the heater is a pump 4 which forces the liquor upward through 5 into the reservoir 6, down through the supply pipe 7, from thence into pipe 8 and valve *a* into the first decanter, A. The three-way cock *o* is located in the pipe 9, at the bottom of the vessel A, as in the position shown in Fig. 3 on the drawings, and the liquor will gradually fill the decanter up to the opening 10 and from there flow into the three-way cock *o*, which is in the position shown in Fig. 5, which will lead the liquor into the circulating header 12, to decanter B, into which it will rise, through the three-way cock *q* located in the pipe 13 at the bottom of decanter B, up to the opening 10, shown in dotted lines, Fig. 1. The liquor then enters the three-way cock *r*, which is in the position shown in Fig. 5, and flows through the circulating header 12, into decanter C in the same manner until it fills the decanter up to the opening, not shown. The decanter D is filled in the same manner. The now decanted clear liquor or juice is then led into the evaporator header 16, by turning the three-way cock *s*, see Fig. 2, into a position such as is indicated in Fig. 6.

If after a certain length of time the decanted liquor located in the receptacle D should commence to run cloudy, the three-way cock just described is turned to the position shown in Fig. 5, consequently the

juice will flow through the three way cock *t* at the bottom of the receptacle *E* which cock is then in the position shown in Fig. 4. This receptacle *E* is really an auxiliary tank. The liquor will fill this receptacle *E* and will enter the evaporator header 16 by the three-way cock then in the position indicated in Fig. 6. Having thus filled decanter *E*, the clear liquor flows to the evaporator. The supply valve *a* of the decanter *A* is then closed and the supply valve *b* of the decanter *B* opened and the three-way cock at the bottom of this decanter turned into the position shown in Fig. 3. At this time decanter *A* will have the greatest accumulation of mud and is by the above described manipulation of valves removed from circulation and by opening the scum valve 17 its contents are sent to scum tank or filter press. After being emptied decanter *A* is ready to be put into circulation again whenever the decanting liquor in the last vessel appears to run cloudy. The connecting pipe 19 between the evaporator header 16 and the filter header 18, has been provided if, in case of a stoppage in the work of the factory, it is desired to send as much of the clear juice as possible from all the decanters direct to the evaporator, thereby relieving the filter press.

Having thus described my invention, what I claim and desire to secure by Letters-Patent from the United States is:—

1. In a decanting system, the combination with a reservoir, of a plurality of separating vessels, a pipe for delivering the liquor to be decanted into the first vessel; a supply pipe connecting each vessel with the next vessel in the series for effecting the discharge of liquor; a circulating pipe connecting each decanter with the next succeeding in the series, said pipe leading from the last tank to an evaporator; a discharge valve located in the bottom of each of said decanters; and a discharge pipe connecting each of said valves with the next succeeding in the series, substantially as described.

2. In a decanting system, the combination with a reservoir of a plurality of separating vessels, a pipe for delivering the liquor to be decanted into the first vessel; a supply pipe connecting each vessel with the next in the series for effecting the discharge of liquor; a circulating pipe connecting each decanter with the next succeeding in the series, a

pipe connecting each decanter with the next in series, said pipe leading from the last tank to an evaporator; a discharge valve located in the bottom of each of said decanters; and a discharge pipe connecting each of said valves with the next succeeding in the series; and a charging valve located in the bottom of each of said decanters, provided with a three-way cock leading into the circulating pipe; substantially as described.

3. In a decanting system the combination with a reservoir, of a multiplicity of separating vessels, a pipe for delivering the liquor to be decanted into the first vessel; a supply pipe connecting each vessel with the next vessel in the series for effecting the discharge of liquor; a circulating pipe connecting each vessel with the next in series; a pipe connecting each decanter with the next succeeding in the series, said pipe leading from the last tank to an evaporator; a discharge valve located in the bottom of each of said decanters; and a discharge pipe connecting each of said valves with the next succeeding in the series; a valve located in the pipe discharging the liquor from one tank to the next succeeding, provided with a three-way cock leading into the circulating as well as the evaporating lines, substantially as described.

4. In a decanting system, the combination of a reservoir, a multiplicity of separating vessels, a pipe for delivering the liquor to be decanted into the first vessel; a supply pipe connecting each vessel in the series for effecting the discharge of liquor; a circulating pipe connecting each vessel with the next in series; a pipe connecting each decanter with the next succeeding in series, said pipe leading from the last tank to an evaporator; a discharge valve located in the bottom of each of said decanters; and a discharge pipe connecting each of said valves with the next succeeding in the series, a pipe provided with a valve, connecting said filter header and evaporator line, substantially as described.

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

LEON VON TRESCKOW.

Witnesses:

B. C. ALLEN,
J. VANDERMAN.