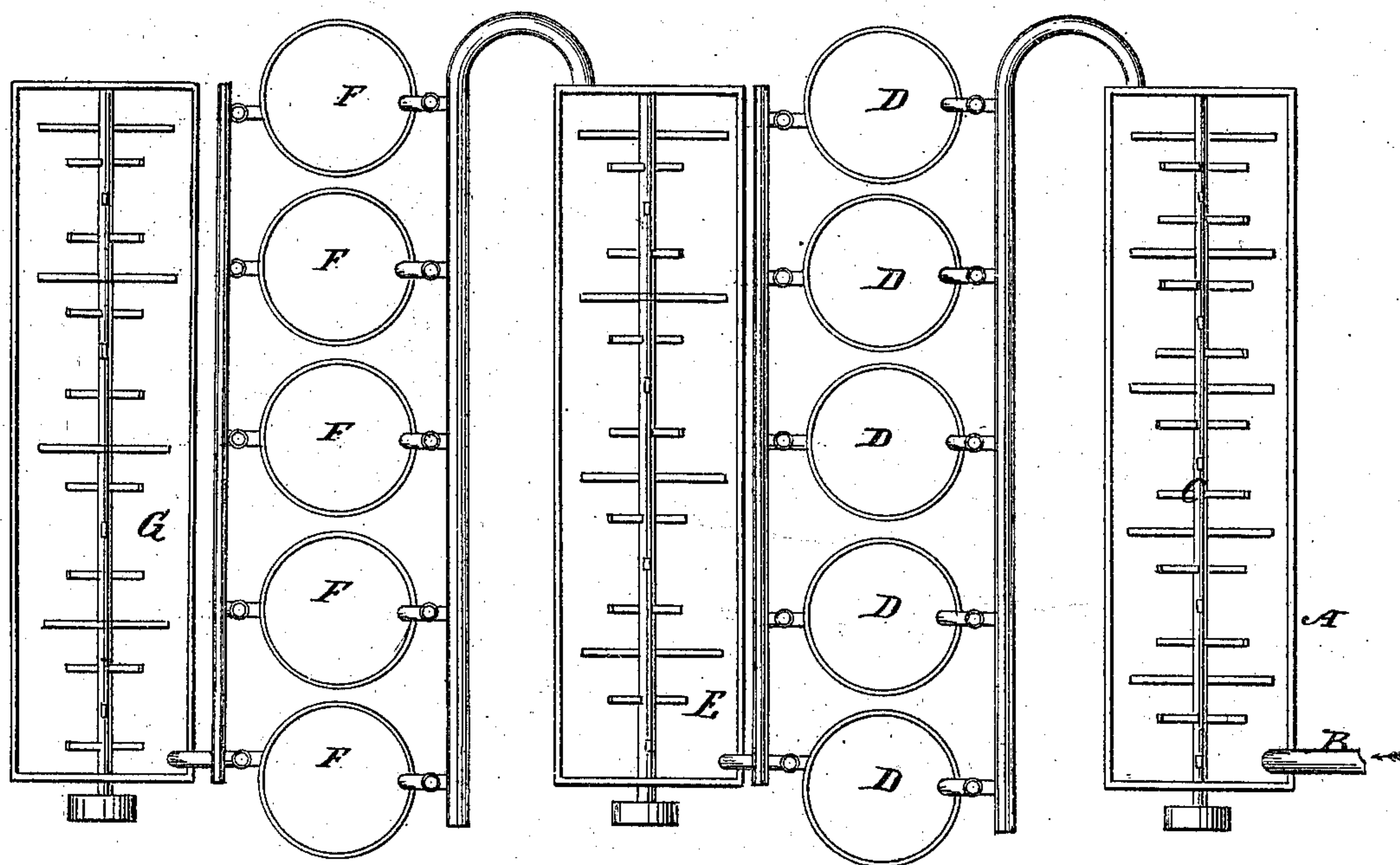


E. SCHALK.

Treating Petroleum.

No. 133,598.

Patented Dec. 3, 1872.



Witnesses:

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PER

UNITED STATES PATENT OFFICE.

EMIL SCHALK, OF NEW YORK, N. Y.

IMPROVEMENT IN TREATING PETROLEUM.

Specification forming part of Letters Patent No. 133,598, dated December 3, 1872.

To all whom it may concern:

Be it known that I, EMIL SCHALK, of the city, county, and State of New York, have invented a new and useful Improvement in Treating Petroleum, of which the following is a specification:

In refining petroleum the product of distillation is treated with sulphuric acid, which is afterward washed out with water; then it is treated with alkalies and washed again. This operation has always, heretofore, been performed in one and the same tank, in batches, taking about a day for each batch, the operation being intermittent. My invention consists of a continuous process of treating the distillate, by which much time and labor will be saved. Instead of having a tank and filling it with oil, and then adding the sulphuric acid, I allow the oil and the acid, in the right proportion, to run in a continuous flow into a horizontal agitator, where I agitate it for a certain time, allowing the product to run out at the other end into a series of small tanks, filling one after the other and allowing the first to be emptied before the last is filled. From each tank the distillate is run into another horizontal agitator, where the washing is carried on in the same continuous way as when treated with acid, and in like manner it is again discharged into tanks, and from there into a third agitator to be treated with alkalies, and then washed again.

The drawing is a plan view of a system of agitators and tanks such as I propose to use in carrying out my improved continuous bleaching and washing process.

A represents the first agitator, into one end of which the distillate and sulphuric acid, in

the right proportions, are allowed to flow through the pipe B. C is a reel by which the agitation is effected. D is a series of tanks into which the product flows from the agitator, filling them successively, to be allowed to stand the requisite time. These tanks will have sufficient capacity to render the operation continuous and retain the product as long as it is required to remain at rest, the first one filled being discharged before the last one of the series is filled, to be ready for repeating the operation. E is a second agitator, into which the first series of tanks discharge. F is a second series of tanks. G is a third agitator, which will have another series of tanks.

Water will be admitted to the second agitator, together with the distillate, for washing out the sulphuric acid; the alkalies will be admitted to the third agitator for treating the distillate, after which it will be discharged into another set of tanks, and then into another agitator to be washed again. Thus the operation is rendered continuous, and a large economy of time and labor is effected.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The combination of a series of horizontal agitators and tanks, substantially as specified.

2. A continuous process of treating and washing distilled petroleum, substantially as described.

EMIL SCHALK.

Witnesses:

T. B. MOSHER,
C. SEDGWICK.