A. J. & A. B. GALLAGHER.
Rectifying Apparatus.

No. 199,282. Patented Jan. 15, 1878.

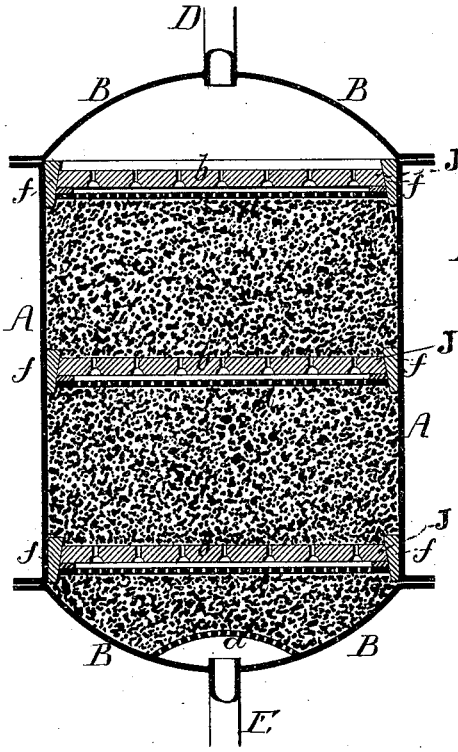

Fig. 1

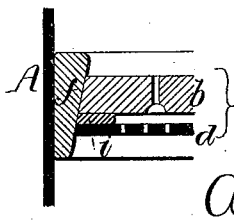

Fig. 2

Witnesses
John W. Clemmer
Harry Smith

Inventors:
Anthony J. Gallagher
Augustus and B. Gallagher
by their Attorneys.
Howson and Sons

UNITED STATES PATENT OFFICE.

ANTHONY J. GALLAGHER AND AUGUSTUS B. GALLAGHER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN RECTIFYING APPARATUS.

Specification forming part of Letters Patent No. **199,282**, dated January 15, 1878; application filed December 26, 1877.

To all whom it may concern:

Be it known that we, ANTHONY J. GALLAGHER and AUGUSTUS B. GALLAGHER, both of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Rectifying Apparatus, of which the following is a specification:

The object of our invention is to so construct a rectifying apparatus that the liquor, in its passage through the same, will be uniformly distributed and channeling prevented.

This object we attain in the following manner, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical section of a rectifying apparatus constructed according to our invention, and Fig. 2 an enlarged view of a portion of the same.

A is the casing of the apparatus, which is furnished, in the present instance, with convex heads B, a feed-pipe, D, communicating with the interior of the casing through the top head, while a discharge-pipe, E, communicates with said interior through the lower head, a perforated diaphragm, *a*, inclosing the mouth of the said pipe E within the casing.

J J J are three partitions, one being arranged near the center and one near each end of the casing, and the space between these partitions and between the lowermost partition and the bottom head is packed with charcoal or other filtering medium.

Each partition J consists of a wooden disk, *b*, and a metal disk, *d*, separated by means of a narrow ring, *i*, at the edges, the wooden disk *b* having a number of comparatively large perforations, which terminate in concentric grooves on the under side, while the disk *d* has a larger number of much smaller perforations, the aggregate area of the perforations in the disk *d* equaling that of the perforations in the disk *b*.

The disks *b* and *d* are slightly less in diameter than the interior of the casing A, so as to permit the introduction of an elastic packing-ring, *f*, preferably of rubber, which is of a wedge-shaped section, so that, as the partition rests on the bed of filtering material, the ring may be hammered firmly into place around the edge of the partition, thereby insuring a perfectly secure joint, and preventing the liquor from forming channels down the inside of the casing.

Owing to the fact that the partitions are principally of wood, we are enabled, without unduly increasing their weight, to make them of such a thickness as will insure the proper action of the elastic packing-ring, while, by the use of the thin metal plate on the under side of the partition, the perforations through which the liquor is distributed on the bed of filtering medium beneath the partition can be made very fine and numerous, thus insuring thorough dissemination of the liquor throughout the entire mass of filtering matter.

We claim as our invention—

1. The combination of the casing A and packing-rings *f* with partitions J, each consisting of a perforated wooden disk, *b*, and a perforated metal disk, *d*, with a space intervening between the two, as set forth.

2. The combination of the casing and its partition or partitions with an elastic packing-ring of a wedge-shaped section, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ANTHONY J. GALLAGHER.
AUGUSTUS B. GALLAGHER.

Witnesses:
GEO. W. DWIER,
HARRY SMITH.