

UNITED STATES PATENT OFFICE.

MARTIN EKENBERG, OF STOCKHOLM, SWEDEN, ASSIGNOR OF ONE-HALF
TO THE FIRM OF LARS MONTEN, OF SAME PLACE.

PROCESS OF MAKING PERFUMES.

SPECIFICATION forming part of Letters Patent No. 588,766, dated August 24, 1897.

Application filed September 20, 1895. Serial No. 563,128. (No specimens.) Patented in Germany August 9, 1894, No. 82,297,
and in France April 1, 1895, No. 246,283.

To all whom it may concern:

Be it known that I, MARTIN EKENBERG, a
subject of the King of Sweden and Norway,
residing in Stockholm, Sweden, have invented
5 certain new and useful Improvements in Per-
fumes, (for which patents have been granted
in France, No. 246,283, dated April 1, 1895,
and in Germany, No. 82,297, dated August 9,
1894,) of which the following is a specification.
10 Alcohol or spirit of varying degrees of con-
centration is generally used as a solvent in
the preparation of perfumes for rooms, cloth-
ing, &c. This solvent, however, has the
property of retaining or binding the odorifer-
15 ous substances, (generally ethereal oils of
high boiling-point or solid substances,) and
the fragrance does not appear in the proper
composition until the solvent is evaporated.
The higher the percentage of alcohol in the
20 spirits the more time elapses before this
proper development. If, as is usually the
case, the fragrant liquid is directly poured
out, wet spots are formed which after the
lapse of some time leave only a slightly-dif-
25 fused concentrated perfume of low intensity.
To be sure it is possible to a certain degree
to increase the intensity of the flavor and its
diffusion—for instance, in the case of per-
fumes for rooms—by the use of atomizers or
30 special bottles provided with air-compressors.
Such apparatuses, however, are not very con-
venient, are expensive, get out of order read-
ily, and require practice for their use. These
objections are overcome by my present in-
35 vention, which is essentially as follows:

When filling in or bottling the fragrant liq-
uid, consisting of a mixture of ethereal oils
and fragrant bodies or their solutions in al-
cohol, I at the same time under more or less
40 pressure introduce into the vessels or bottles
for consumption substances which at the or-
dinary temperature of a room or of the hand
are partly or wholly gaseous and which at a
temperature below $+30^{\circ}$ centigrade are ca-
45 pable of exerting a pressure sufficient for
forcing the whole of the liquid out of the con-
taining vessel. However, only such volatile
substances can be used which besides having
the properties mentioned shall themselves

have no odor or, like the spirits at present 50
used for perfumery, have an odor so little
marked as not to essentially change the char-
acter of the perfume. As soon as the liquid
is discharged from the vessel the substance
thus added escapes in gaseous form and at 55
the same time carries off a sufficient quantity
of the fragrant substance to bring it into im-
mediate prominence, the pressure serving for
convenient use and diffusion. As examples
of substances possessing the above-men- 60
tioned properties I mention the following:
hydrocarbons, such as butane, tetramethyl-
ene, isopentane; and ethers, such as ethylen-
ether, for example, all of which have a boil-
ing-point below $+30^{\circ}$ centigrade at the pres- 65
sure of one atmosphere; also carbonic acid,
monoxid of nitrogen, methane, atmospheric
air, &c.

The increase of intensity of the fragrance
is particularly noticed when the fragrant liq- 70
uid is saturated with a body gaseous at the
ordinary temperature of the room without,
however, materially increasing the pressure—
for instance, with methane. When opening
the bottle, gas is in this case slowly gener- 75
ated, carrying the fragrant substances off
with it, so that the intensity of the fragrance
is maintained constant during the whole pe-
riod of evaporation.

For perfumery for rooms when an instan- 80
taneous diffusion of the perfume through the
air is desired without separation of drops of
non-evaporated liquid, the substance added
will be a liquid with a boiling-point not over
 $+30^{\circ}$ centigrade, and such liquid is added 85
in such quantity that it forms the principal
solvent of the fragrant body. By this means
an instantaneous and complete evaporation
is effected. Since the solvents of the fra-
grant bodies usually at the same time are 90
also solvents of resins, &c., drops falling
down from the same are apt to leave spots on
polished furniture and other things with
which they may come in contact.

The vessels (mostly glass bottles) which 95
are used for keeping the mixture of the fra-
grant liquids, together with the substances
introduced, under pressure are provided with

a simple valve, so that, whenever desired, the liquid is easily diffused by operating the same.

5 Having thus described my invention, I claim—

1. As a new article of manufacture, a closed vessel containing a mixture of a fragrant substance or its solution and a substance, such as butane, having a boiling-point below +30°
10 centigrade and practically inodorous, being of such a character as not to noticeably modify the odor of the perfume, whereby when subjected to the temperature of the hand or the air of a living-room, it will be
15 readily vaporized, substantially as set forth.

2. As a new article of manufacture, a closed vessel and a liquid mixture contained there-

in, said liquid mixture comprising a fragrant substance and a hydrocarbon or ether such as described, said hydrocarbon or ether having a boiling-point below +30° centigrade and practically inodorous, being of such a character as not to noticeably modify the odor of the fragrant substance or perfume, whereby, when subjected to the heat of the
20 hand or that of a living-room, it will be readily vaporized, as set forth.
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In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

MARTIN EKENBERG.

Witnesses:

ERNST SVANGVIST,
CARL TH. SUNDHOLM.