

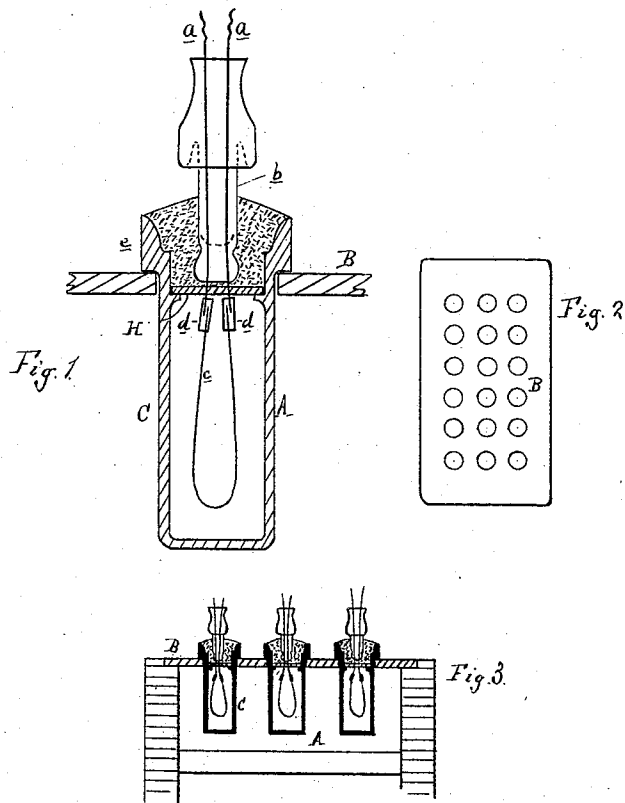
(No Model.)

C. J. VAN DEPOELE.

PROCESS OF MAKING INCANDESCENTS.

No. 324,193.

Patented Aug. 11, 1885.



Witness:
H. S. Magnus
E. W. Andrews

Inventor:
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Atty.

UNITED STATES PATENT OFFICE.

CHARLES J. VAN DEPOELE, OF CHICAGO, ILLINOIS.

PROCESS OF MAKING INCANDESCENTS.

SPECIFICATION forming part of Letters Patent No. 324,193, dated August 11, 1885.

Application filed December 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. VAN DE-
POELE, of Chicago, in the county of Cook and
State of Illinois, have invented new and use-
ful Improvements in Processes of Manufac-
turing Carbons and Attaching the same in In-
candescent Electric Lamps; and I do hereby
declare that the following is a full, clear, and
exact description thereof, reference being had
to the accompanying drawings, which form a
part of this specification.

This invention relates to certain new and
useful improvements in a process of manufac-
turing carbons for incandescent lamps and at-
taching said carbons to the conducting-wires
leading through the plug of the bulb or globe.

The invention consists in the various steps
in the process and in the entire process, sub-
stantially as hereinafter described.

Figure 1 is a sectional elevation showing the
plug, the connecting-wires, the carbons, the
manner of connecting the same to the wires,
and the matrix in which the carbonization
takes place. Fig. 2 is a plan of the carboniz-
ing furnace or oven. Fig. 3 is a vertical sec-
tion of the same, showing the manner of car-
bonizing the carbons.

My process is as follows: I take any suitable
vegetable fibers of sufficient length and stretch
the same between two points—for instance, by
suspension at one end and weights at the other,
or in any other suitable way by which the
fibers may by tension be made straight.
While in this position I coat such fibers with
an even coating of lamp-black and varnish,
and this latter operation is repeated until the
required size or thickness is obtained, when
the fibers are dried either slowly or rapidly,
as may be most convenient. After the fibers
thus coated have become thoroughly dried
they will be found straight and strong, when
they should be cut into proper lengths and at-
tached to the platinum conducting-wires *a*,
which pass through the plug *d* in the manner
well known to electricians.

The method which I employ in fastening
the fiber *c* to the conducting-wires is very sim-
ple, and is as follows: I cut sections *d*, of straw,
about a quarter of an inch long, through which
the bore is about a thirty second of an inch,
inside diameter, and stick them over the ad-

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jacent ends of the wires and fiber, and in or-
der to secure a perfect contact between the
ends of the wires and fiber I fill this small
thimble with a compound of lamp-black and
varnish, which, when dried, will be found to
accomplish the purpose and make a solid and
continuous connection. A is an oven with a
perforated cover, B, as shown in Figs. 2 and
3, and into these perforations I drop an iron
tube or pot, C, closed at its lower end, with
an enlargement or collar, *e*, at its upper end,
to prevent the tube from dropping through
the cover. I now place the prepared fiber, as
described, and secured to the wires and plug,
into the upper end of this tube, so that the
lower end of the glass plug will rest upon or
above the diaphragm H of asbestos, above
which I fill the upper end of the tube around
the glass plug with ashes, carbon-dust, or
other suitable material for luting the same, by
means of which all atmospheric air is exclud-
ed from the retort C. Suitable heat now be-
ing applied to the oven will soon carbonize
the fiber, the collar, and filling, by means of
which said fiber is connected with the wires.
The plug, with the fiber, is then removed from
the retort, and is ready to be inserted into the
mouth or neck of the bulb, such as is ordina-
rily employed for incandescent lights, the pro-
jecting platinum wires forming the means of
connection with the source of electricity.

By means of this process I am able to secure
the wires and fiber together before the latter
is carbonized and while it is strong and tena-
cious, thereby avoiding the large percentage
of loss which invariably occurs where the car-
bons are attached to the wires after carboni-
zation has taken place.

Although not essential to the above-de-
scribed process, in order to make the fiber
more tenacious and homogeneous a small
quantity of coal-tar or other highly-carbona-
ceous material may be placed in the bottom of
the retort, which material is reduced and de-
posited by the heat upon the carbon filament.
This can be done during the process of car-
bonization, which I have described, or may
be made the subject of a repeated operation.

I do not claim the retort herein described
in the present application, as I intend to make
it the subject-matter of another patent.

In this application I make no claim to the article produced by the process herein described, nor to the straw collar, as the same will be made the subject-matter of a separate
5 application.

What I claim as my invention is—

The process of manufacturing carbons for electric incandescent lamps, consisting of, first, preparing vegetable fiber with a coating of
10 lamp-black and varnish; second, attaching said fiber to the conducting platinum wires by means of a vegetable collar which embraces

the adjacent ends of the fiber and the wires, and filling said collar with a compound of lamp-black and varnish, and, third, uniting
15 the platina wires to the fiber by subjecting said wires, fiber, and collar to a heat sufficient to carbonize vegetable tissue, substantially as set forth.

CHARLES J. VAN DEPOELE.

Witnesses:

H. S. SPRAGUE,
E. W. ANDREWS.