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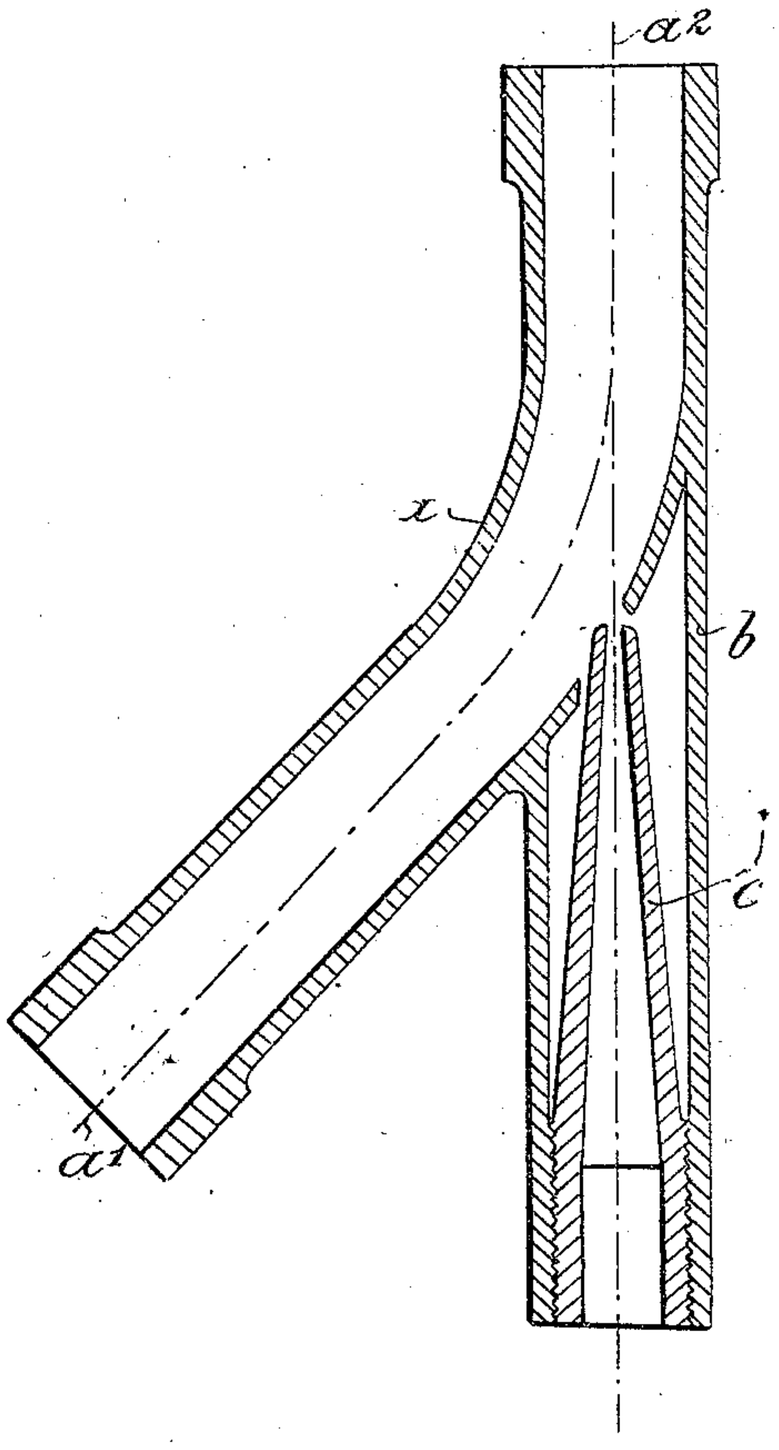
E. S. E. VON LINDENSTAMM.

FLUID PRESSURE SUCTION APPARATUS.

APPLICATION FILED SEPT. 26, 1906.



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UNITED STATES PATENT OFFICE.

EMIL SCHNIZER EDLER VON LINDENSTAMM, OF VIENNA, AUSTRIA-HUNGARY.

FLUID-PRESSURE SUCTION APPARATUS.

No. 842,100. Specification of Letters Patent. Patented Jan. 22, 1907.

Application filed September 26, 1906. Serial No. 336,357.

To all whom it may concern:

Be it known that I, EMIL SCHNIZER EDLER VON LINDENSTAMM, a subject of the Emperor of Austria-Hungary, residing at Vienna, Empire of Austria-Hungary, have invented certain new and useful Improvements in Fluid-Pressure Suction Apparatus; 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.

The present invention refers to suction apparatus of that class in which, through the action of the suction of a steam (gas or liquid) jet issuing under pressure from a nozzle, a vacuum is produced, such as is required for cleaning apparatus, vacuum-brakes, &c.

In all apparatus of this kind at present known the arrangement of the nozzle in the suction-conduit is of such a nature that this nozzle is placed wholly or to its greatest extent in the suction-conduit. This circumstance, especially when the apparatus had to be used for the purposes of cleaning, possessed the disadvantage that the air drawn off by suction and impregnated with impurities had to pass through the free space existing between the outer wall of the nozzle and the inner wall of the suction-conduit, owing to which the impurities frequently got clogged in the suction-conduit.

The drawback is avoided in the present invention by the fact that the nozzle which enters the suction-conduit at a point where it is bent in the shape of a knee does not project at all or, at any rate, only to a mere fraction of the diameter of the suction-conduit (practically for not more than one-fifth of the suction-conduit diameter) beyond the inner wall of the suction-conduit for the purpose of obtaining as small a reduction as possible of the cross-section of the passage.

The drawing shows in section a form of execution of the suction apparatus according to the present invention.

The apparatus consists of a pipe-bend *a*, to be inserted into the suction-conduit. At the point where this pipe-bend forms the knee there is cast on a pipe connection *b*, into which the suction-nozzle *c* is screwed.

The arrangement of the pipe connection *b* and the suction-nozzle *c* is carried out in such a manner that the axis of the latter is inclined toward the axis a' of that portion of the pipe-bend *a* which is before the knee, while it preferably coincides with the axis a^2 of that portion of the pipe-bend which is beyond the knee.

The pipe-bend and the pipe connection, which contains the nozzle, are preferably made out of one piece.

In the example shown in the drawing the nozzle *c* does not project out of the wall of the pipe-bend *a*, and therefore permits the passage of a current of air through the whole extent of the cross-section of the pipe; but the nozzle might also, without deviating from the object of the invention, project into the inside of the wall of the pipe-bend by a small fraction of the suction-conduit diameter without reducing the cross-section to such an extent as in the previously-known arrangements, and without a clogging of the suction-conduit, through the impurities carried along in it taking place, and, further, without materially reducing the effectiveness of the apparatus.

I claim—

In combination with a knee-shaped suction-conduit a nozzle adapted to admit fluid under pressure into such conduit and entering the same at the convex side of the knee, such nozzle practically not projecting into the interior of the said conduit, substantially as and for the purpose described.

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

EMIL SCHNIZER EDLER VON LINDENSTAMM.

Witnesses:

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