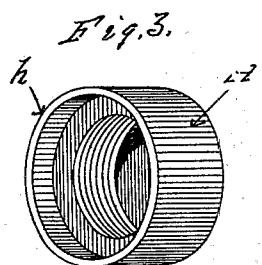
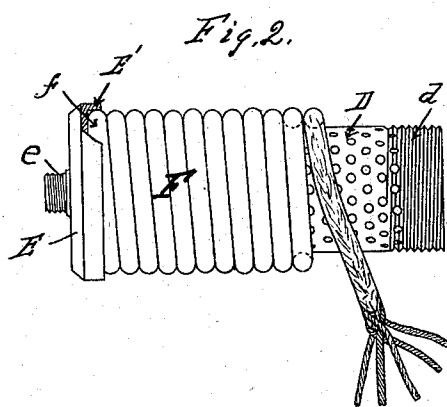
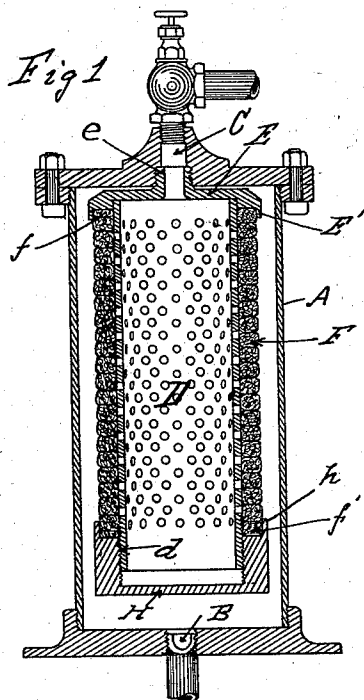


(No Model.)

R. CONRADER.  
OIL FILTER.

No. 559,440.

Patented May 5, 1896.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

RUDOLPH CONRADER, OF ERIE, PENNSYLVANIA.

## OIL-FILTER.

SPECIFICATION forming part of Letters Patent No. 559,440, dated May 5, 1896.

Application filed July 6, 1895. Serial No. 555,102. (No model.)

*To all whom it may concern:*

Be it known that I, RUDOLPH CONRADER, a citizen of the United States, residing at the city of Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Oil-Filters; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention consists in the improvement in oil-filters hereinafter set forth and described and illustrated in the accompanying drawings, and relates particularly to the construction of the filtering medium of such filters, which I construct in the following manner, viz: I take a perforated tube having a collar on one end and a screw-thread on the other. Upon this tube I tightly wind one or more depths of cord or tape made of some fibrous material, and after the desired amount of such cord or tape is wound thereon I screw a cap having a suitable collar thereon upon the screw-threaded end of the tube, which forces it against the end of the coils of the cord or tape wound on the tube, so as to compress the coils thereof longitudinally against each other, and in this manner I am enabled to adjust the filtering material to such density as may be desired to produce the required result, while at the same time, when desired, the cap can be quickly removed from the end of the tube and the filtering material renewed at pleasure.

In the accompanying drawings, illustrating my invention, Figure 1 shows a vertical section of my improved filtering mechanism. Fig. 2 shows a view in elevation of the same during the process of winding the fibrous cord or tape thereon. Fig. 3 shows a perspective view of the screw-cap fitting upon the screw-threaded end of the perforated tube.

In this construction A is the shell or case within which my improved filtering mechanism is secured, and B the inlet and C the outlet thereof. Within this shell A, I removably secure a perforated tube D, having a screw-

thread *d* on one end and a cap E on the other end thereof provided with a nipple *e*, adapted to be screwed into the outlet C. Around the edge of the cap E there is a downwardly-projecting flange E', adapted to receive and support the first coil *f* of a fibrous cord or tape F. This cord or tape F, I wind closely around the perforated tube D until it is filled to and over the greater part of the screw-threaded end *d* thereof. I then screw a cap H, Fig. 3, provided with a flange or collar *h* thereon, adapted to inclose the lower coil *f'* of the cord or tape F upon the screw-thread *d* of said tube until it compresses the coils of cord or tape F longitudinally so closely together as will make the fibrous material of sufficient density to properly filter the fluid passing through it.

Having thus fully described my invention so as to enable others to construct and operate the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in an oil-filter, of a perforated tube having a fixed recessed collar on one end and a screw-thread on the other end thereof, a fibrous cord or tape wound closely around said tube and a recessed screw-cap adapted to be screwed upon the end of said tube so as to compress the coils of said cord or tape longitudinally upon said tube, substantially as and for the purpose set forth.

2. The combination in an oil-filter, of a shell or case adapted to inclose filtering mechanism, a perforated tube removably secured within said shell, a cap secured to one end of said tube having a recessed collar thereon, a screw-thread on the opposite end of said tube, a recessed cap adapted to be screwed thereon, and a fibrous cord or tape wound around said perforated tube, so as to completely fill the space and be firmly compressed between the collar thereon and said screw-cap, substantially as and for the purpose set forth.

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

RUDOLPH CONRADER.

Witnesses:

FRED EINFELDT,  
H. J. CURTZE.