No. 728,426. PATENTED MAY 19, 1903.

I. TIMAR.

SAFETY STOPPER.

APPLICATION FILED APR. 22, 1901.

NO MODEL.

Fig. 1.

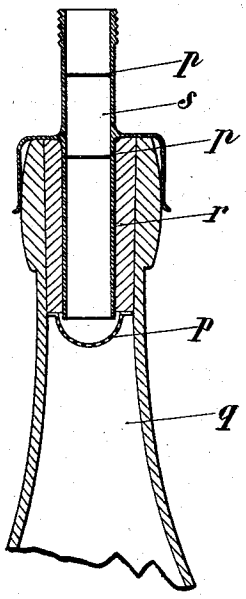
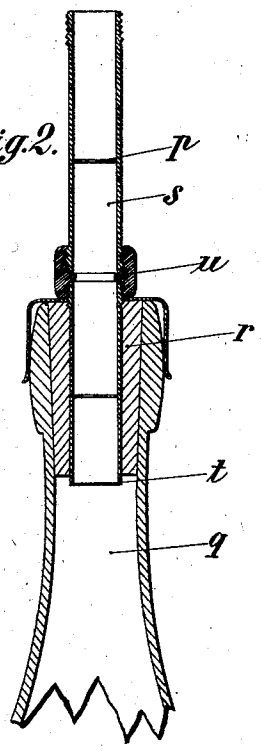


Fig. 2.



Witnesses:-
M. A. Witherell.
M. N. McGown

Inventor-
Ignaz Timar,
By Knight Bros
Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 728,426. Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

IGNAZ TIMAR, OF BERLIN, GERMANY.

SAFETY-STOPPER.

SPECIFICATION forming part of Letters Patent No. 728,426, dated May 19, 1903.

Application filed April 22, 1901. Serial No. 56,899. (No model.)

To all whom it may concern:

Be it known that I, IGNAZ TIMAR, manager, a subject of the Emperor of Austria-Hungary, residing at Kommandantenstrasse 14, Berlin, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Safety-Stoppers, of which the following is a full, clear, and exact description.

This invention has reference to shutting-off appliances—as, for instance, stoppers, cocks, taps, and valves used for the passage of inflammable fluids—and has mainly for its object and effect to prevent a flame striking back into the vessel which contains the fluid and causing an explosion of same. With this arrangement a second one may be combined, which prevents any dangerous transference of heat from the outlet of this shutting-off appliance in question to the vessel containing the fluid in case this outlet should be temporarily exposed to heat. Such a case might occur, for instance, if the contents of a vessel containing petroleum or spirit passed through the shutting-off appliance directly into a fire or spirit-flame.

In the accompanying drawings, Figure 1 is a vertical sectional view of a safety-stopper embodying my improvements. Fig. 2 is a similar view showing a modified construction.

Referring to the drawings, q is the vessel containing the liquid—for instance, an ordinary bottle—and r is the stopper closing same, which stopper is provided with a special outlet-pipe s. To close the outer end of this pipe s, an ordinary cock or small screwed cap may be used.

In order to prevent a flame striking back into bottle q through pipe s and causing same to explode by setting fire to the liquid and gases contained in it, one or more strainers p, of wire-gauze or the like or other suitable material, are used. The number of these strainers and the arrangement of same in the pipe or in the stopper r are immaterial, the only condition being in each case that the disposition of the strainer or strainers is such that the liquid when being poured into or out of the containing vessel passes through the strainer, so that the flame in order to strike into the vessel can only do so through the strainer. As the flame, however, does not pass through the strainer into the vessel q, no explosion can occur.

In order to prevent the conduction of heat to the outer end or the outlet of pipe s into the interior of the vessel and there bring about a setting on fire of the liquid and explosion of the vessel, it is advisable to insert between the outer end of pipe s or the actual "mouthpiece" of same and the inner end t or the vessel itself an insulating-piece u, which consists of some material of sufficient solidity, but which is a non-conductor of heat. The outer end of the pipe s may now, in case such should happen, become red-hot, and yet the heat will not within a short space of time be able to spread to the interior of the vessel to such a degree as to cause any danger of explosion.

What I claim, and desire to secure by Letters Patent, is—

1. A safety-stopper, consisting in a tightening-piece fitting into the mouth of the vessel, a metallic tube inserted into the said tightening-piece and one or more sheets of safety wire-gauze inserted into and occupying the whole area of the said tube substantially as and for the purpose described.

2. A safety-stopper consisting of a tightening-piece fitting into the mouth of the vessel, a metallic tube inserted into the said tightening-piece and extending outwardly, a second metallic tube, connected to and held at a distance from the first-named tube by means of a tightly-fitting sleeve of refractory heat-insulating material, one or more sheets of safety wire-gauze inserted into and occupying the total area of the said two tubes, substantially as and for the purpose described.

In witness whereof I subscribe my signature in presence of two witnesses.

IGNAZ TIMAR.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.