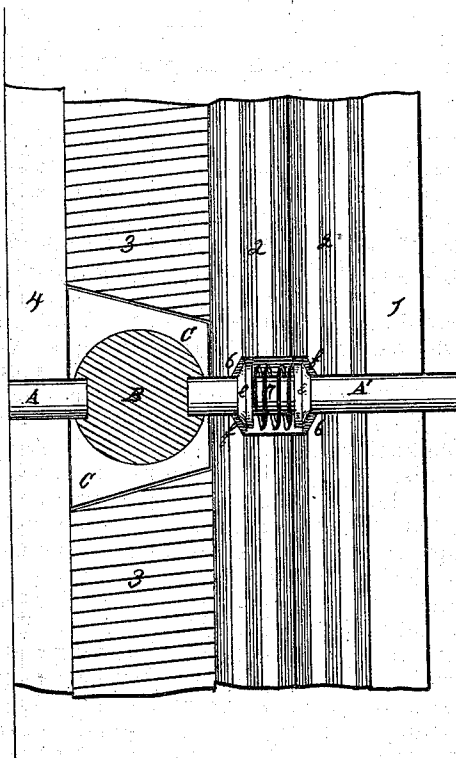
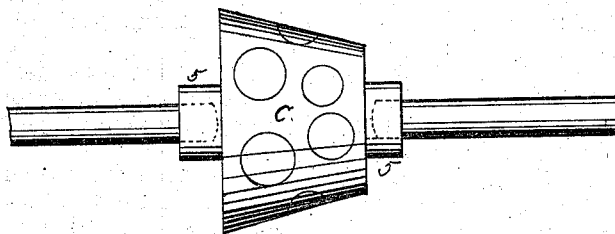


C. O. YALE'S

Improved Intercepting Bolt Spindle

No. 119,258.

Patented Sep. 26, 1871.

Fig. 1.*Fig. 2.*

Witnesses {
 W. H. Bennett
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Charles O. Yale
 by his Attorney
 Carl H. Smith

UNITED STATES PATENT OFFICE.

CHARLES O. YALE, OF NEW YORK, N. Y.

IMPROVEMENT IN LOCK-SPINDLES FOR SAFES.

Specification forming part of Letters Patent No. 119,258, dated September 26, 1871.

To all whom it may concern:

Be it known that I, CHARLES O. YALE, of the city, county, and State of New York, have invented an Improved Intercepting Bolt and Lock-Spindle for Safes, whereof the following is a specification, reference being had to the drawing hereto annexed.

The object of said invention is to prevent access to the interior of the safe or injury to the lock by drilling into or imparting heavy blows to the outer end of the spindle which communicates between the lock, or a system of bolts on the inside, and a suitable knob or handle on the outside of the safe, and also to preclude the introduction of any inflammable or explosive liquid or gas or other material into the safe or its lock through or around said spindle; and my improvement consists in making the lock-spindle in two or more sections and interposing between them a piece or mass of hard and impenetrable material, such as Franklinite, spiegeleisen, or any substance that a drill will not scathe, inclosed within an envelope of ductile metal, as herein-after described; and also in providing the spindle with concentric valves or gaskets of packing held to suitable valve-seats by the pressure as of a spring.

The drawing shows in section, in Figure 1, a part of the door of a safe to which the invention is applied.

The safe-door represented is constructed of several thicknesses of metal of differing nature and texture. For example, the first (the outer lamina) is of wrought-iron, the second is of welded iron and steel, the third is of Franklinite or spiegeleisen, and the fourth is of wrought-iron. A A' is the bolt-spindle, and is represented in two parts or sections; but a greater number may be used. B represents a solid mass of Franklinite cast upon or otherwise made fast to and connecting the two sections of the spindle, so as not only to break the continuity thereof, but also to intercept any attempt to drill into the safe through the spindle, the nature of the intercepting substance being such that no drill can affect it. The interceptive substance is made of a larger diameter than the spindle, whereby any drilling at the side, or in the seam adjoining the spindle, is frustrated, and, in order to resist the blows of a sledge applied to the outer end of the spindle,

should fill and fit the cavity which it occupies in the metallic wall of the safe-door and be able to receive and take up the concussion of such blows. I therefore inclose the interceptive material B in an envelope, C, of malleable iron, brass, lead, or any metal which (unlike Franklinite) may be so turned and fashioned as to be made to fit its cavity, as aforesaid, and of such softness as to form a cushion that will absorb the concussion of blows applied to the end of the spindle. By this means I prevent any fracture of the Franklinite as a result of concussion. The form thereof is not essential, but to render it the more difficult of removal I prefer the conical shape represented, the base of the cone lying toward the inside of the safe. An alternative plan is exhibited in Fig. 2, where the spindle, instead of attaching directly to the Franklinite, is attached to journals 5 formed on the envelope. To provide against the introduction of any inflammable or explosive liquid or gas or other material into the lock or interior of the safe through the seam at the juncture of the spindle with its bearings, the spindle is encircled by one or more elastic valves or gaskets, *f*, and collars *e*, seen in section, fitted to cavities formed to receive them. The elastic gaskets or valves *f* and the metallic valves or collars *e*, as well as the valve-seats 6, are all of a conical shape, and this feature operates to cause the gaskets *f* to hug the spindle closely when forced toward the valve-seat 6 by the pressure of the spring 7.

The above invention admits of many modifications without departing from the essential features which distinguish it.

I claim—

1. The interceptive piece of Franklinite or its equivalent inclosed in an envelope of ductile metal and occupying a larger area than the diameter of the spindle, for the purposes and substantially as described.

2. The combination, with the spindle, of one or more valves for packing the joint around the spindle, for the purposes and substantially as specified.

CHAS. O. YALE.

Witnesses:

SERTO H. NOYES,
FRANK O. HERRING.