

No. 708,562.

Patented Sept. 9, 1902.

F. KOSTLAN,
EMERGENCY SAFETY PLUG.

(Application filed May 16, 1902.)

(No Model.)

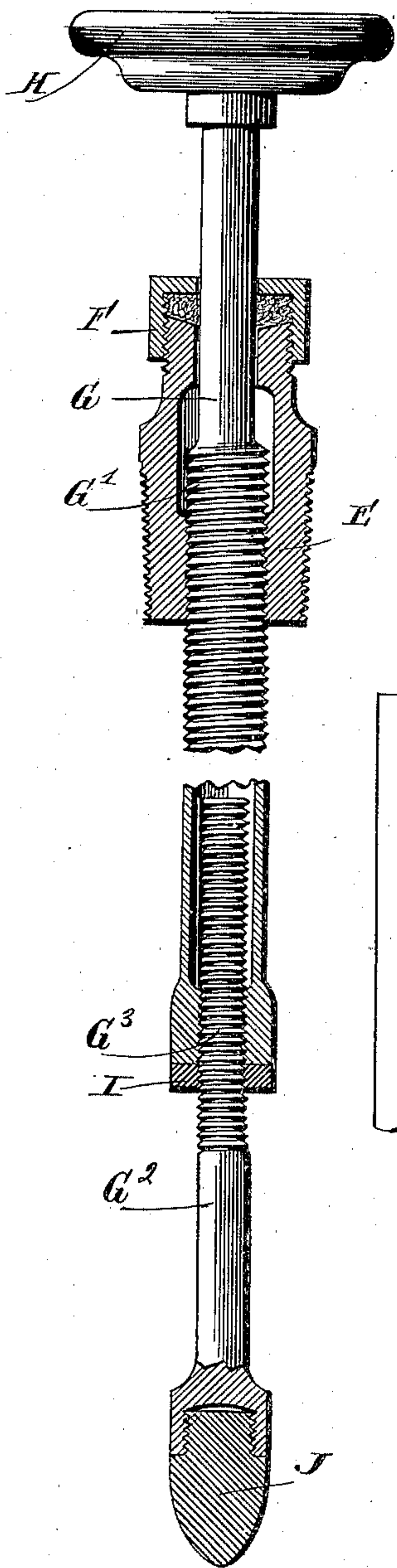


Fig. 1.

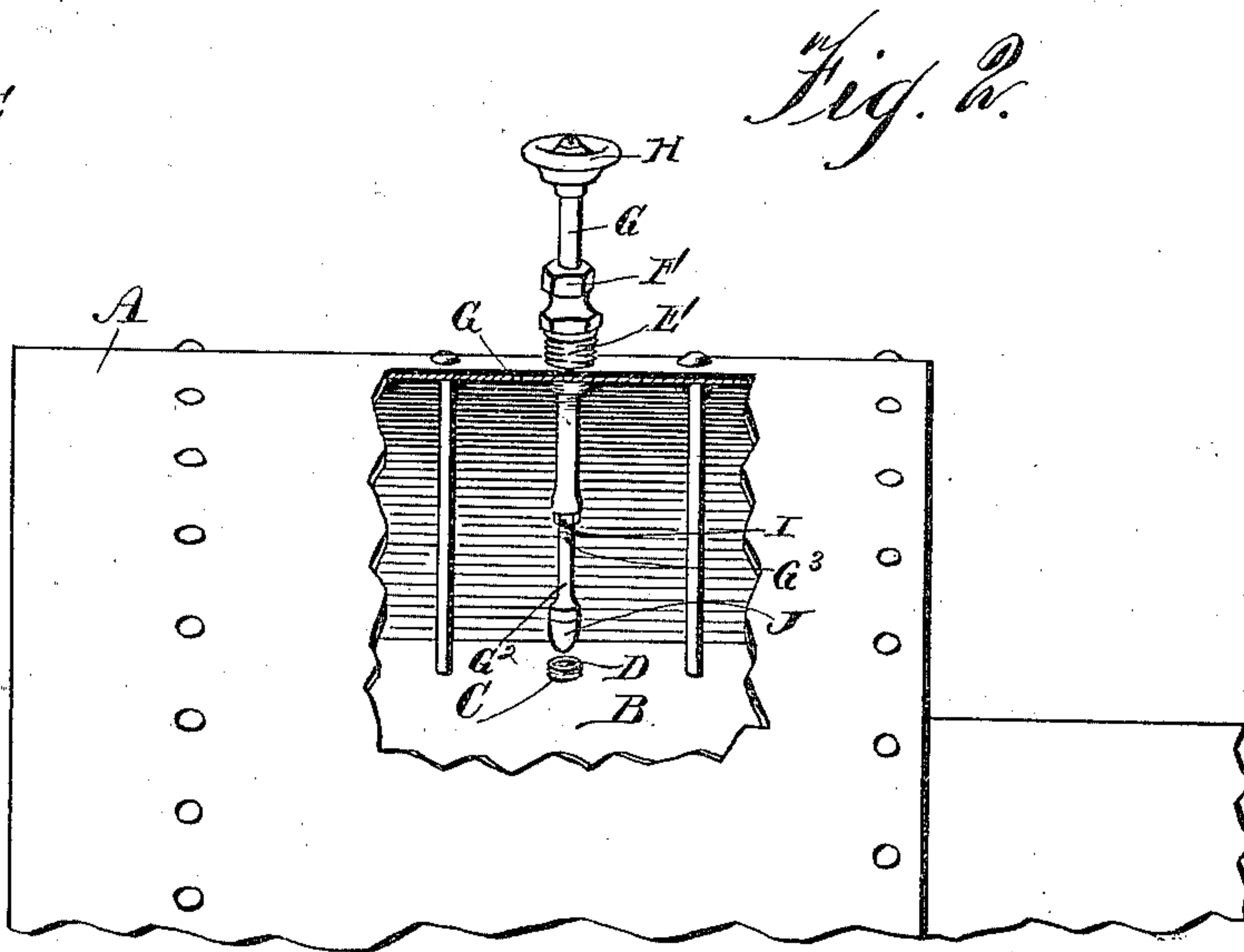


Fig. 2.

Witnesses.

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FRANK KOSTLAN, OF TRAER, IOWA.

EMERGENCY SAFETY-PLUG.

SPECIFICATION forming part of Letters Patent No. 708,562, dated September 9, 1902.

Application filed May 16, 1902. Serial No. 107,582. (No model.)

To all whom it may concern:

Be it known that I, FRANK KOSTLAN, a citizen of the United States, residing at Traer, in the county of Tama and State of Iowa, have
5 invented certain new and useful Improvements in Emergency Safety-Plugs, of which the following is a specification.

The object of this invention is to produce a safety device for steam-boilers so constructed
10 ed that on the blowing out of a fusible plug the opening may be closed and steam kept up until it is convenient to renew said plug.

The nature of the invention will fully appear from the description and claim following,
15 ing, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view showing the construction of my improved safety-plug. Fig. 2
20 shows the manner in which the same is applied to a steam-boiler.

In the drawings, A denotes the outer shell, and B the crown-sheet, of a steam-boiler. In the crown-sheet is screwed a hollow plug C,
25 fitted with a core D, of some fusible metal, lead being commonly used. Directly in line with this plug is placed my device for closing the hollow plug on the melting of its core and which is described as follows:

E is a gland screwing into a hole in the
30 outer shell directly in line with that in the crown-sheet which takes the hollow plug—the “safety-plug,” as it is usually called. This gland is provided with a stuffing-nut F to make a steam-tight joint around the stem
35 G of the closing-plug. The upper end of the stem is provided with a suitable hand-wheel H, by which it may be turned. It is threaded into the gland at G', so as to move up or down when turned. The stem is also made tubu-
40 lar, and into its lower end is screwed an auxiliary stem G², threaded at G³ and provided with a set-nut I. By this means the length of the stem may be adjusted to the distance of the outer shell of the boiler from the crown-

sheet, which distance varies, of course, in dif- 45
ferent boilers. In the expanded lower end of the auxiliary stem is secured a conical plug J, of fusible metal, such as lead.

The operation of the device will be readily understood. In the event of the crown-sheet 50
becoming overheated the fusible plug melts and steam rushes into the combustion-chamber, quenching the fire to some extent and removing any danger of an explosion. It is not convenient to draw the fire at the time, how- 55
ever, so the engineer simply screws down the emergency safety-plug and closes the opening over the fire, the conical end of the plug readily entering the hole in the original
60 safety-plug and its softness securing a steam-tight joint when screwed tightly in place. He may then inject more water into the boiler, regulate his fire according to requirements, and continue the boiler in service until it is
65 convenient to insert a new safety-plug. At such time the emergency-plug may, if necessary, be entirely removed by unscrewing the gland and the conical tip of soft metal be renewed.

Having thus described my invention, what 70
I claim as new, and desire to secure by Letters Patent, is—

The combination with a steam-boiler provided with a safety-plug, substantially as described, of an emergency safety-plug, com- 75
prising a gland adapted to be screwed into the boiler-shell, a tubular stem screwing into said gland, and provided with a suitable hand-wheel, and auxiliary stem screwing into said
80 tubular stem, and provided with a suitable set-nut, and a terminal, conical tip of soft metal secured in the end of said auxiliary stem.

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

FRANK KOSTLAN.

Witnesses:

J. F. KLADIVO,
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