

(No Model.)

F. GRINNELL.  
SPLICE.

No. 277,478.

Patented May 15, 1883.

Fig. 1 -

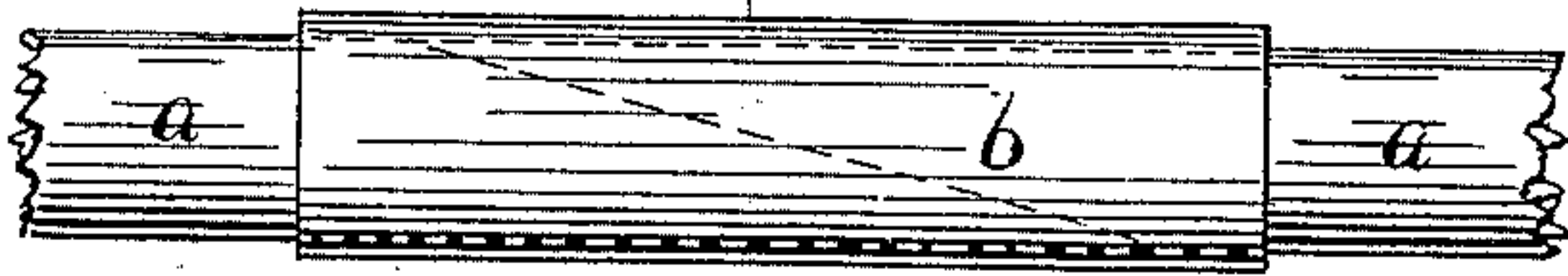


Fig. 2 -

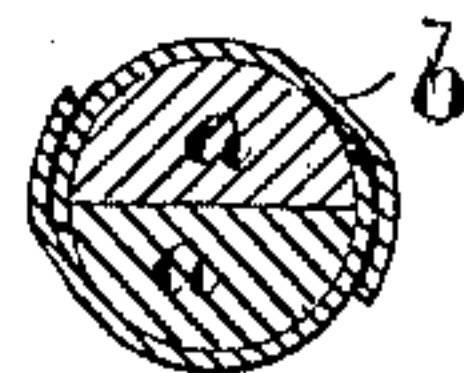


Fig. 3 -

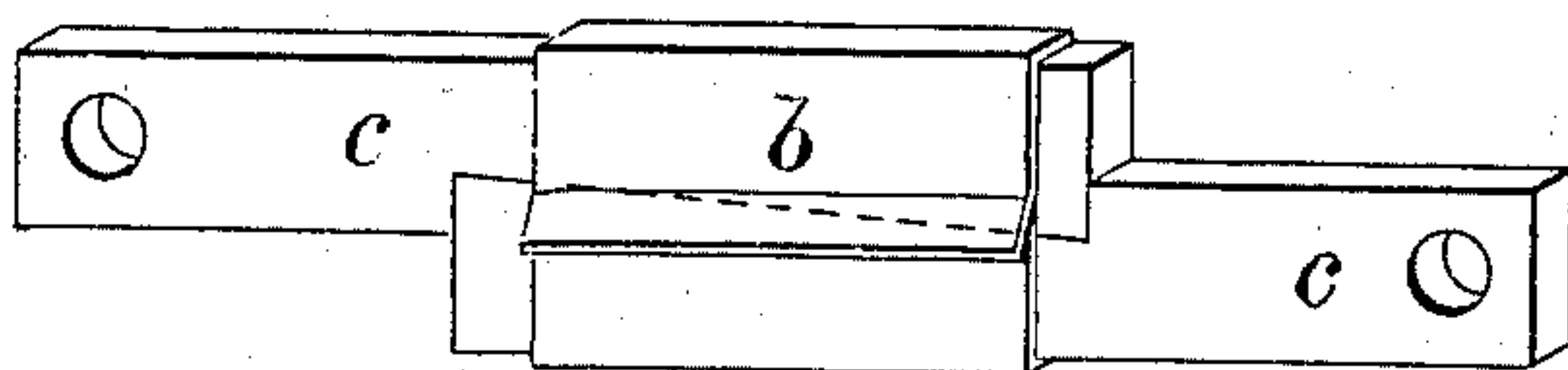


Fig. 4 -

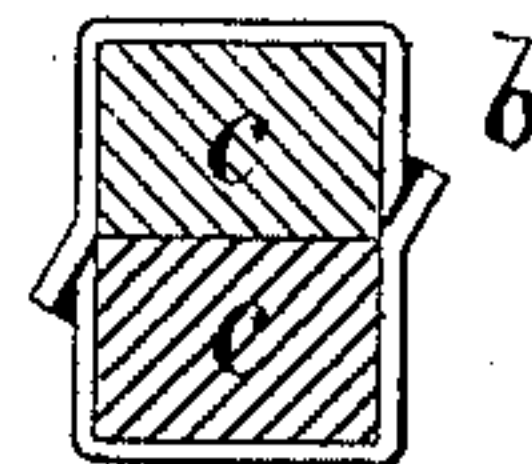


Fig. 5 -

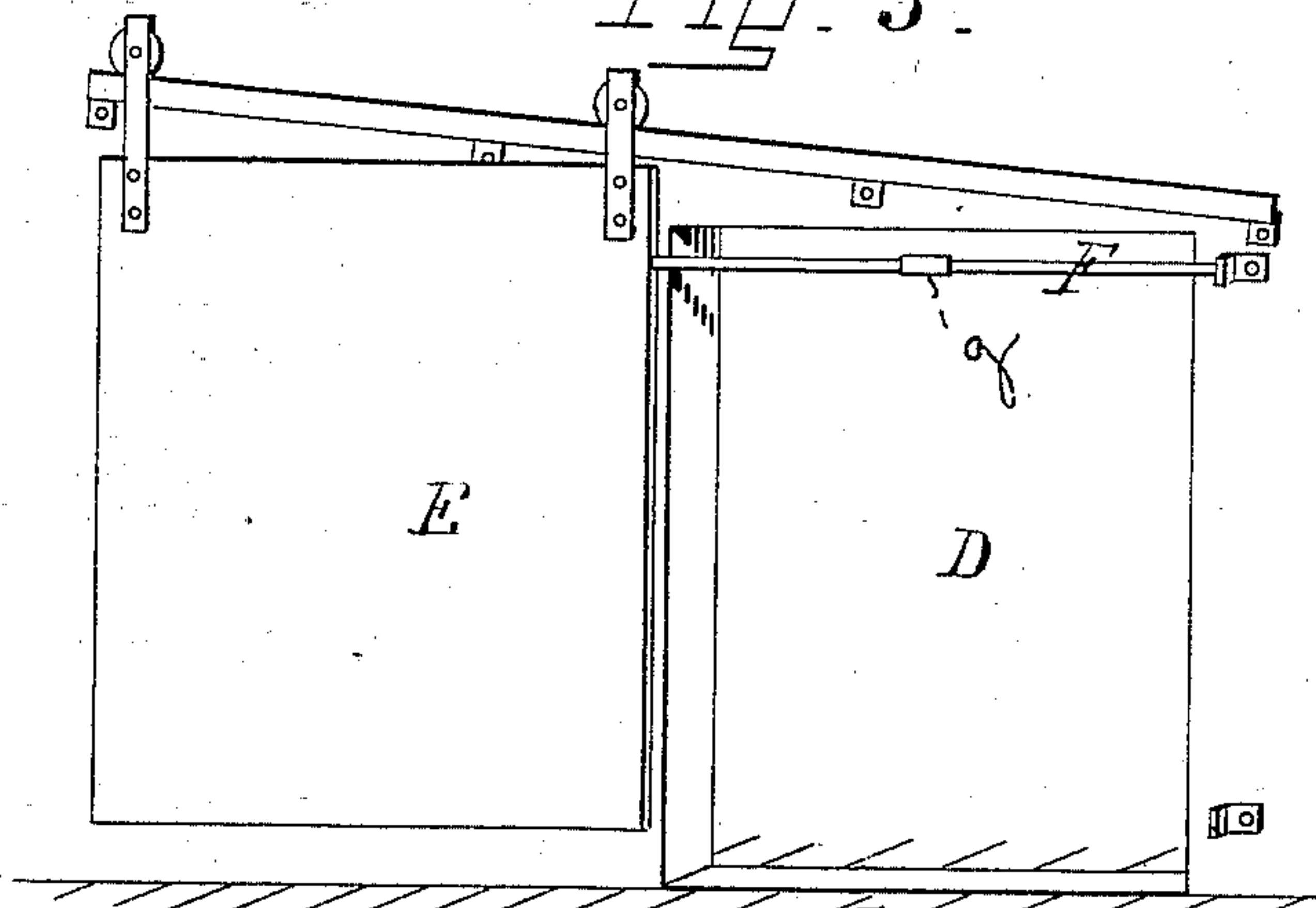
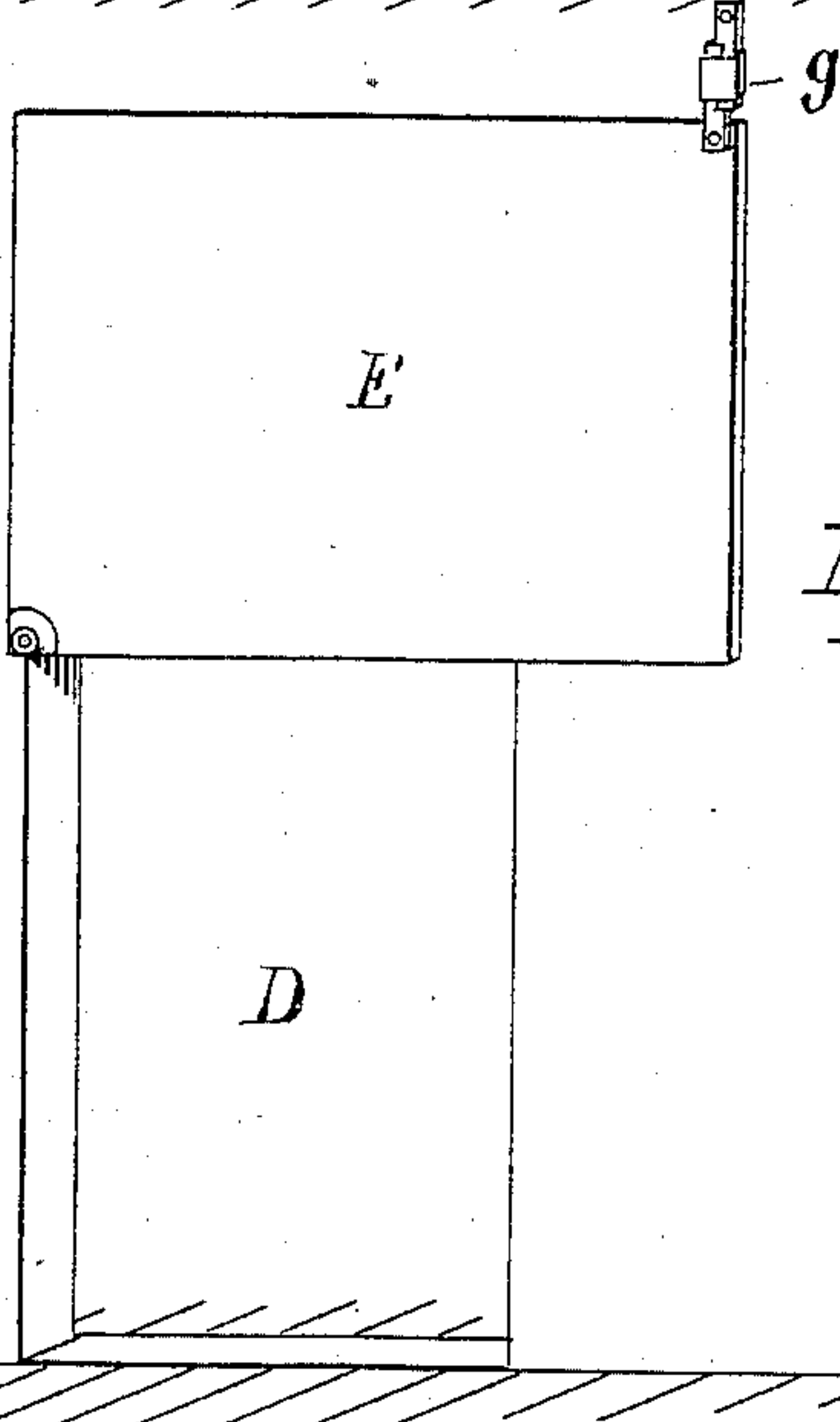


Fig. 6 -



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK GRINNELL, OF PROVIDENCE, RHODE ISLAND.

## SPLICE.

SPECIFICATION forming part of Letters Patent No. 277,478, dated May 15, 1883.

Application filed January 22, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK GRINNELL, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Splices; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

10 This invention has reference to an improvement in locking-bars, suspension-rods, links for connecting fire-alarm wires, suspending weights, and for other purposes in which any desired thing or article is to be released when a fire breaks out in a building.

15 The object of this invention is to construct a bar or link that will resist strain or thrust until by the breaking out of a fire a fusible solder is sufficiently heated to release the splice.

20 The invention consists in uniting a rod, bar, or link by means of a splice, and securing the two parts together by a sleeve made in two parts and united by a solder fusible at a low temperature, as will be more fully set forth hereinafter.

25 Figure 1 is a view of a rod surrounded with a sleeve. Fig. 2 is a sectional view of the same. Fig. 3 is a view of a connecting-link spliced and surrounded by a sleeve. Fig. 4 is a sectional view of the same. Fig. 5 is a view of a door kept open by means of a rod spliced and secured as shown in Fig. 1. Fig. 6 is a view of a door suspended by a link such as is shown in Fig. 3.

30 The spliced bar shown in Fig. 1 is used in places where a trust-stop is required to sustain anything that is to be released by the action of heat in case of a fire. The spliced link shown in Fig. 3—a modification of the spliced bar shown in Fig. 1—is used in places where any weight—such as a door, a valve, wires, shutters, or any other thing—is to be kept suspended until on the breaking out of a fire the same is to be released.

45 In the drawings, *a a* are two parts of a rod of any desired section. The ends are lapped over each other by a beveled splice. The splice is surrounded by the metal sleeve *b*, made in two parts and united by a solder fusible at a

low temperature. The sleeve firmly unites the two parts and prevents them from being pushed over each other until the heat generated by a fire sufficiently softens the solder to allow the sleeve to part under the strain exerted against the ends of the rod *a a*.

55 *c c* are two links, of any desired length, spliced together by a beveled splice and held in place by the sleeve *b*, made in two parts and united by a solder fusible at a low temperature, so that by the fusion of the solder the strain on the links *c c* will rupture the soldered joint and release the links.

60 Two applications of this device are shown in Figs. 5 and 6, in which *D D* are door-openings, and *E E* doors kept open by the rod *F* and link *g*, respectively, which in case of a fire will separate and allow the doors to close automatically. The devices can be used for many other purposes in buildings to protect them against fire, and their application will be well understood by those versed in the art of automatic fire protection.

70 The metal sleeve may be made of thin sheet metal and provided with one soldered joint only, as under ordinary conditions only one of the soldered joints will be released by heat before the metal sleeve separates.

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

1. A splice made by providing two parts with beveled or inclined surfaces, lapping the same over each other, and surrounding the splice with a sleeve made in two parts and soldered together with a solder fusible at a low temperature.

2. The combination, with the beveled ends of the rods *a a*, of the sleeve *b*, the parts thereof secured together by a solder fusible at a low temperature.

90 3. The combination, with the sleeve *b*, made in two parts, secured together by fusible solder, of two ends provided with beveled surfaces interlocked in the sleeve and constructed to rupture the solder when softened by heat, as described.

FREDERICK GRINNELL.

Witnesses:

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M. F. BLIGH.