

J. M. CLIFFORD.

RAILWAY SWITCH.

(Application filed May 6, 1901.)

(No Model.)

FIG. 1.

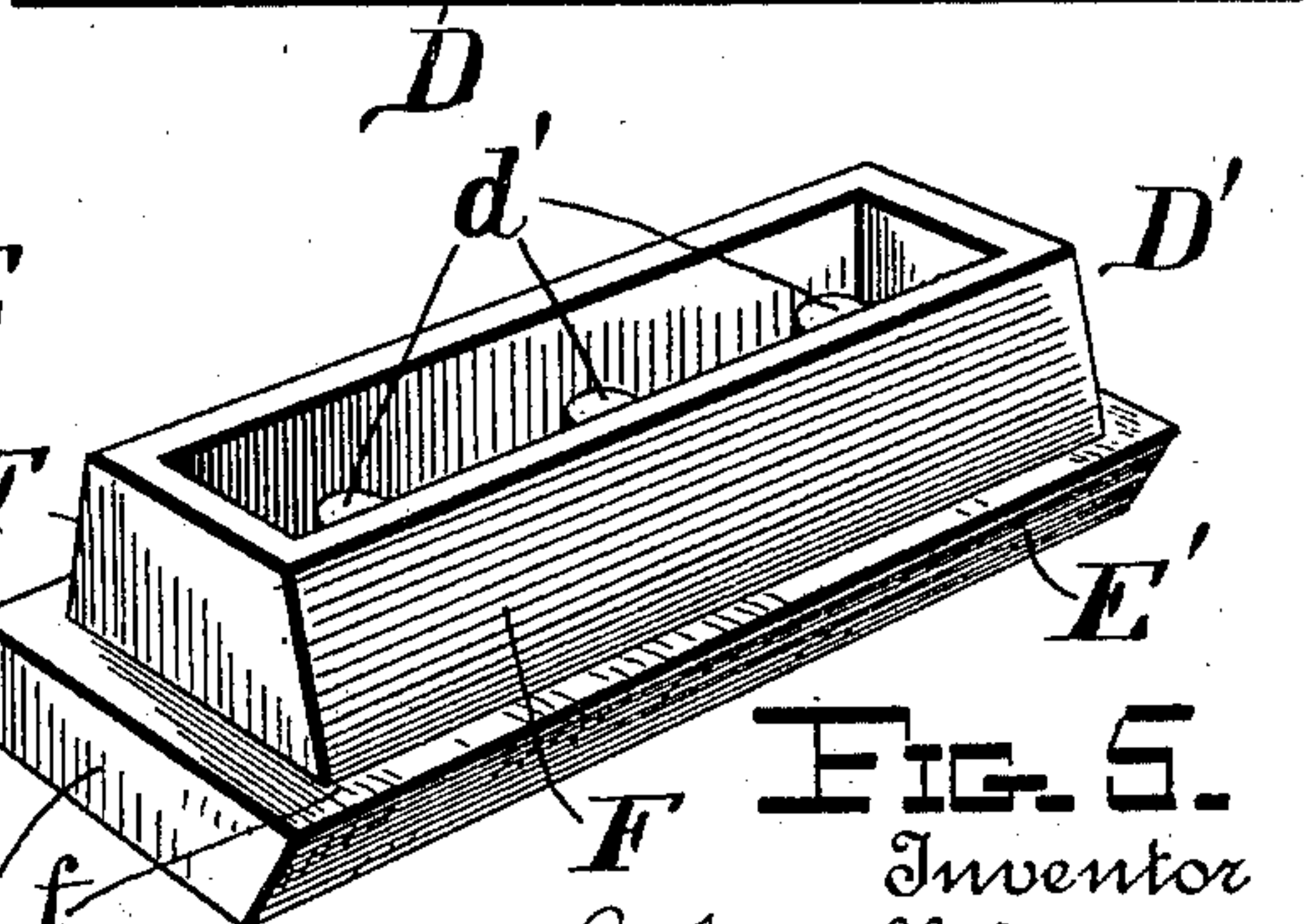
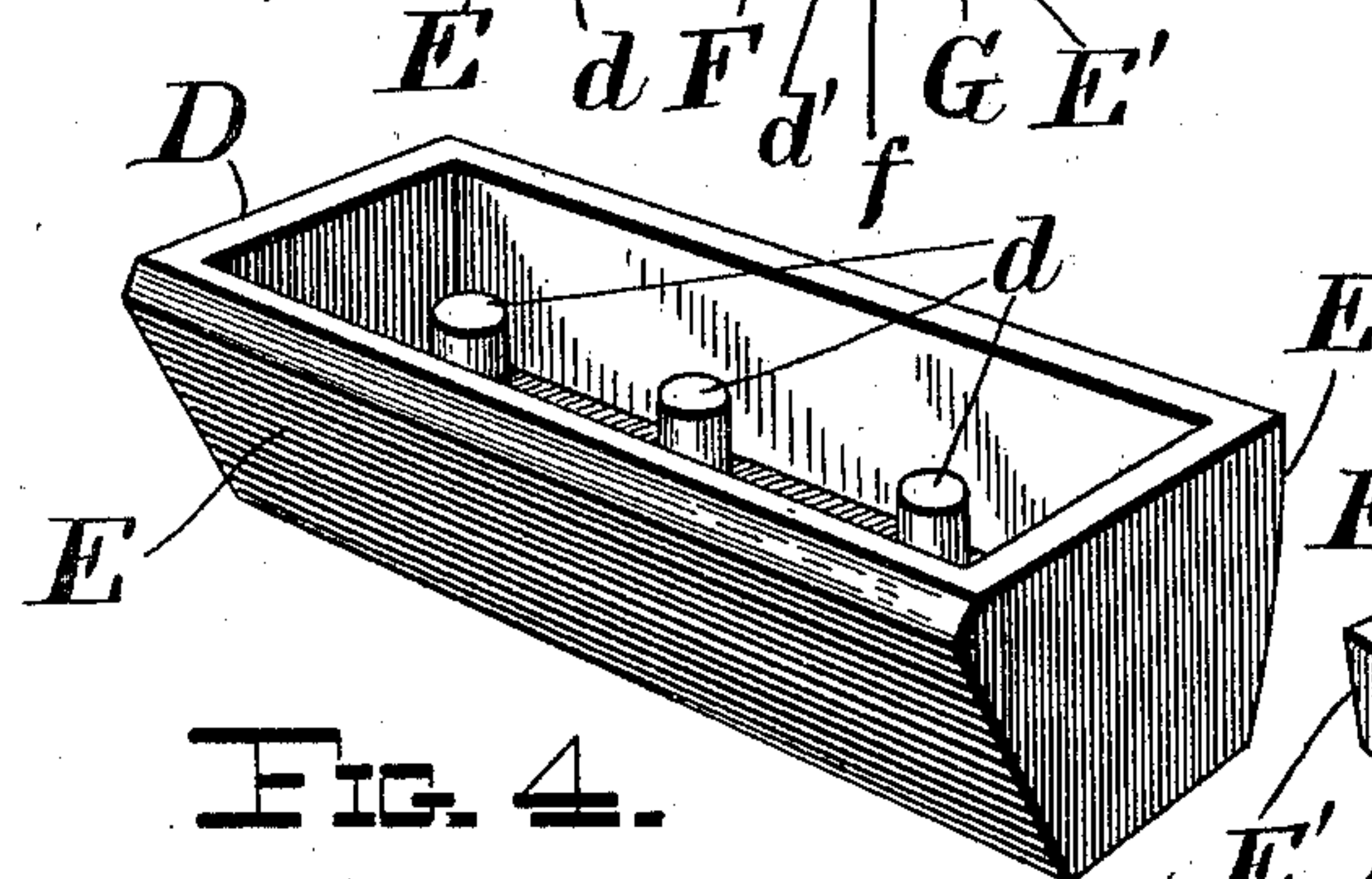
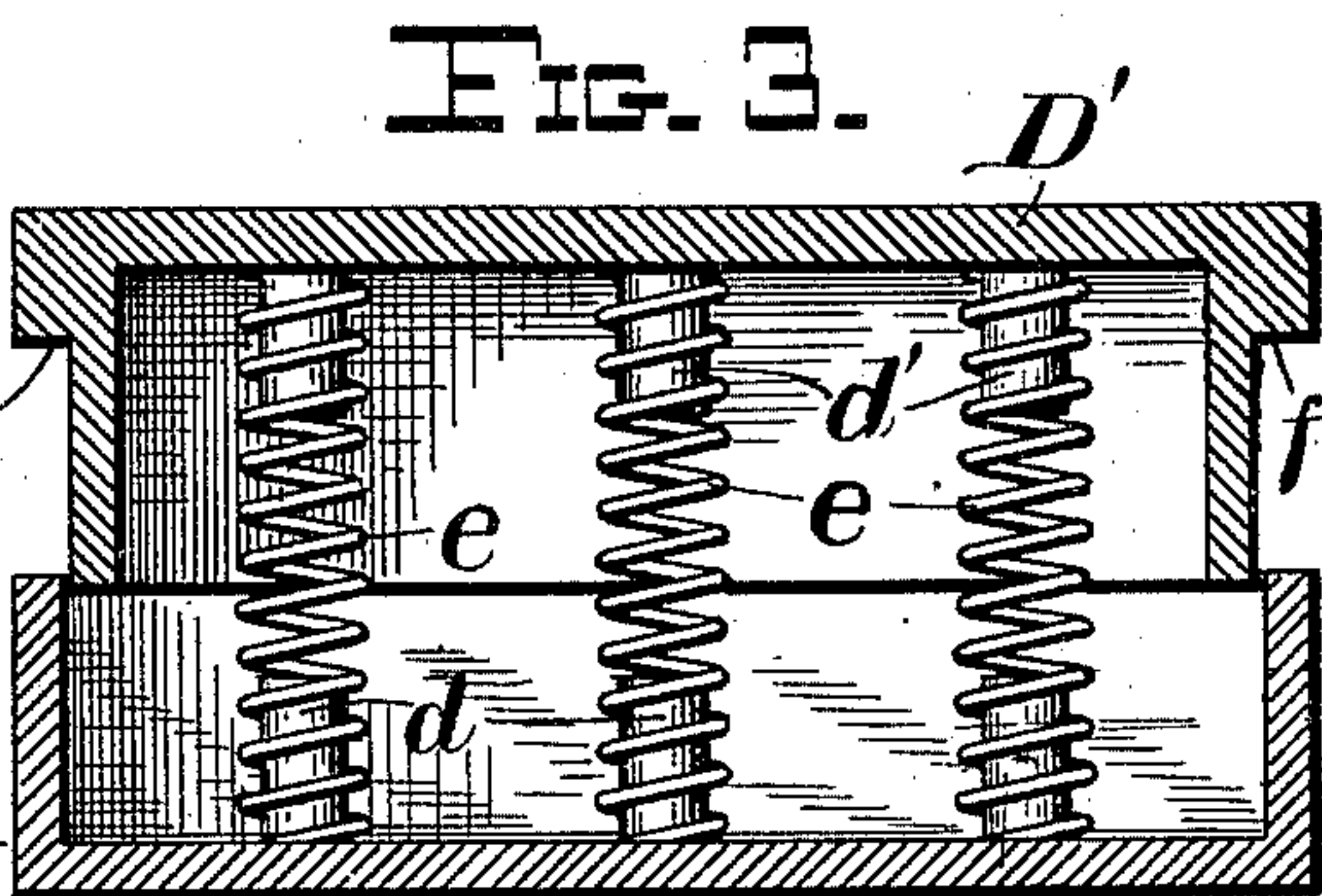
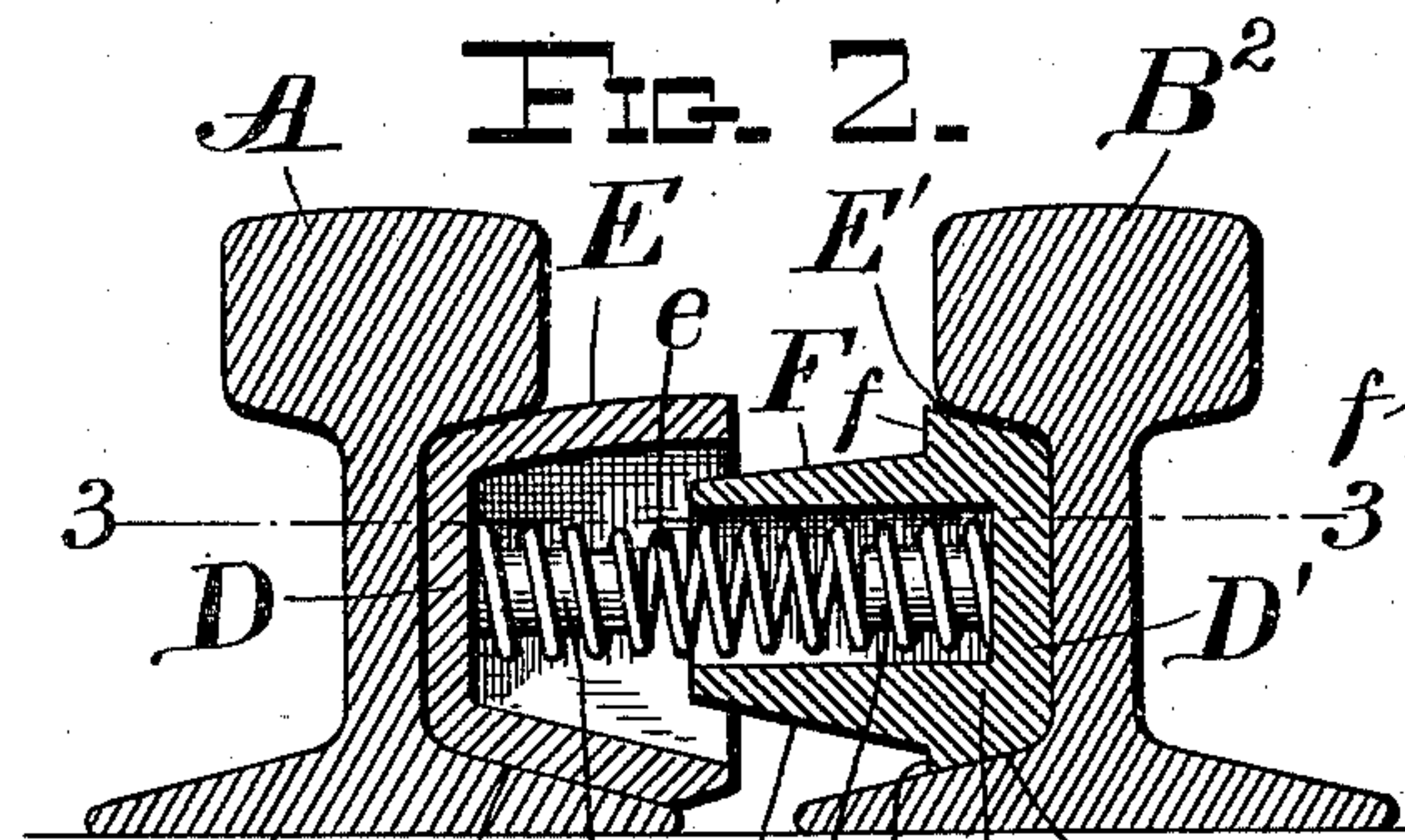
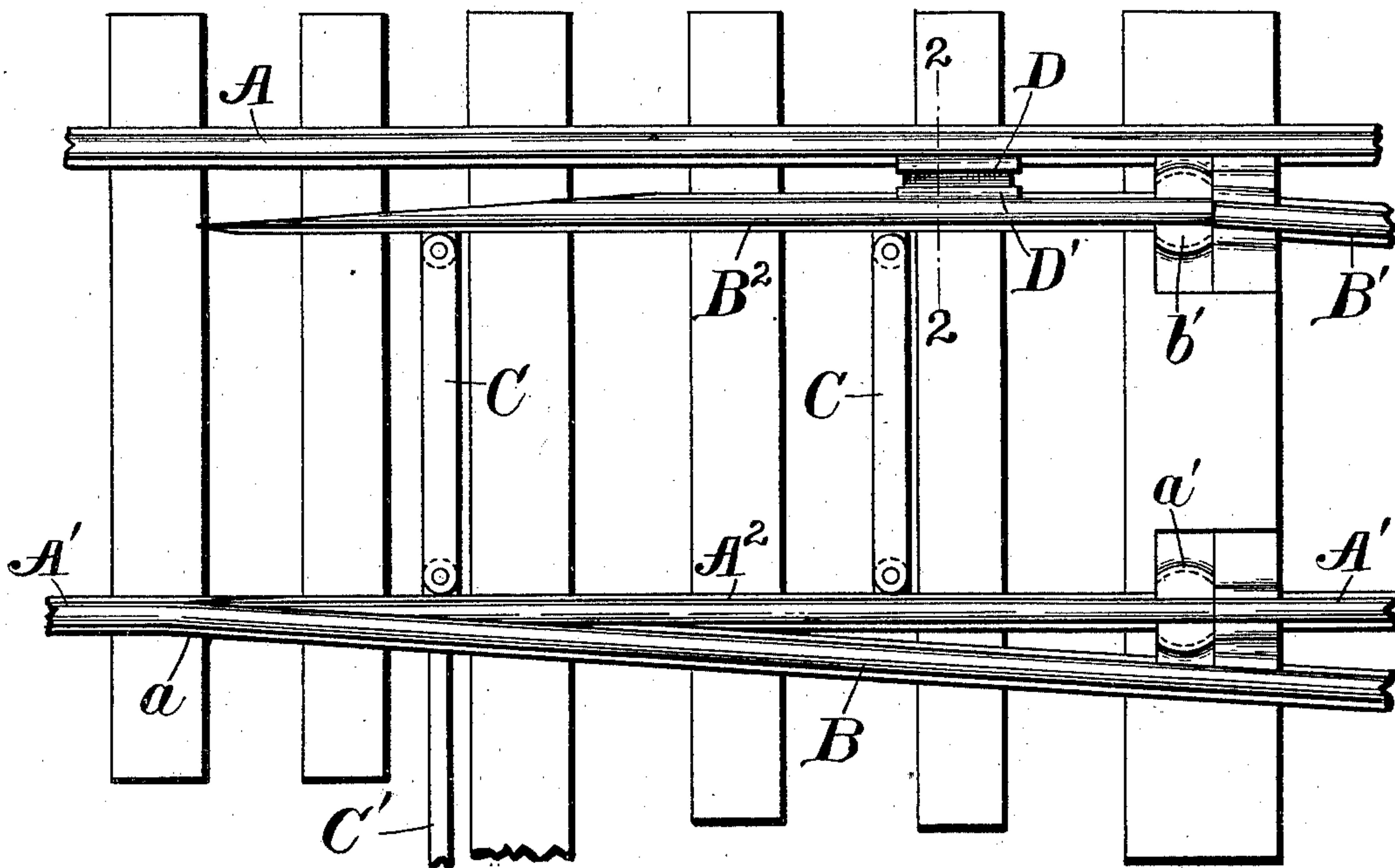


FIG. 4.

FIG. 5.

Witnesses

Percy C. Bowen.
Stephen Ginst.

Inventor

J. M. Clifford
by Wilkinson & Fisher
Attorneys.

UNITED STATES PATENT OFFICE.

JERRY M. CLIFFORD, OF IRON MOUNTAIN, MICHIGAN.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 683,383, dated September 24, 1901.

Application filed May 6, 1901. Serial No. 58,966. (No model.)

To all whom it may concern:

Be it known that I, JERRY M. CLIFFORD, a citizen of the United States, residing at Iron Mountain, in the county of Dickinson and State of Michigan, have invented certain new and useful Improvements in Railway-Switches; 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.

My invention relates to improvements in safety appliances for railway-switches, and primarily has for its object to provide a resilient means for the more securely holding the switch in the closed position when the traffic is over the main line and at the same time permitting the switch to be easily opened when it is desired to switch the train off from the main line.

With this end in view I have invented a device the peculiar construction and arrangement of the parts of which and its appliance to a switch will now be described, reference being had to the accompanying drawings, in which like letters refer to corresponding parts in the several views.

Figure 1 is a plan view of the ordinary split-rail switch, showing my device placed in operative position between the main rail of the main line and split point of the switch. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a longitudinal section of my improved device on the line 3 3 of Fig. 2. Fig. 4 is a perspective view looking at the interior of a section of the spring-containing casing forming part of my device, and Fig. 5 is a perspective view looking at the interior of another section of the spring-containing casing.

A A' A² represent the rails of the main line, the rail A being a continuous stationary rail—that is to say, the main rail of the main line—while the rail A' is a continuous stationary rail, but leading off at *a* to the main rail B of the siding, the rails B' B² forming the other rail of the siding. The rail A², which is a short rail for connecting the two sections of the rail A', is pivotally mounted at one end, as at *a'*, in proximity to one section of the rail A', and at its other end tapered off to make a close connection with the other sec-

tion of the rail A' where the same leads off to the siding. The rail or switch point B² is similar in construction to the rail A², being pivotally mounted, as at *b'*, and connects the main-line rail A with the rail B' of the siding. These two pivoted rails A² B² are connected together by transverse links C, one of which is provided with an extension C' for operating the switch-rails.

When the pivoted rail A² is in the position indicated in Fig. 1, the switch-point B² is drawn away from the main rail of the main line and the main line is closed for a straight run. It frequently happens, however, that from the jolting of the cars or other causes the rail A² is slightly separated from the rail A' at the point *a*, which allows the flange of the car-wheel to pass between the rail A² and the rail B, which results in the derailment of the cars, and the primary object of my device is for the purpose of keeping these rails close together when once closed.

Between the main-line rail A and the pivoted switch-point B², I provide a resilient means tending to separate the rails of a strength sufficient to keep the rail A² in close contact with the rails A' and B² when the main line is closed. This device consists of a box or casing D, the exterior, upper, and lower longitudinal sides of which are beveled, as at E, to fit snugly between the longitudinal webs of the rail A. The interior of this box or casing is provided with a series of studs *d*, which support one end of the coil-springs *e*. To the rail B², I secure a somewhat similar box or casing D', provided with the studs *d'*. The exterior surface of the upper and lower longitudinal sides of the box or casing D' are beveled, as at F, to fit within the box or casing D. The box D' is provided with the integral enlarged portion G, which is beveled, as at E', to fit snugly between the longitudinal webs of the switch-point B², and at the point where the enlarged portion G meets the sides of the casing D' is formed the edge *f*, which fits up against the casing D when the two sections come together. Of course it is obvious that it is immaterial whether the sections D, D', respectively, are secured to the rails A, B², respectively, and vice versa, and I may use resilient means for separating the two casings other than the coil-springs shown and

described without departing from the spirit of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a railway-switch, the combination with the pivoted switch-point, of means mounted between the main rail of the main line and the pivoted switch-point, said means comprising a box or casing, one section of which is secured to the main rail of the main line and the other section to the switch-point, and resilient means interposed between said sections, within said casing, for holding the sections apart when the main line is open, substantially as described.

2. In a railway-switch, the combination with the pivoted switch-point, of means mounted between the main rail of the main line and the pivoted switch-point, said means comprising a box or casing composed of two sections, movable one within the other, one of said sections adapted to be secured to the main rail of the main line and the other sec-

tion to said switch-point, lugs secured within said sections, and coiled springs supported by said lugs tending to separate said sections and hold the same apart when the main line is open, substantially as described.

3. In a railway-switch, the combination with the pivoted switch-point and main-rail section, means for tying said switch-point and pivoted main-rail section together, means for opening and closing said switch, means mounted between the main rail of the main line and said pivoted switch-point, comprising a box or casing composed of two sections, one movable within the other, and resilient means interposed between said casing-sections for holding the pivoted rail-section in close contact with the main line when said main line is open, substantially as described.

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

JERRY M. CLIFFORD.

Witnesses:

EDWARD J. HARVEY,
JAMES D. CUDLIP.