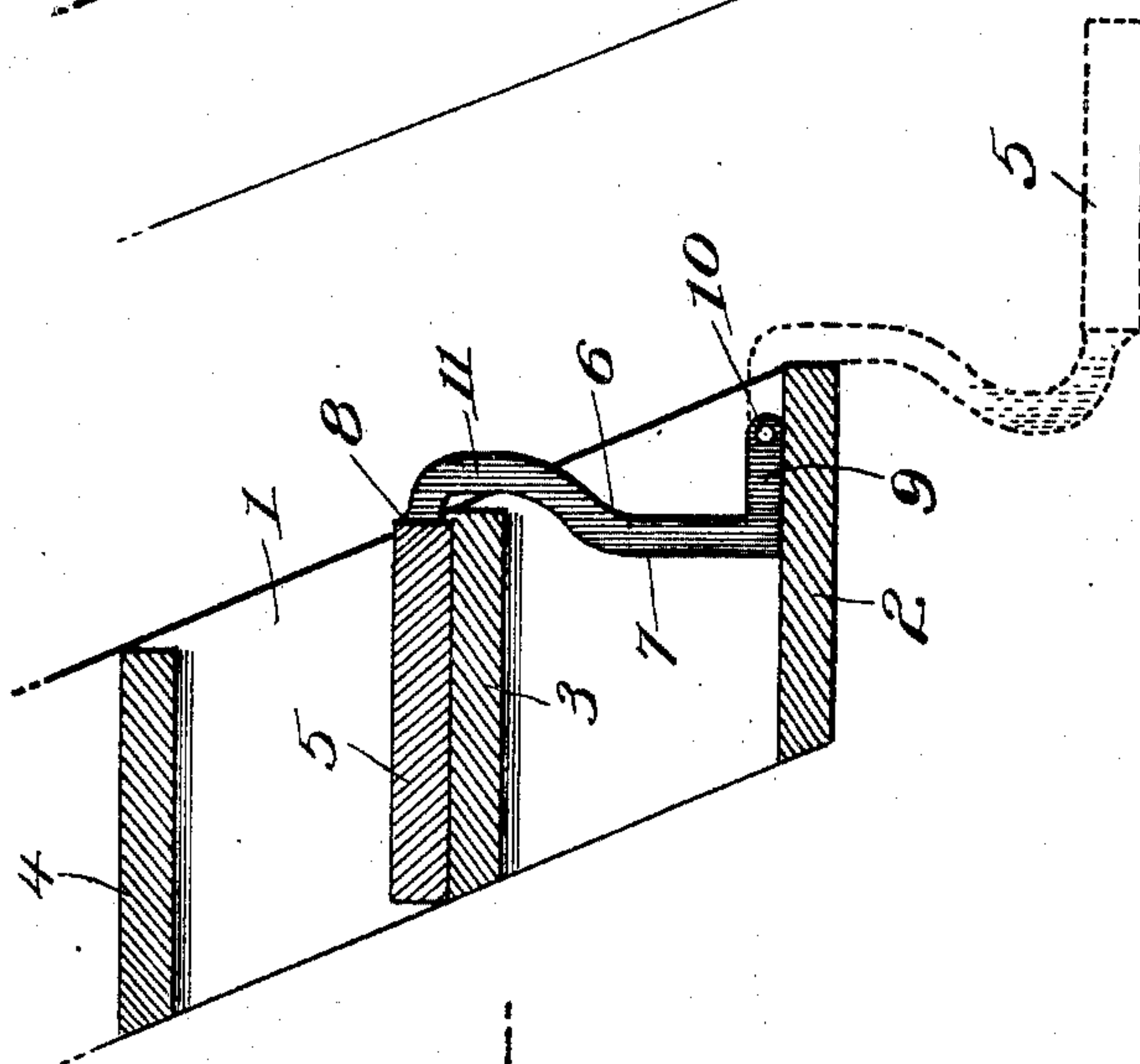
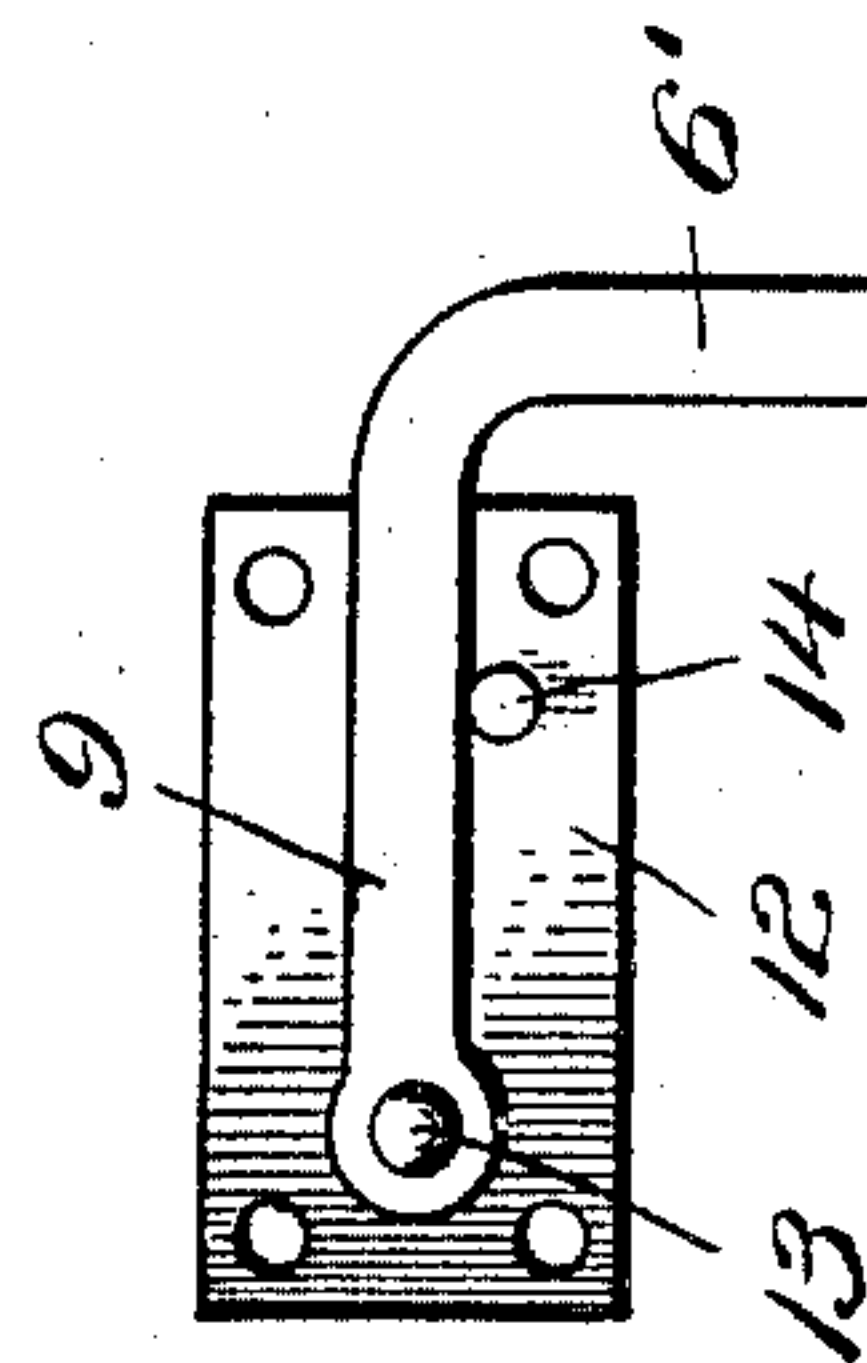
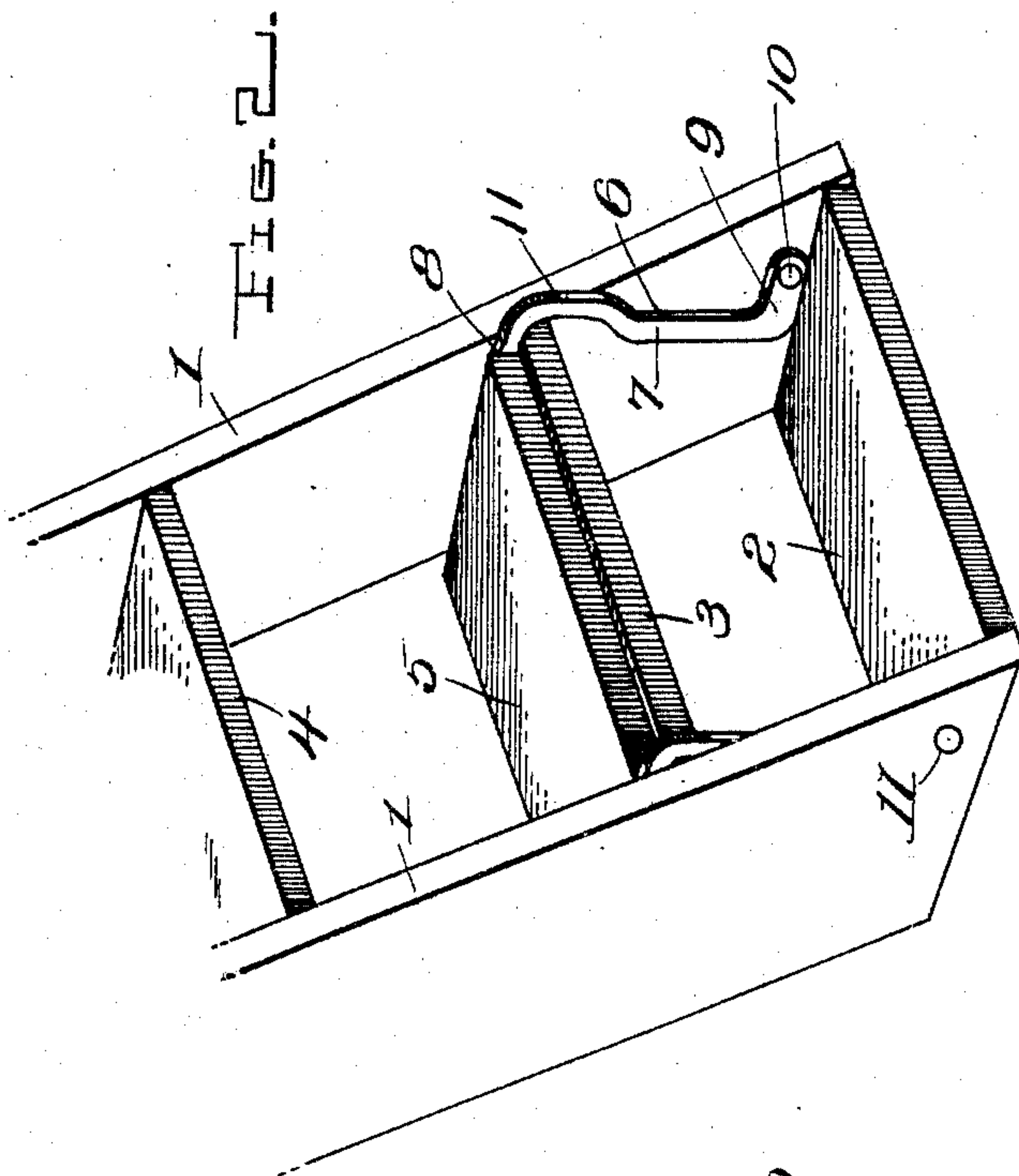


D. JONES.
EXTENSION STEP FOR CARS.
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928,128.

Patented July 13, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

DAVID JONES, OF PAUL, ILLINOIS.

EXTENSION-STEP FOR CARS.

No. 928,128.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed December 23, 1908. Serial No. 468,942.

To all whom it may concern:

Be it known that I, DAVID JONES, a citizen of the United States, residing at Paul, in the county of Pope and State of Illinois, have invented new and useful Improvements in Extension-Steps for Cars, of which the following is a specification.

This invention relates to extension steps for cars, the object of the invention being to provide a simple construction of extension step and means for pivotally mounting said extension step upon the main steps of a car whereby the same may be readily projected below the lower main step for use and retracted so as to rest when not in use upon one of the superposed main steps, and whereby the said extension step will be firmly held and braced in both positions.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:

Figure 1 is a vertical transverse section through the main steps, showing in full and dotted lines the extension step in retracted and projected positions. Fig. 2 is a perspective view of the same. Fig. 3 is a detail view illustrating a different manner of mounting the extension step.

Referring to the drawings, 1 designates the side rails of the main steps of a railway car, such as customarily employed on each side of each of the end platforms of the car, and 2, 3 and 4, respectively, designate the main steps, which are fixed to the rail. It will, of course, be understood that the framework and main steps may be of any construction in common use, and that no restrictions are made in this particular.

The supplementary step 5 is coextensive in size or substantially so, with each of the main steps, and is pivotally mounted so as to be swung to a retracted position over upon the main step 3, as shown in full lines in the drawing, and to be projected to hang below and in advance or outwardly from the main step 2, as shown in dotted lines in Fig. 1. To this end, the said supplementary step is secured at its sides to the free ends of a pair of swinging bracket arms 6, each comprising a body portion 7 having angularly bent ends 8 and 9 projecting in reverse directions. The free ends 8 are secured in any suitable manner to the side edges of the supplementary step, while the ends 9 are piv-

otally connected with the side rails 1 of the main steps by pivot pins or bolts 10, the length of the bracket arms being such and the pivot pins being so arranged as to permit the supplementary step to be swung to the described retracted and projected positions.

The angularly bent ends 9 of the bracket arms are so arranged as to rest squarely against the lower main step when the supplementary step is retracted, so that the bracket arms will serve as braces to sustain the steps 3 and 5 against the pressure of the weight of persons stepping thereon, and said ends 9 are also adapted to bear against the step 2, in such a manner as to allow the adjacent extremities of the body portions 6 of the brackets to bear against the front edge of said step 2 to support and sustain the supplementary step when projected in a firm and stable manner, thus obviating the use of auxiliary supporting devices. At their points of connection with the angular ends 8, the free extremities of the body portions of the brackets are offset or bent outwardly, as at 11, in a direction away from the end 8 and in the same direction in which the ends 9 extend, which offset portions are designed to permit the supplementary step to be swung fully over upon the main step 3 and to also serve as hand-holds or grasps by which the supplementary step may be manually swung to projected and retracted positions. It will thus be seen that during the running of the train, the supplementary step may be folded upwardly to an out of the way position in which it will be supported by the second main step 3, and that when the train reaches a station, the supplementary step of the main steps at the side of the train facing the station may be turned downwardly to the dotted line position shown in Fig. 1, to enable persons to ascend and descend the main steps with facility, the supplementary step taking the place of the box commonly employed between the ground or platform and the lower main step 2.

Instead of pivotally connecting the lower ends of the bracket arms directly to the main rails 1, supporting plates 12 may be secured to said rails, and each supporting plate may be provided with a pivot pin or stud 13 on which the bracket arm 6' is pivotally mounted, and may also be provided with a stud or projection 14 serving as a stop to limit the downward movement of the bracket arm

when the supplementary step is projected, and to sustain and brace said arm. Either of these modes of mounting the bracket arms may be employed in practice.

5 Having thus fully described the invention, what is claimed as new, is:—

1. The combination with the main steps of a railway car, of a supplementary step shorter than said main steps, and bracket
10 arms for supporting said supplementary steps, each of said bracket arms having integral right angularly bent ends projecting in reverse directions in parallel relation and provided adjacent one of said end portions
15 with a pronounced offset, said ends of the bracket arms being secured to the side edges of the supplementary step to swing the said step over upon one of the main steps and to occupy the spaces between the ends of said
20 supplementary step and sides of the main steps when the supplemental step is folded, the other ends of said bracket arms being pivotally mounted upon the sides of the main step to permit the arms to be swung
25 downward or upward to vertical position and to rest in both positions upon the lower main step, the said offsets being adapted to extend outwardly from and without contact with the upper main step on which the supplementary
30 step is adapted to fold, to permit said supplementary step to rest squarely upon the main step, substantially as described.

2. The combination with the main steps

of a railway car, of a supplementary step 35 shorter than said main steps, and bracket arms for supporting said supplementary steps, each of said bracket arms having integral right angularly bent ends projecting in reverse directions in parallel relation and
40 provided adjacent one of said end portions with a pronounced offset, said ends of the bracket arms being secured to the side edges of the supplementary step to swing the said step over upon one of the main steps and to
45 occupy the space between the ends of said supplementary step and sides of the main steps when the supplemental step is folded, the other ends of said bracket arms being pivotally mounted upon the sides of the
50 main step to permit the arms to be swung downward or upward to vertical position and to rest in both positions upon the lower main step, the said offsets being adapted to extend outwardly from and without contact
55 with the upper main step on which the supplementary step is adapted to fold, to permit said supplementary step to rest squarely upon the main step, and stop devices on the sides of the main steps for limiting the
60 downward pivotal movement of the bracket arms.

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

DAVID JONES.

Witnesses:

GUY GLASS,
LUKE GILLIAM.