

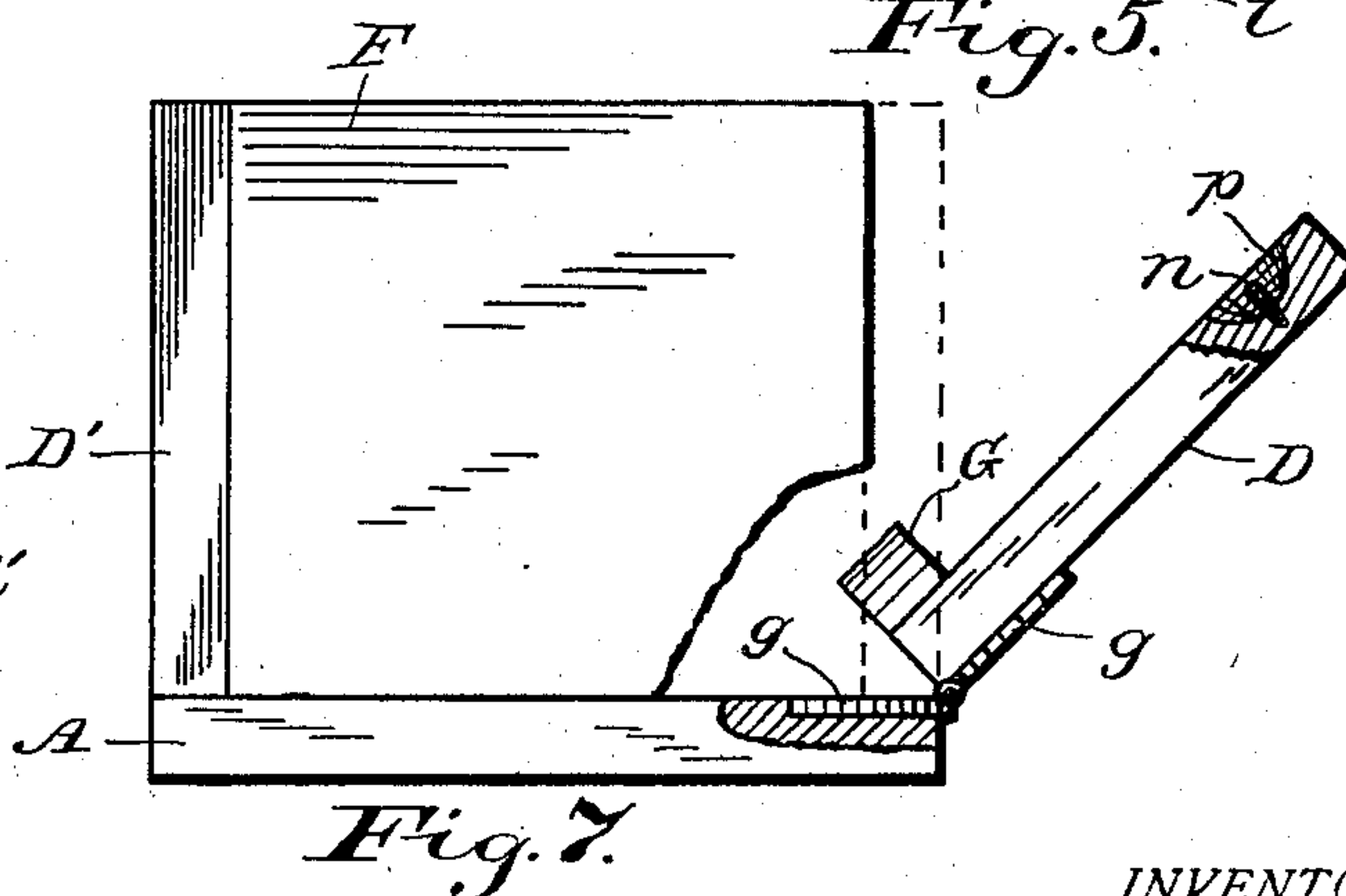
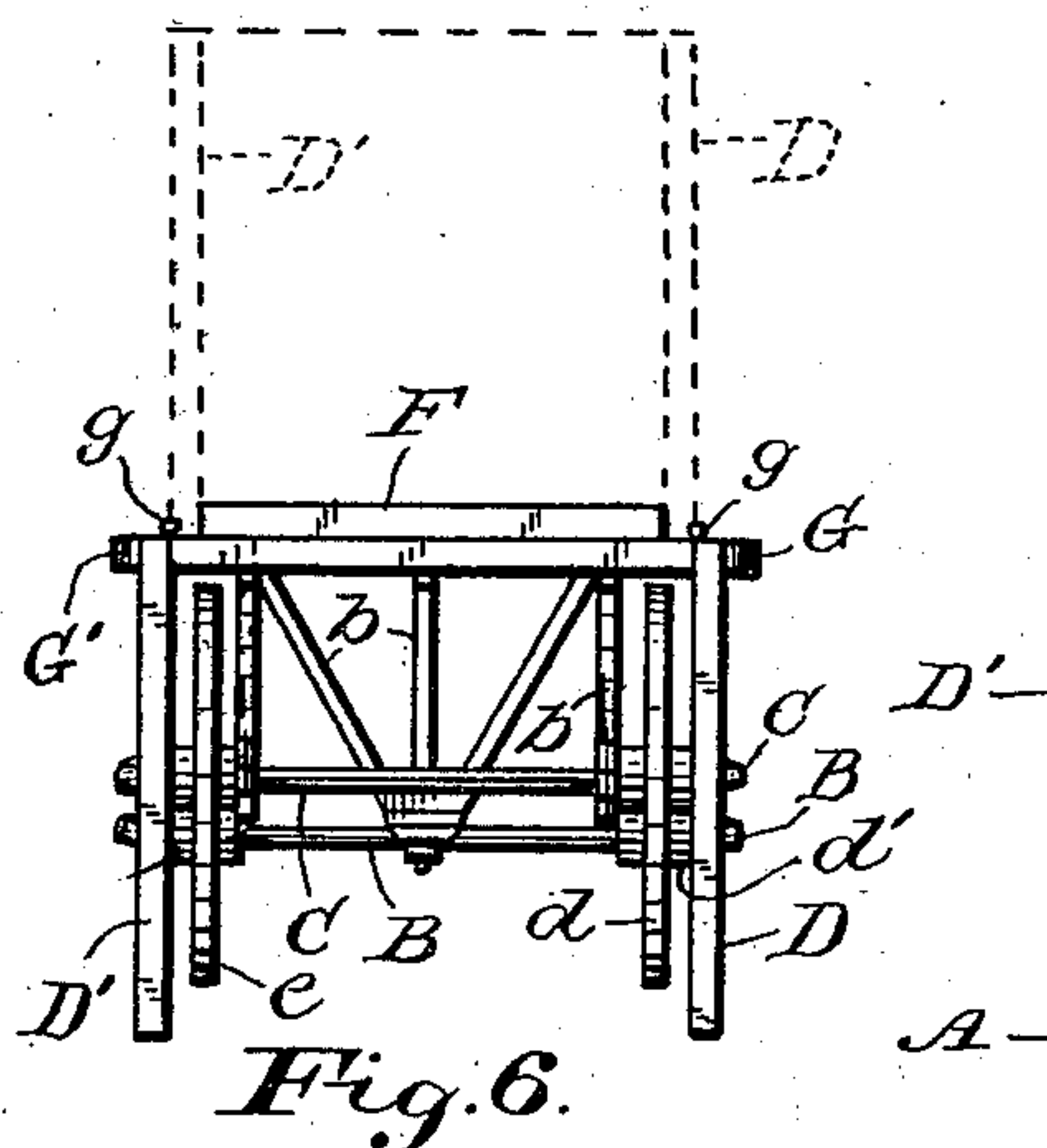
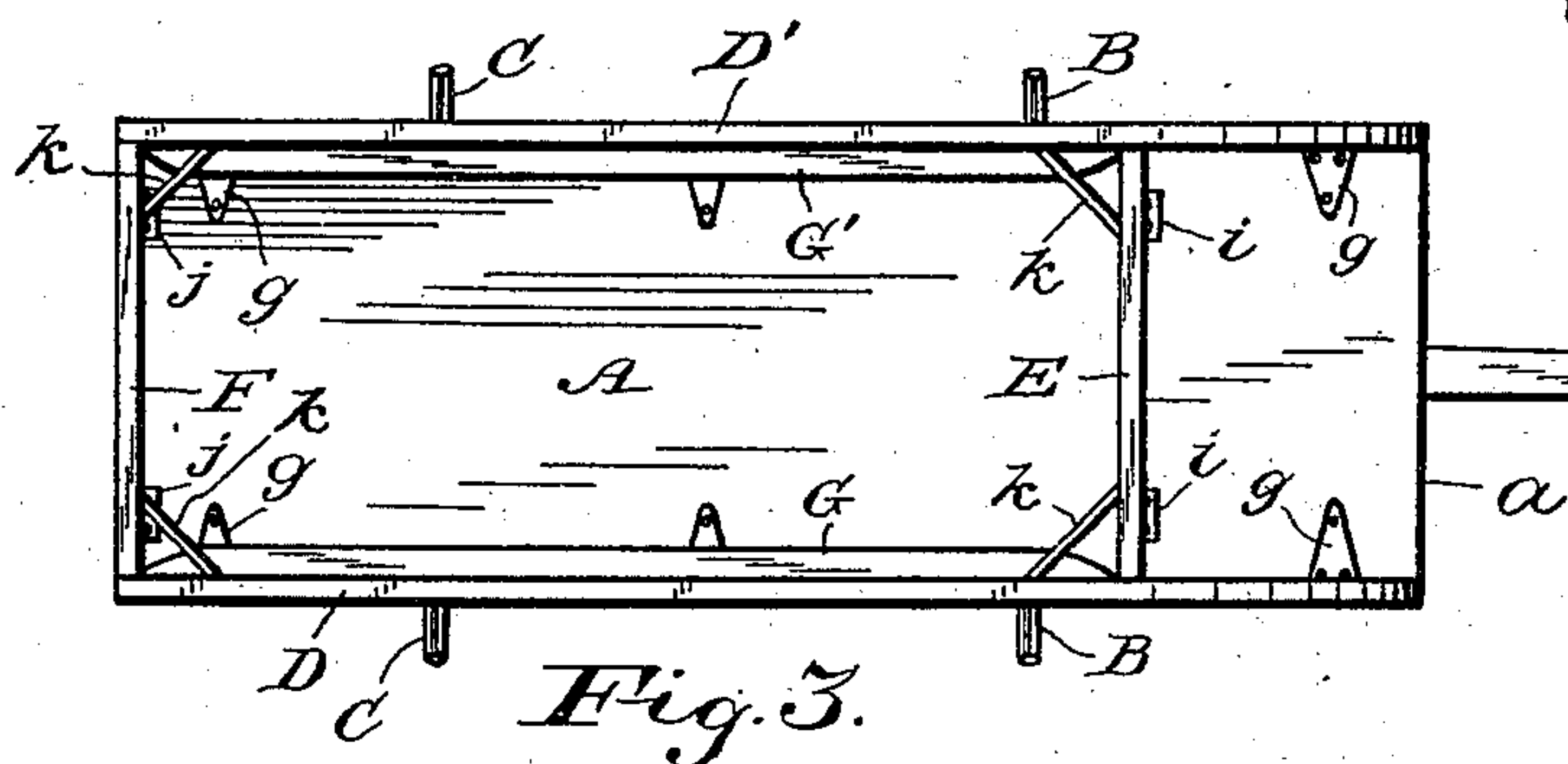
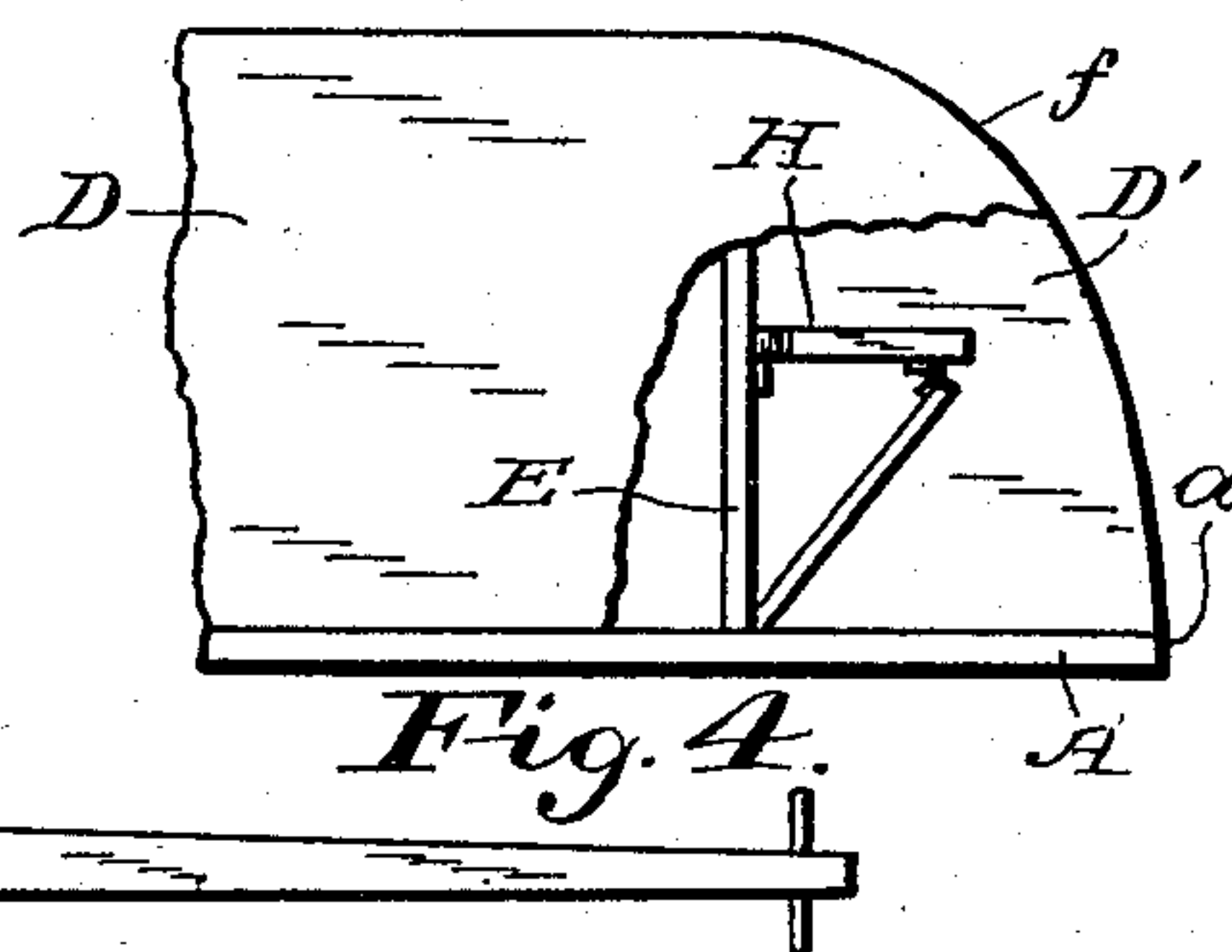
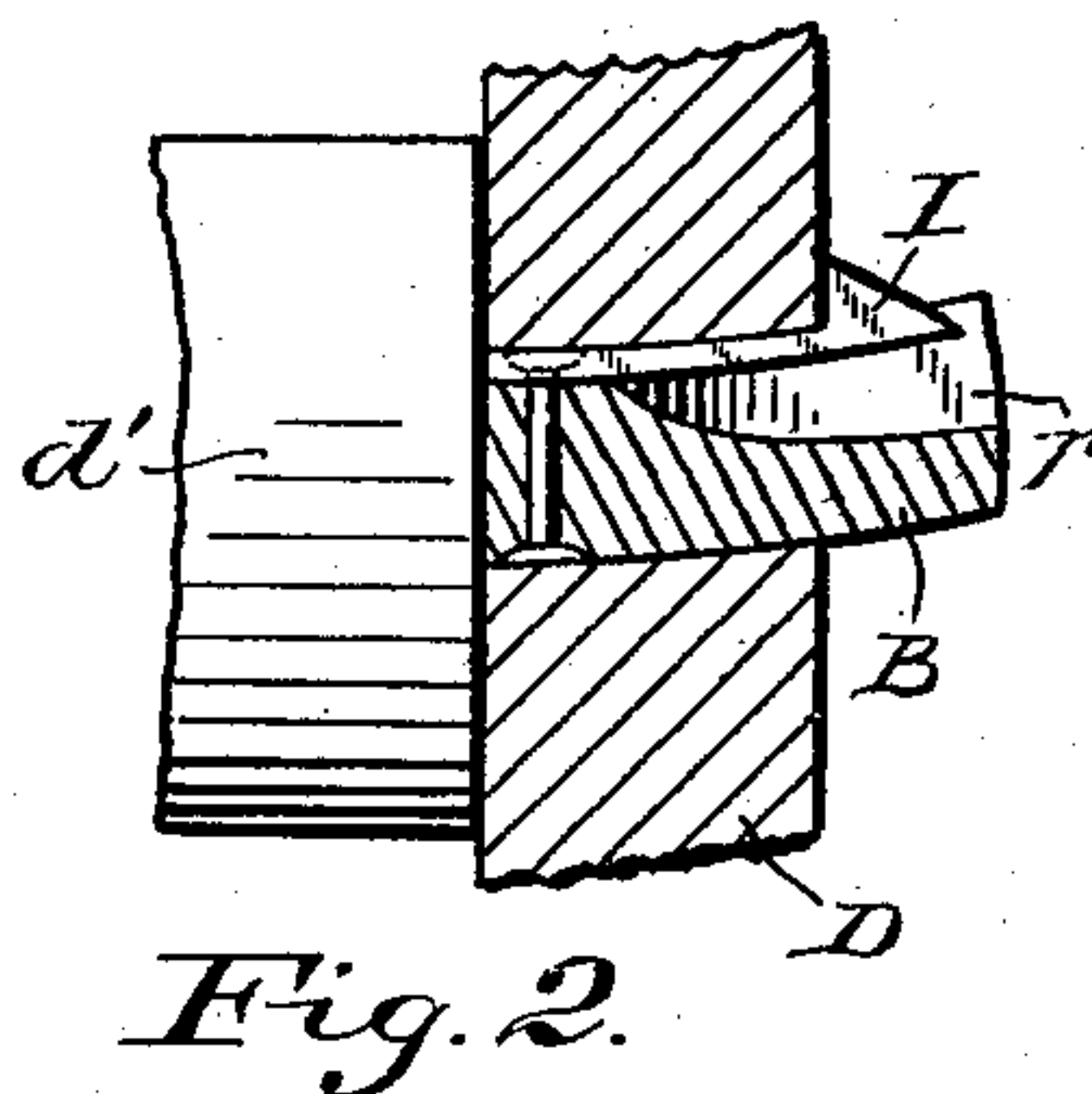
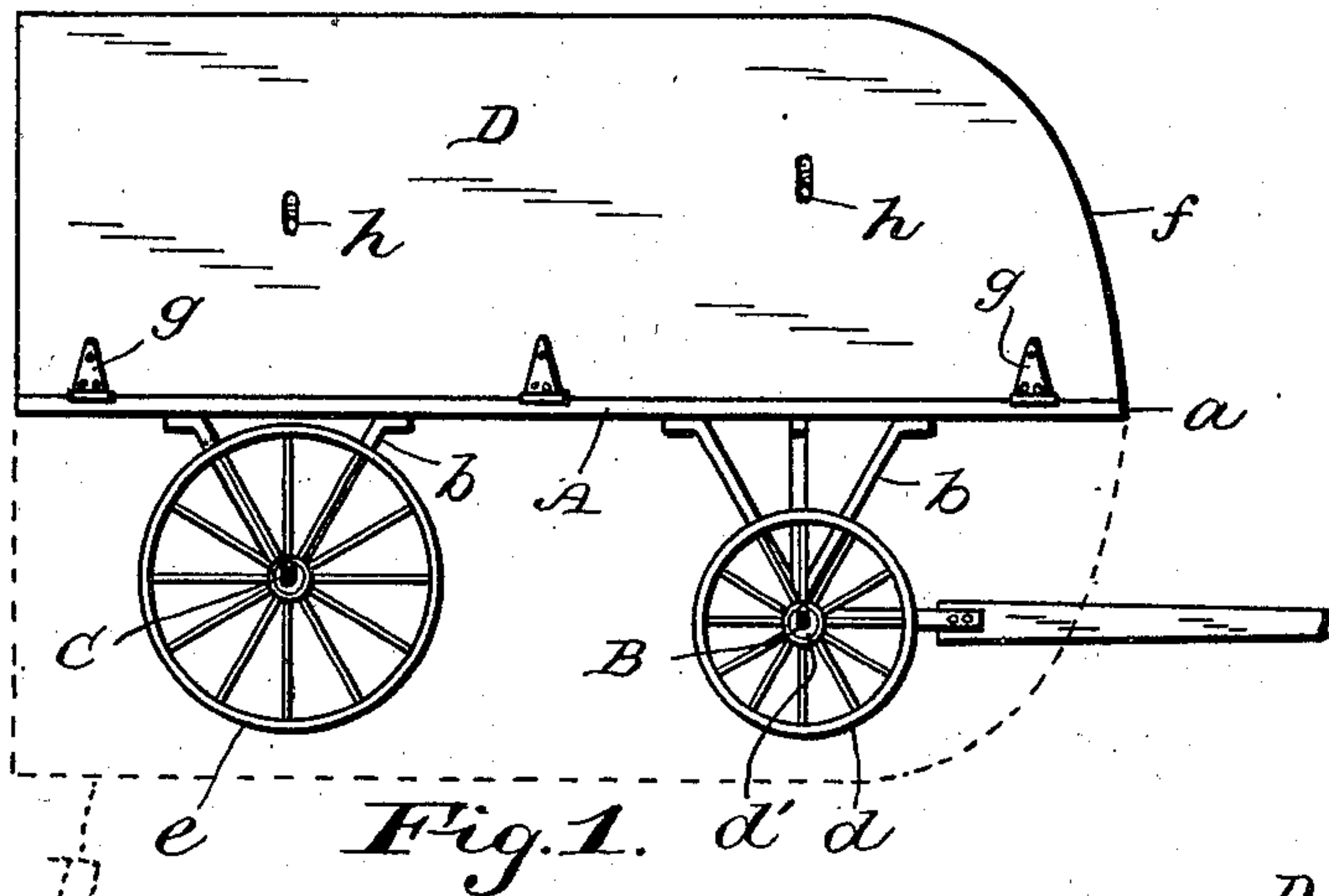
No. 702,677.

Patented June 17, 1902.

J. L. POTTER & H. E. COHEN.
CONVERTIBLE WAGON OR SLED.

(Application filed Mar. 7, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOSEPH L. POTTER AND HARRY E. COHEN, OF INDIANAPOLIS, INDIANA.

CONVERTIBLE WAGON OR SLED.

SPECIFICATION forming part of Letters Patent No. 702,677, dated June 17, 1902.

Application filed March 7, 1902. Serial No. 97,100. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH L. POTTER and HARRY E. COHEN, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Convertible Wagons or Sleds; and we do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to vehicles that are designed to be instantly converted either from wagons to sleds or from sleds to wagons, and it has reference more particularly to hand-vehicles of this character that are adapted for the use of children for both summer and winter seasons of the year.

The object of our invention is to generally improve the construction of convertible vehicles of this character and provide combined self-contained wagon and sled elements which may be cheaply constructed and be durable and economical in use and which may be quickly transformed without requiring the removal and laying aside of any part of the vehicle that might become misplaced or lost, and thus impair the usefulness of the vehicle.

Our invention consists in providing novel axles for the vehicle, novel hinged body sides for the wagon that may be transformed into sled-runners at will and secured to the axles in a novel manner; and the invention consists also in the new and useful combination of parts, as hereinafter particularly described, and pointed out in the claims.

Referring to the drawings, Figure 1 represents in side elevation a vehicle constructed substantially in accordance with our invention, showing in dotted lines the contour thereof when transformed from a rolling to a sliding vehicle; Fig. 2, a sectional detail view of an end of one of our improved axles, together with a part of a sled-runner connected thereto; Fig. 3, a top plan view of the vehicle as it appears when arranged as a wagon; Fig. 4, a fragmentary side view of the vehicle-body, showing a front seat therein; Fig. 5, a fragmentary detail view; Fig. 6, a rear end elevation of the vehicle as it appears when converted into a sled, the dotted lines indicating the positions of parts when arranged as a wagon; and Fig. 7, an enlarged detail

view of the rear end of the vehicle-body, portions being broken away and showing a combined body side and a sled-runner as it would appear when being transformed from one to the other operative element.

Similar reference characters in the several figures of the drawings indicate corresponding parts.

In construction we employ the most suitable well-known materials, such as wood and the metals, and we provide a body which may be variously formed and ornamented, comprising a member A, which may constitute either the bottom of the wagon-body or the top or seat of the sled and which in use always has the same surface presented uppermost, the part *a* being the forward end thereof. The main parts of the axles B and C may be variously formed and are attached by suitable members *b* to the member A. The four wheels, as *d* and *e*, may be of any desired type suitable for the purpose and may be connected to the axles in the usual manner. In order to utilize the axles as features of our improvements, we so design them that when the wheel-hubs *d'* are in their proper positions on the axles the outer ends of the hubs will preferably be in the same vertical planes as the side edges of the member A, and portions of the axles shall extend somewhat beyond the hubs, or if hubs be set farther in the axle-nuts or linchpins may occupy the above-described positions relative to the member A. The extremities of the axles are suitably adapted to have the sled-runners attached thereto, as will be hereinafter further referred to. Combined body sides and sled-runners D D' extend along the side edges of the member A and are connected thereto by means of suitable hinges *g*, so that when erect upon the member A as side-boards the outer faces thereof will be flush with the edge faces of the member A, and when the parts D D' are arranged as sled-runners the outer faces thereof will bear against the edge faces of the member A, the upper edge faces of the runners flush with the upper surface of the sled top or seat. The forward ends of the parts D D' are suitably formed as runner front ends *f*, and in the body portions of said parts are apertures *h h*, through which the extremities of the axles may extend, the apertures being suitably situate for the purpose, so as to register with the axles when occasion requires.

Near the forward part of the vehicle-body an end-board E may be connected to the member A by hinges *i i*, extending between the side-boards, and a tail-board F may be likewise connected by hinges *j*. Suitable couplers *k* connect the side-boards and end-boards together, the couplers being adapted to be unobstructive, as hooks attached to eyes *l* in recesses *m*, operating in connection with eyes *n* in recesses *p*.

In order to attach the parts D D' when arranged as runners to the axles, suitable latching devices are provided, which may be made in various forms, such as spring-catches I, set in recesses *r* in the upper sides of the axles, which may be pressed into the recesses when the runners are being moved on or off the axles and which will automatically engage and retain the runners when the latter are seated as designed.

In some cases a detachable seat H may be connected to the front board E, if desired.

In order to provide handholds when the vehicle is converted into a sled, ribs G G' are attached to the parts D D' in proper positions so that they will project from the outer upper faces of the parts D D' when arranged as runners, and when the latter are arranged as body sides the ribs will lie upon the member A against the side-boards.

It will be obvious that many minor modifications may be made in the details of construction within the spirit and intent of our invention.

In practical use assuming that the vehicle is arranged as a wagon, substantially as shown in Figs. 1 and 3, and that it is desired that it be transformed into a sled the couplers may be disengaged, the sides of the body D D' swing outwardly and downwardly until the axles enter the apertures *h h*, and the latches operate and secure the parts, now comprising runners, to the axles. The sled will now be formed, and the wheels *d e* will be elevated, so as to clear the ground, the runners supporting the body of the vehicle. The boards E and F may be allowed to stand up as back and foot rests, or they may be folded down upon the sled-seat, and the seat H, if provided, may serve as a foot-rest, or it may be removed. By reverse operations the sled may be as quickly transformed or converted into the wagon form of vehicle.

Having thus described our invention, what we claim as new is—

1. The combination with the body bottom having the hinges attached thereto, and the axles, of the body sides attached to said hinges and having the apertures in the body portions thereof to receive the ends of the axles, whereby the body sides may be permitted to swing down from the body bottom as runners, substantially as set forth.

2. The combination with the body bottom having the hinges attached thereto, the wheels, and the axles projecting through the wheel-hubs, of the body sides attached to said

hinges and having the apertures to receive the projecting portions of said axles, said sides being at the outer ends of said hubs and said axles extending through said apertures, and the latches securing said sides to said axles, substantially as set forth.

3. In a convertible wagon or sled, the combination of the non-invertible combined body bottom and sled-top, the leaf-hinges secured to the sides of said bottom and top, the combined body sides and runners having each the pair of apertures in the body portions thereof and secured at edges thereof to said hinges, the folding end-boards, the wheels, the axles projecting through the wheel-hubs and adapted to enter said apertures, the latches in engagement with the ends of said axles and also with said sides and runners adjacently to said apertures, the fastening devices attached to said end-boards, and the fastening devices attached to said sides and runners to cooperate with said devices attached to said boards, substantially as set forth.

4. In a convertible wagon or sled, the combination of the wheels, the axles having the extremities projecting through the wheel-hubs, the runners having the apertures therein and situated at the outer ends of said hub with said axles extending into said apertures, and latches securing said runners to said axles, substantially as set forth.

5. The combination with the runners having the apertures therein, of the axles in said apertures and having the recesses in the extremities thereof, the latches secured in said recesses and engaging said runners at said apertures, the hinges secured to said runners, and the top secured to said hinges, substantially as set forth.

6. In a convertible wagon or sled, the combination of the wheels, the axles projecting beyond the wheel-hubs and adapted to have the runners attached thereto, the non-invertible combined body bottom and sled-top mounted upon said axles, the hinges attached to the edges of said bottom and top, the combined body sides and sled-runners secured to said hinges and having the apertures in the body portions thereof adapted to receive the extremities of said axles, the latches cooperating with said axles and with said sides and runners at said apertures, the ribs attached to the inner sides of said body sides upon said bottom and top, the end-boards, and the fastening devices cooperating with the end-boards and with said body sides, parts of said fastening devices being recessed in said body sides, substantially as and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH L. POTTER.
HARRY E. COHEN.

Witnesses:

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JULIE ROTBART.