

No. 616,215.

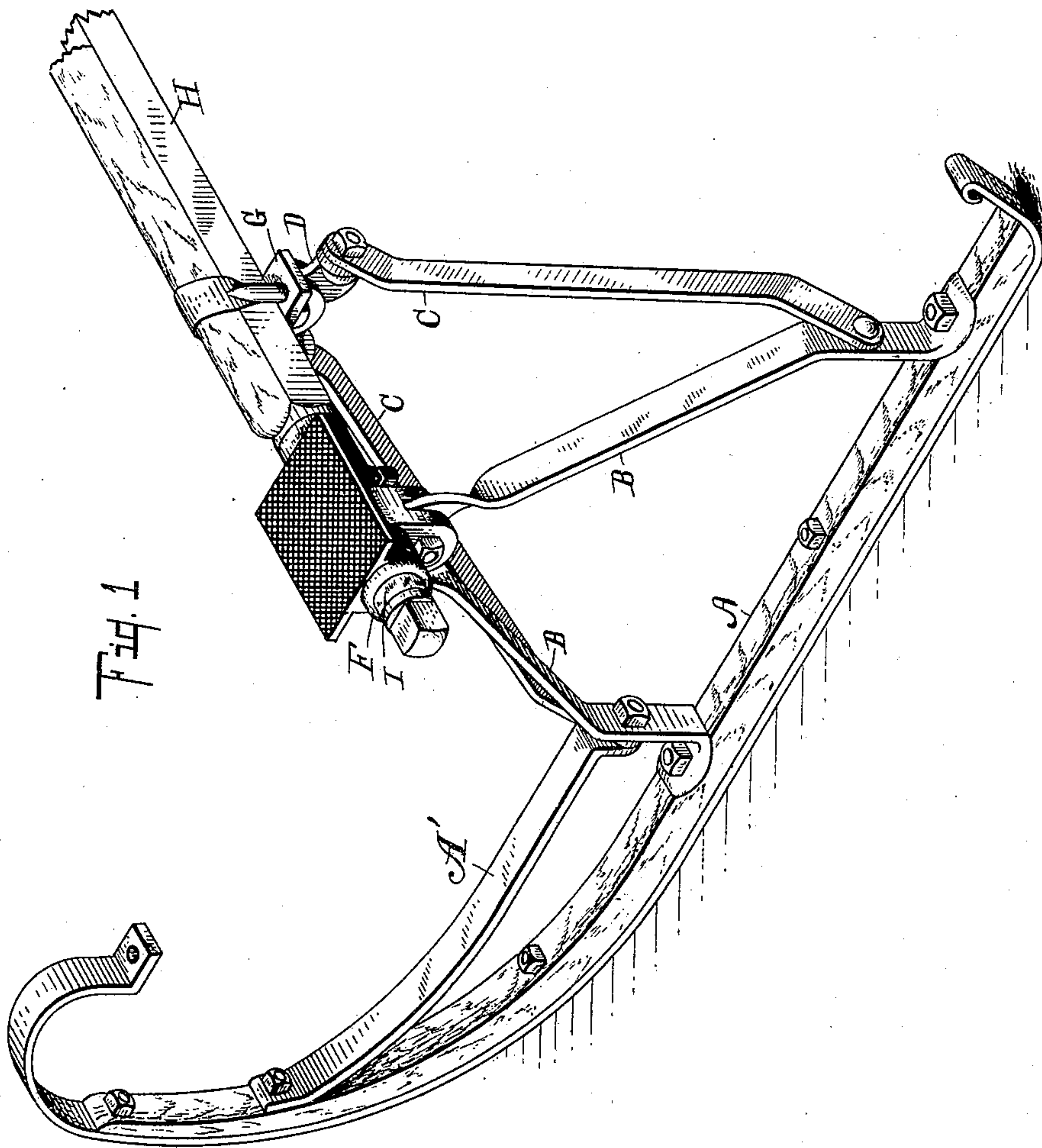
C. H. VAN WAGONER.
SLEIGH RUNNER.

(Application filed Dec. 1, 1896.)

Patented Dec. 20, 1898.

(No Model.)

2 Sheets—Sheet 1.



Witnesses.

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Inventor.

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Attorney.

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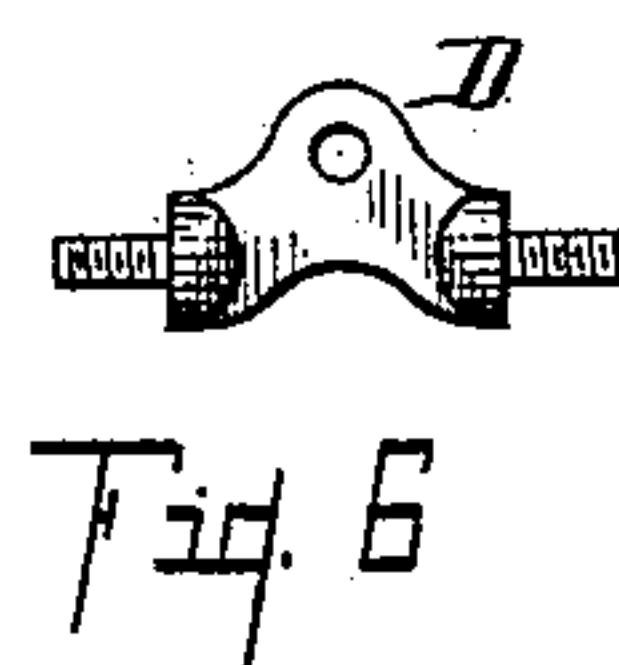
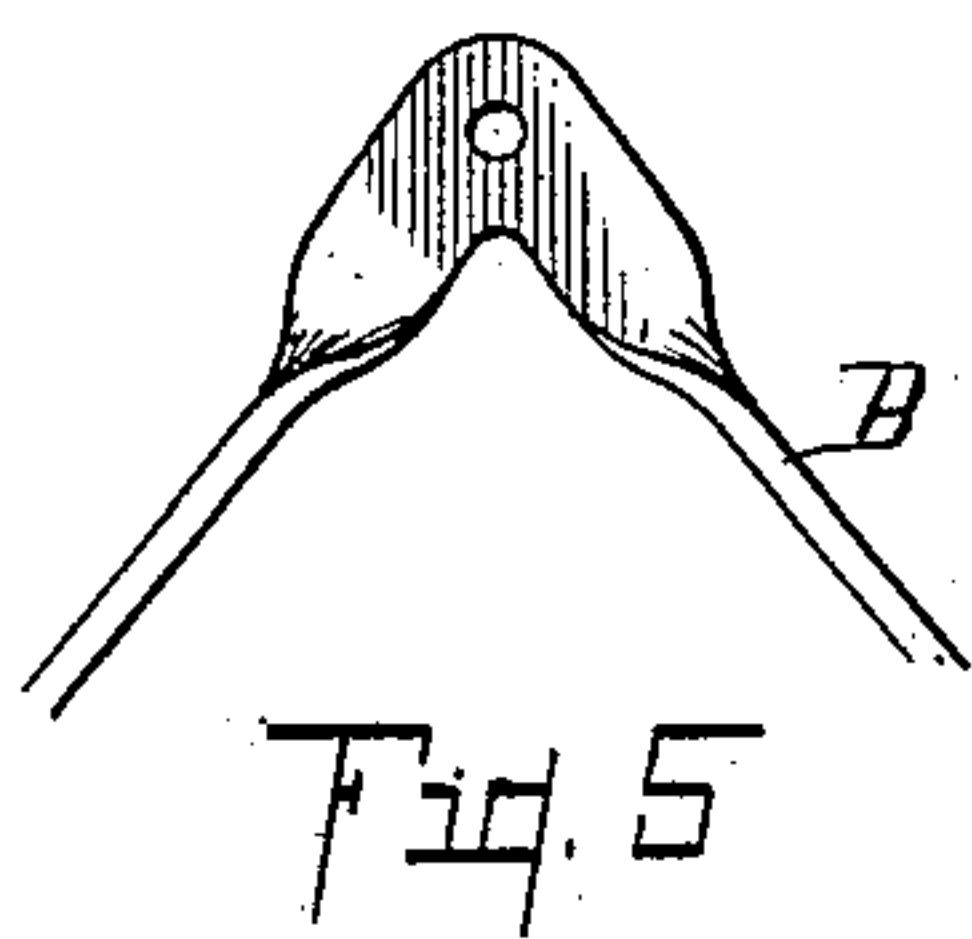
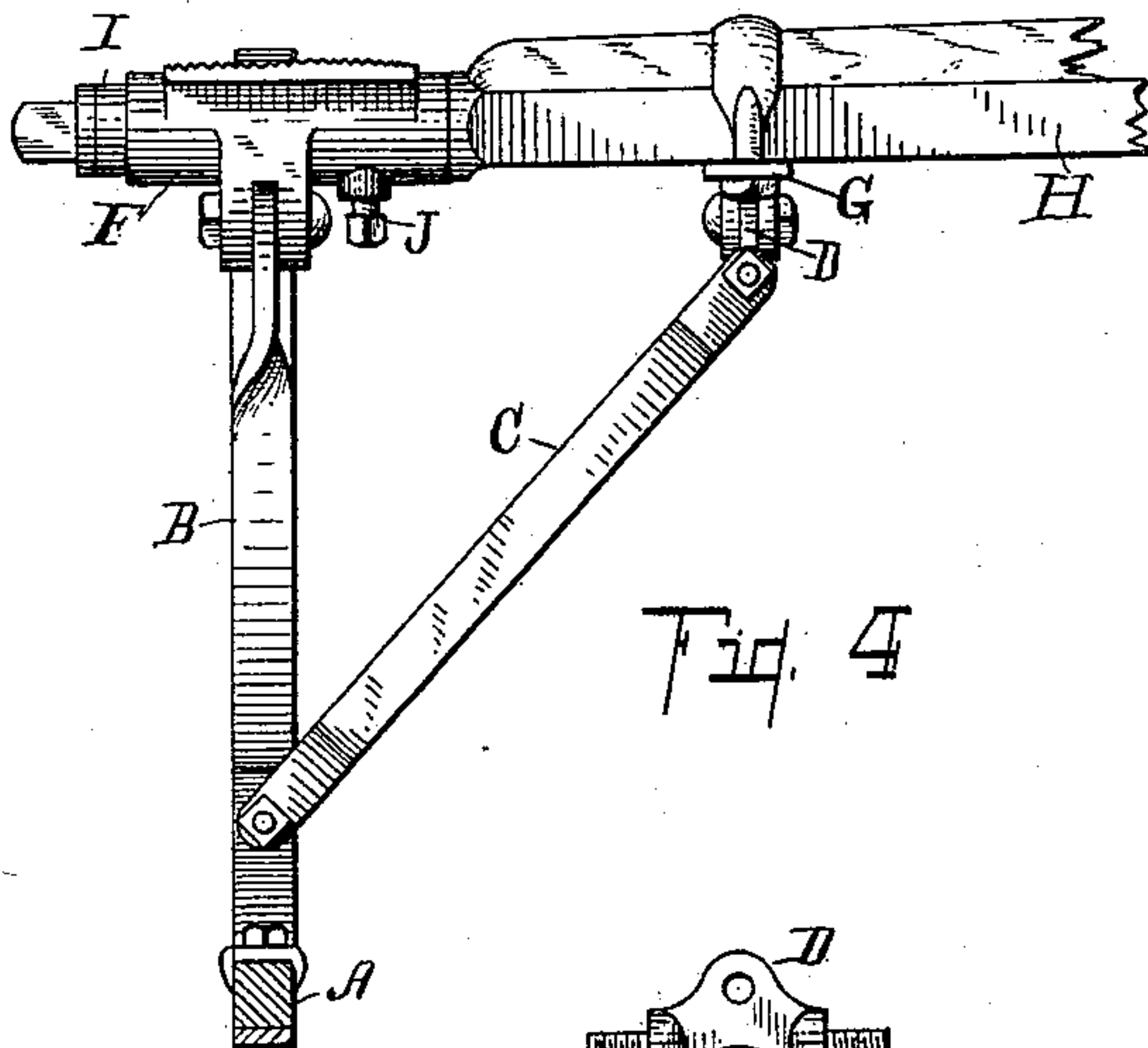
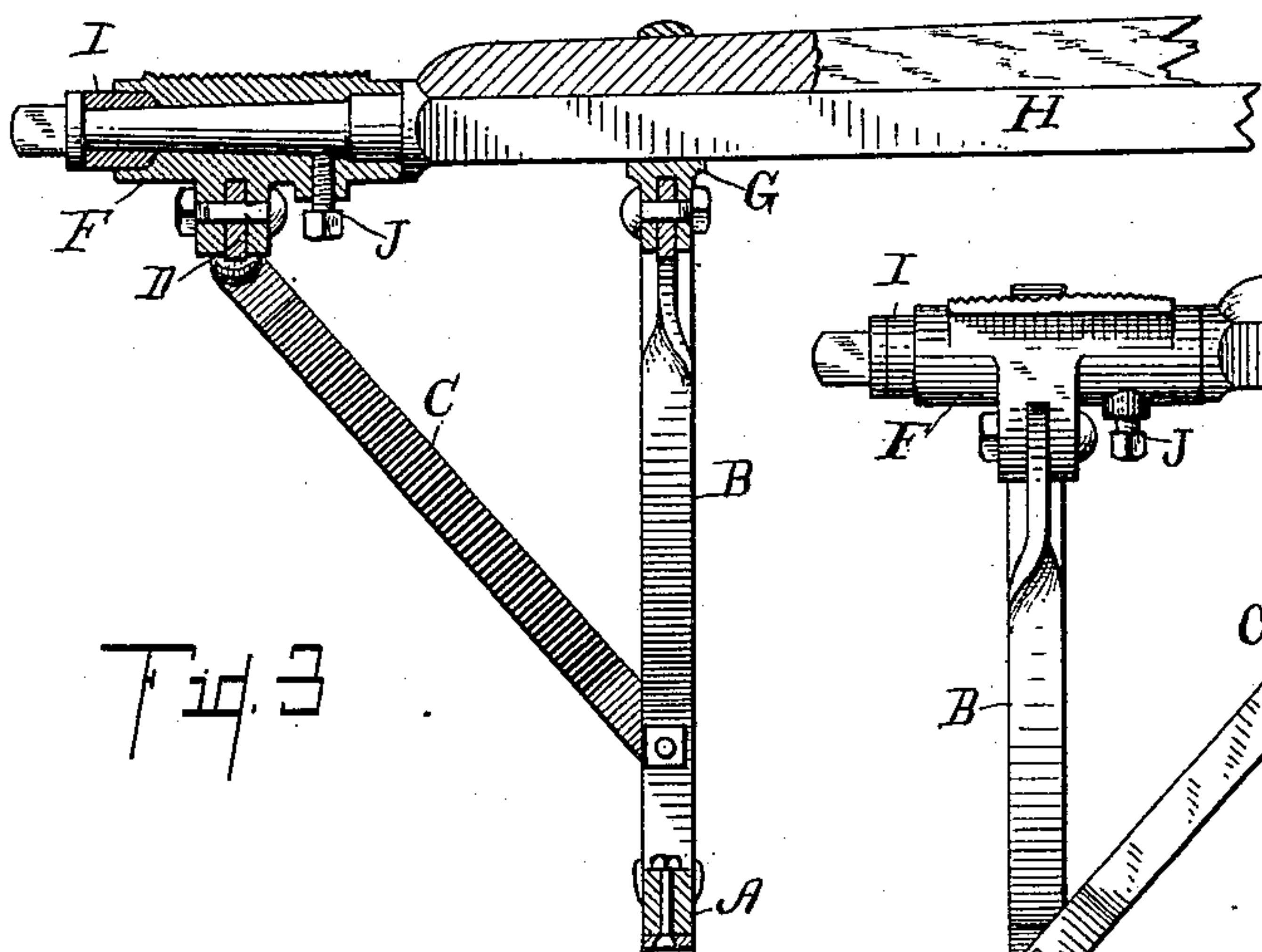
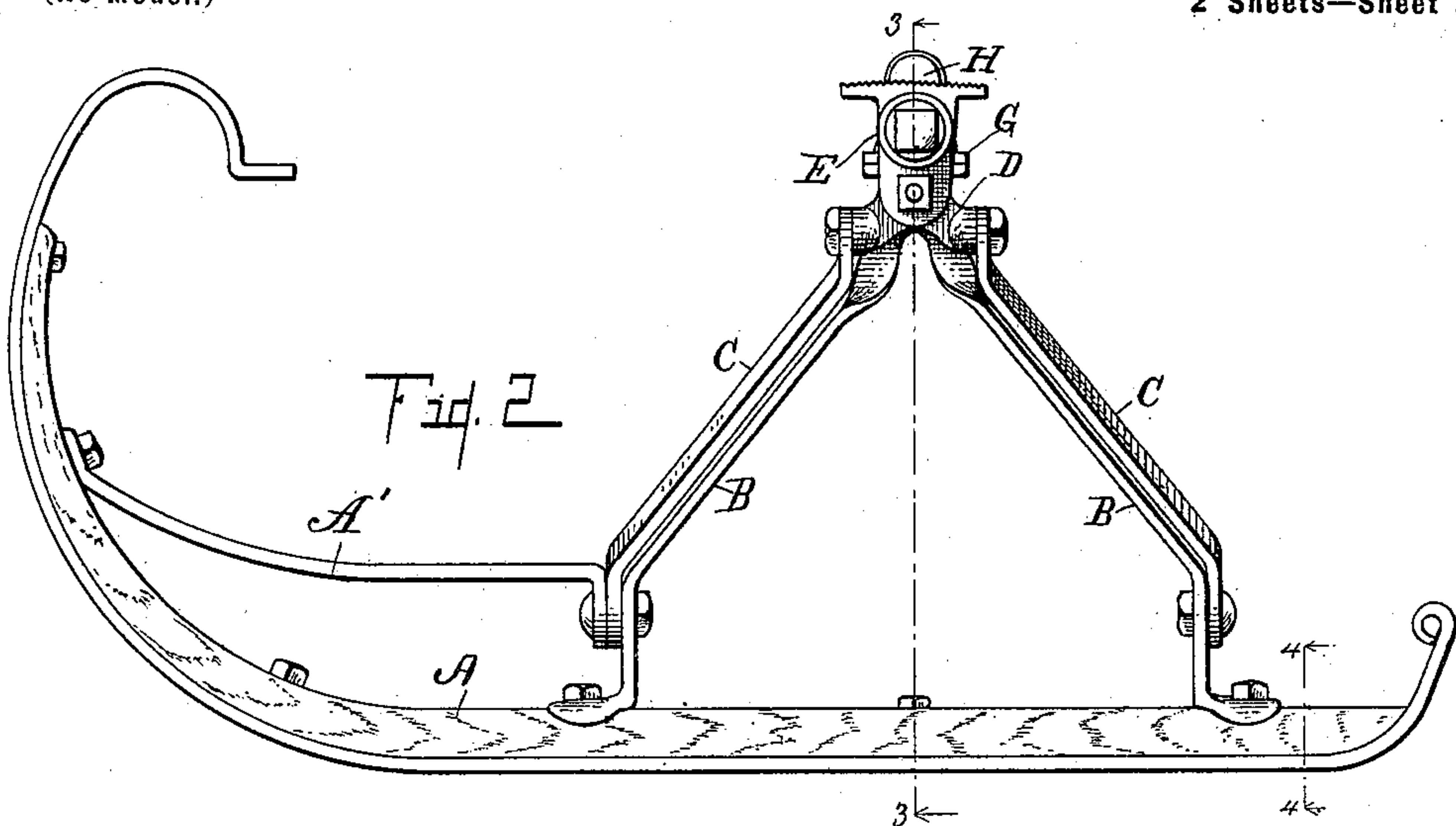
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SLEIGH RUNNER.

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2 Sheets—Sheet 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES H. VAN WAGONER, OF LANSING, MICHIGAN, ASSIGNOR OF THREE-FOURTHS TO HARRIS E. THOMAS AND IRVILLE A. HARPER, OF SAME PLACE, AND FRED H. STONE, OF DETROIT, MICHIGAN.

SLEIGH-RUNNER.

SPECIFICATION forming part of Letters Patent No. 616,215, dated December 20, 1898.

Application filed December 1, 1896. Serial No. 614,149. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. VAN WAGONER, a citizen of the United States, residing at the city of Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Sleigh-Runners, of which the following is a specification.

My invention relates to improvements in runners which are adapted to be attached to wheeled vehicles after removing the wheels. As heretofore constructed this style of sleigh-runners have been improperly supported upon the axles, so that in running over uneven ground great strain is put upon the axle and also upon the runner, which tends to rapidly wear it out. Also the sleigh-runners as heretofore constructed have not been completely adjustable to accommodate different widths of track, which is a very desirable feature, especially in cities or where a vehicle is intended to be operated both in the city and in the country.

The objects of my invention are therefore, first, to provide a runner which can be easily adjusted to various widths of the track; second, to provide runners which are so pivoted that there shall be a minimum of strain upon the runner and bearings in use; third, to provide runners that are completely interchangeable, so that runners from one side can be shifted to the other to equalize the wear upon the shoes, which is of great advantage; fourth, to provide a runner so constructed that all wear and tear is relieved on the axle of the vehicle from operation; fifth, to provide an improved attaching means for runners; sixth, to provide a runner that can be stored in a very compact space for shipment, and, seventh, to provide a runner that can be easily transported on the vehicle itself. Further and other objects will appear definitely in the detailed description. I accomplish these objects of my invention by the devices and means described in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a runner embodying the features of my invention attached to the axle of a vehicle. Fig. 2 is a

side elevation of the same. Fig. 3 is a transverse sectional elevation on line 3 3 of Fig. 2. Fig. 4 is a similar view to Fig. 3, showing the axle adjusted to a wide track. Fig. 5 is a detail view of the knee of the runner at the angle of the top. Fig. 6 is also a detail view of the pivotal yoke D for the connecting-braces C.

In the drawings similar letters of reference refer to similar parts throughout the several views and all of the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines.

Referring to the lettered parts of the drawings, A represents the runner, which is provided with a suitable shoe curved up in a graceful curve at the forward end and also curved up slightly at the rear to permit of its running in either direction. The runner is provided with a pair of knees B B, which are formed in a single piece, which is bent into an inverted-V shape at the top. There is no rave upon the runner; but a brace A' is upon the runner A, which secures the lower part of the knee to the lower part of the same to serve as a support. A suitable block F, of steel or iron, is provided to slip upon the axle and is secured in place by the set-screw J. A tread is placed upon the top, so that the same shall serve as the step for entering the vehicle. The under side is provided with a pair of ears or lugs, through which a bolt can extend for the purpose of attaching the runner. Over the axle H is a clip having a cross-piece G on the under side, which is also provided with a pair of ears for the reception of the bolt for the purpose of securing the runner to the axle. The block F is also hollowed out at the ends, and the block of wood I placed therein and against which the bur of the axle is turned to assist in clamping the same securely and prevent any shucking or wear and tear upon the axle itself. The blocks of wood I are made of considerable length, so that they can be cut to the right length by the user of the runner to accommodate the length of the axle.

Extending up from the lower part of the knee of the runner are a pair of braces C, which are secured together at their upper ends

by a yoke D, which is pivoted between the same and has a suitable bolt-hole there-through and is adapted to be inserted between the ears on the under side of the block

5 For on the clip G, as the case may be. These braces C are pivoted to a vertical portion of the knees B at the bottom, so that they will swing freely over the same. These braces C are of such length that they will swing freely
10 over the top of the knees from one side to the other.

The yoke D and the top of the knees B are pivoted to the under side of the axle exactly in a horizontal line at right angles to the line
15 of draft, so that the runner tips up and down on the points of pivoting perfectly free without binding or tending to twist or turn in any direction, thus obviating the objection to the pivoting of the same directly on the axle.
20 The braces C, being adjustable over the knees B, permit of the runner being attached toward the inside, as indicated in Fig. 3, or well out under the axle, as in Fig. 4, for adjusting the distance between the runners to
25 the width of the track upon which they are intended to run. This construction also makes it unnecessary to make the runners as rights and lefts, for by simply swinging the braces C over the knees B the runner will
30 become either a right-hand or a left-hand runner, as the case may be, or it can be placed inside of the tread or track of the wheel or out even with the same, as indicated in the figures. When it is desired to carry the run-
35 ners with the vehicle, they can be attached by the brace only, as shown in Fig. 4, and the runner be folded up against the axle and secured there.

I desire to state that the details of this construction can be considerably varied without
40 departing from my invention. The exact form of the knees B and the brace C is not material, as they can be made of various forms and of fanciful designs, if preferred. A single brace C might possibly be constructed to
45 serve the purpose of both. The brace A' might be dispensed with when the runner is made sufficiently strong otherwise. It is not
50 an essential that a tread be made on the top of the block engaging the axle. No doubt

other variations will readily suggest themselves to those skilled in the art to which my invention appertains. Experience indicates, however, that the structure exactly as I have produced it is most efficient and satisfactory. 55

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

1. In a runner for attachment to wheeled vehicles the combination of the runner portion A, with knees B, secured thereto having a brace A', extending to the forward part of the runner and braces C, C, pivoted to the lower part of the knees B, and joined together at the top by a suitable pivoted yoke D; a
60 block F, to be placed upon the axle of the vehicle with the set-screw J, to adjust the same securely and the ears on the under side to receive the attachment of the runner; and the clip, G, having ears on the under side to re-
65 ceive the other portion of the runner to attach the same and pivot them in straight lines coacting together substantially as and for the purpose specified. 70

2. In a runner to be attached to wheeled vehicles the combination of the runner portion A, with knees extending upwardly therefrom attached to a vehicle-axle; braces pivoted to a vertical portion of said knees and adapted to swing over the top of the same
80 with a suitable yoke at the top for attachment to the axle so that the runner can be used either as a right-hand or left-hand runner or be adjusted toward the inside or toward the outside as the case may be. 85

3. In a runner to be attached to wheeled vehicles the combination of the runner portion; a knee extending up therefrom and a pivoted brace adapted to swing to either side of said runner; and means of attaching said
90 brace and knee to the axle to make the same interchangeable and adjustable as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

CHARLES H. VAN WAGONER. [L. S.]

Witnesses:

JOHN G. WHITTEN,
CHARLES F. HAMMOND.