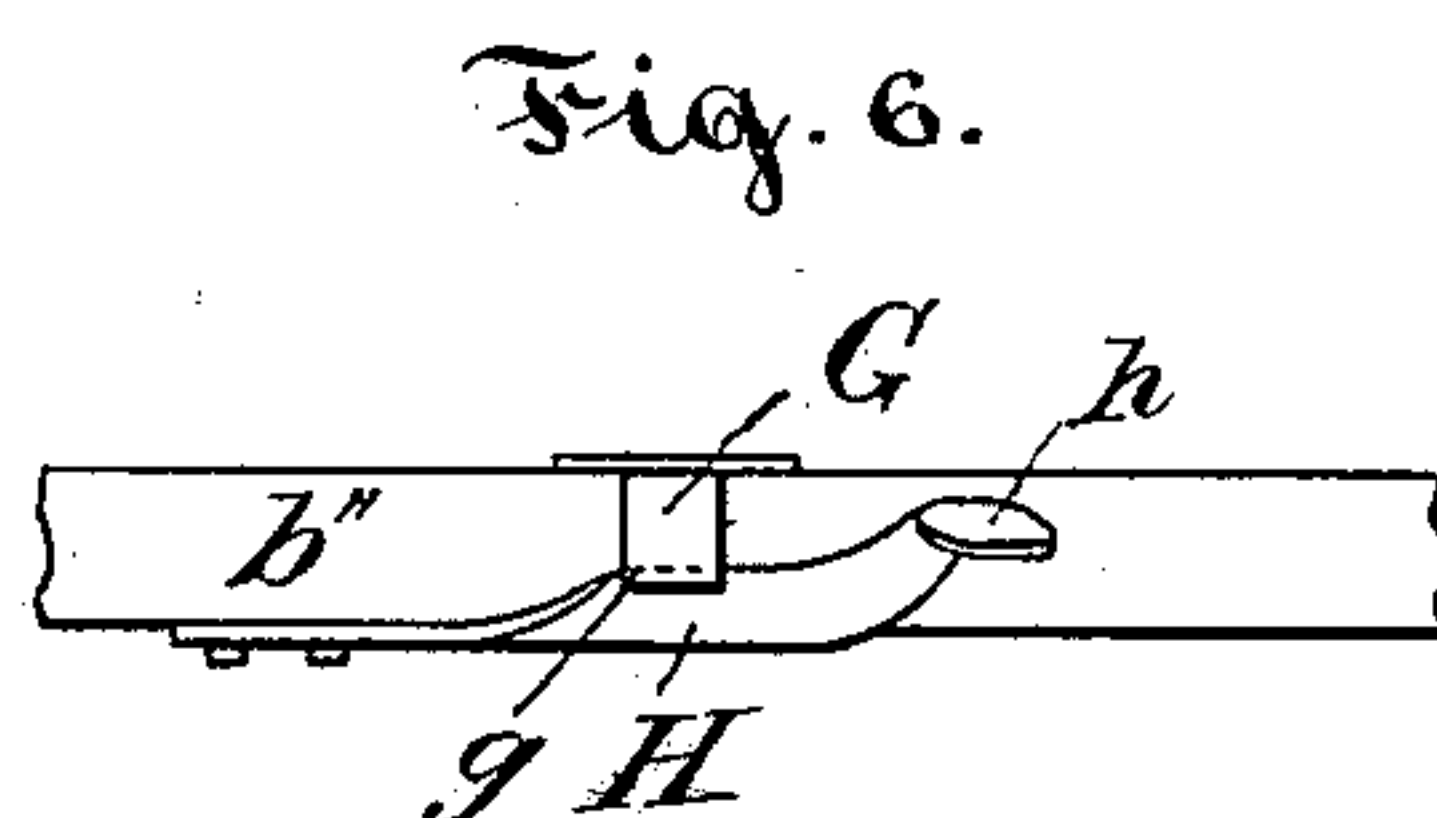
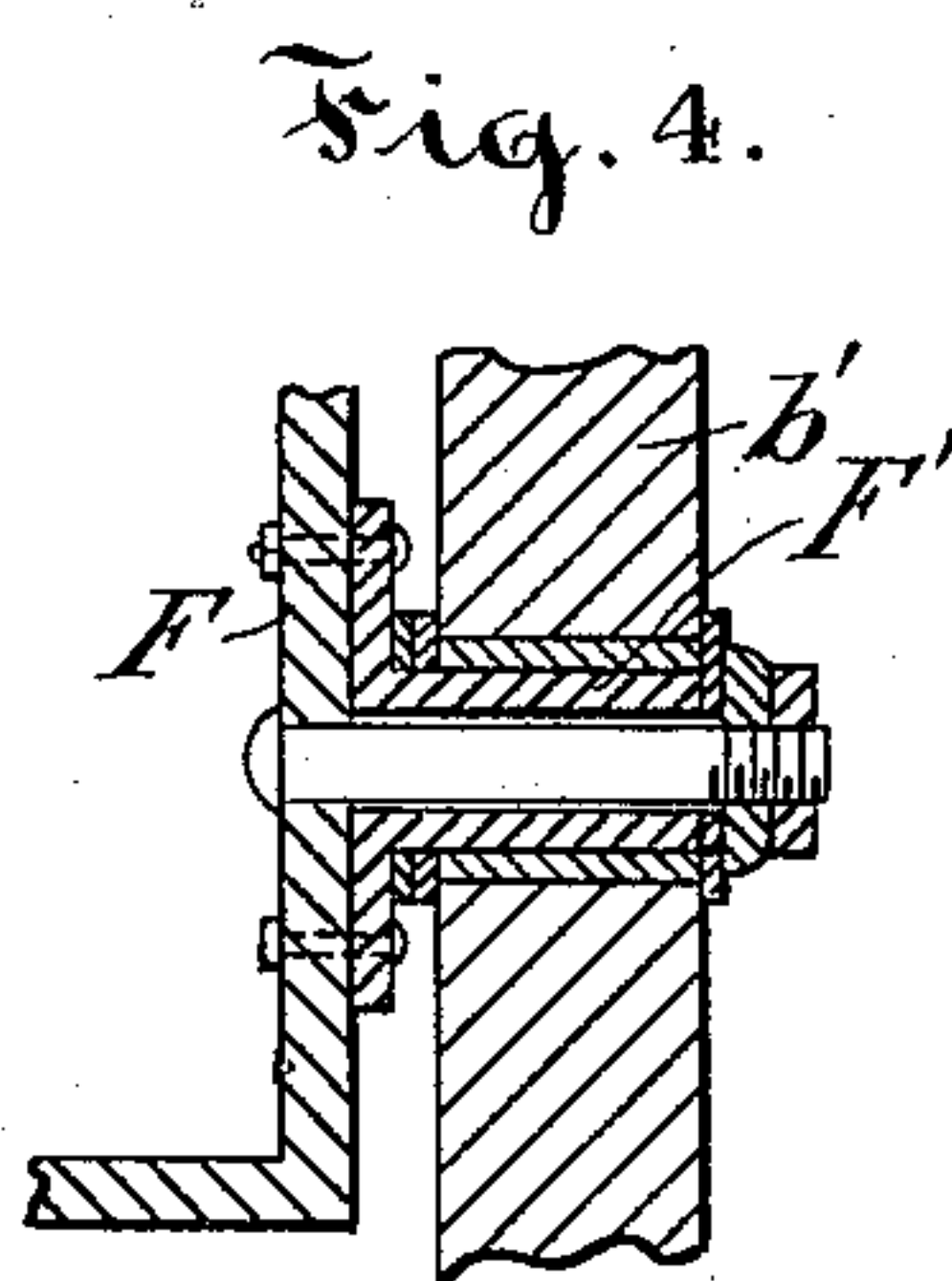
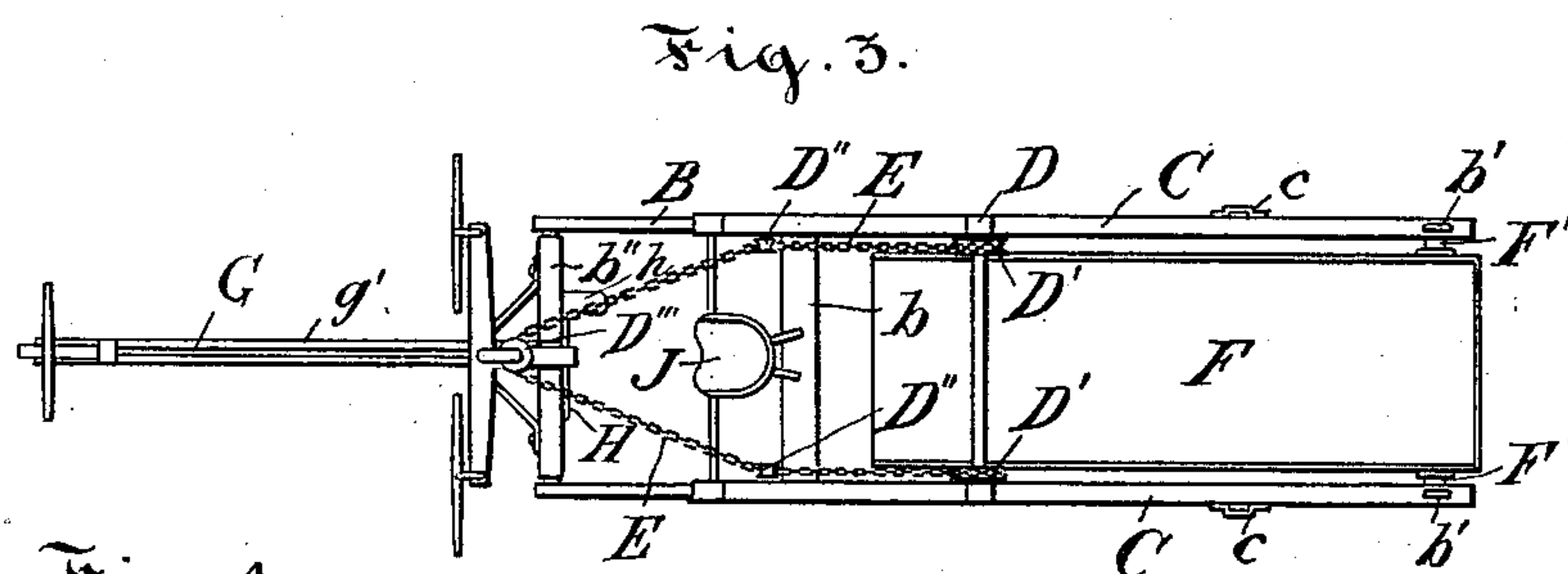
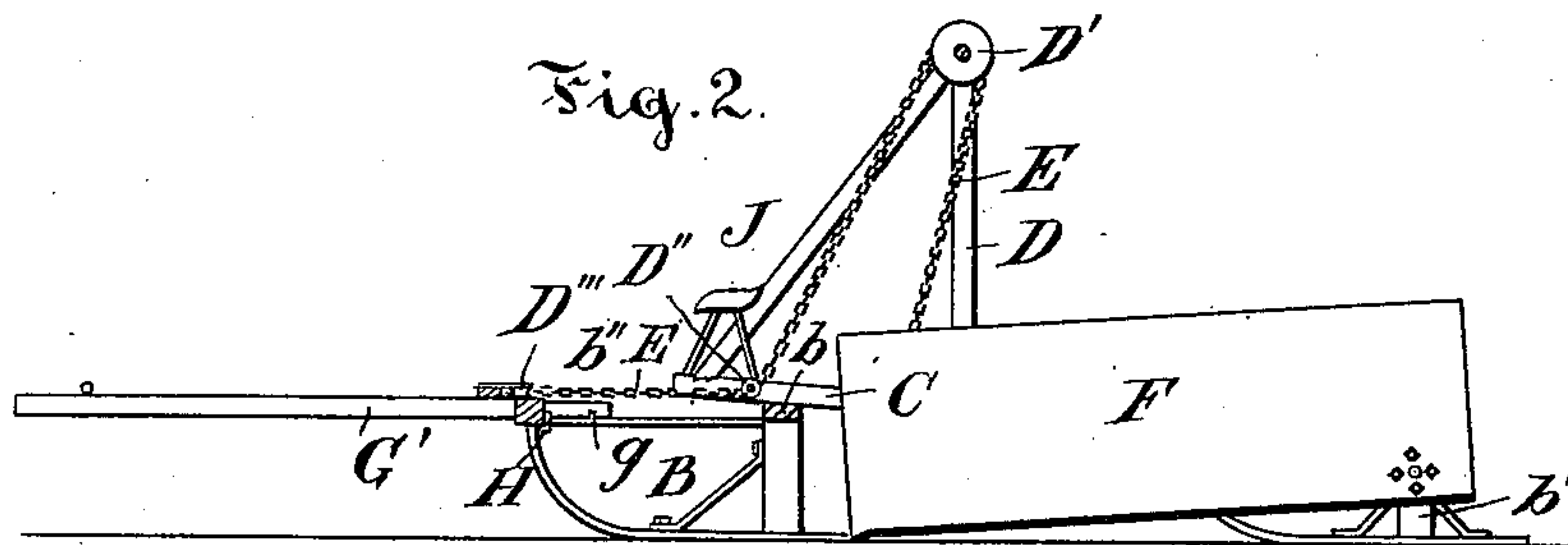
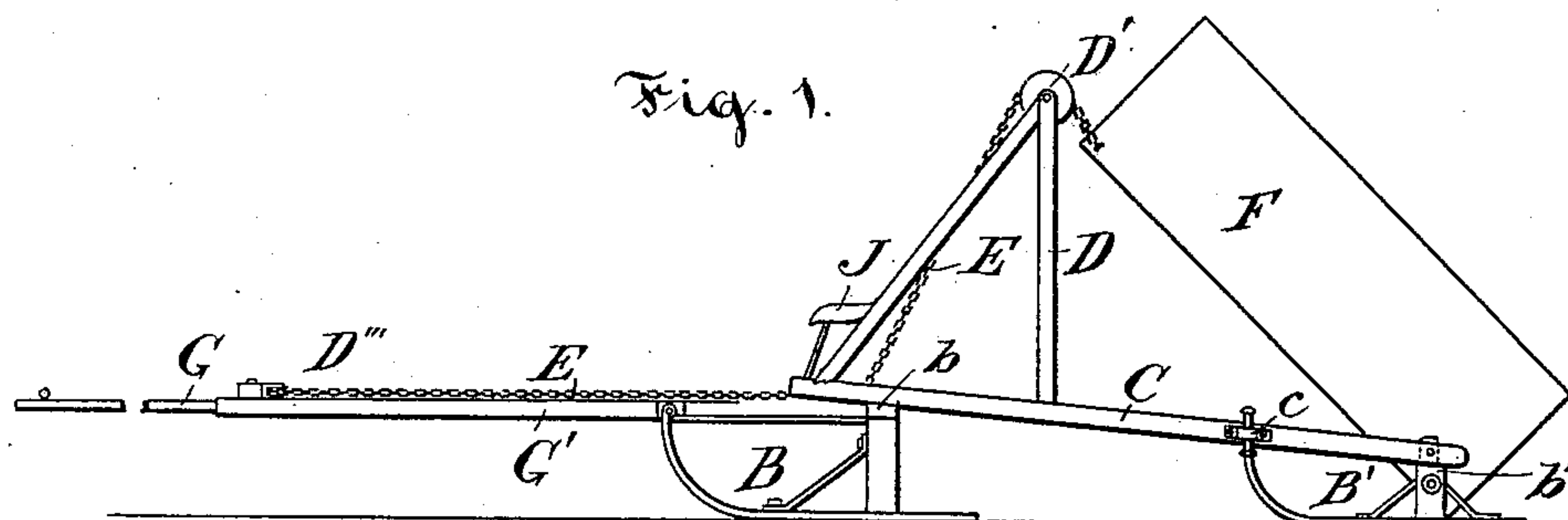


(No Model.)

A. TRACY & W. ABBOTT.
SCRAPING AND DUMPING VEHICLE.

No. 538,203.

Patented Apr. 23, 1895.



Witnesses:

Chas. C. Riley.
W. Noffke.

Albert Tracy
William Abbott
Inventors

by A. Harvey
their Attorney.

UNITED STATES PATENT OFFICE.

ALBERT TRACY AND WILLIAM ABBOTT, OF OTTAWA, CANADA, ASSIGNORS OF ONE-HALF TO DAVID WILLIAM ABBOTT AND HENRY HOOPER WOOTEN, OF SAME PLACE.

SCRAPING AND DUMPING VEHICLE.

SPECIFICATION forming part of Letters Patent No. 538,203, dated April 23, 1895.

Application filed January 21, 1895. Serial No. 535,690. (No model.) Patented in Canada July 10, 1894, No. 46,541.

To all whom it may concern:

Be it known that we, ALBERT TRACY and WILLIAM ABBOTT, of the city of Ottawa, in the county of Carleton and Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Scraping and Dumping Vehicles, (for parts of which we have obtained a patent in Canada, No. 46,541, bearing date July 10, 1894;) and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof.

Our invention, which will be hereinafter fully set forth and claimed, relates to the construction of sleighs and other vehicles adapting them as scrapers and dumpers.

The object of our invention is a sleigh or other vehicle with box that is raised and lowered by the action of the draft and forms a scraper and dumper.

Figure 1 is a side elevation of our improved scraping and dumping sleigh, showing the box dumped. Fig. 2 is a vertical longitudinal section of the same, showing the box lowered for scraping. Fig. 3 is a top view of the same showing the box level for traveling. Fig. 4 is a detail of the rear support of the box. Fig. 5 is a cross section of the tongue and tongue socket, and Fig. 6 is an elevation of the roller and foot lever.

Upon two sleigh bobs B and B', front and rear respectively, are framed two sills C C, one at each side. The forward ends of said sills are secured upon the bolster b of the front bob and the rear ends are mortised upon the unconnected knees, b', of the rear bob, so that bobs and sills have a flexible connection, the front ends of the runners of the rear bob passing through a clevis, c, secured to the sills, as shown in Figs. 1 and 3. Upon the forward part of each sill is erected a stand, D, braced to resist a forward strain, which is provided at the top with a pulley, D'. Another pulley, D'', is journaled to each sill C forward of the position of the pulley D'. A chain E has its two ends secured to the sides of the box F near its bottom at the forward end, passes over the pulley D', under the pulley

D'' and partly around an upward projection 50 of pulley D''' on a sliding bar, G, in the tongue or pole G'. The front end of the box F, which latter is adapted to be carried between the two sills and has the forward end of its bottom sharpened and shod, is thus suspended by 55 the chain E from the stand D and may be raised or lowered at pleasure. The rear end of the box F, Fig. 4, is provided at each side with a trunnion, F', projecting axially and journaled in the bob knee b'. It is secured 60 in a low position on the box and journaled low down on the knee, forming a low pivotal support for the box on the rear bob. Said trunnion may consist of a flanged tube or pin, bolted to the side of the box. 65

The front bob, as usual, is constructed with a roller, b'', and to this is secured the rear end of the tongue or pole, G', grooved at the top from end to end to form a socket or casing in which the bar, G, is made to fit slidingly, as 70 shown in Fig. 5 in detail. Said tongue or pole may be in one piece and grooved or consist of a bottom piece and two sides forming a semi tube or box open at the top, and is about the length of an ordinary tongue, so as 75 to form a fair hold and guide to the sliding bar when it is drawn out as far as the chain E will allow for the full elevation of the box F. Strips g' may be secured along the upper edges of the groove, forming guides to keep 80 the bar G in the groove. It is necessary that the tongue G' should be open at the top, as the draft, (double tree or whiffletree) and the pulley D''' are pivoted to the top of the bar G sliding in it. To the front end of the slid- 85 ing bar G is attached the neck yoke or other means of guiding it. The bottom of the said bar is at the rear end provided with a series of notches, g. To the roller b'' is secured at one side of the tongue a spring, H, projecting 90 across said bar G and adapted to engage any one of its notches g. The free end h of said spring is bent rearwardly and thus formed into a foot lever which may be readily reached from the driver's seat, J, which is secured 95 upon the forward ends of the sills C.

The device operates as follows: Supposing the driver to be mounted on his seat J and

the box F lowered to its traveling position, as shown in Fig. 3, then the driver may stop his horses or other draft animals, back them and at the same time depress the lever H with his foot. This allows the sliding bar G to pass rearwardly in the tongue as many notches *g* in the bar as may be desired and the front of the box F is thus lowered into a position adapted for scraping. As soon as the lever H is released it will press upward on the bottom of the bar G and engage the first notch *g* that presents itself when the bar is either sliding forward or rearward in the tongue G'. By reversing the horses now, the whole vehicle and with it the box F is moved forward and the box will scoop up the snow or whatever other material it may be desired to gather. When as much has been scooped up as is desired and it becomes necessary to draw the load away, the front of the box is raised sufficiently to enable the vehicle to move along, by depressing the foot lever H while the horses are moving forward and allowing the bar G to slide as many notches forward in the tongue as may be necessary. When it is desired to dump the load, the driver depresses the foot lever H while the horses are moving forward, the bar G, being freed from the restraint of the lever H in the notches *g*, slides forward in the tongue G' and the chain E is drawn forward with it, thus raising the front of the box to its highest position or to a sufficient height to allow its contents to slip off. The box may be lowered again by backing the horses and depressing the foot lever H, allowing the bar G to be slid back in the tongue G' to the desired extent. The chain E is secured to the bar G by a pulley D''' or equivalent device in order to keep the strain on the chain even when turning.

Although specially adapted for a snow scraping and carrying device, and therefore placed on runners, the superstructure is equally available for wheels.

We claim as our invention—

1. The combination of a front bob provided with roller and bolster and a rear bob having its knees unconnected transversely, two sills framed near one end upon said bolster and mortised at the other end upon the upper ends of the knees of the rear bob, a box adapted to be carried between said sills, trunnions secured to the rear end of said box and journaled in the knees of the rear bob, a stand upon each forward end of said sills, a pulley at the top of each stand, a pulley at the forward end of each sill, a chain having its ends secured to the forward end of said box and passing over the pulleys at the top of the

stand and under the pulleys at the sill and engaging a sliding bar in the tongue from which the forward end of the box is thus suspended, a grooved tongue or pole having its rear end secured to the roller and adapted to allow a bar to slide in the same, a bar adapted to slide in said tongue or pole and project therefrom at both ends and having the aforementioned chain secured to its rear end in a manner that it may yield laterally and having the rear portion of the lower surface notched and a spring foot-lever secured to the roller and projecting across said bar and adapted to engage said notches, substantially as set forth.

2. The combination of two sills suitably supported at the front and rear, a box adapted to be carried between said sills, a braced stand at the forward end of each sill, a pulley at the top of each stand, a pulley journaled to each sill, a chain having its ends secured to the forward end of said box and passing over the pulleys at the top of the stand and under the pulleys at the sills and having its central part engaged by a projection on a sliding bar in the tongue of the vehicle, substantially as set forth.

3. The combination of a cross piece or roller *b''*, a tongue or pole grooved at the top having its rear end secured in said cross piece and adapted to hold a bar slidingly, a bar adapted to slide in said tongue or pole and provided at its lower surface with a series of notches and a spring lever secured to said cross piece and projecting across said sliding bar and engaging said notches, substantially as set forth.

4. The combination of a bar held slidingly in the tongue or pole of a vehicle and controlled by a foot-lever engaging notches in the same and having the draft and means of guiding applied to it, a chain secured to the rear end of said bar by means affording lateral yield and passing over elevated pulleys and having its ends secured to a box, sills suitably supported at the front and rear, stands at the forward ends of said sills supporting said elevated pulleys and a box adapted to be carried between said sills and being suspended at the front end by said chain, substantially as set forth.

In testimony whereof we have signed in the presence of the undersigned witnesses.

ALBERT TRACY.
WILLIAM ABBOTT.

Witnesses:

A. HARVEY,
A. TROWSSE.