

W. C. BROWN.
SNOW PLOW AND ROLLER.
APPLICATION FILED MAY 18, 1910.

979,255.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 1.

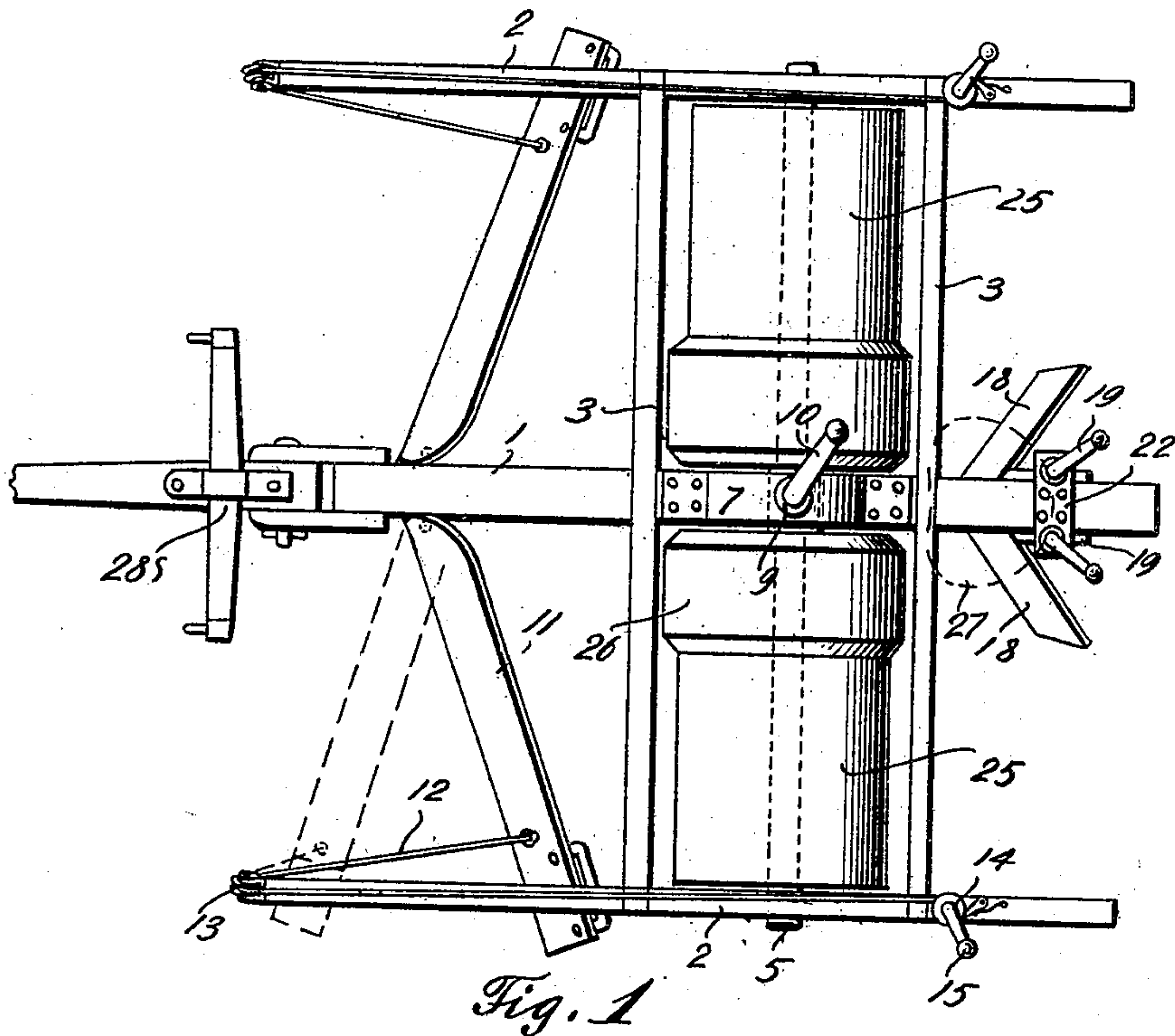


Fig. 1

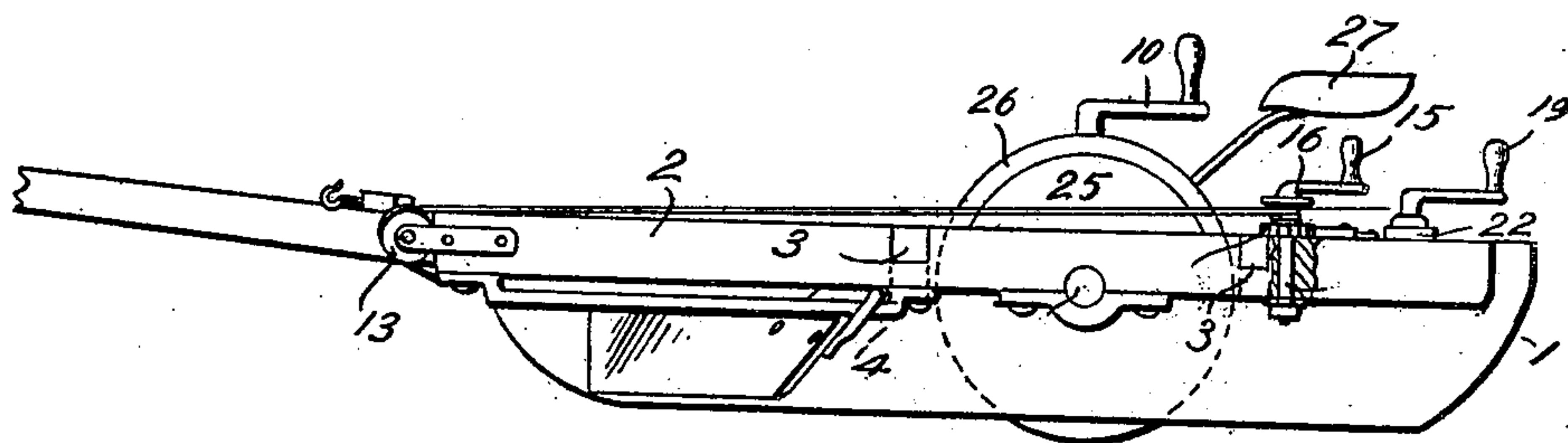


Fig. 2

Witnesses

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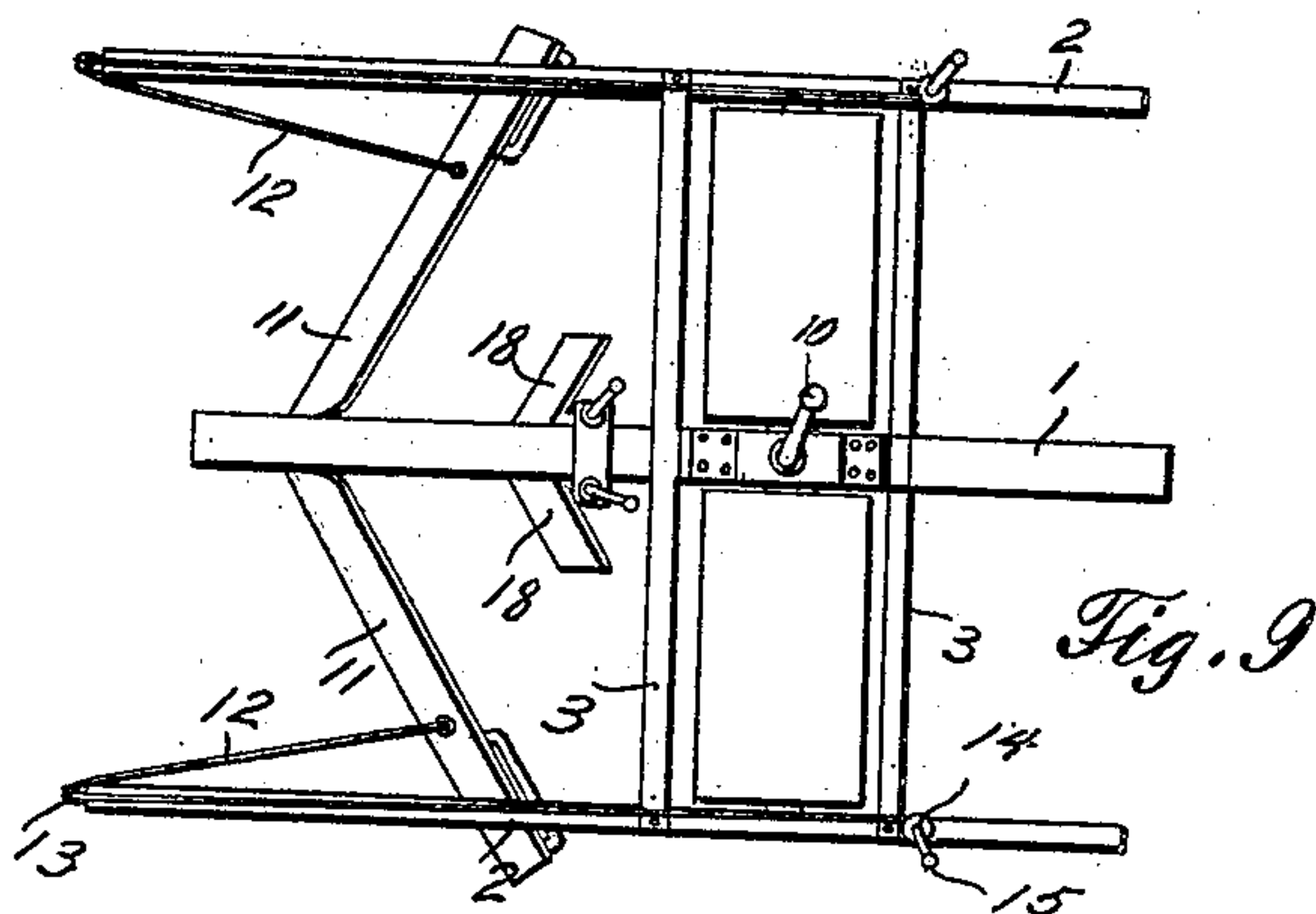
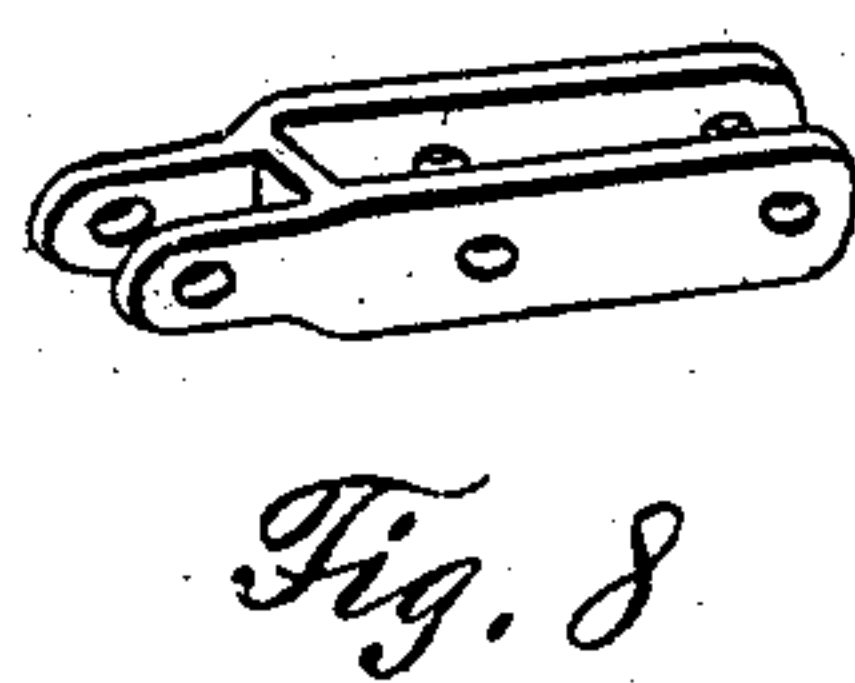
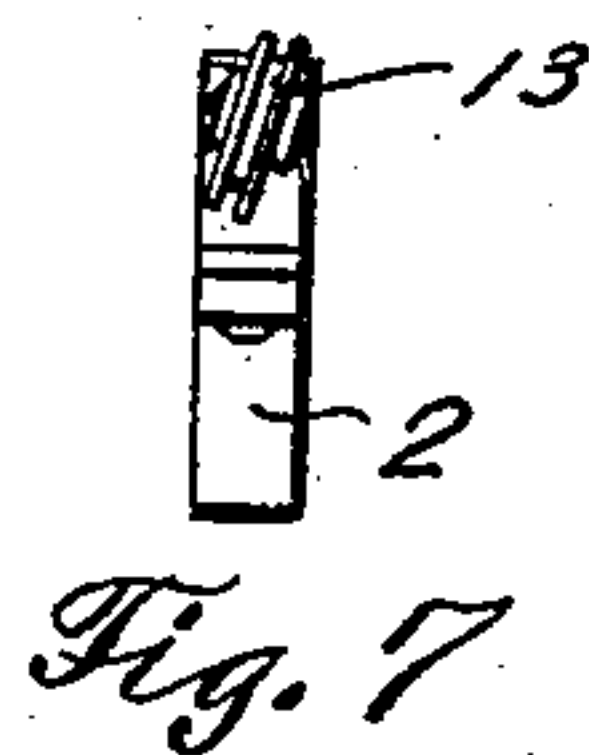
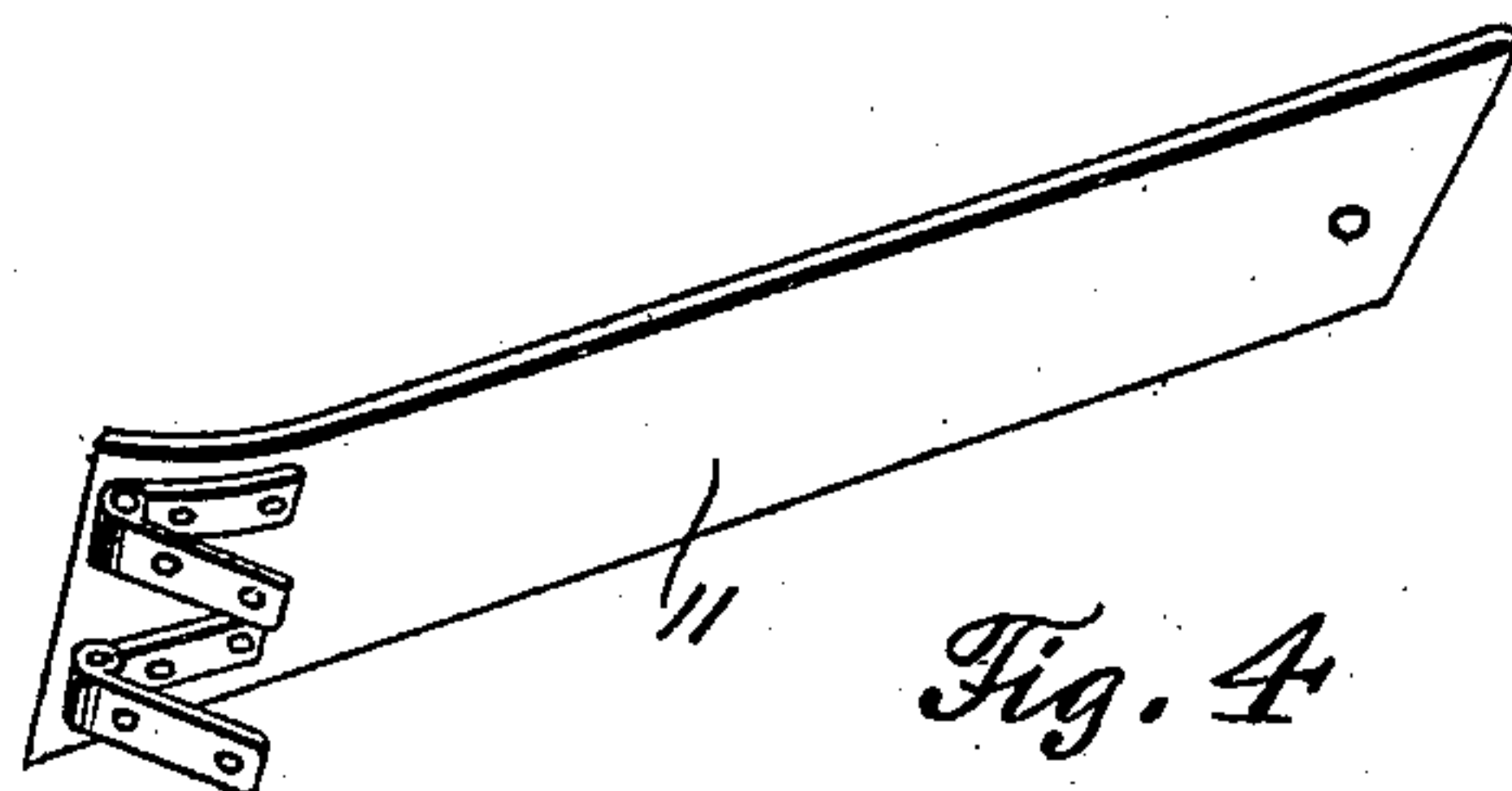
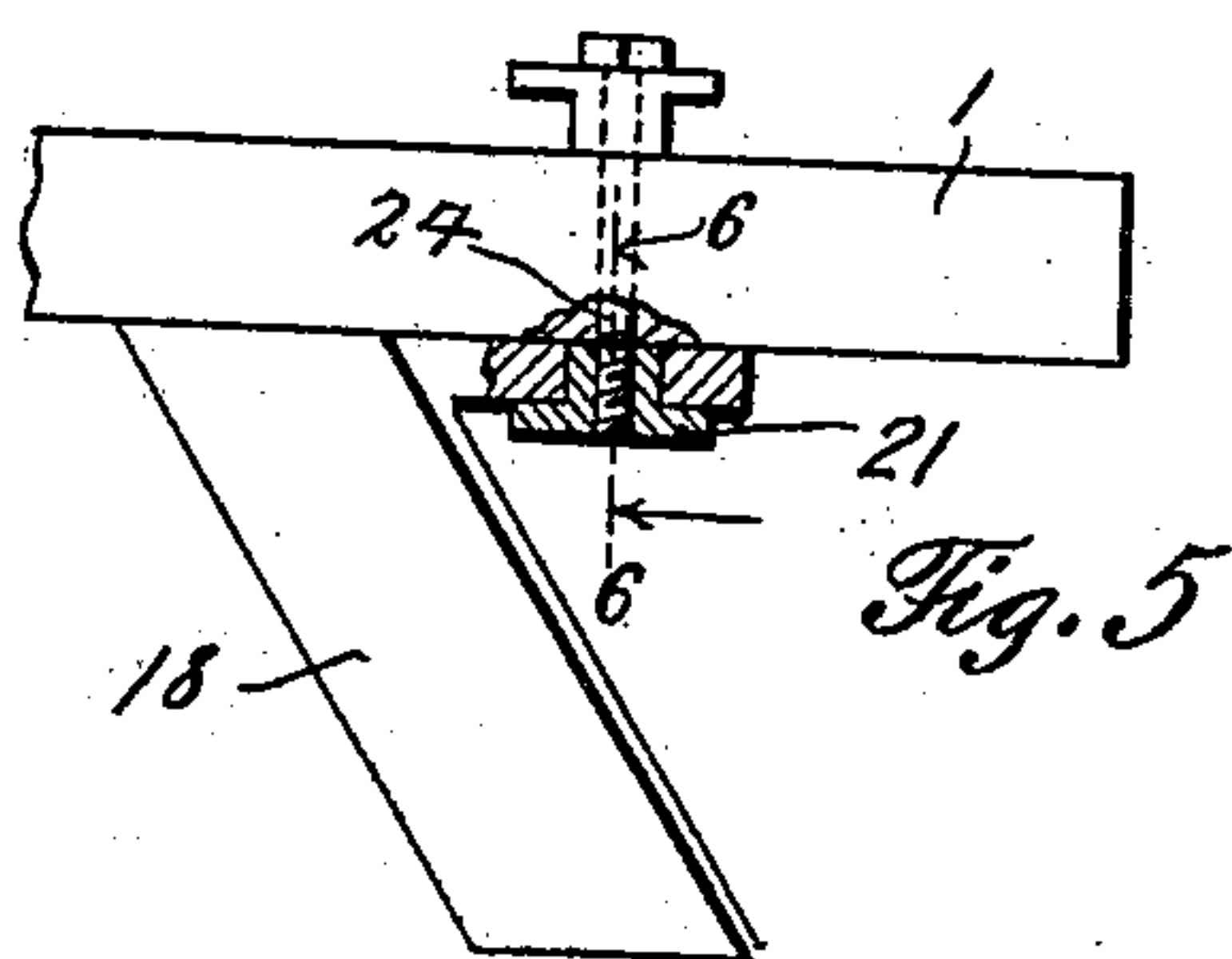
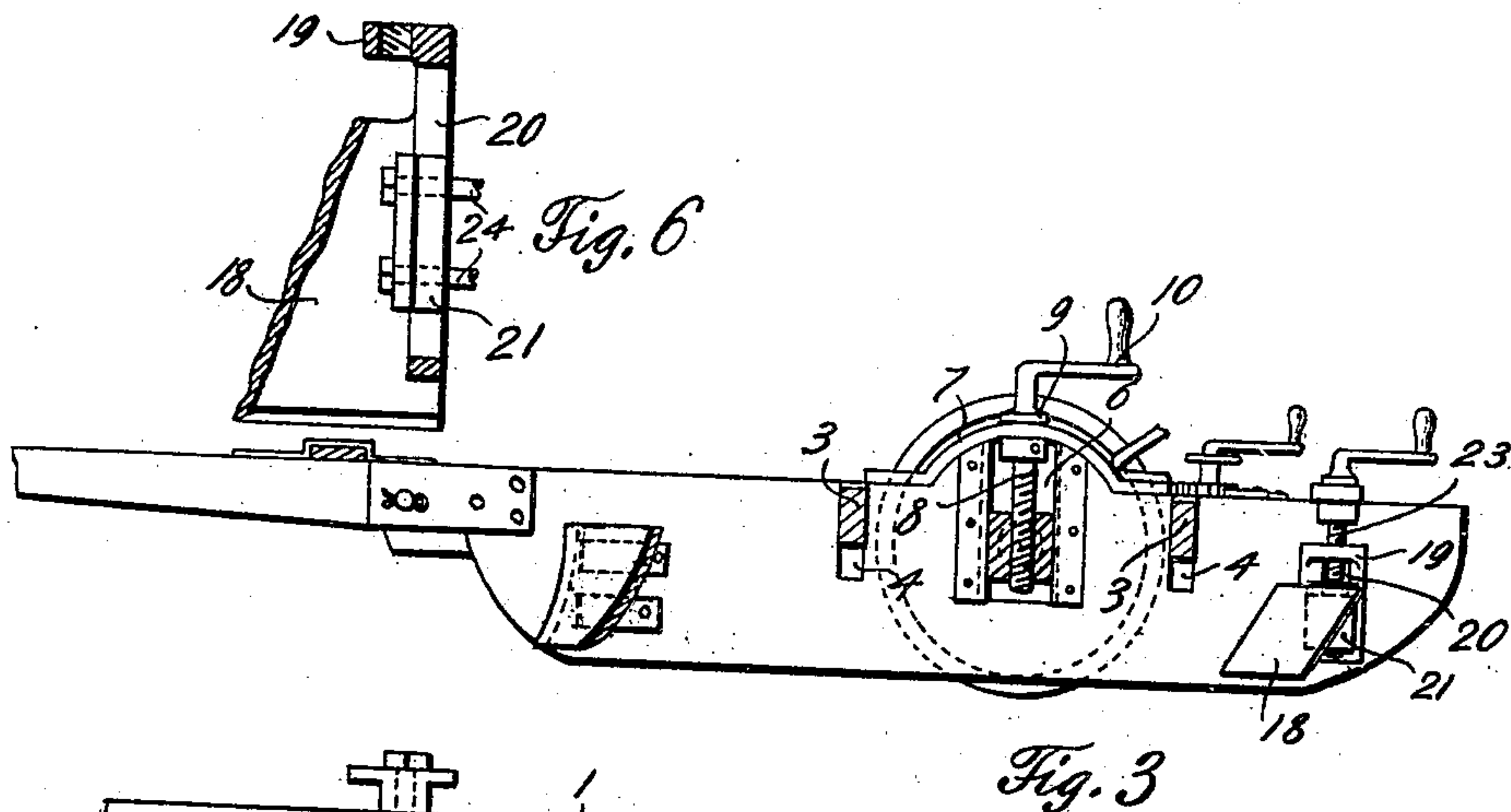
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UNITED STATES PATENT OFFICE.

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SNOW PLOW AND ROLLER.

979,255.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed May 18, 1910. Serial No. 562,087.

To all whom it may concern:

Be it known that I, WILLIAM C. BROWN, a citizen of the United States, residing at Lake Pleasant, in the county of Hamilton and State of New York, have invented certain new and useful Improvements in Snow Plows and Rollers, of which the following is a specification.

The object of this invention is to devise an improved form of snow plow and snow leveling machine.

A machine embodying the invention comprises certain means for scraping the snow in any desired direction with regard to the movement of the machine, other mechanism including plows for cutting a ditch or otherwise similarly operating on the snow, and rollers mounted to pack the snow as they pass over, and after it has been operated upon by either device of the machine.

For a full understanding of the invention reference is to be had to the following detail description and the accompanying drawings, in which—

Figure 1 is a top plan view of a machine embodying the invention; Fig. 2 is a side elevation; Fig. 3 is a vertical longitudinal section; Fig. 4 is a perspective view of one of the scrapers showing the hinge means therefor; Fig. 5 is a fragmentary view, partly broken away to show more clearly the means for connecting the plows to the central runner of the machine to permit vertical movement of said plows; Fig. 6 is a fragmentary view about on the line 6—6 of Fig. 5, and in section; Fig. 7 is a detail view more clearly showing the mounting of the rollers at the front of the frame; Fig. 8 is a detail view of the supporting plate for the rollers at the front ends of the runners; Fig. 9 is a top plan view of a modified construction of the machine.

Specifically describing the invention and referring to the drawings, the numeral 1 denotes a central runner and the numeral 2 the outer sides of the frame on opposite sides of the central runner. The sides 2 are rigidly connected by means of cross bars 3 secured thereto in any substantial manner, said cross bars 3 passing through vertical slots 4 leading downwardly from the upper edge of the middle runner 1. The axle 5 is mounted on the sides 2 and the central portion of said axle is preferably square and mounted in a guide slot 6 in the intermediate runner 1. Spanning the upper open end

of the slot 6 is a plate 7 to which a screw 8 is swivelly attached as shown at 9. The screw 8 has a handle 10 at its upper end by which it is turned, and said screw may be operated to raise and lower the central runner 1 with respect to the sides 2 and cross bars 3. The plate 7 is of course rigidly attached to the central runner and the latter is lifted through the use of said plate.

Pivotally or hingedly connected with the front end portion of the runner 1 are scrapers 11, the outer portions of which are movable by means of operating connections 12 consisting of cables. Each cable 12 has one of its ends secured to the outer end of the adjacent scraper 11, said cable thence passing around a pulley 13 at the front end of the adjacent side 2 of the frame and then extending back toward the rear end of said frame so as to pass about a shaft 14 journaled in any suitable manner in the side 2. The shaft 14 is adapted to be turned by means of a crank handle 15 and in this manner the movement of the outer ends of the scrapers may be effected so as to place said scrapers in substantial alinement with one another, in divergent positions as shown in Fig. 1 or at different adjustments diagonally of the frame of the machine. A suitable pawl 16 is adapted to engage a ratchet on each shaft to prevent turning of the shaft in a reverse direction from that in which it is rotated to actuate the scrapers 11.

Preferably mounted on the rear end of the central runner 1 are plows 18, the same being located at opposite sides of said runner, each plow consisting of a wing or shovel having a rearwardly extending supporting arm 19, the latter being formed with a vertical slot 20 through which passes the top of a guide plate 21, the latter being somewhat T-shaped in cross section, with the head portion overlapping the outer side portions of the arm 19 to effectively secure the plow to the runner. A short transverse plate 22 is attached to the rear end of the runner 1 and screws 23 carried thereby are adapted to engage the arms 19 of the plows whereby the said plows may be raised or lowered according to the desire of the operator in the actual use of the machine. Guide plates 22 are arranged on opposite sides of the runner 1 to carry the adjacent plows 18 and said plates are secured to the runner 1 and to each other by fastening bolts or members 24.

As shown in Fig. 9, if desired, the plows 18 may be mounted in front of the rollers 25, the latter being mounted on the shaft 5 before mentioned. Two of the rollers 25 are preferably used one on each side of the runner 1. The rollers are mounted in the space between the cross bars 3 and the inner end of each roller is diametrically enlarged as shown at 26 to form annular enlargements adapted by reason of the great weight of the rollers to provide tracks in the snow over which the machine is caused to pass. The tracks or depressions caused by the enlargements 26 facilitate travel of vehicles in an evident manner.

A seat may be provided on the central runner 1 for the operator, and is shown at 27. Draft means will be applied to the front end of the runner 1 and the same is shown at 28.

I claim:

1. In a machine of the class described, a frame composed of a pair of spaced sides, cross bars connecting the same, a runner arranged between said spaced sides, an axle connecting the spaced sides, rollers mounted on said axle and arranged on opposite sides of the intermediate runner, said rollers being provided with annular enlargements at their peripheral portion for the purpose described.

2. In a machine of the class described, a frame composed of a pair of spaced sides, cross bars connecting the same, a runner arranged between said spaced sides, an axle connecting the spaced sides, rollers mounted on said axle and arranged on opposite sides of the intermediate runner, the intermediate runner being provided with slots receiving the cross bars connecting the spaced sides, and means operatively connected with the intermediate runner and the axle aforesaid to raise the intermediate runner with respect to the spaced sides of the frame.

3. In a machine of the class described, a frame composed of a pair of spaced sides,

cross bars connecting the same, a runner arranged between said spaced sides, an axle connecting the spaced sides, rollers mounted on said axle and arranged on opposite sides of the intermediate runner, a plate attached to the intermediate runner, said intermediate runner having a slot beneath said plate and through which the axle passes, and a screw swivelly connected with said plate and operatively connected with the axle whereby on the turning of said screw, the intermediate runner will be raised with respect to the spaced sides.

4. In a machine of the class described, a frame composed of a pair of spaced sides, cross bars connecting the same, a runner arranged between said spaced sides, an axle connecting the spaced sides, rollers mounted on said axle and arranged on opposite sides of the intermediate runner, said rollers being provided with annular enlargements at their peripheral portion for the purpose described, and plows mounted on the intermediate runner for vertical adjustment.

5. In a machine of the class described, a frame composed of a pair of spaced sides, cross bars connecting the same, a runner arranged between said spaced sides, an axle connecting the spaced sides, rollers mounted on said axle and arranged on opposite sides of the intermediate runner, said rollers being provided with annular enlargements at their peripheral portion for the purpose described, scrapers pivotally attached at corresponding inner ends to opposite sides of the intermediate runner, and connections for moving the outer ends of said scrapers forwardly and rearwardly for the purpose described.

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

WILLIAM C. BROWN.

Witnesses:

FRANK A. LAURENCE,
JOHN OSTRANDER.