

No. 880,165.

PATENTED FEB. 25, 1908.

M. R. RUDOLPH.
SLEIGH.

APPLICATION FILED MAY 21, 1907.

3 SHEETS—SHEET 1.

Fig. 1-

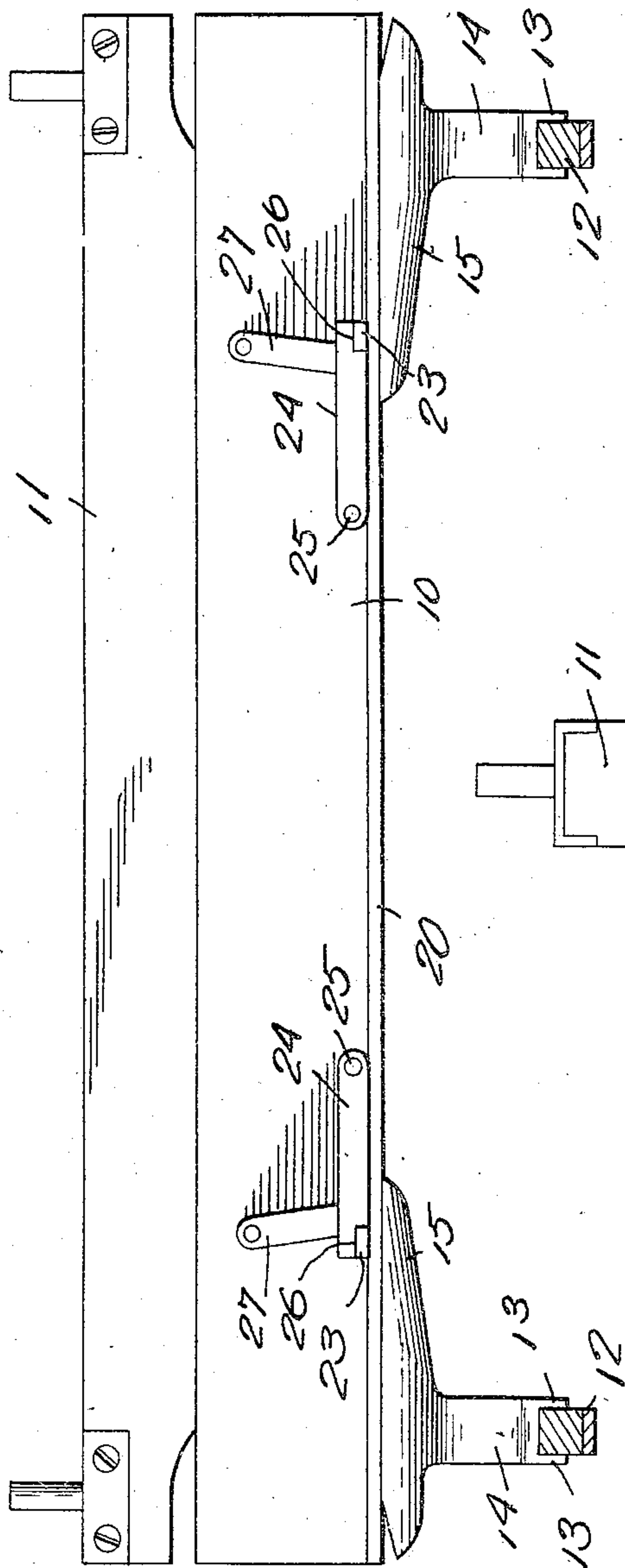
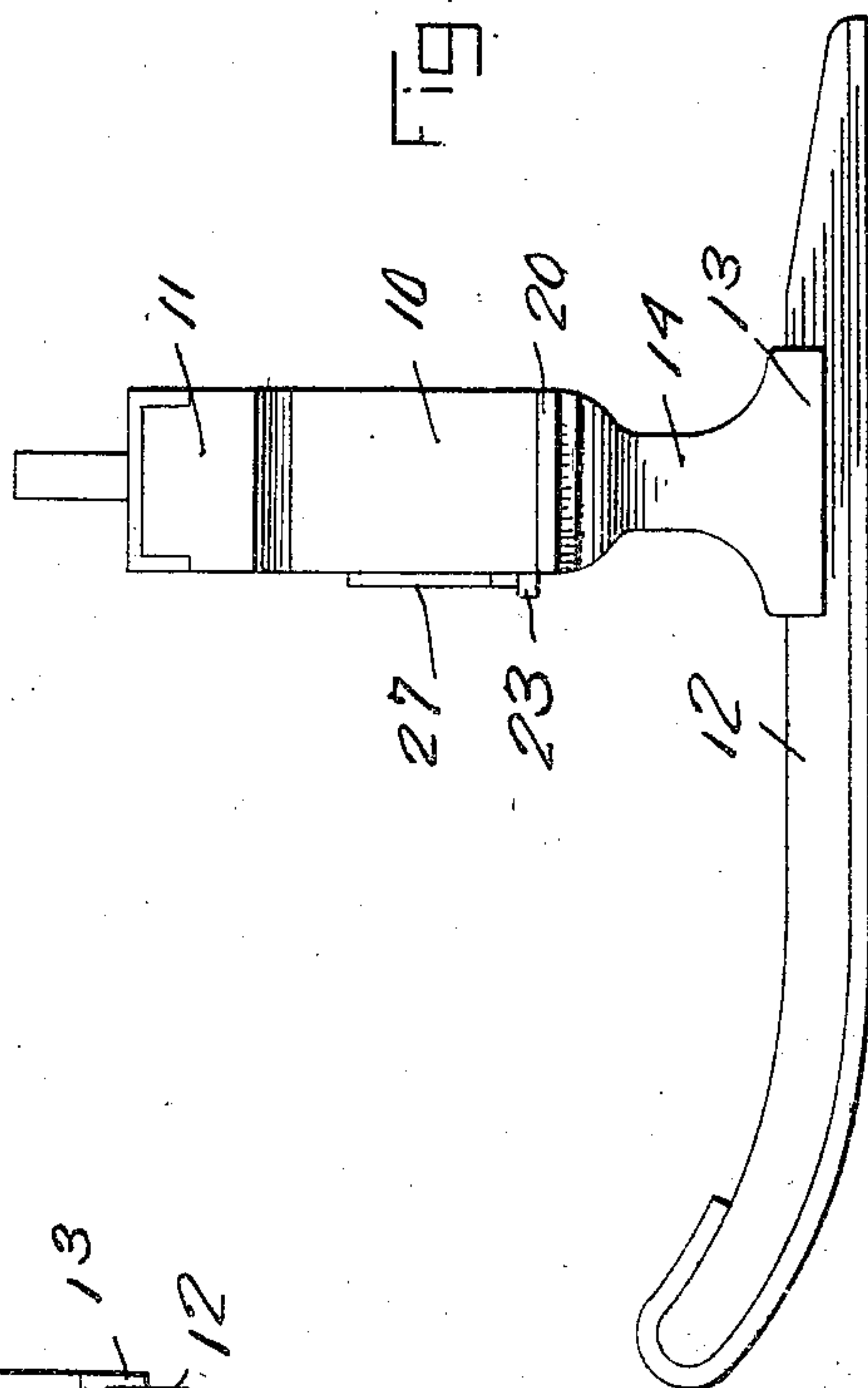


Fig. 3-



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3 SHEETS—SHEET 2.

Fig. 2.

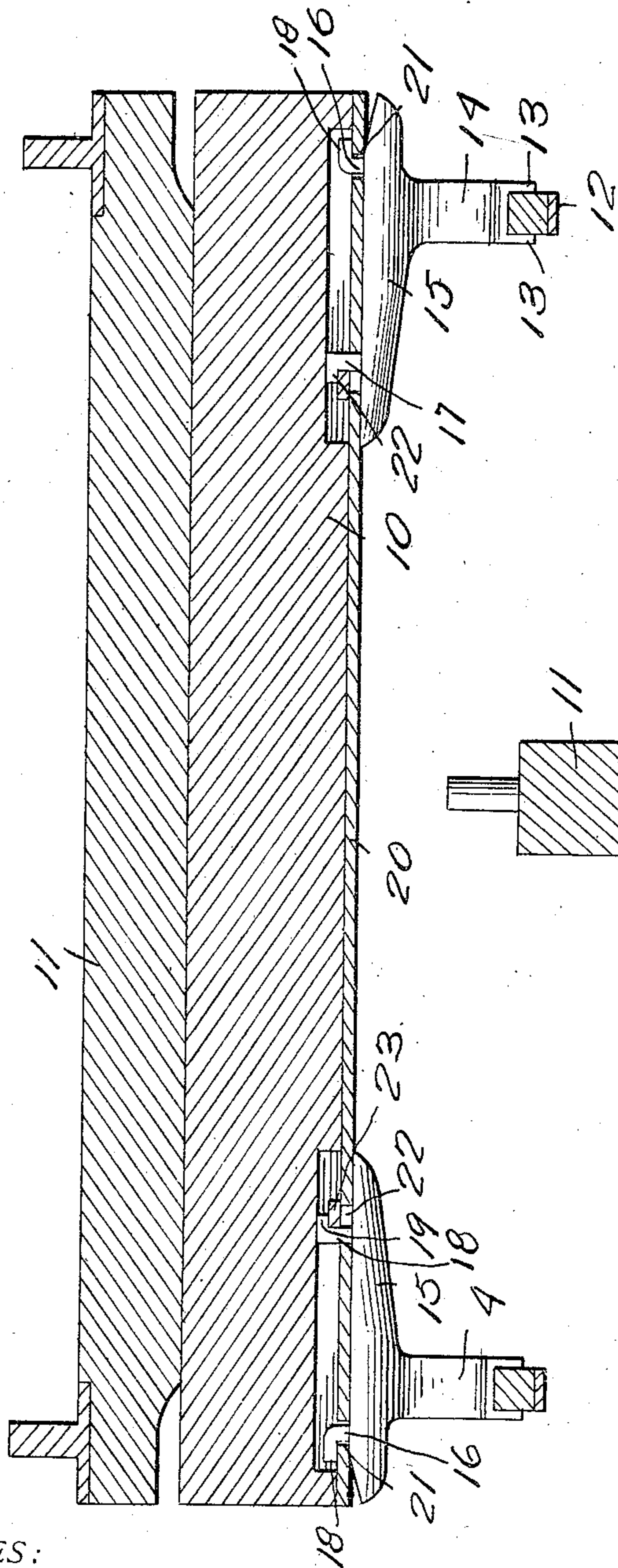
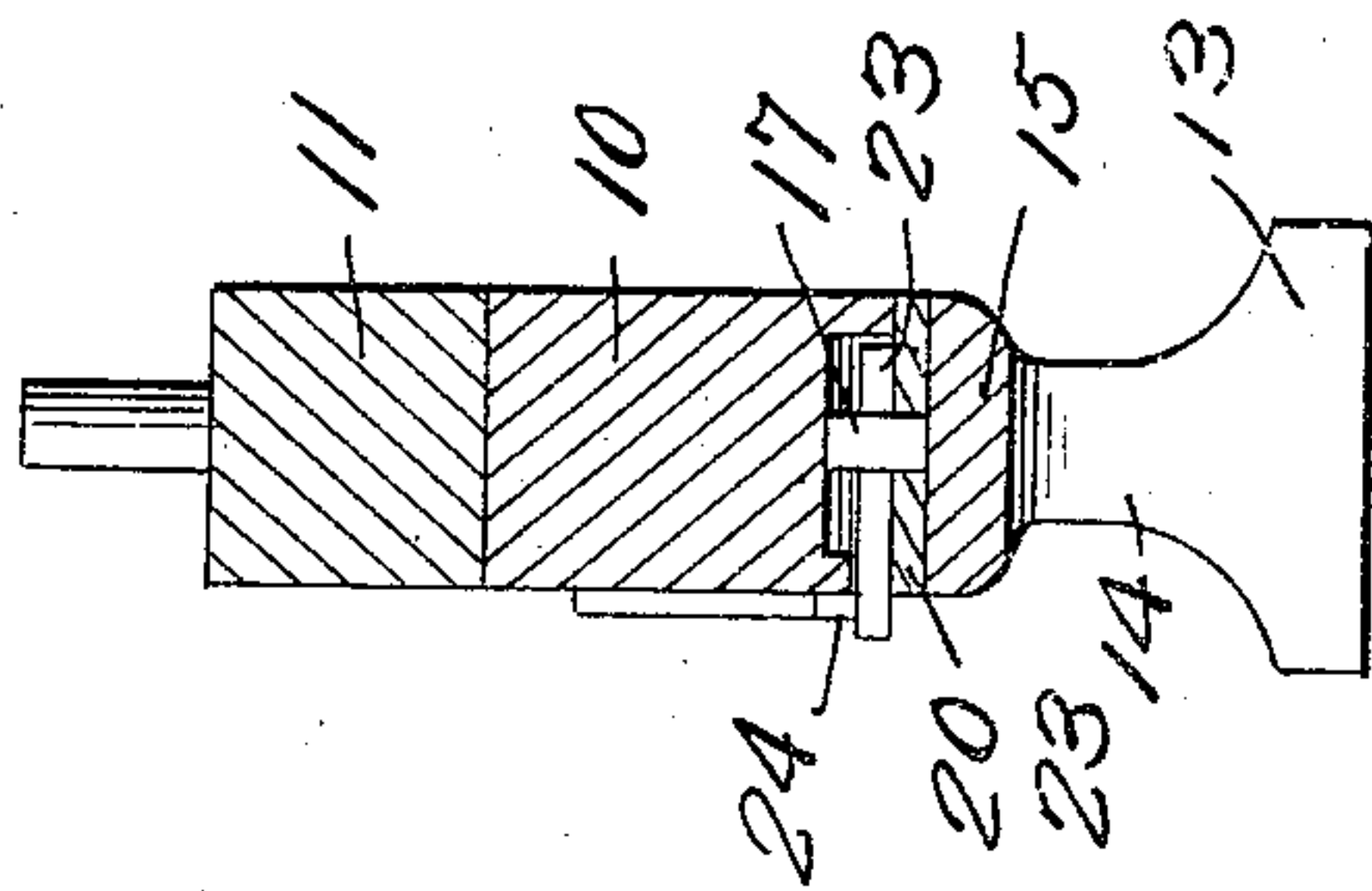


Fig. 5.



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3 SHEETS—SHEET 3.

Fig. 4.

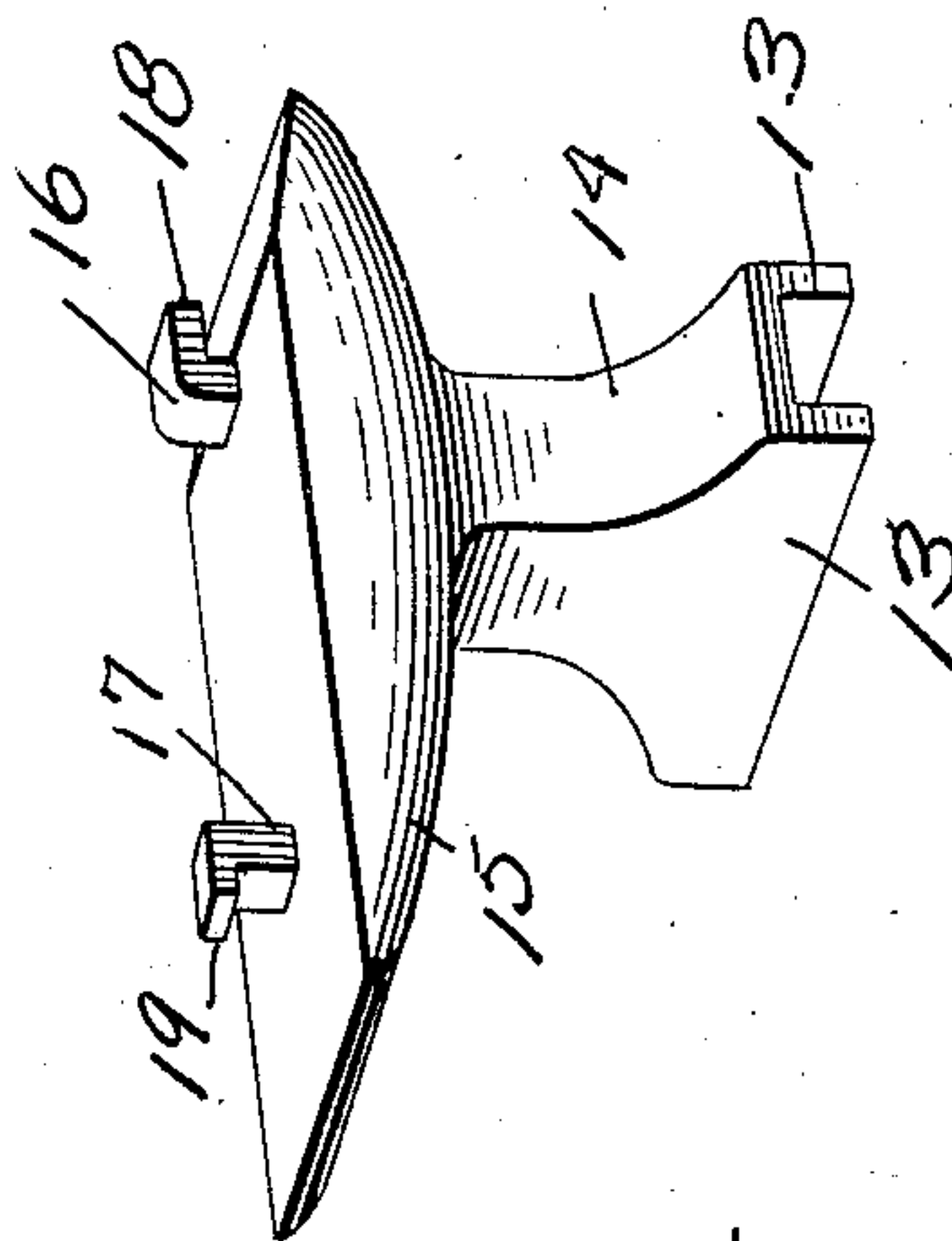
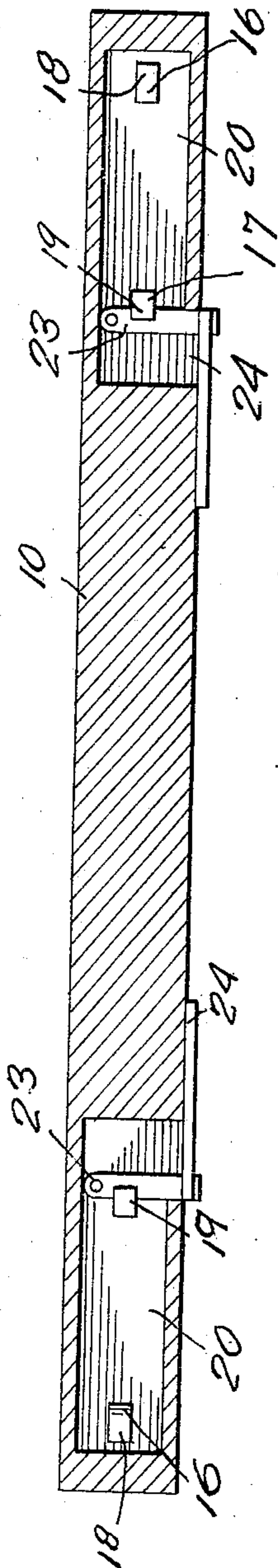


Fig. 5.

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SLEIGH.

No. 880,165.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed May 21, 1907. Serial No. 374,812.

To all whom it may concern:

Be it known that I, MAX R. RUDOLPH, a citizen of the United States, residing at Warrens, in the county of Monroe, State of Wisconsin, have invented certain new and useful Improvements in Sleighs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to sleighs and more particularly to a novel form of knee for sleighs, the primary object of the invention being to provide a knee and beam of such construction that they may be readily connected and disconnected without the use of tools.

In carrying out my invention I employ a beam which has its under face recessed at points and upon the under face of which is secured a plate which extends entirely throughout the length of the beam. This plate is provided with openings and the knees for the sleigh are provided upon their upper surfaces with shouldered lugs, the outer lugs upon each knee being engaged in the outer openings in the plate and the inner lugs in the inner openings. A latch is pivoted upon the plate for engagement with each of the inner lugs of the knees and means is provided upon the beam for holding these latches in engagement with the said lugs to prevent accidental disengagement of the knees from the beam.

In the accompanying drawings, Figure 1 is a front elevation of a beam, bolster, the knees, and the runners of a sleigh constructed in accordance with my invention, the runners being shown in section, Fig. 2 is a vertical longitudinal sectional view through the beam, the knees however being shown in elevation, Fig. 3 is a side elevation, Fig. 4 is a horizontal sectional view through the beam and showing the latches for the lugs upon the knees engaged with the said lugs, Fig. 5 is a vertical transverse sectional view through the beam and one of the knees, and, Fig. 6 is a detail perspective view of one of the knees.

In the drawings there is shown the beam 10 of a sleigh and a bolster 11 which is mounted in the usual manner upon the upper face of the beam. The runners are indicated by the numeral 12 and are received between lips 13 formed at the lower ends of

knees 14 which are embodied in my invention. Each of these knees is provided with an elongated head 15 which extends longitudinally of the beam 10 of the sleigh and beyond opposite sides of the standard of the knee, the inner ends of the heads being of greater length than the outer ends thereof. Upon the upper face of each of the heads 15 there are formed upstanding lugs 16 and 17 which are provided respectively with laterally turned heads 18 and 19, the said heads upon the lugs of each knee being extended in opposite directions and outwardly. The function of these lugs and the heads thereon will be presently fully explained.

The under side of the beam 10 is recessed adjacent each end and secured upon the under side of the beam and covering the said recesses adjacent the ends thereof is a plate 20 the said plate being extended the entire length of the beam and covering the entire under face thereof. Adjacent each of its ends the plate 20 is provided with a pair of openings one of which is indicated by the numeral 21 and the other by the numeral 22, the openings 21 being designed for the reception of the lugs 16 and the openings 22 for the reception of the lugs 17 it being understood that the openings 21 are of substantially the same dimensions as the bodies of the lugs 16 and that these lugs may be engaged through the openings with their heads extending between the plate 20 and the under side of the beam 10 and within the recesses formed in the said under side. The openings 22 however are of such size as to permit passage of the lugs 17 and their heads 19 therethrough after the lugs 16 have been engaged in the openings 21, this engagement being had by first inserting the heads 18 and then swinging the inner end of the head of the knee upwardly until the lug 17 enters the opening 22.

It will be understood of course that the heads 18 upon the lugs 16 prevent disengagement of the said lugs from their openings and in order that the lugs 17 may be held also against such disengagement there is pivoted upon the plate 20 adjacent each of the openings 22 a latch 23 which has one of its ends projecting beyond the forward edge of the plate 20 and the forward face of the beam 10 so that it may be grasped and swung into and out of engagement beneath the head 19 upon the corresponding lug 17. In order to hold these latches 23 in such engagement

beneath the heads upon the lugs 17 I have provided upon the forward face of the beam 10 and adjacent the forward end of each of the latches 23 a latch 24 the latch being 5 pivoted at one of its ends as indicated by the numeral 25 and being adapted for vertical swinging movement. The outer or free end of each of the latches 24 is cut away as indicated by the numeral 26 so as to form a 10 shoulder against which one edge of the corresponding latch 23 abuts it being understood that this abutment of the latch against the shoulder prevents disengagement of the latch from beneath the head 19 upon the 15 corresponding lug 17. Keepers 27 are pivoted at their upper ends upon the forward face of the beam 10 and are adapted to be swung downwardly into frictional engagement with the upper edges of the latches 24 20 when the said latches are swung to engage the latches 23 and these keepers 27 serve to hold the latches 24 against raising or becoming disengaged from the latches 23.

From the foregoing description of my invention it will be observed that either of the 25 knees may be readily fixed to the beam and securely locked in position and also that it may be readily detached therefrom by releasing the several latches above described.

30 What is claimed is—

1. The combination with a sleigh beam having a recessed under face, of a plate secured upon the under face of the beam and extending longitudinally thereof and covering the entire face thereof, said plate being 35 provided adjacent each of its ends with a pair of openings, knees provided at their upper ends with elongated heads, lugs formed integral with the upper face of the 40 heads and projecting upwardly therefrom,

heads formed integral with the lugs and projecting outwardly therefrom in opposite directions, the lugs being engageable through the openings in the plate, latches pivoted to the plate and engageable beneath the head 5 upon one of the lugs upon the knee, latches for holding the said latches against disengagement, and keepers for holding the last named latches against disengagement from the first named latches. 50

2. The combination with a sleigh beam having a recessed underface, of a plate secured upon the under face of the beam and extending longitudinally thereof and covering the entire face thereof, said plate being provided 55 adjacent each of its ends with a pair of openings, knees provided at their upper ends with elongated heads, lugs formed integral with the upper face of the heads and projecting upwardly therefrom, heads formed integral 60 with the lugs and projecting outwardly therefrom in opposite directions, the lugs being engageable through the openings in the plate, latches pivoted upon the plate and engageable beneath the head upon one of the 65 lugs upon the corresponding knee, latches pivoted upon the forward face of the beam and provided with shoulders against which one edge of the corresponding first mentioned latch abuts, and keepers pivoted upon 70 the said forward face of the beam and movable to frictionally engage the last named latches and hold them from disengagement from the first mentioned latches.

In testimony whereof, I affix my signature, 75 in presence of two witnesses.

MAX R. RUDOLPH.

Witnesses:

A. PREMO,
M. LAWTON.