

No. 681,587.

Patented Aug. 27, 1901.

E. F. STUFFLEBEAM.

SLED.

(Application filed July 5, 1901.)

(No Model.)

Fig. 1

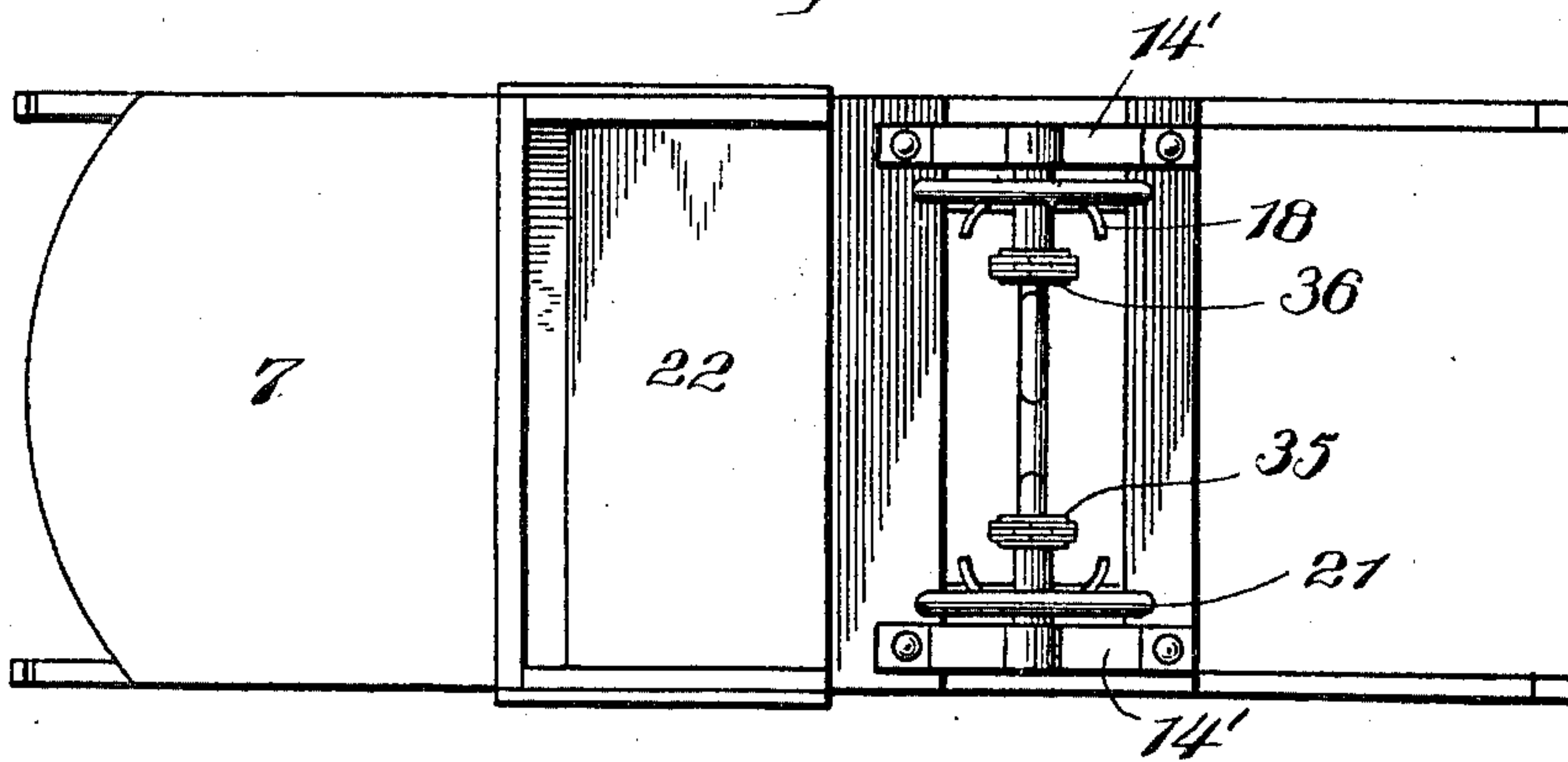


Fig. 2

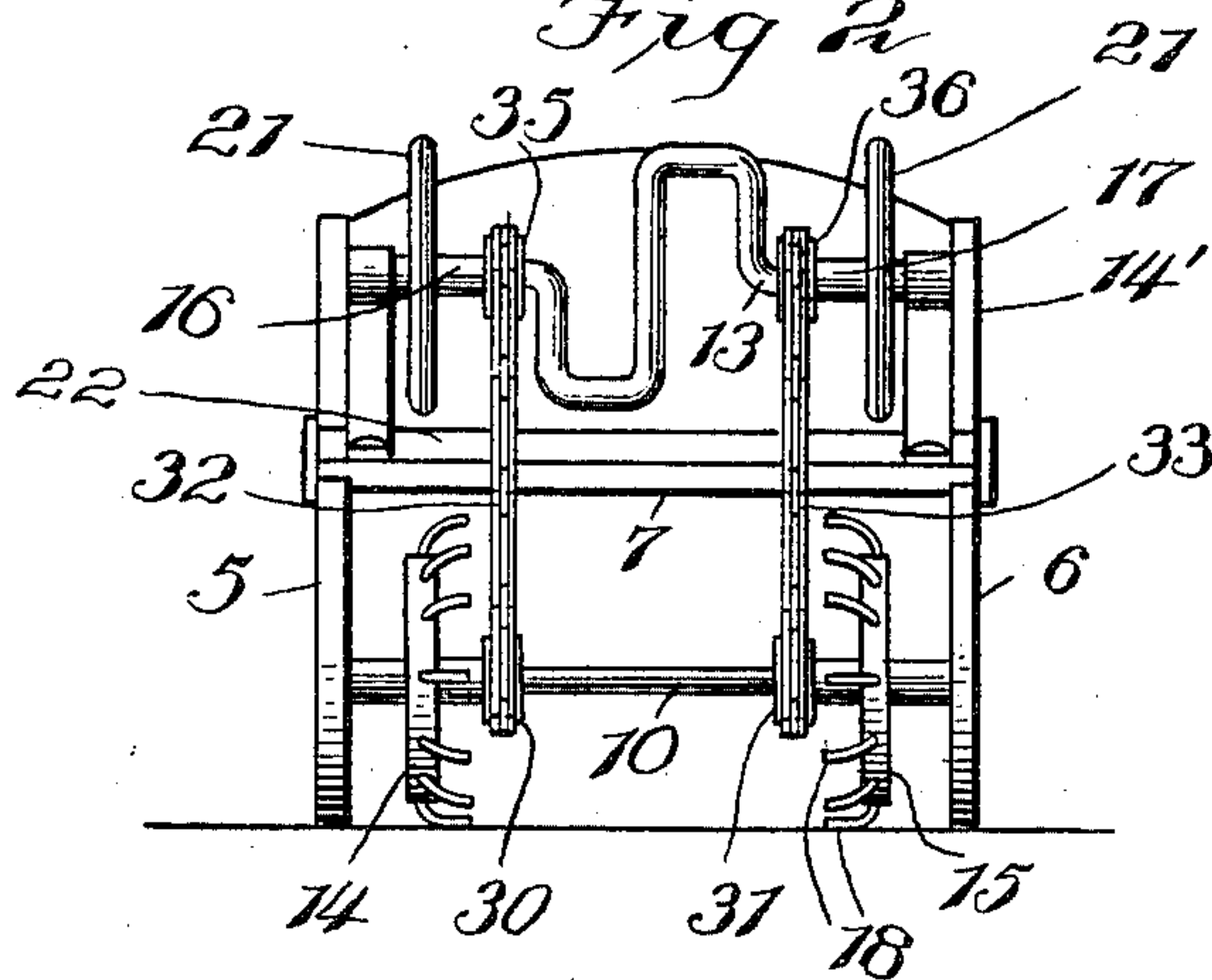
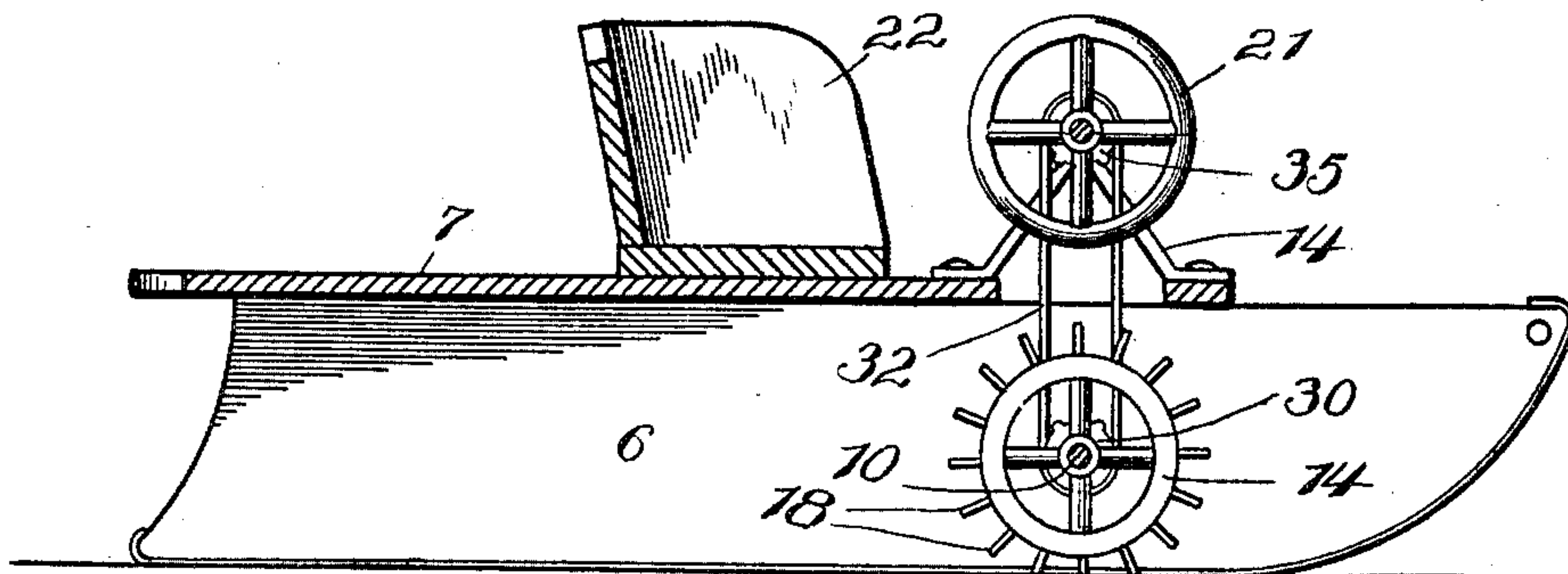


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

EDWARD F. STUFFLEBEAM, OF BERDAN, ILLINOIS.

## SLED.

SPECIFICATION forming part of Letters Patent No. 681,587, dated August 27, 1901.

Application filed July 5, 1901. Serial No. 67,209. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD F. STUFFLEBEAM, a citizen of the United States, residing at Berdan, in the county of Greene, State of Illinois, have invented certain new and useful Improvements in Sleds; 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 sleds, and more particularly to that class wherein propelling mechanism is provided for moving the sled over level snow or ice, the object of the invention being to provide a simple and efficient construction which will be easy of operation, which will pass readily over slight obstructions, and which may be readily steered.

An additional object of the invention is to provide such a construction of propelling-wheels as will eliminate sudden shocks and jars.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the sled. Fig. 2 is a front elevation of the sled. Fig. 3 is a vertical longitudinal section.

Referring now to the drawings, the sled comprises the two side pieces 5 and 6, which are spaced laterally and which are connected at their upper edges by the platform 7, secured to the sides in any suitable manner.

To propel the sled, a shaft 10 is mounted between the runners, and at the ends of this shaft and adjacent to the inner facing of the sides of the sled are fixed the propelling-wheels 14 and 15, having threaded perforations in their peripheries, into which are engaged the fingers 18, which latter are of spring material and are curved toward each other, their ends being projected outside of the periphery of their respective wheels. These fingers have such positions that when the shaft that carries them is rotated the ends of the fingers will project or tend to project beyond the shoes of the sides, so as to insure engagement of the fingers with the surface over which the sled is to be moved.

As above indicated, the fingers are substantially arcuate, and as the wheels rotate the ends of these fingers are brought into contact

with the ground and they are compressed or released, according to the direction of movement of the sled. By then rotating the shaft and the wheels thereon the sled will be propelled, the lateral curvature of the fingers giving to the sled an even forward movement, owing to the fact that the fingers yield and thereby absorb vibration incident to striking lumps of ice or hard snow and which vibration would ordinarily be transmitted to the sled. To rotate the drive-shaft, it has sprockets 30 and 31 fixed thereon and with which are engaged chains 32 and 33, which are in turn engaged with sprockets 35 and 36, which latter are mounted upon a shaft 13, journaled in bearings in the uprights 14', and upon this crank-shaft and between the sprockets and the uprights are disposed the spacing-blocks 16 and 17, which assist in holding the sprockets in alinement with the sprockets on the shaft below. Thus when the crank-shaft is rotated the drive-shaft is rotated, so that the fingers 18 are rotated to successfully engage the surface upon which the sled is to be propelled. As above stated, the engaging or propelling fingers are arcuate in shape, so that the weight of the sled tends to deflect the fingers slightly. When the sled is to be propelled, the crank-shaft is rotated, and when speed is given to the crank-shaft it is maintained by the use of fly-wheels 21 on the crank-shaft. It will be noted that with this construction the speed of the driving-shaft is dependent upon the speed of rotation given to the crank-shaft, and after the crank-shaft is rotated at a sufficiently high speed the fly-wheels thereon by their momentum assist in maintaining the speed of rotation of the crank-shaft. Upon the platform and adjacent to the crank-shaft is disposed a transverse seat 22, which is slidably and adjustably mounted for movement toward and away from the crank-shaft to compensate for the different lengths of reach of different operators. With this portion of the construction it will be seen that the drive-wheels may be rotated at the proper speed to propel the sled and that there will be no tendency for the sled to be over-turned in the event of a finger of one of the drive-wheels striking against a hard lump or other obstruction, as in such an event the finger that strikes an obstruction is bent, and



when the obstruction is passed it springs back into place.

What is claimed is—

1. A sled comprising sides and a connecting-  
5 platform, a drive-shaft mounted in bearings  
between the sides, wheels fixed upon the drive-  
shaft and having spring-fingers fixed thereto  
and bent into arc shape, the fingers of one  
wheel being curved in the direction of the  
10 fingers of the opposite wheel, and means for  
rotating the drive-shaft.

2. The combination with a sled including  
sides and a connecting-platform, of a drive-  
shaft mounted between the sides, wheels fixed  
15 upon the drive-shaft, arcuate spring-fingers

fixed to the wheels, the fingers of one wheel  
being curved in the direction of the fingers of  
the other wheel, a crank-shaft journaled in  
bearings upon the sides of the sled, sprock-  
ets on the crank-shaft and drive-shaft, chains 20  
connecting the sprockets, and fly-wheels on  
the crank-shaft.

In testimony whereof I hereunto sign my  
name, in the presence of two subscribing wit-  
nesses, on the 3d day of April, 1901.

EDWARD F. STUFFLEBEAM.

Witnesses:

JOHN C. MCCONNELL,  
JOHN A. BRIDGES.