

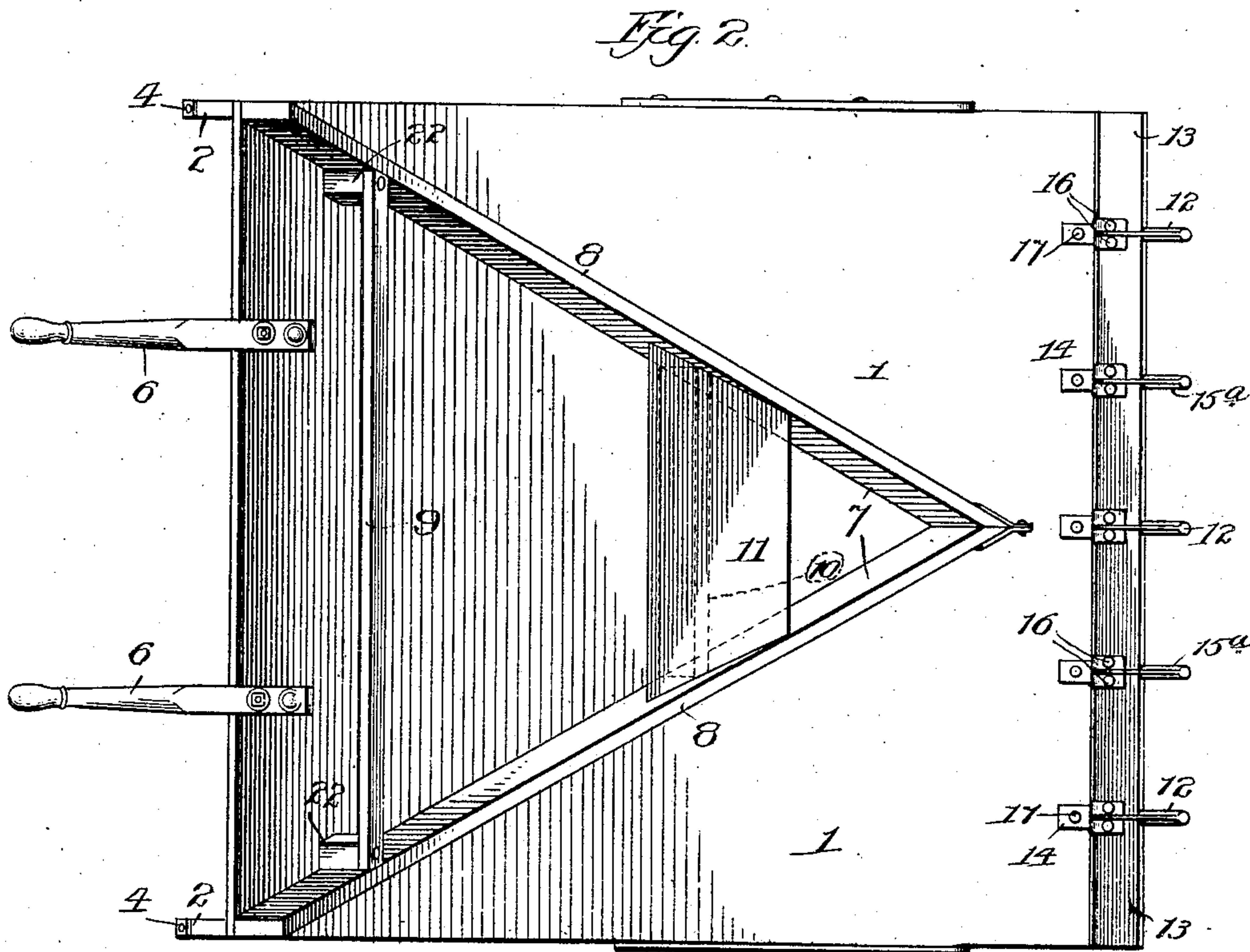
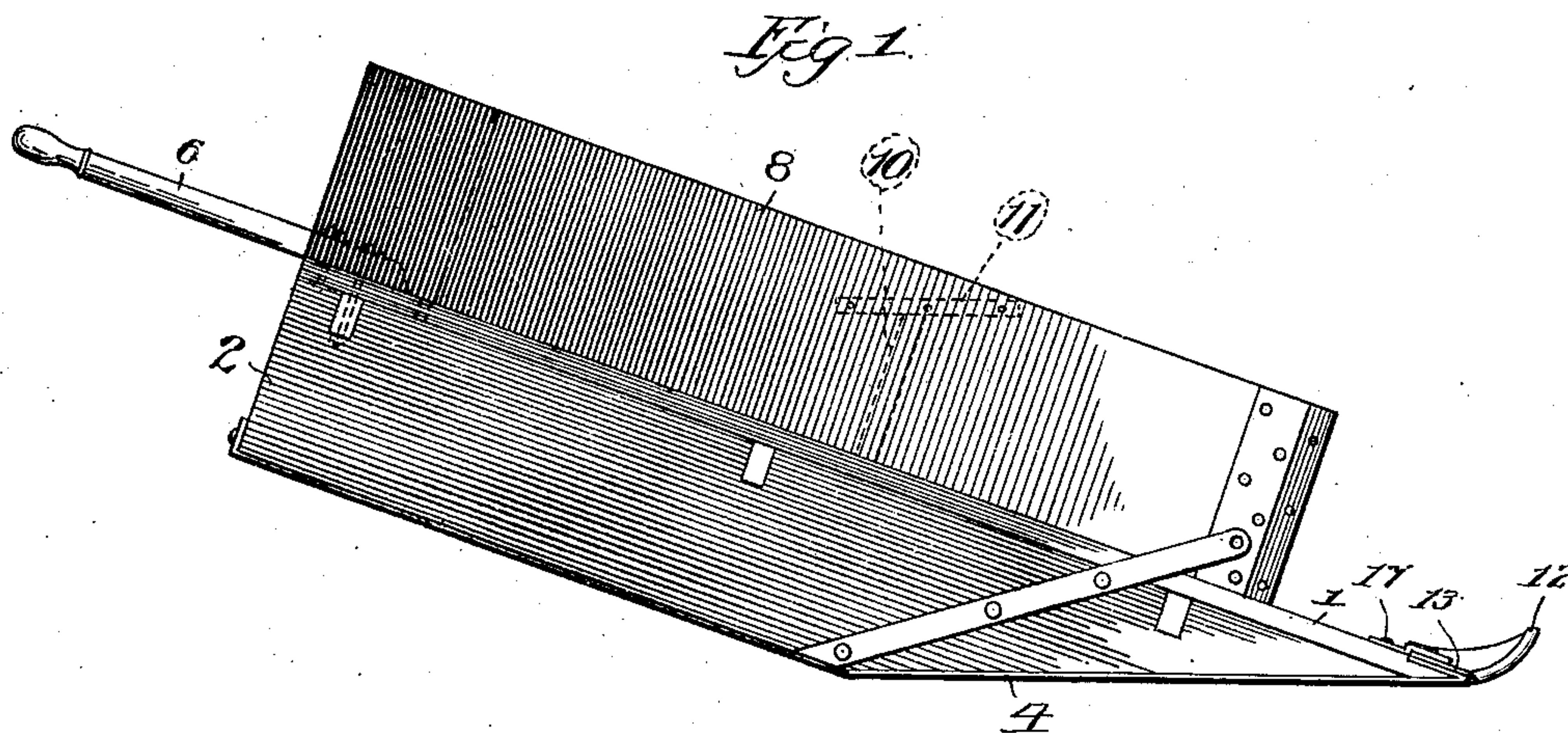
No. 845,549.

PATENTED FEB. 26, 1907.

M. J. HENRY.  
COMBINED SHOVEL AND PLOW.

APPLICATION FILED APR. 20, 1906.

3 SHEETS—SHEET 1.



Witnesses:  
Geo. Charnov  
E. M. Collins.

Inventor  
Milton J. Henry

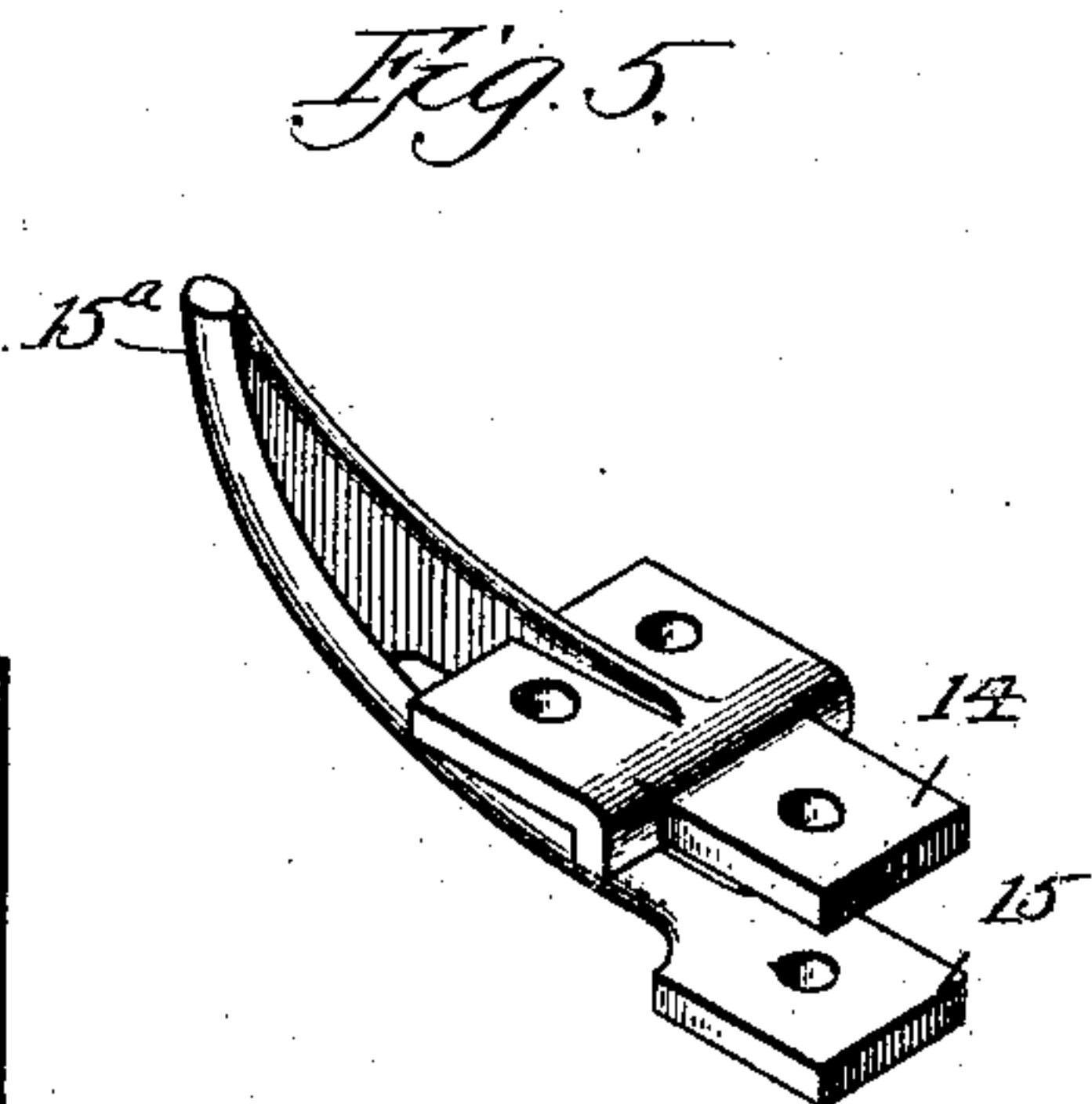
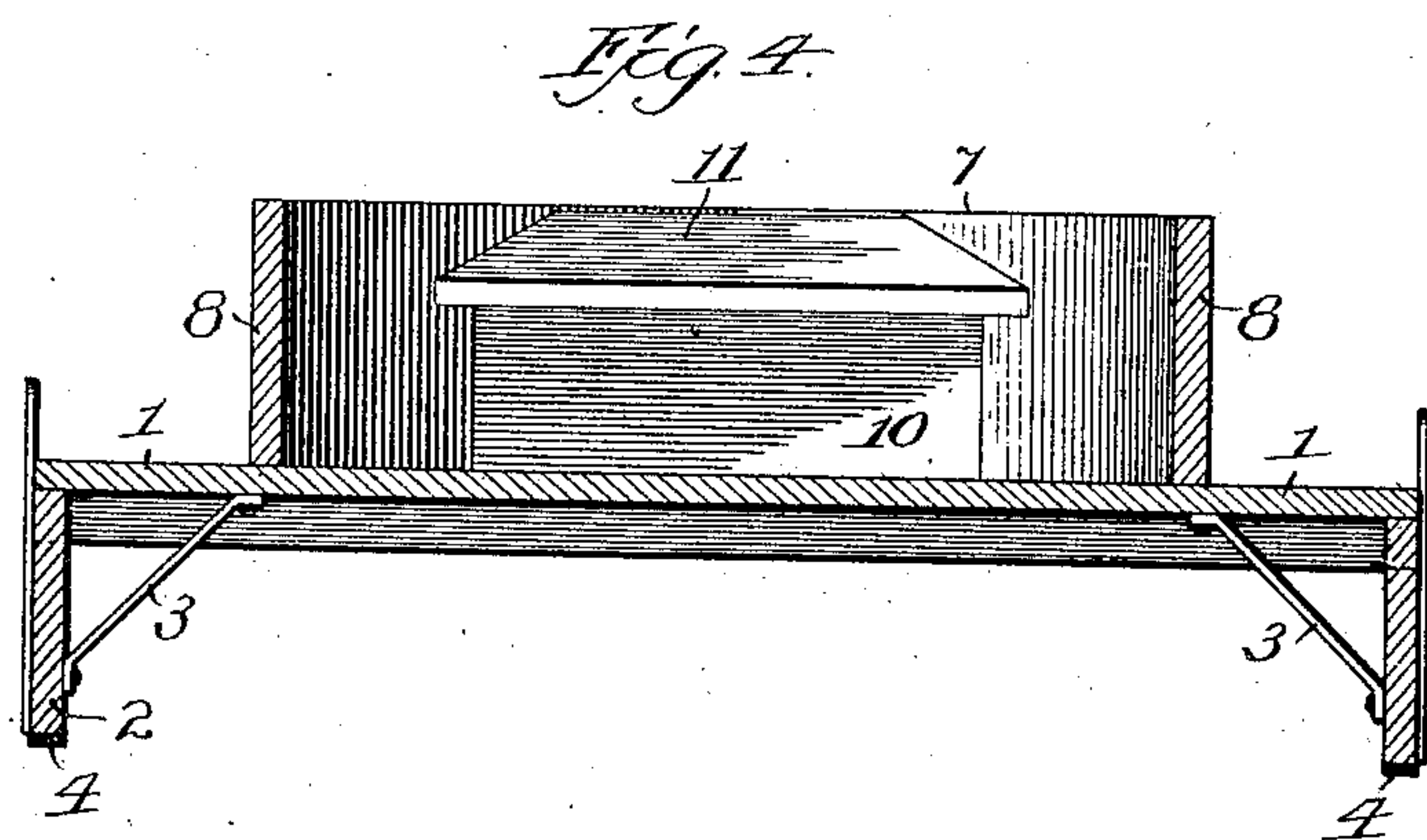
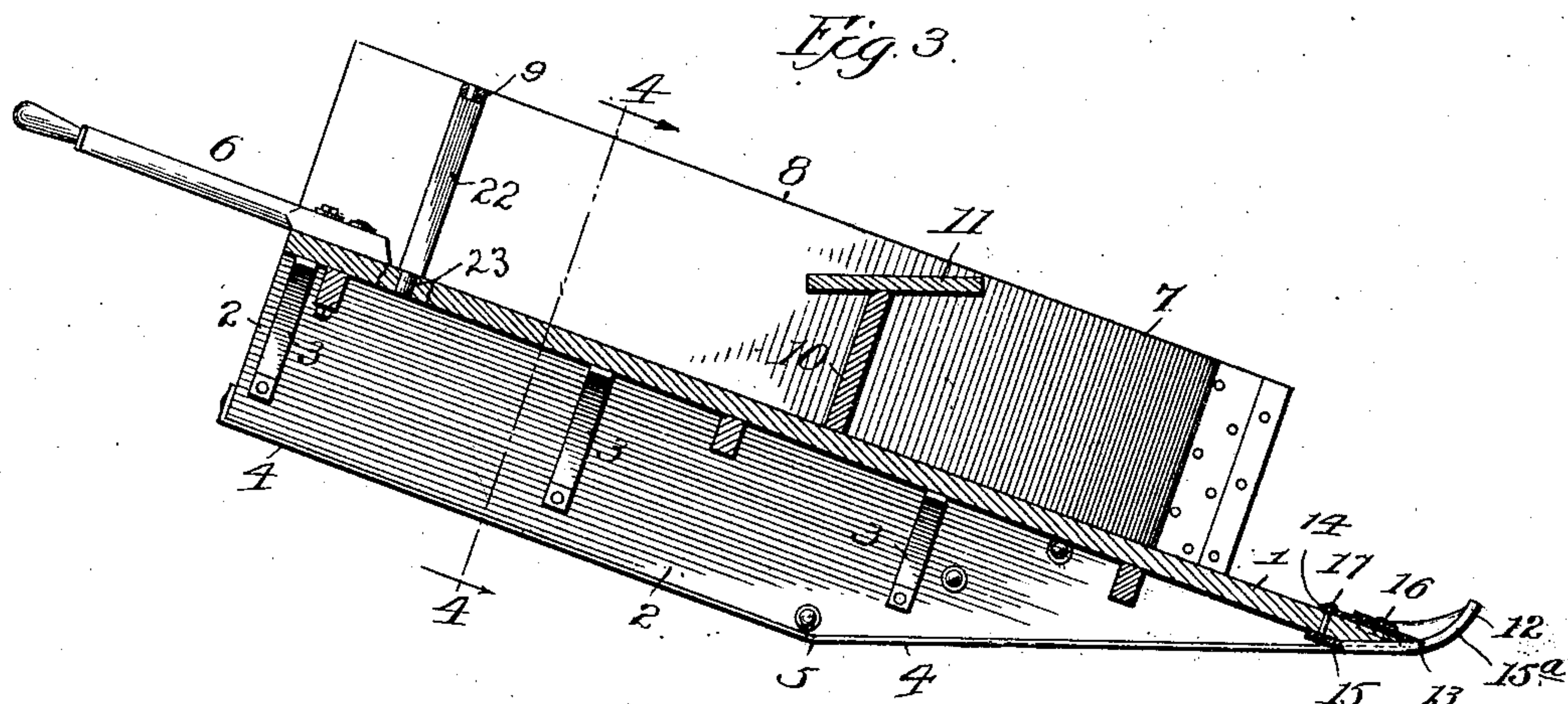
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3 SHEETS—SHEET 2.



Witnesses:  
Ed. O. Davidson.  
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3 SHEETS—SHEET 3.

Fig 6

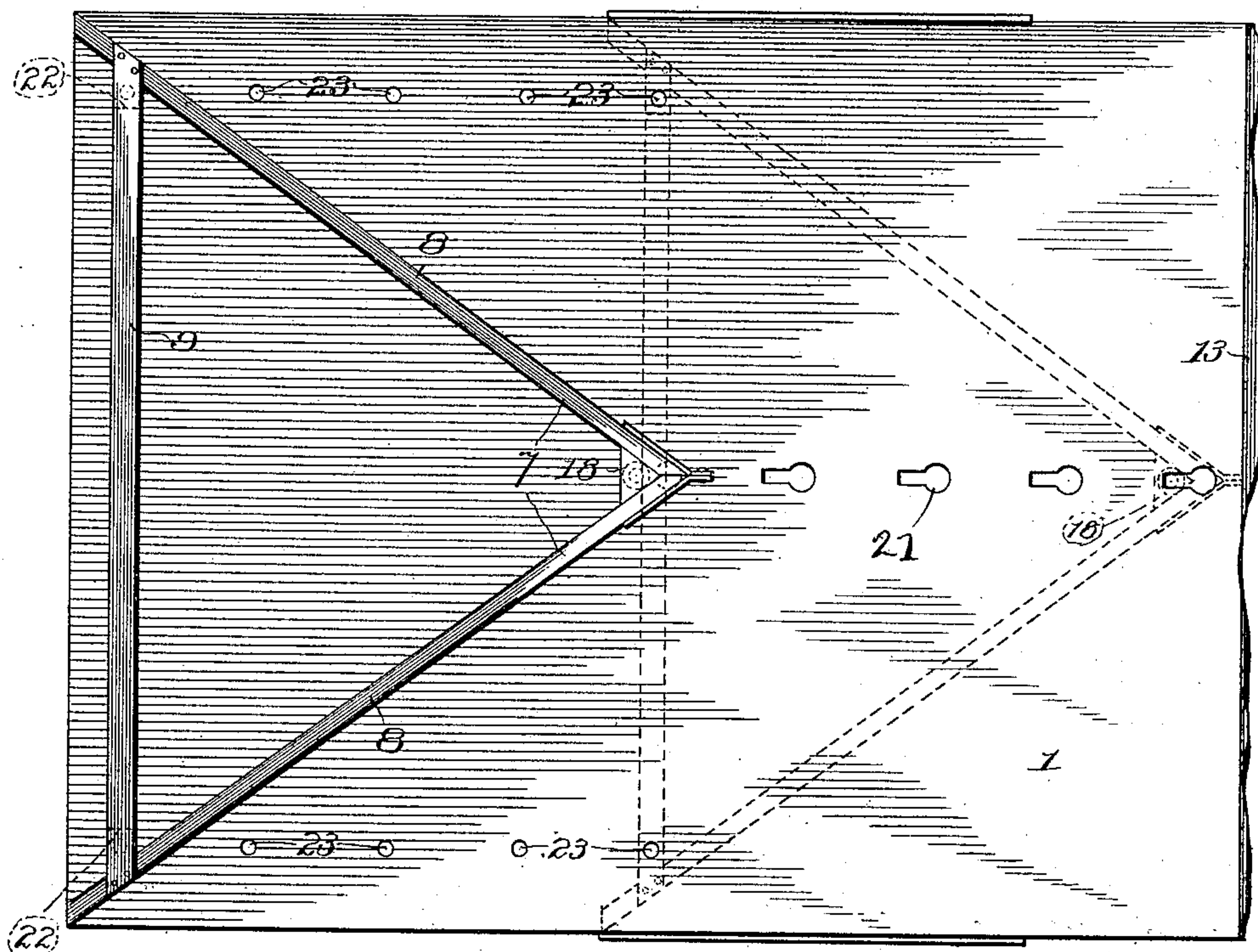
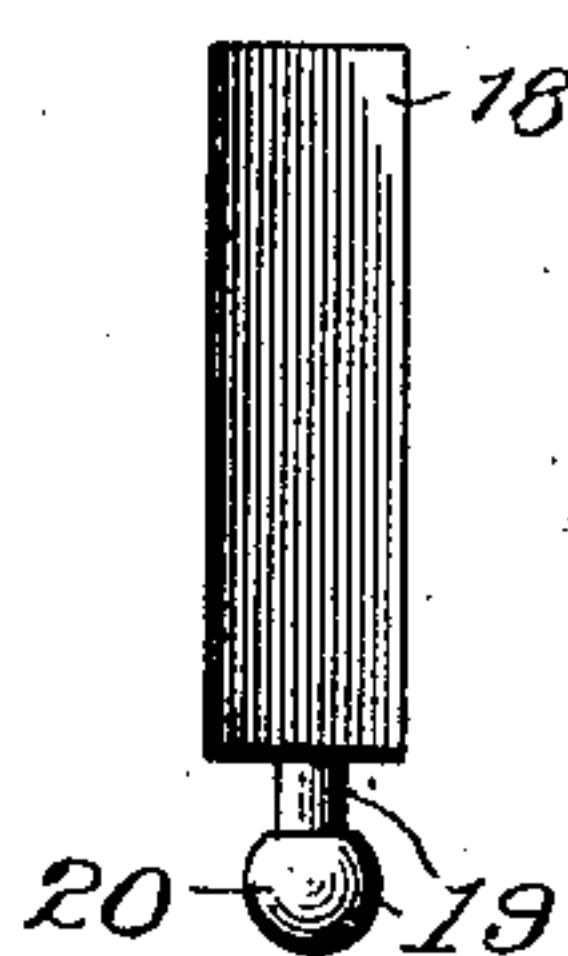


Fig 7



Witnesses:  
Geo. C. Johnson,  
E. M. Collins.

Inventor:  
Milton J. Henry



# UNITED STATES PATENT OFFICE.

MILTON J. HENRY, OF OAK PARK, ILLINOIS.

## COMBINED SHOVEL AND PLOW.

No. 845,549.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed April 20, 1906. Serial No. 312,892.

*To all whom it may concern:*

Be it known that I, MILTON J. HENRY, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Combined Shovel and Plow, of which the following is a full, clear, and exact description.

My invention relates to a combined shovel and plow for removing snow or the like, and has for its object to provide an improved and simple structure which will be reliable and efficient in operation.

My invention contemplates, generally speaking, a snow shovel or scraper upon which is mounted a deflecting-plow adapted to thrust the snow or other material to one side or both sides of the surface being cleaned. I preferably employ a V-shaped plow having its apex close to the front edge of the scraper at approximately the center of the scraper, so that the snow is deflected or thrust to either side of the walk or surface being cleaned. An advantage of this arrangement lies in the fact that the device cannot be thrust to one side when a drift is encountered, since the shovel is buried at the base of the drift, and the plow will be forced directly through the same. The front edge of the shovel is preferably provided with curved riders adapted to accommodate the device to slight irregularities in the surface being cleaned, and the vertical side wings upon which the scraper is mounted taper abruptly near their central point toward the front of the scraper, so that when it is desired to pass over an obstruction or pass from the street over the curbing to the sidewalk the front end of the device may be readily tipped up by means of a suitable handle attached to the scraper. The plow is longitudinally adjustable upon the shovel, so as to adapt the device to varying depths of snow.

I will describe my invention by reference to the accompanying drawings, which represent the preferred embodiment of my invention, reserving for the appended claims a statement of the parts, improvements, and combinations which I deem novel with me.

In the drawings, Figure 1 is a side elevation of a combined shovel and plow embodying my invention. Fig. 2 is a plan view thereof. Fig. 3 is a longitudinal sectional view on line 3 3 of Fig. 2. Fig. 4 is a transverse sectional view on line 4 4 of Fig. 3.

Fig. 5 is a detail view of one of the riders which are secured to the front edge of the shovel. Fig. 6 is a plan view illustrating the manner of adjusting the position of the plow upon the scraper; and Fig. 7 is a detail view of the center post, which is secured at the apex of the plow.

The same letters of reference are used to designate the same parts wherever shown.

The shovel or scraper 1 is mounted upon vertical side wings 2 2, said parts being secured together by braces 3 3. Metal runners 4 4 are secured to the wings, said wings tapering at approximately their central points abruptly toward the front edge of the shovel. Handles 6 6 are secured to the shovel, whereby the same may be tilted up over obstructions and the like.

A deflecting-plow 7 is mounted upon the shovel or scraper, said plow comprising two deflecting-plates 8 8, mounted on edge in a V shape with their apex near the front edge of the shovel. The plates are provided with suitable braces 9 10, the brace 10 carrying a seat 11 for the operator. A suitable attachment may be provided for the plow, whereby power may be applied to the device.

Means are provided for accommodating the shovel to slight irregularities in the walk or surface being cleaned, said means preferably comprising riders 12 12, secured to the front edge of the shovel or scraper, the scraper carrying a metal plate 13 along its front edge. Said riders each preferably comprises a pair of clamping-jaws 14 15, formed integrally with an upwardly-projecting curved lug 15<sup>a</sup>, adapted to ride over rough surfaces. The jaws are adapted to receive said plate 13 and portions of the shovel, the bolts 16 16 passing through said jaws, plate, and shovel, bolts 17 passing through simply the jaws and shovel. I preferably arrange the plow so as to be adjustable upon the scraper and capable of being set with its apex at varying distances from the front edge of the scraper, so as to accommodate the plow to varying depths of snow and permit the snow to be thrown upon the crust adjoining the surface being cleaned. Thus the center post 18, secured at the apex of the plow carries at its lower end a finger or bolt 19, formed integrally with a button 20. Said bolt 19 is adapted to enter any one of a number of key-shaped slots 21 in the scraper, said slots extending in a row from the front of the scraper at its center. The front portion of each slot



is circular in outline and communicates at its rear with a narrowed rectangular portion. Thus when the bolt 19 is placed within a slot the button 20 passes through the circular portion of the slot, and when the plow is forced rearwardly the finger 19 rides in the narrowed portion of the slot and the button 20 serves to lock the same in place. At the rear ends of the plates 8 8 are mounted posts 22 22, adapted to lock in slots 23 23 along the sides of the scraper. Thus for a slight depth of snow the plow would be set forward on the scraper in the desired slots, while for a heavy fall the plow would be mounted at the rear of the scraper over the portions of the side wings having the maximum height.

I claim—

1. The combination with a snow-shovel, of vertical side wings therefor, metal runners on said wings adapted to slide along the surface being cleaned, said wings tapering abruptly near their front ends toward the front edge of the shovel, and a handle for said shovel; whereby the structure may be easily tipped to accommodate the same to abrupt and considerable irregularities in the surface being cleaned.

2. The combination with a snow-shovel, of a deflecting-plow mounted thereon, said plow being longitudinally adjustable upon said shovel, and riders secured to the front edge of said shovel to accommodate the same to irregularities in the surface being cleaned.

3. The combination with vertical side wings, the lower surfaces of said wings forming obtuse angles, a shovel mounted on said wings, and a deflecting-plow mounted on said shovel.

4. The combination with vertical side wings, the lower surfaces whereof form obtuse angles, a shovel mounted on said wings, a deflecting-plow longitudinally adjustable upon said shovel, and riders mounted upon the shovel to accommodate the same to irregularities in the surface over which said plow moves.

5. The combination with a snow-shovel, of vertical side wings therefor, runners on said

wings adapted to slide along the surface being cleaned, said wings tapering abruptly near their front ends toward the front edge of the shovel, a V-shaped deflecting-plow mounted on said shovel, riders mounted upon the front edge of the shovel to accommodate the same to slight irregularities in the surface being cleaned, and a handle for said shovel whereby the structure may be easily tipped over abrupt obstructions.

6. A rider for snow-shovels or the like comprising a pair of clamping-jaws secured to a curved upwardly-projecting lug.

7. A snow-shovel having a metallic plate secured along its front edge, and a number of riders each comprising clamping-jaws formed integrally with a curved upwardly-projecting lug, the jaws of each rider being adapted to receive said plate and a portion of the shovel, and bolts passing through said jaws, plate and shovel.

8. The combination with vertical side wings having metal runners on the bottom thereof adapted to slide along a surface, the bottom surfaces of said wings forming obtuse angles, a shovel mounted on said wings, a V-shaped deflecting-plow longitudinally adjustable upon said shovel, curved riders along the front edge of said shovel to accommodate the same to slight irregularities in said surface, and a handle for said plow whereby the same may be tipped to lift the shovel over obstructions.

9. The combination with a snow-shovel, of a deflecting-plow mounted thereon, vertical wings upon which said shovel is mounted, the bottom surfaces of said wings sliding along the surface being cleaned and forming obtuse angles with their apexes on a central line between the ends of said shovel, and a handle for the shovel adapted to tip or turn the same upon said apexes.

In witness whereof I hereunto subscribe my name this 28th day of March, A. D. 1906.

MILTON J. HENRY.

Witnesses:

ERIC G. HALLIN,  
C. A. RICKFORT.