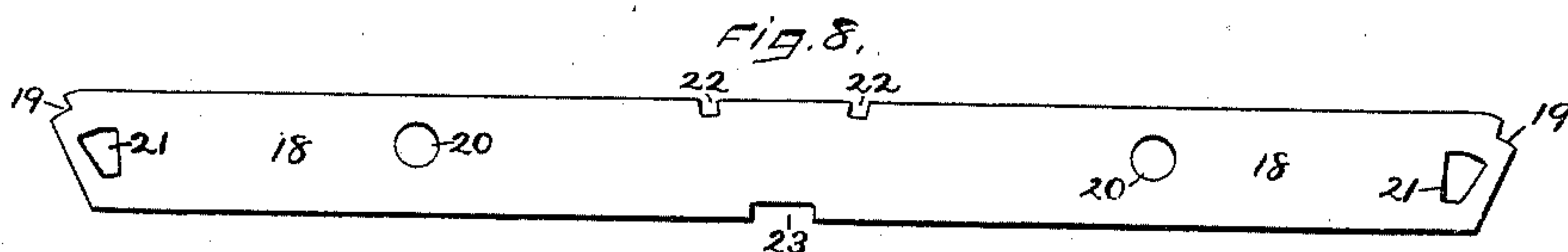
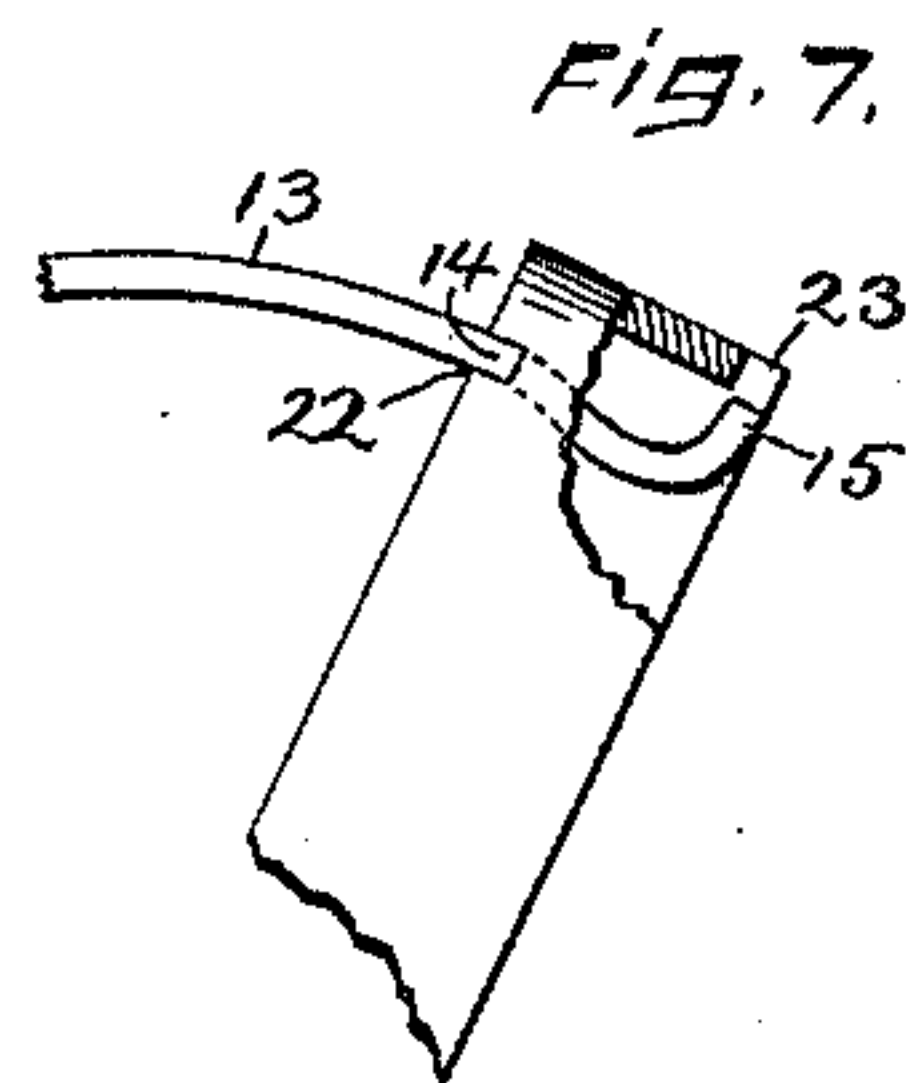
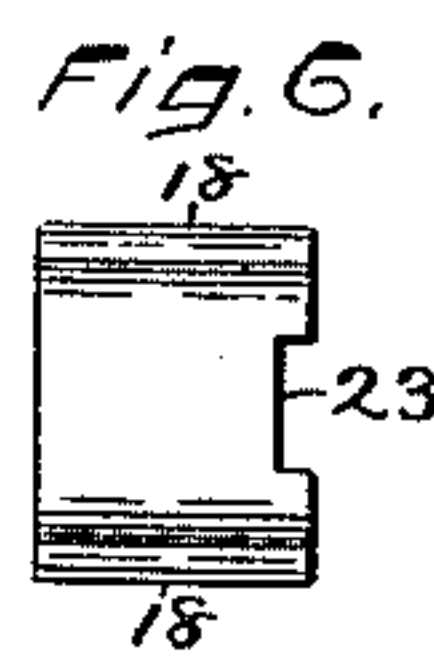
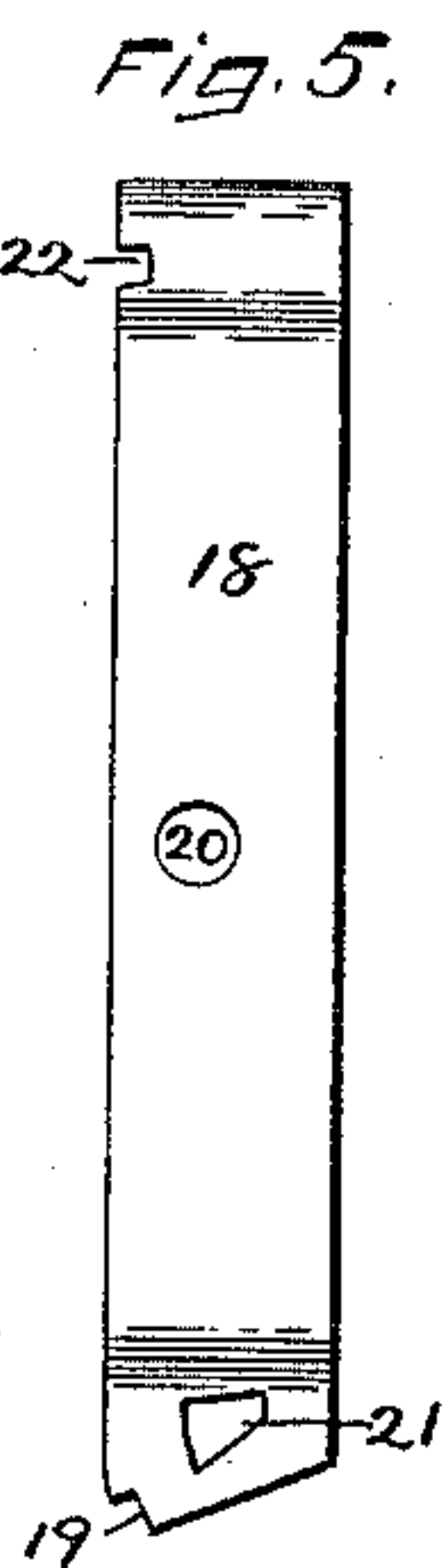
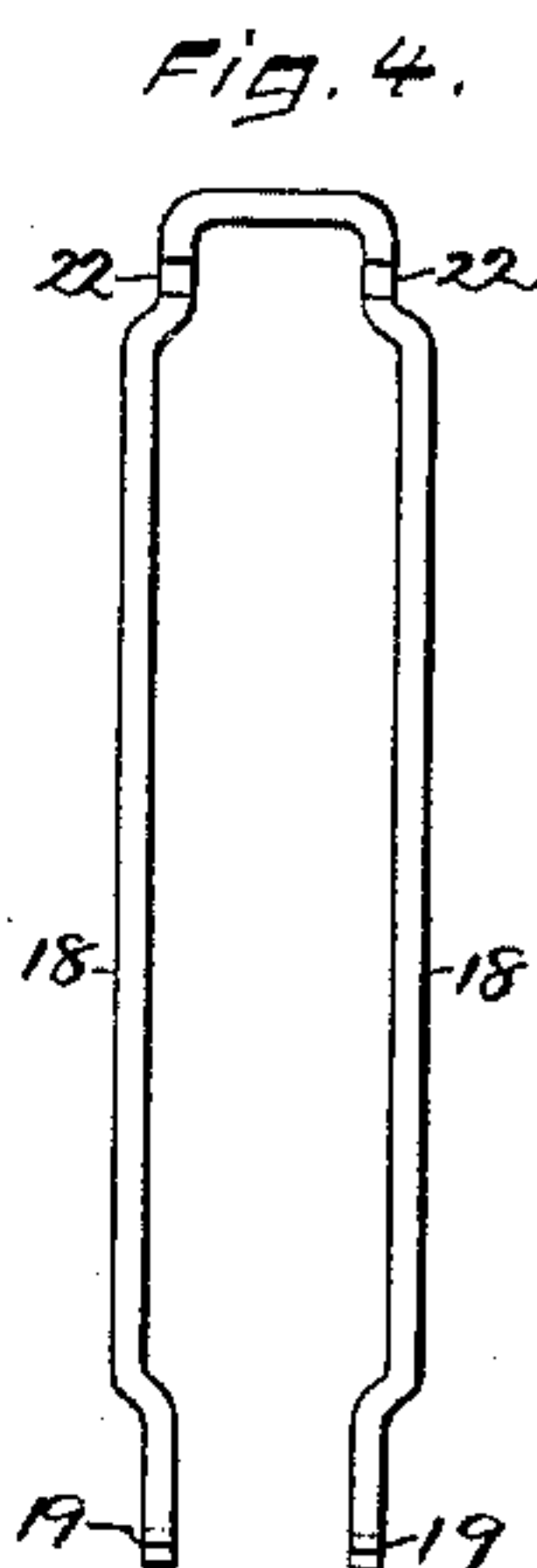
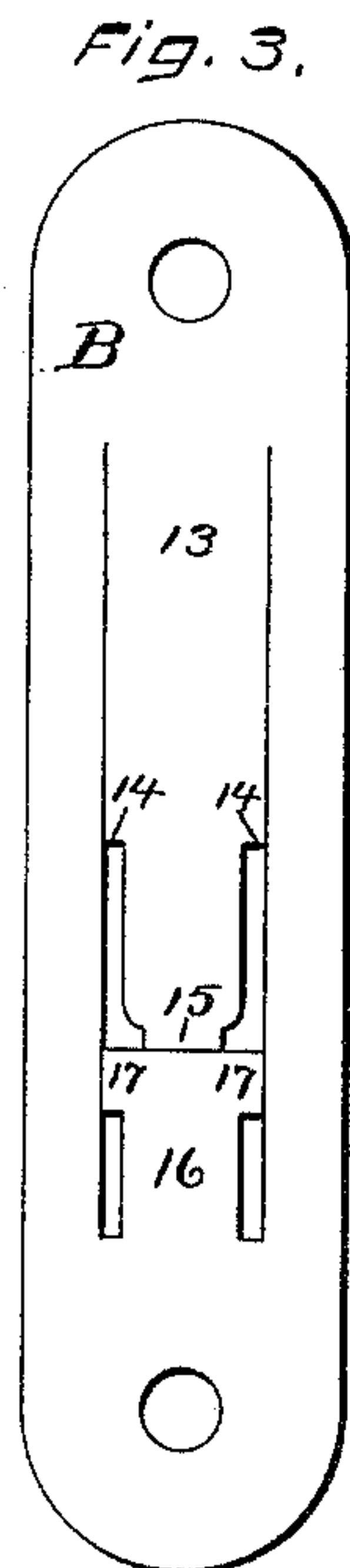
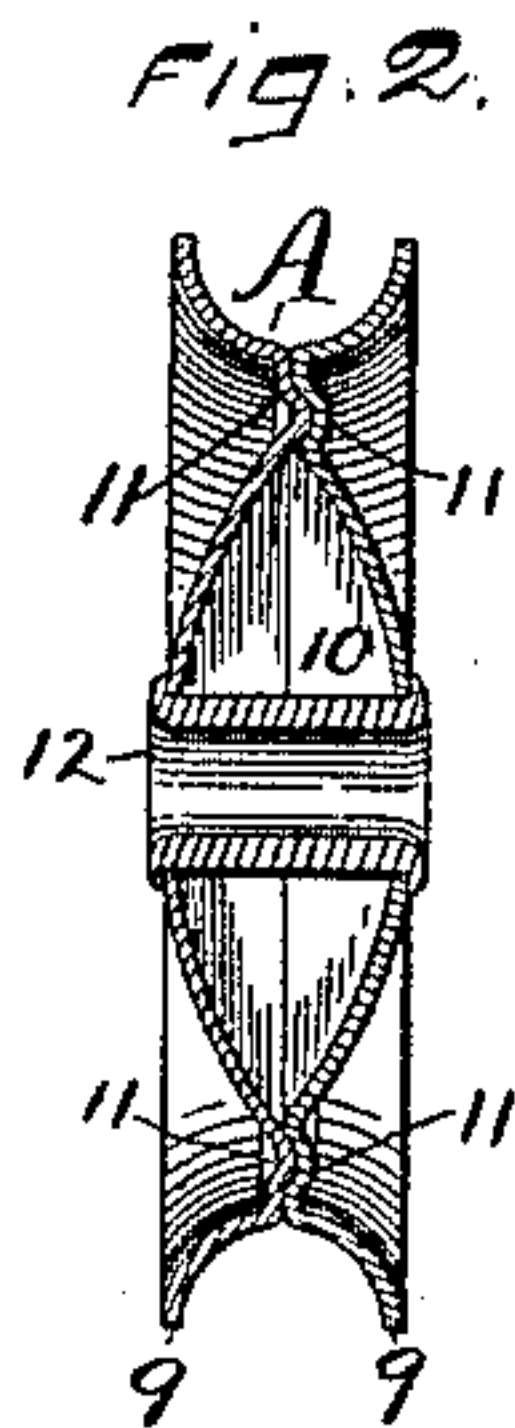
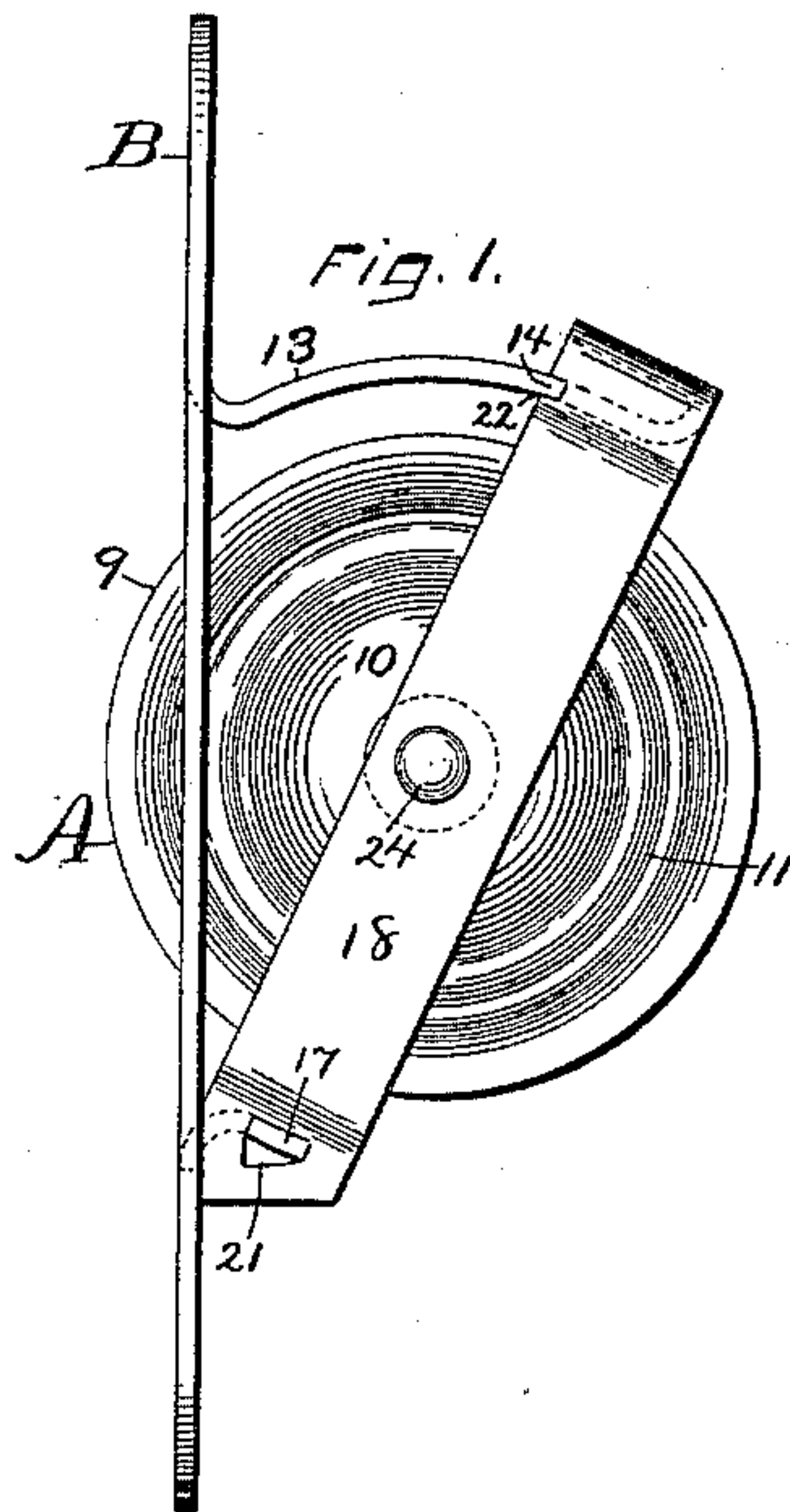


(No Model.)

T. CORSCADEN.  
SASH CORD GUIDE.

No. 467,668.

Patented Jan. 26, 1892.



WITNESSES.

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Att'y.



# UNITED STATES PATENT OFFICE.

THOMAS CORSCADEN, OF NEW BRITAIN, CONNECTICUT.

## SASH-CORD GUIDE.

SPECIFICATION forming part of Letters Patent No. 467,668, dated January 26, 1892.

Application filed February 18, 1891. Serial No. 381,840. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS CORSCADEN, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Sash-Cord Pulleys, of which the following is a specification.

My invention relates to improvements in sash-cord pulleys; and the objects of my improvement are economy in construction and the production of a neat, strong, and efficient article, both as regards the pulley and its frame.

In the accompanying drawings, Figure 1 is a side elevation of the complete pulley and frame. Fig. 2 is a central section of the pulley. Fig. 3 is a plan view of the face-plate portion of the frame as cut from sheet metal ready to bend into shape. Figs. 4, 5, and 6 are respectively edge, side, and top views of the bar portion of the frame. Fig. 7 is a side elevation of the upper end of said bar and a portion of the guard, illustrating the manner of assembling the parts; and Fig. 8 is a plan view of the blank from which the bar portion of the frame is formed.

I construct the pulley A of two sheet-metal disks and a tubular hub. These disks are first swaged to give the desired form of peripheral flanges 9 9, at the same time swaging a convex central portion 10 and concentric beads 11, one upon each disk, the same being preferably swaged near the base of the peripheral flanges and one bead being a little larger than the other, so that the beads may fit into each other, as shown in Fig. 2, and thereby hold the two parts of the pulley concentrically, as shown. If desired, other forms of projections and recesses upon the two parts of the pulley may be employed to hold them in proper relation to each other; but I prefer the concentric beads, as shown. The two parts of the pulley thus made, when placed together, form a central hub which is convex upon each side and whose thickness or width is preferably about equal to the width of the pulley at its flanges. This central hub is perforated and a tubular hub 12 inserted therein, as shown in Fig. 2, and headed over at each end, thereby completing the pulley and firmly holding its parts in place. If desired, the hub

12 might be shouldered at each end and inserted during the operation of putting the two parts of the pulley together; but the shoulders on the hub are unnecessary, inasmuch as the two parts of the pulley rest together and the central convex portions are strong enough to hold the parts in place. While I have designed this construction of pulley for use with sash-cords, it is evident that the same construction of pulley may be employed with other cords, as in sheave-pulleys; or it may be used in any other pulley by merely changing the form of the peripheral flanges to adapt them for the required use.

The face-plate portion of the frame may have any ordinary contour, as shown in Fig. 3, and in which B designates the face-plate. The central portion is cut, as shown in Fig. 3 of the drawings, to form a guard 13 for the top of the pulley, said guard having toward its outer end shoulders 14 and at its outer end a tenon 15. This guard is bent back, substantially as shown in Fig. 1, but with the portion near its end at first shaped as shown in Fig. 7. A T-shaped tongue 16, as shown in Fig. 3, is blanked out from the middle of the face-plate, the two arms of its T forming laterally-projecting lugs 17 when said tongue is bent rearwardly, as indicated by the broken lines near the lower part of Fig. 1. The pieces cut out from the side of the tongue 16 also form recesses for the reception of the lower corners of the side bars 18. The opening left by bending back the guard 13 and tongue 16 forms the usual opening for the pulley in the face-plate. I blank out the side bars 18 from a strip of metal with shoulders 19, axle-openings 20, mortises 21, narrow recesses or notches 22, and wider recess 23. This strip is then bent into the form illustrated in Figs. 1, 4, 5, and 6, so that the recess 23 is in the connecting portion at the top between said side bars. These side bars are first sprung apart at their lower ends sufficiently to let the lugs 17 into the mortises 21, while the lower front corner of each side bar lies in the space at the sides of the tongue 16 in the face-plate, and the shoulders 19 resting on the metal at the lower inner corner of the opening in the face-plate, substantially as shown in Fig. 1. The upper



part of the frame is then swung forwardly to bring the shoulders 14 of the guard into the notches 22 in the side bars, while the tenon 15, being dropped a little in the original bending of the guard, readily passes under the connecting portion at the upper end of the bars 18 and permits the two to come together, as shown in Fig. 7. The rear end of the guard is then bent upwardly to bring the lug or tenon 15 into the recess 23, as indicated by broken lines in Fig. 1, so as to firmly lock the two parts of the frame together. The pulley A is inserted and secured by an axle 24 in the ordinary manner, and this may be done either before or after the two parts of the frame have been put together.

From the foregoing it will be seen that I construct a pulley of two pieces of sheet metal and a tubular hub without any rivets or other fastening device than the hub and said two parts of the pulley, thus producing a cheap and inexpensive, and at the same time a durable and substantial, pulley. The frame is constructed of only two pieces of sheet metal—namely, the face-plate portion and a single strip for the side bars—thereby using the least possible amount of metal for producing a pulley-frame with a broad face-plate. Although the frame is what may be termed a “skeleton form,” the side bars, in connection with the face-plate and guard, are substantially in the form of a triangle, so as to give them great strength, bracing the pulley in the direction of the strain brought to bear upon it in use. The frame is constructed without riveting, and the work of producing it is largely press-work, whereby it can be produced at a small cost.

I claim as my invention—

1. The herein-described pulley, consisting of two pieces of sheet metal swaged into shape, having convex central portion and having integral projections on one part that enter corresponding recesses in the other part for holding them concentrically, and a tubu-

lar hub with its ends headed on the outside of said convex central portions for holding said two parts together, substantially as described, and for the purpose specified.

2. The herein-described frame for sash-cord pulleys, consisting of the face-plate, the pulley-guard extending therefrom at the upper part thereof, and the side bars bearing the pulley-axle and secured by their upper ends to that end of said pulley-guard which is farthest from said face-plate and extending obliquely downward in the form of a brace to the lower part of said face-plate, to which said lower ends are secured, substantially as described, and for the purpose specified.

3. The herein-described frame for sash-cord pulleys, consisting of the face-plate portion having the tongue 16 at its lower part, provided with lugs 17, and the pulley-guard 13 at its upper part, provided with shoulders 14 and tenon or lug 15, and the side bars 18, secured to said parts at their upper and lower ends and having shoulders, mortises, and recesses for connection therewith, substantially as described, and for the purpose specified.

4. In a sash-cord-pulley frame, the tongue 16, formed on the lower end of the face-plate with recesses or slots upon each side and lugs 17 on each side at its end, and the side bars 18, having at their lower ends shoulders and mortises for engagement with said face-plate, tongue, and lateral lugs, substantially as described, and for the purpose specified.

5. In a frame for a sash-cord pulley, the face-plate portion having the guard 13, shoulders 14, and tenon or lug 15, the side bars secured to the face-plate at their lower ends and having notches 22 to receive the shoulders 14, and a recess 23 to receive the lug or tenon 15, substantially as described, and for the purpose specified.

THOMAS CORSCADEN.

Witnesses:

JAMES SHEPARD,  
JOHN EDWARDS, Jr.