

No. 793,918.

PATENTED JULY 4, 1905.

G. D. CLARK.
SASH CORD GUIDE.
APPLICATION FILED AUG. 13, 1904.

Fig. 1.

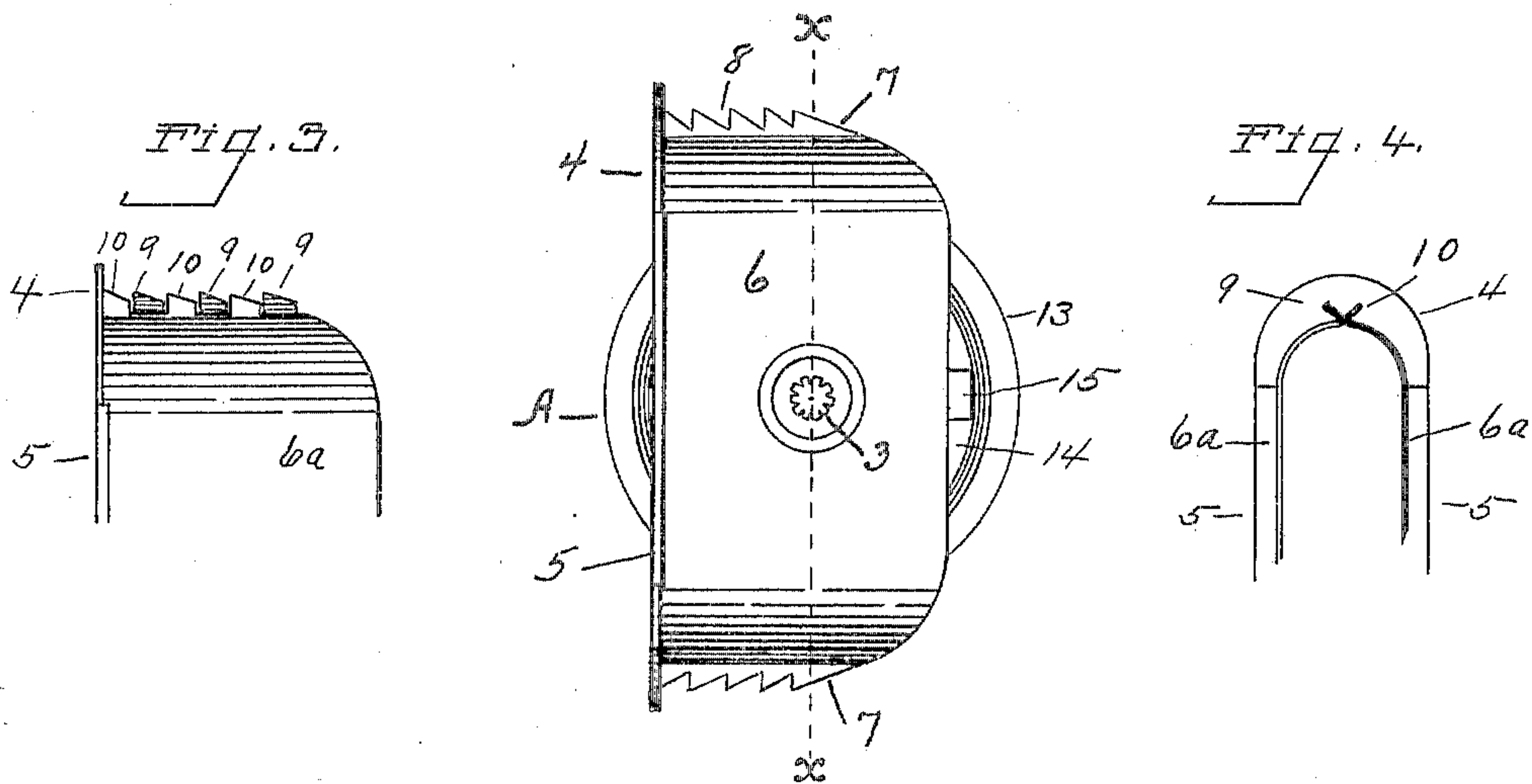
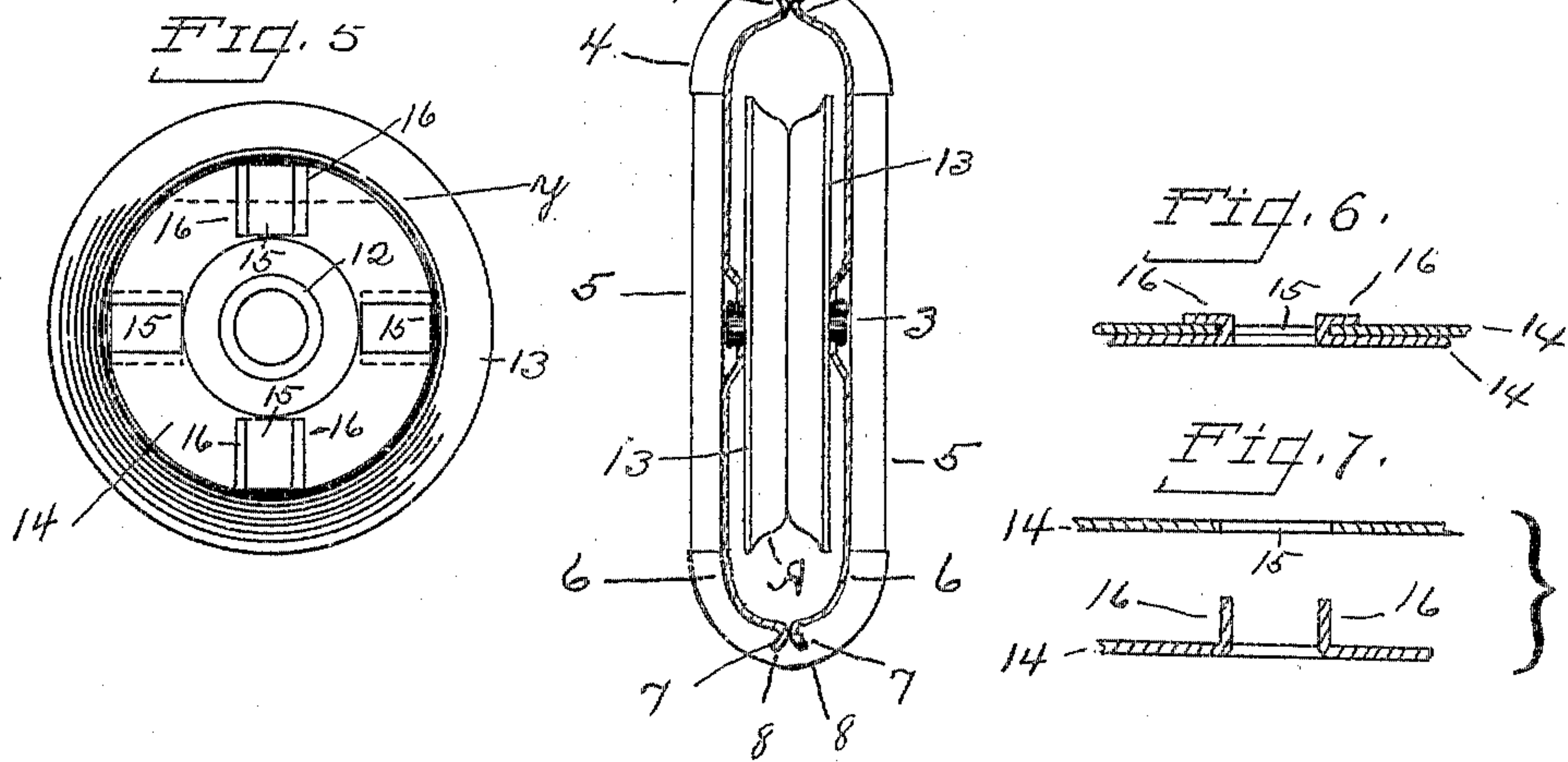


Fig. 2.



WITNESSES.

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GEORGE D. CLARK, OF PLAINVILLE, CONNECTICUT.

SASH-CORD GUIDE.

SPECIFICATION forming part of Letters Patent No. 793,918, dated July 4, 1905.

Application filed August 13, 1904. Serial No. 220,630.

To all whom it may concern:

Be it known that I, GEORGE D. CLARK, a citizen of the United States, residing at Plainville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Sash-Cord Guides, of which the following is a specification.

My invention relates to improvements in sash-cord guides; and the main objects of my improvement are convenience and efficiency in use without any substantial increase in the cost of the article.

In the accompanying drawings, Figure 1 is a side elevation of my sash-cord guide. Fig. 2 is a sectional view of the same on the line *xx* of Fig. 1, the pulley and its axle or pin being shown in elevation. Fig. 3 is a side elevation of the upper portion of the frame or case in a modified form. Fig. 4 is a rear elevation of the same. Fig. 5 is a detached side elevation of the pulley. Fig. 6 is an enlarged detail section of the same on the line *yy* of Fig. 5. Fig. 7 is a like view of the same before the two parts are put together.

The pulley A and its axle or pin are or may be of any ordinary construction. The frame or case is made of a single piece of sheet metal doubled upon itself at the middle portion of each side edge of the face-plate 4 to form a double selvage 5, while the two cheeks or sides 6 are formed of two wings extending from the inner thickness of metal which forms the said selvage, the said wings being bent at a right angle to the face-plate and curved toward each other at the top and bottom, all substantially as shown, described, and claimed in my Patent No. 495,021, dated April 11, 1893.

I form an outwardly-turned flange 7 at the meeting or abutting ends of the two cheeks or sides 6 with a serrated or toothed edge to form the fastening-prongs 8. These prongs are in the form of ratchet-teeth, slanting on the top or rear edge and square or parallel with the face-plate 4 on the front edge, as shown in Fig. 1, whereby the prongs will deflect the wood when the pulley-frame is being driven in, and then the square edges will hold the pulley-frame from being pulled out.

In order to separate or isolate these prongs, the metal is doubled upon itself, so that the points of the prongs in the two flanges 7 spread out in an oblique direction, as shown in Fig. 2. These prongs 8 will hold the frame within its mortise, whereby no fastening-screws are required and it is not necessary to perforate the face-plate to receive such screws. It is only necessary to enter the sash-cord guide into its mortise in the wood where it is to be placed and then drive the guide into the mortise. This will give four rows of oppositely-extended fastening-prongs, two at the top and two at the bottom.

While I prefer to construct the frame in accordance with my aforesaid patent, for the purpose of this application, the side cheeks, with their meeting ends, are the main essential feature or foundation for the present invention, and therefore if these cheeks are present and adapted for the formation of the outwardly-turned flanges or prongs, the other features of the frame for the sash-cord guide are not essential.

In Figs. 3 and 4 the frame or case has the same face-plate 4, double selvage 5, and two cheeks or sides 6^a; but instead of bending the flange back, so as to be substantially doubled upon itself, as best shown in Fig. 2, I make but a slight bend in the metal adjacent to the upper and lower edges of the cheeks 6^a, cut a row of notches or spaces in the edges of these cheeks, and bevel or slant the edge of metal left between the said spaces, whereby I form at the meeting portions of the said cheeks two series of alternating points and spaces 9 and 10. These are so disposed that when the two cheeks are placed together the points of one series enter the spaces in the other series and form an extended abutting surface to prevent the said edges from shutting by each other and also form projecting fastening-prongs similar to those first described. I have described the prongs at both the top and bottom of the frame or case and I prefer to so make them, whereby the frame or case can be inserted either side up. When once in place, however, the main reliance for holding it within its mortise in the window-

frame is the prongs at the top, as substantially all the strain tending to withdraw the frame or case comes at the top edge.

By providing two separated rows of fasten-
 5 ing-prongs the said prongs take hold of the wood on two lines so widely apart that the fibers of the wood must be broken on two separate lines before the case can be pulled out, thereby giving the case substantially twice
 10 the holding power that it would have in a construction of case that might be released by one line of breaks in the fibers of the wood. In addition to thus doubling of the holding capacity it insures the full penetra-
 15 tion of the prongs by arranging them so that they stand substantially in alinement with the metal at the sides of the meeting ends of the case, so that the resistance of the pressure of the prongs is transmitted to the metal in an
 20 edgewise direction without any tendency to bend the metal inwardly and lessen the penetration of the prongs, as would be the case with thin metal, when the prongs stand substantially at right angles to the metal from
 25 which they are extended.

The pulley, as shown, consists of a tubular bushing 12 and two disks of metal 13 struck up into the proper form for the rim and hub with an annular flat portion 14 between the
 30 rim and hub. A pulley having similar disks fastened together by the bushing and recesses and projections or by rivets or by integral eyelets is older than my present invention, and therefore is not broadly claimed herein.
 35 Instead of rivets or eyelets I form in each disk two radially-extended slots 15 in the said annular flat portion on diametrically opposite sides, and half-way between the said slots I cut out integral lips or prongs 16, arranged
 40 in pairs, the lips in each pair standing parallel to each other and at first bent at right angles to the said annular flat portions, as shown in Fig. 7, the said lips being so spaced
 45 that each pair of lips substantially fills one of the said slots. The two parts or disks are alike and they are placed together with the lips of each disk projecting through the slots of the companion disk. After placing
 50 them together the edges of the lips are turned down or clenched, as shown in Figs. 5 and 6, two pairs of lips being clenched down on one side of the pulley, as shown by full lines in Fig. 5, and two pairs being clenched down on
 55 the opposite side of the said pulley, as shown by the broken lines in said Fig. 5. The slots and lips extend in substantially a radial direction from hub to rim of the pulley and greatly strengthen the same, as well as pro-
 60 viding an inexpensive and efficient means of fastening the two disks together. The fastening means is particularly efficient in securely holding the two disks together by reason of having each one of the clenched or

turned-down lips or prongs extend from rim 65 to hub with an unbroken and continuous edge.

I claim as my invention—

1. A pulley for a sash-cord guide, comprising two disks with rims, the said disks having
 70 radial slots extending inwardly from the rim and a pair of radial lips for each of the said slots, the said lips extending inwardly from the rim and clenched over the opposite edges of the metal at each of the said slots in the
 75 form of spoke-like reinforcements.

2. A frame for a sash-cord guide formed of sheet metal, and having side cheeks with meet-
 80 ing ends, the said ends having flanges with fastening-prongs formed at the outer edges, the said flanges being rolled over from the said ends so as to substantially double the metal
 85 upon itself with the pronged edges slanting outwardly away from each other while the bent portions of the said flanges at their junction with the said ends abut against each other
 90 and form the meeting upper ends of the said cheeks.

3. A frame for a sash-cord guide formed of sheet metal, and having side cheeks with meet-
 95 ing ends, each of the said ends having fasten- ing-prongs, the said prongs in the two meet- ing ends being spread apart to extend later- ally in opposite directions and form two sep- arated and longitudinally-extended rows of
 100 projecting prongs.

4. A pulley for a sash-cord guide, compris-
 105 ing two disks with rims, the said two disks having radial slots extending inwardly from the rim and a pair of radial lips for each of the said slots, the said lips extending inwardly
 110 from the rim in pairs with an open radial space between the lips of each pair and with one lip of each pair bearing against and clenched over one radial edge of one slot and
 115 the other lip in the same pair bearing against and clenched over the opposite edge of the same slot, the said slots and spaces in the said two disks registering with each other and form-
 120 ing radial openings through the pulley with both radial edges of each of the said openings having a continuous unbroken turned-over metal edge.

5. A frame for a sash-cord guide formed of sheet metal and having side cheeks with meet-
 125 ing ends, the said ends having flanges with fastening-prongs formed at the outer edge and extended in the same general direction as the metal immediately on each side of the said
 130 meeting ends, whereby the resistance to the pressure of the prongs when the case is driven into the wood, is transmitted in the edgewise direction of the metal on each side of the said
 135 meeting ends of the case.

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Witnesses:

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 H. C. GOODRICH.