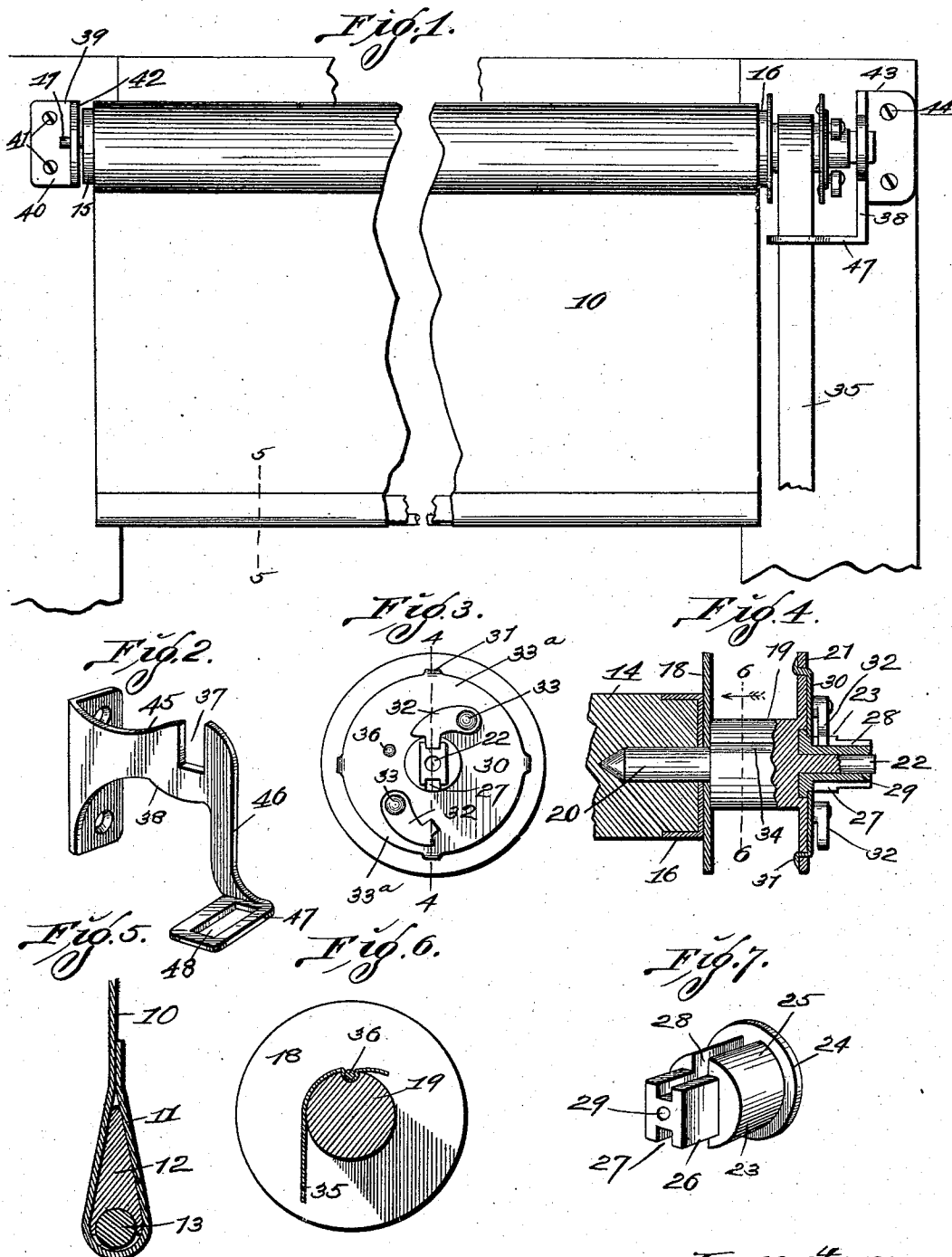


(No Model.)

H. M. STURGIS.
WINDOW SHADE ROLLER.

No. 576,080.

Patented Jan. 26, 1897.



Attest
W. Smith
S. G. Wells.

Inventor:—
Herbert M. Sturgis.
By Higdon, Cugan & Higdon, Attys.

UNITED STATES PATENT OFFICE.

HERBERT M. STURGIS, OF ST. LOUIS, MISSOURI.

WINDOW-SHADE ROLLER.

SPECIFICATION forming part of Letters Patent No. 576,080, dated January 26, 1897.

Application filed October 6, 1896. Serial No. 608,003. (No model.)

To all whom it may concern:

Be it known that I, HERBERT M. STURGIS, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Adjustable Window Shades or Curtains, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to adjustable window shades or curtains; and it consists in the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a front elevation of my improved adjustable window shade or curtain in position for use, parts being broken away to economize space. Fig. 2 is a view in perspective of a bracket of which I make use in supporting my improved adjustable shade or curtain. Fig. 3 is an end view of a roller constructed in accordance with the principles of my invention. Fig. 4 is a sectional view taken approximately on the line 4 4 of Fig. 3. Fig. 5 is a sectional view taken approximately on the line 5 5 of Fig. 1. Fig. 6 is a sectional view taken approximately on the line 6 6 of Fig. 4. Fig. 7 is a view in perspective of a grooved collar of which I make use.

In the construction of my improved adjustable window shade or curtain I employ the flexible shade 10, the lower end 11 of which is turned upwardly and sewed to itself, thus forming a loop in which is positioned the stiffening-stick 12. Said stiffening-stick 12 is triangular in cross-section, and a semicircular groove is formed in its lower side, in which is positioned the rod 13, which rod acts as a weight to hold the free end of the curtain down. The upper end of the shade or curtain is attached to a wooden roller 14, which roller has the metallic ferrules or caps 15 and 16 upon its ends. A pin 17 is inserted through the center of the cap 15 and into the end of the roller 14, and said pin acts as one of the spindles upon which the roller 14 turns.

A circular sheet-metal disk 18 is placed against the face of the cap 16 in a vertical position, and the pulley 19 is placed with one of its ends against the central portion of the disk 18. A pin 20 projects from the end of the pulley 19 through the disk 18 and through the

central portion of the cap 16 and into the end of the roller 14, thus holding said pulley securely in position relative to said roller. A flange 21 is formed integral with the outer end of the pulley 19. A pin 22 projects outwardly from the pulley 19, and said pin is centrally located relative to the periphery of said pulley and in a line with the pin 20. An annular recess is formed in the end of the pulley 19 around the pin 22, and the collar 23 is placed loosely upon the pin 22 and has an annular flange 24, which operates within said recess in the end of said pulley 19.

The collar 23 has a cylindrical portion 25 projecting outwardly from the flange 24, and a square rectangular portion 26 projecting outwardly from the end of said cylindrical portion 25. Rectangular slots 27 and 28 are formed longitudinally in opposite sides of the portions 25 and 26, as shown in Fig. 7, and a centrally-located bore 29 is formed longitudinally through the flange 24, the cylindrical portion 25, and the rectangular portion 26, and the pin 22 operates in said bore.

A sheet-metal disk 30 has an aperture in which the cylindrical portion 25 of the collar 23 operates, and said disk 30 is placed against the outer face of the flange 21. Projections 31 extend from the edge of said disk 30 through openings in the flange 21, and the points of said projections are bent against the inner face of the flange 21 to form rivets for holding said disk 30 firmly in position against said flange.

Gravity-pawls 32 are pivotally mounted against the outer face of the disk 30 by means of the pins 33 and in position to have the free ends of said pawls engage the slots 27 and 28 in the cylindrical portion 25 of the collar 23. Lips 33^a are turned outwardly from the edge of the disk 30 to form stops against which the pawls 32 will strike and thus prevent said pawls from turning around on the pins 33. A groove 34 is formed longitudinally of the pulley 19, and apertures are formed through the flange 21 and the disk 30 in line with said groove, and also through the disk 18 and the cap 16 in line with said groove, and the upper end of the tape 35 is pressed into said groove, and a pin 36 is inserted through the apertures in the disk 30 and flange 21, and then along the outer face of

said web and through the openings in the disk 18 and the cap 16 and into the end of the roller 14, thus holding the web 35 securely to the pulley 19, as shown in Fig. 6.

5 The web 35 is wound upon the pulley 19 in a direction opposite to the direction in which the shade 10 is wound upon the roller 14, so that when the web unwinds the roller winds up, and vice versa.

10 The rectangular portion 26 of the collar 23 is placed in the notch 37 of the bracket 38 and forms a bearing within which the pin 22 operates, and the pin 22 thus acts as a spindle, operating in conjunction with the spindle 17, 15 which spindle operates in a bearing in the bracket 39 to support the roller 14 and the attachments thereto.

The bracket 39 consists of a plate 40, which is attached to the window-frame by means of 20 the screws 41, and the ear 42, which extends outwardly at right angles to said plate 41 and has an aperture in which the spindle 17 operates. The bracket 38 consists of the plate 43, which is attached to the window-frame 25 by means of the screws 44, and the arm 45, which extends outwardly from the inner edge of the plate 43 and at right angles to said plate and has the notch 37 formed in its outer end. An arm 46 extends downwardly from 30 the free end of the arm 45, and the portion 47 of said arm is turned inwardly at right angles to said arm 46 and has the rectangular opening 48, through which the web 35 operates, thus forming a guide for said web. The 35 plate 43, the arm 45, the arm 46, and the portion 47 are formed integral of a single piece of sheet metal.

When it is desired to raise the shade 10, the operator pulls upon the web 35, thus unwinding 40 said web from the pulley 19 and winding the shade 10 upon the roller 14. When it is desired to lower the shade 10, the operator pulls upon the web 35 until the pawls have been released from the groove in the cylindrical 45 portion 25 and then quickly releases the web 35 until the shade descends to the desired position.

I claim—

1. In an adjustable window shade or curtain, 50 the pulley 19, the flange 21 formed integral with said pulley, the pin 22 formed integral with said pulley, there being an annular recess in the end of said pulley and around said pin 22, the collar 23 loosely mounted upon 55 said pin 22 with the flange 24 of said collar in said recess, the disk 30 attached to the outer face of the flange 21 and holding said collar in

position, gravity-pawls pivotally connected to said disk 30 and in position to engage the grooves in said collar 23, substantially as 60 specified.

2. In an adjustable window shade or curtain, a roller having the caps 15 and 16 upon its ends, the shade or curtain attached to said roller and the lower edge of said shade or curtain 65 being turned up and stitched to itself, the stiffening-stick 12 inserted through the loop thus formed, the rod 13 inserted through said loop and through the groove in the lower side of said stiffening-stick, the disk 18 against 70 the face of the cap 16, the pulley 19 against the face of said disk 18 and having the pin 20 inserted through said disk 18 and through said cap and into the end of the roller, the flange 21 formed integral with said pulley 19, 75 the pin 22 formed integral with said pulley 19 and having an annular recess formed around said pin and in the end of said pulley, the collar 23 upon said pin 22 and having the flange 80 24 engaging the recess in the end of the pulley, the disk 30 attached to the outer face of said flange 21 and holding said flange 24 in position, gravity-pawls pivotally attached to said disk 30 and in position to engage the grooves in said collar 23, substantially as 85 specified.

3. In a window shade or curtain, the collar 23 consisting of the flange 24, the cylindrical 90 portion 25 projecting outwardly from said flange and the rectangular portion 26 projecting outwardly from said cylindrical portion, the longitudinal grooves 27 and 28 formed in opposite sides of said cylindrical portion and said rectangular portion, and the bore 29 extending through said collar, substantially as 95 specified.

4. In an adjustable window shade or curtain, the combination with the end of the roller carrying a shade or curtain, of the pulley 19, the web 35 attached to said pulley, the 100 pin 22 extending from the end of said pulley, the collar 23 upon said pin and rotatably connected to said pulley 19, gravity-pawls connected to said pulley 19 and in position to engage the grooves in said collar 23, and the 105 bracket 38 engaging said collar 23, substantially as specified.

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

HERBERT M. STURGIS.

Witnesses:

EDWARD E. LONGAN,
MAUD GRIFFIN.