

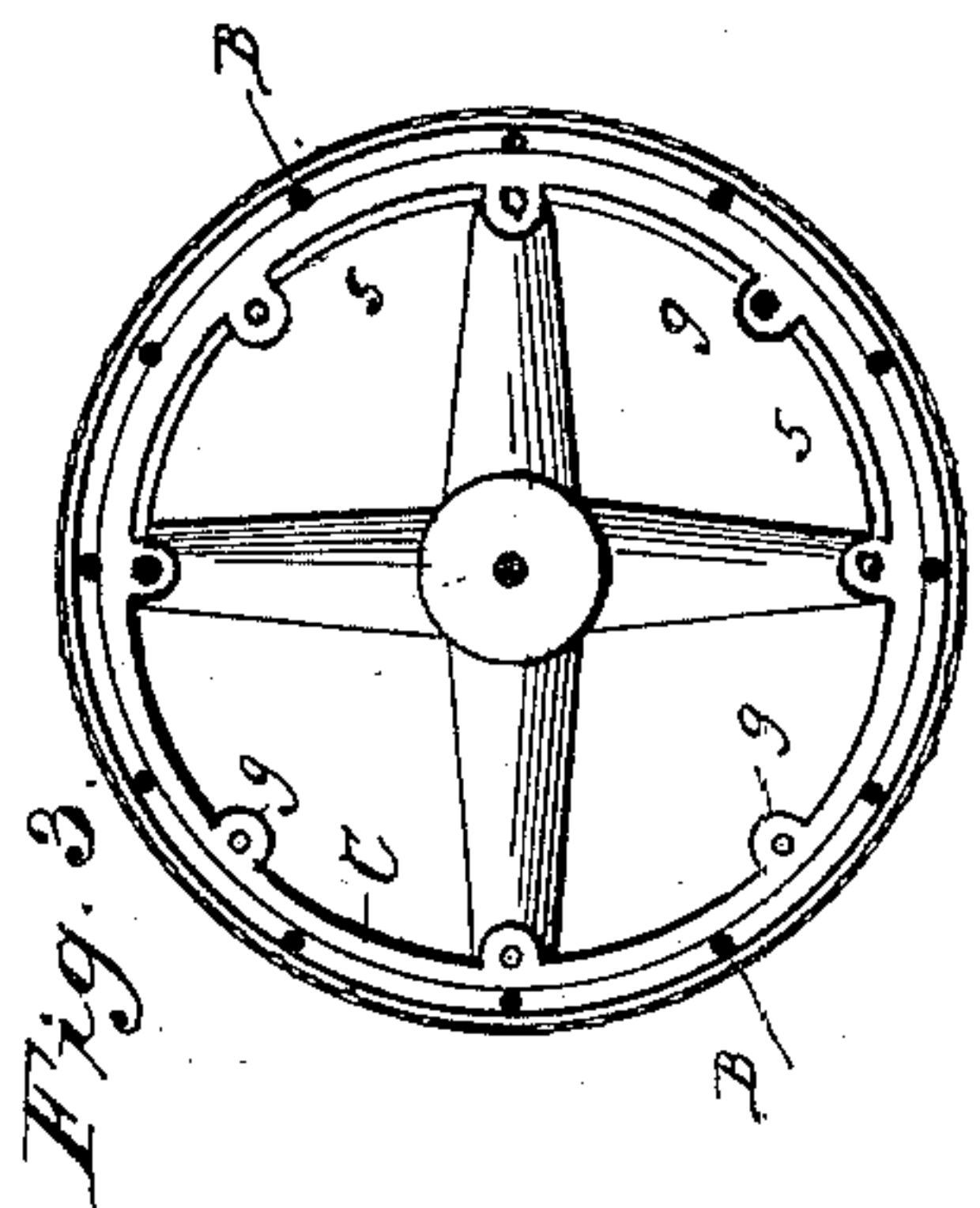
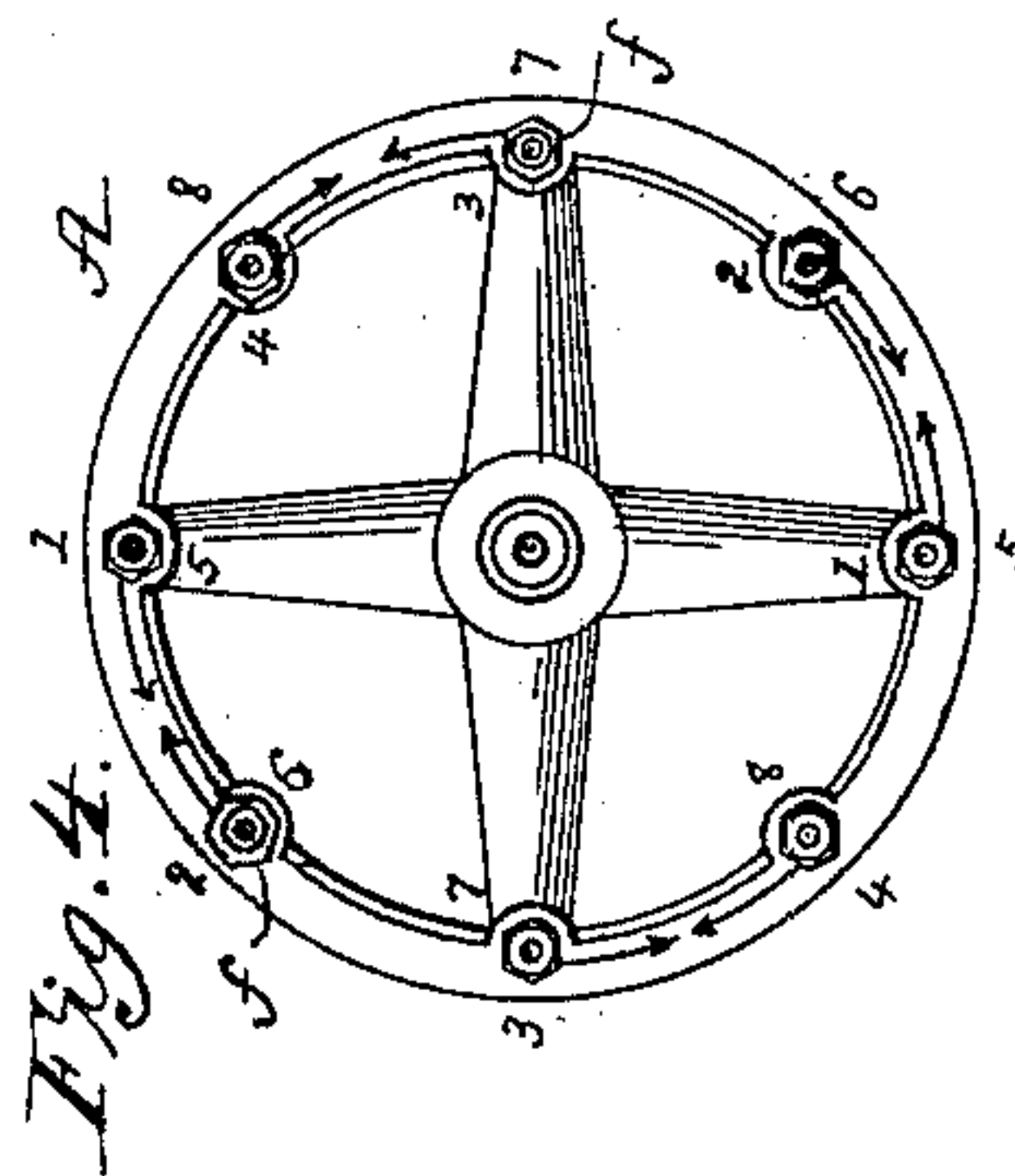
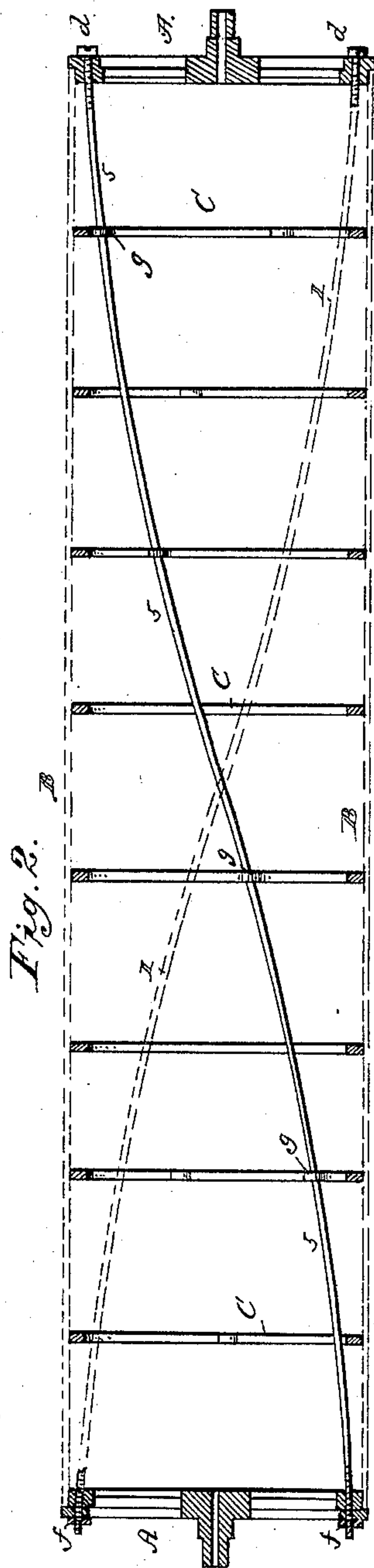
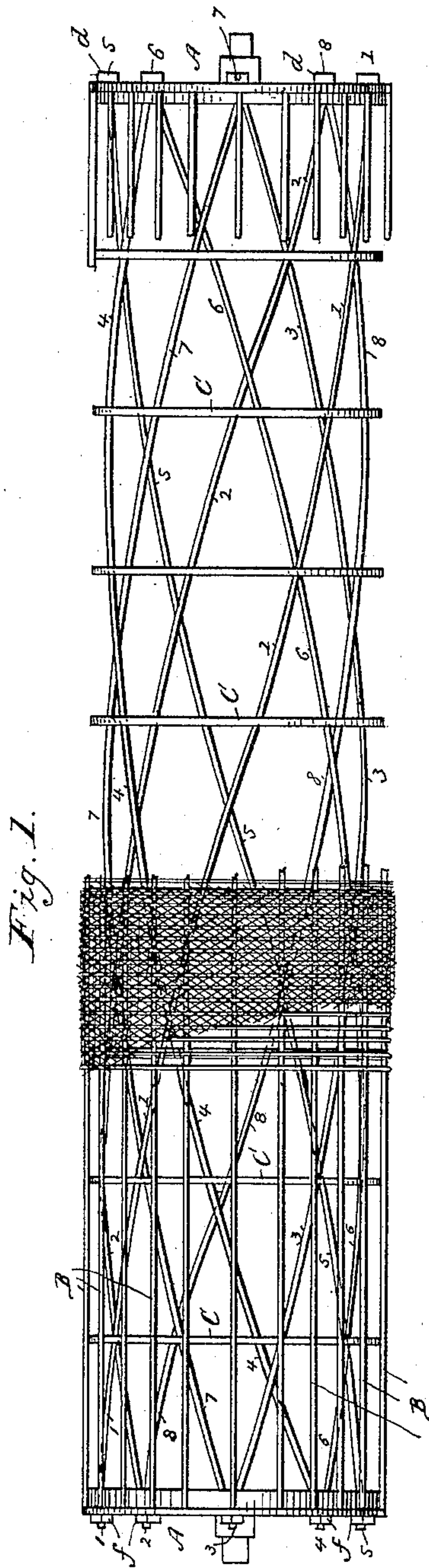
(No Model.)

W. D. STEVENS.

DANDY ROLL.

No. 387,118.

Patented July 31, 1888.



Witnesses,

*Wm. F. Bellamy*  
*G. W. Chamberlain.*

Inventor,

*Wellington D. Stevens,*  
By his Attorneys, *Chapman*



# UNITED STATES PATENT OFFICE.

WELLINGTON D. STEVENS, OF SPRINGFIELD, MASSACHUSETTS.

## DANDY-ROLL.

SPECIFICATION forming part of Letters Patent No. 387,118, dated July 31, 1888.

Application filed December 27, 1887. Serial No. 259,018. (No model.)

*To all whom it may concern:*

Be it known that I, WELLINGTON D. STEVENS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Dandy-Rolls, of which the following is a specification.

This invention relates to improvements in the construction of dandy-rolls, the purpose of which being to secure for the usual outlying winding wire gauze a support which will be most firm and rigid and permitting, of no yielding under transverse force; and it consists in the combination and arrangement of the various parts of the roll, all substantially as will be hereinafter more fully described, and set forth in the claim.

In the accompanying drawings, Figure 1 is a side view of the roll structure with intermediate portions of the longitudinal rods broken away for better illustration, and showing a portion of the circular winding wires and covering-gauze thereon. Fig. 2 is a longitudinal section of the roll-frame, but showing only one truss-rod in full lines, a truss-rod which is oppositely secured therein being indicated by dotted lines. Fig. 3 is a cross-section of the dandy-roll, showing but one truss-rod, however; and Fig. 4 is a view at one of the roll-heads.

As in other similar rolls, the present dandy-roll comprises two heads, A A, provided with journals, a series of parallel longitudinal rods, B B, extending between and by their ends secured to said heads, a series of rings, C C, located within said rods, and to the outer peripheries of which rings said rods are attached, and a series of truss or brace rods extending from head to head of the roll for maintaining and supporting said rings, and the whole is to be covered by a series of circular or winding wires, *a*, and wire-gauze *b*; and it is in the peculiar and improved arrangement of the truss-rods that the present invention particularly consists.

In the present roll I employ eight truss-rods, designated by the figures 1 to 8, inclusive, each provided at one end with a head, *d*, its other end being screw-threaded, with and upon which a nut, *f*, engages, and each truss-rod is passed through one head or end plate A and extends to and through the opposite

head, passing thereto in a gradual or extended helical line, reaching the opposite head at a point thereof diametrically opposite to that from which it left the first-named head, and being at all points in its length at equal distances from the axial line of the roll; and the alternate truss-rods extend at an angle to those of the truss-rods intermediate thereof, crossing at some point in their course, and, as will be more clearly understood on reference to the drawings, Fig. 2, in which only two truss-rods, 1 and 5, are shown, each leaving diametrically-opposite points of one head, following a gradual helical line, and reaching the opposite head at a point diametrically opposite each other; and again in Fig. 4 the positions of the ends of several truss-rods at the head are indicated by the figures 1 to 8, arranged in the outer circle, the arrows indicating their helical direction, and the figures 1 to 8 arranged in the inner circle indicate the points at which said truss-rods meet and are secured at the opposite head of the roll, and each truss-rod lies upon the intermediate rings, C C, and is stayed thereon by suitable securing means—as, for instance, by providing perforated ear-pieces *g*, as inward extensions on said rings, through which the truss-rods pass; and it is preferred when the said truss-rods have been strained up as desired, to apply solder at the place of engagement of the said rods and rings, as also at the places of intersection of one rod with another, principally for the purpose of preventing any rattling of the adjacent parts; and, as well known in practice, a metallic truss-rod in constructions of the character described, after having been in use for a certain time loses more or less of its tensional strain, therefore when the truss-rods of the dandy-roll herein described require to have any slackness that they may have acquired through the use of the roll taken up by operating the nuts on the ends of the rods, the herein-described soldered connections between said truss-rods and the rings of the rolls through which they pass are removed, and after said rods shall have been satisfactorily strained by turning the nuts the said soldered connections are again made; and, although, as shown, each truss-rod is at one end headed and at its other end screw-threaded to receive a straining-up nut, to form each end of the rods screw-threaded



and to provide nuts therefor would be in effect the same, and while it is most desirable and practicable to have each truss-rod follow a helical course to encompass in the length of 5 the roll one-half of its circumference, its helical direction may be made more gradual to encompass a lesser portion of the circumference, or less gradual to encompass in its course a greater portion of the circumference of the 10 roll than as described, as might be advantageous in the construction of rolls of different lengths.

The construction and arrangement of the truss rods, substantially as described, is most 15 advantageous, efficient, and practical, the same being most effective in securing positive rigidity and firmness to the roll structure in a most simple and practical manner, leaving its internal cylindrical space entirely open and un- 20 obstructed, the series of trussing-rods, as has been hereinbefore particularly described, be-

ing arranged in the form of an annulus, and the roll is comparatively cheap and exceedingly durable.

What I claim as my invention is—

A dandy-roll frame consisting of two heads, 25 A A, a series of outer longitudinal rods extending between and secured to said heads, a series of rings, C, located within said rods, to the outer peripheries of which said rods are 30 attached, a series of truss-rods each at one end headed and at its other screw-threaded extending in helical lines, substantially as described, from head to head, and passing there- 35 through, said truss-rods being in engagement with said rings, and nuts *f* engaging with the screw-threaded ends of said truss-rods against the one head, substantially as described.

WELLINGTON D. STEVENS.

Witnesses:

G. M. CHAMBERLAIN,  
H. A. CHAPIN.