(No Model.)

W. H. POOL.

DANDY ROLL.

No. 354,486. Patented Dec. 14, 1886.

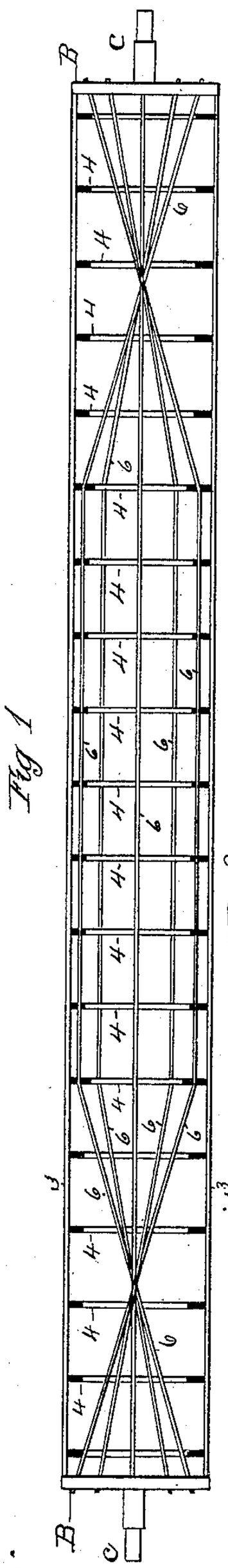

Fig 1

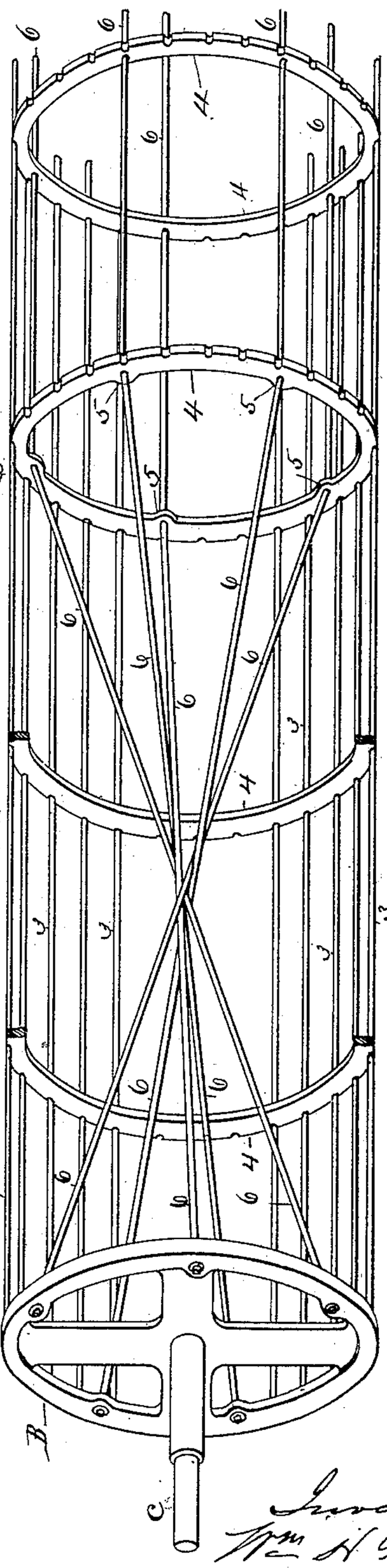

Fig 2

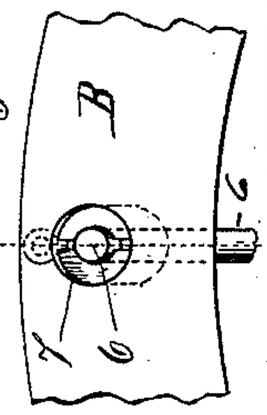

Fig 4

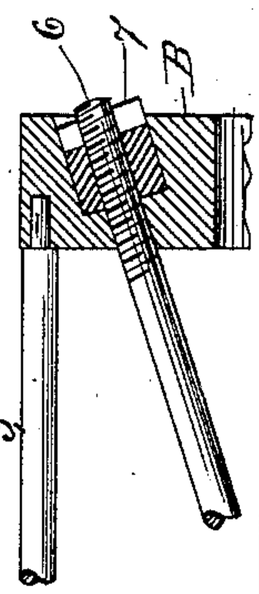

Fig 3

Witnesses
Wm H Chapin
G. M. Chamberlain

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UNITED STATES PATENT OFFICE.

WILLIAM H. POOL, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO WELLINGTON D. STEVENS, OF SAME PLACE.

DANDY-ROLL.

SPECIFICATION forming part of Letters Patent No. 354,486, dated December 14, 1886.

Application filed July 26, 1886. Serial No. 209,076. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. POOL, 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 dandy-rolls for paper-machines, the object being to provide an improved adjustably-trussed frame for said rolls, whereby the maximum rigidity proportionate to the weight of the roll is secured; and the invention consists in the peculiar construction and arrangement of the frame and truss-rods of the roll, as hereinafter fully described, and set forth in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation, partly in section, of a dandy-roll constructed according to my invention. Fig. 2 is a perspective view of one end of the roll, illustrating the truss-connection between the head and the adjoining part of the roll, and several of the longitudinal outer rods and of the rings within the latter. Fig. 3 is a transverse section of a portion of the roll-head in the direction of the length of the roll. Fig. 4 is an elevation of the part shown in Fig. 3.

In the drawings, B B indicate the heads of the roll, each of which is provided with a suitable journal, *c*. A series of longitudinal rods, 3, extend between the two heads B, the ends of which enter sockets in the inner sides of said heads, as shown; or the ends of said rods are otherwise suitably secured to the heads, whereby they are retained in the position shown, with the outer surface thereof substantially in the same plane as the periphery of the heads of the roll. Intermediately between the heads of the roll, and within the said longitudinal rods 3, are placed a series of flat metallic rings, 4, having half-round notches in their peripheries, in which said longitudinal rods lie, the latter being soldered to said rings. A portion of said rings 4 are perforated transversely commencing with one about intermediately between the center of the roll and each head, the latter-named two rings being provided with bosses 5 on their inner edges, opposite the perforations therethrough, to strengthen the rings at those points.

For the purpose of imparting rigidity to the roll, and to obviate any tendency to flexure between its journals, the roll is provided with a series of truss-rods, 6, the ends of which pass transversely through each of the heads B, and are secured thereto by a nut on each end thereof, sockets being formed in the outer side of said head to receive each of said nuts 7, as shown in Fig. 3. Said truss-rods run from each head within several of said rings 4, near to the latter, crossing each other, as shown, and pass through the perforations in said ring 4, on which are said bosses 5; and from the latter-named ring said rods extend parallel with the above-named outer rods 3, passing through the perforations in the rings 4, which are located between said two rings, on which are said bosses 5. Thus, between the center and each end of the roll a truss formation is provided, consisting of the rods 6, and the tension of the latter is adjusted by screwing the nuts 7 more or less tightly on the ends thereof, and thereby the requisite resistance of the roll to flexure between its heads is secured, and by imparting more or less strain to the truss-rods 6, on opposite sides of or at different points on the roll, the surface of the latter is caused to rotate true with its journals.

One end of each truss-rod may be provided with a head to engage with the head of the roll, one end only of said rod having a nut thereon, as above described.

What I claim as my invention is—

1. A dandy-roll consisting of two heads, substantially as described, a series of longitudinal rods extending between said heads and having their ends in engagement with the latter, a series of rings located within said rods, having the latter attached to their peripheries, and a series of truss-rods extending from head to head of the roll, crossing each other near each head and passing longitudinally through several of said rings, and having a screw engagement with one or both of said heads, substantially as set forth.

2. A dandy-roll having a suitable metallic frame, substantially as described, and a series of truss-rods having their ends attached to the heads of the roll and crossing each other near said heads and extending longitudinally within and in engagement with the inner side of the

central portion of the roll-frame, substantially as set forth.

3. A dandy-roll having a suitable metallic frame, substantially as described, and a series of truss-rods having a screw-attachment with one or both heads of the roll and crossing each other near said heads and extending longitudinally within and in engagement with the inner side of the central portion of the roll-frame, substantially as set forth.

WILLIAM H. POOL.

Witnesses:
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