

No. 639,001.

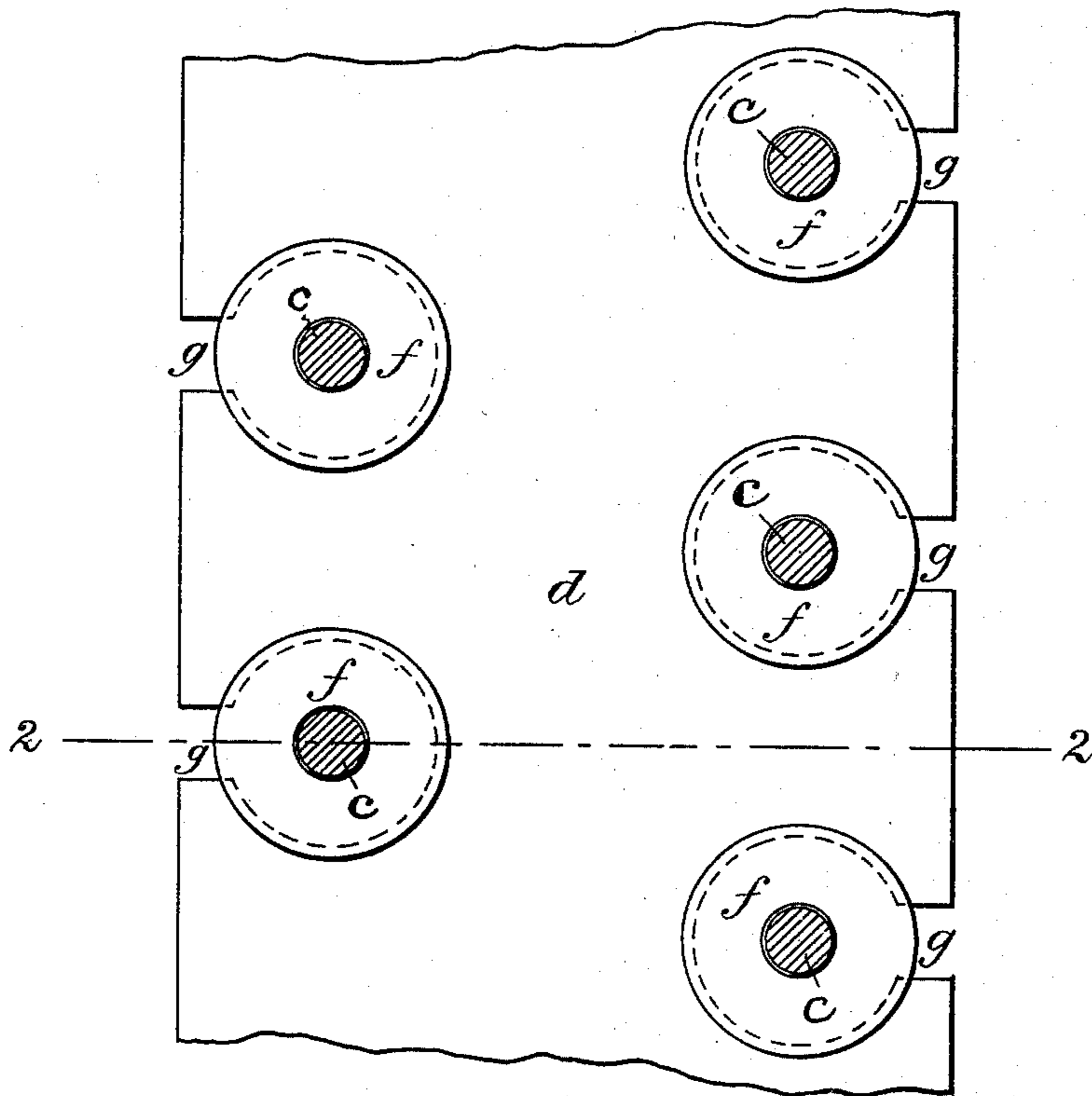
Patented Dec. 12, 1899.

W. V. THRELFALL.

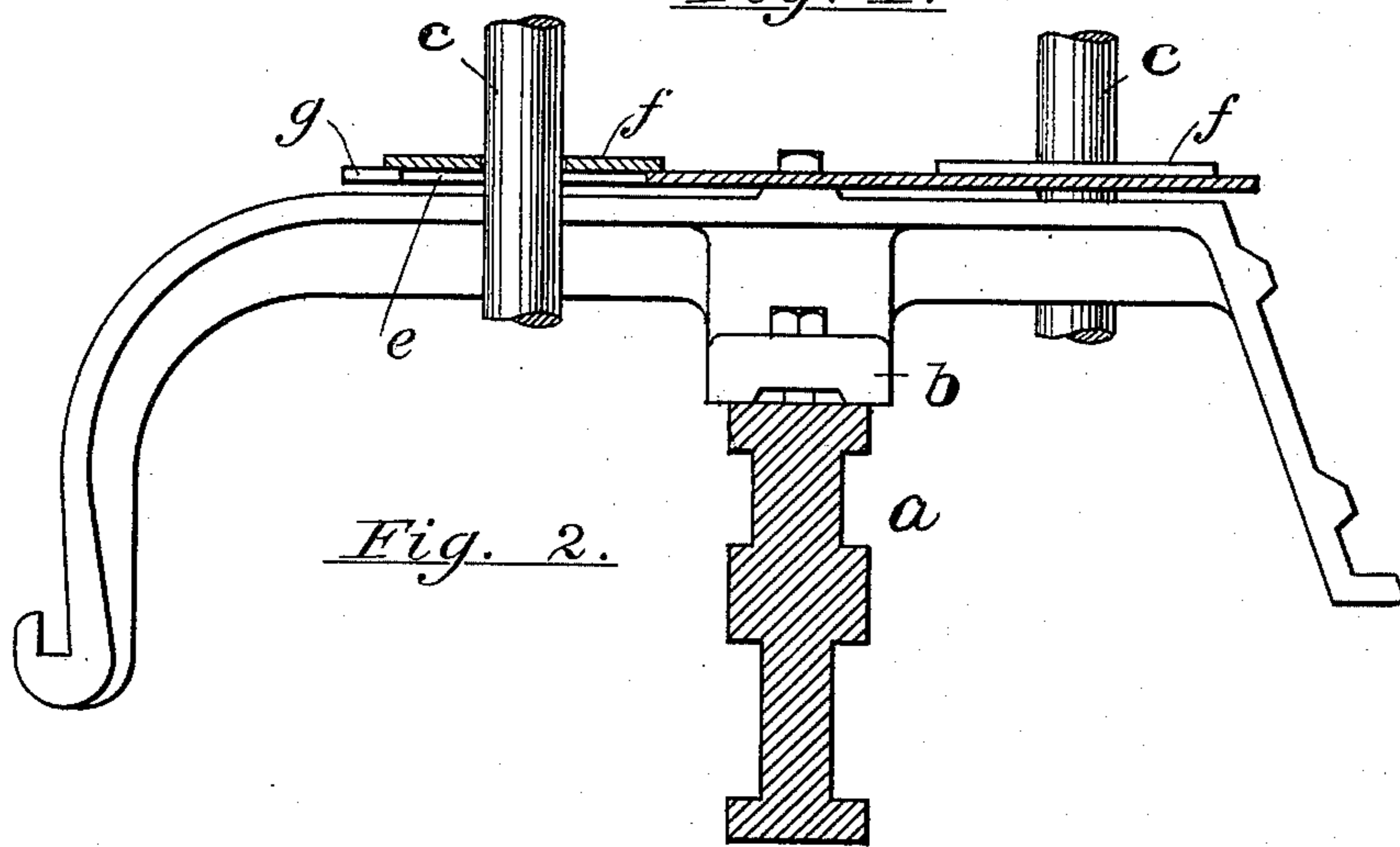
COVERING PLATE FOR RAILS, BOLSTERS, AND STEPS IN ROVING MACHINES.

(Application filed June 15, 1899.)

(No Model.)



*Fig. 1.*



*Fig. 2.*

WITNESSES:

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INVENTOR.

*William V. Threlfall.*

BY

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

WILLIAM V. THRELFALL, OF BIDDEFORD, MAINE, ASSIGNOR TO THE  
SACO & PETTEE MACHINE SHOPS, OF SAME PLACE AND NEWTON, MAS-  
SACHUSETTS.

COVERING-PLATE FOR RAILS, BOLSTERS, OR STEPS IN ROVING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 639,001, dated December 12, 1899.

Application filed June 15, 1899, Serial No. 720,605. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM V. THRELFALL, of Biddeford, in the county of York and State of Maine, have invented certain new and useful Improvements in Covering-Plates for Rails, Bolsters, or Steps in Roving-Machines, of which the following is a description sufficiently full, clear, and exact to enable those skilled in the art to which it appertains or with which it is most nearly connected to make and use the same.

This invention has relation to covers for the bolsters, steps, rails, and gears of roving frames and machines for cognate purposes in the textile-manufacturing art.

The covers mentioned are employed, *inter alia*, to protect the parts over which they extend against dust and flyings of fiber settling thereon and against the consequences of such happening. While it is almost essential to the satisfactory operation of the modern roving-frame that the operative parts and their adjuncts should be covered, the doing of this interferes to a considerable extent with the readiness and quickness with which individual and a series of parts may be reached for purpose of lubricating or doing other work in regard to the same.

The invention overcomes the objections and difficulties mentioned so far as it relates to bolster, step, gear, and rail covers, and this is accomplished by providing the lengths of covers at the spindle-points with holes large enough for the gears to be passed through them and furnishing the spindle with small disks or plates, in the nature of supplemental covers, which surround the spindles and rest at their edges upon the main cover, thus covering the gear-hole and affording means whereby individual spindles and bobbins and their gears may be raised without disturbing other spindles or parts.

The invention also consists in slotting the cover from the gear-holes to its edge, so that an entire length of cover can in most instances be taken off without disturbing the spindles.

Reference is to be had to the annexed drawings and to the letters marked thereon, forming a part of this specification, the same let-

ters designating the same parts or features, 50 as the case may be, wherever they occur.

Of the drawings, Figure 1 is a plan view of a portion of a cover showing my improvements, the spindles being shown in section. Fig. 2 is a sectional view taken on the line 55 2 2 of Fig. 1 and showing also some of the immediately-connected parts.

In the drawings, *a* designates the rail.

*b* designates framework supported on the rail and which in turn supports the gear and 60 other covering devices.

*c* designates the spindles, below which are the bearings and spindle (or, it may be, bobbin) operating gears.

*d* designates my improved bolster, step, 65 rail, and gear cover, which consists of a sheet or piece of polished steel made of convenient length and of but one piece for the whole width of the spindle-bearings and their adjuncts to be covered. 70

At each point where a spindle occurs along the length of the cover holes *e* are made therein, preferably circular in form and of a diameter sufficient to allow the spindle to be raised out of its step and the gear on the spindle to pass through said hole. Surrounding the spindles are disks *f*, also of polished steel, of a diameter sufficiently great to allow them at their edges to rest upon the surface of the plate *d*, as indicated in Fig. 1, thus forming, 80 as it were, a spindle-cover to the holes *e* and allowing individual spindles to be raised, with the gears thereon, which gears are adapted to pass through the holes *e*, as before indicated, raising the plates *f* with them. By this means 85 it will be seen that individual spindles may be raised, so as to oil the steps or bearings or perform any other work necessary or called for without disturbing other spindles.

From each hole *e* to the edge of the plate 90 *d* I form a slot *g*, of sufficient width to allow the spindle to pass laterally out therethrough. By this construction I am enabled to remove the plate entirely after removing one line of spindles by simply drawing it laterally out 95 from the other line of spindles in place, and this construction furthermore affords opportunity for lifting one edge of the plate with-

out disturbing the spindles, and it may be lifted to such a degree even as to free it from one line of spindles without removing them from their steps, and then by drawing it laterally away from the other line of spindles it may be taken out without removing any of the spindles from their steps or bearings.

I have employed various forms of devices for accomplishing the same end as that herein shown and described; but the latter is deemed sufficient to give to those skilled in the art a clear and exact understanding of the nature and design of my invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

20 1. A cover for rails and steps and other adjuncts of spindles in roving-frames consisting of a sheet of metal of convenient length provided at the points where the spindles occur with holes of comparatively great diameter,

and disks of greater diameter than the holes 25 to cover the latter; the disks being provided centrally with holes for the passage of the spindles.

2. A cover for rails and steps and other adjuncts of spindles in roving-frames consisting 30 of a sheet of metal of convenient length provided at the points where the spindles occur with holes of comparatively great diameter, and disks of greater diameter than the holes to cover the latter, the disks being provided 35 centrally with holes for the passage of the spindles, the plate being also provided with slots leading from the holes to the edges of the plate.

In testimony whereof I have signed my 40 name to this specification, in the presence of two subscribing witnesses, this 12th day of June, A. D. 1899.

WILLIAM V. THRELFALL.

Witnesses:

ARTHUR W. CROSSLEY,  
ANNIE J. DAILEY.