

(No Model.)

T. COULTHARD.

RING HOLDER FOR SPINNING AND TWISTING MACHINES.

No. 254,618.

Patented Mar. 7, 1882..

Fig. 1.

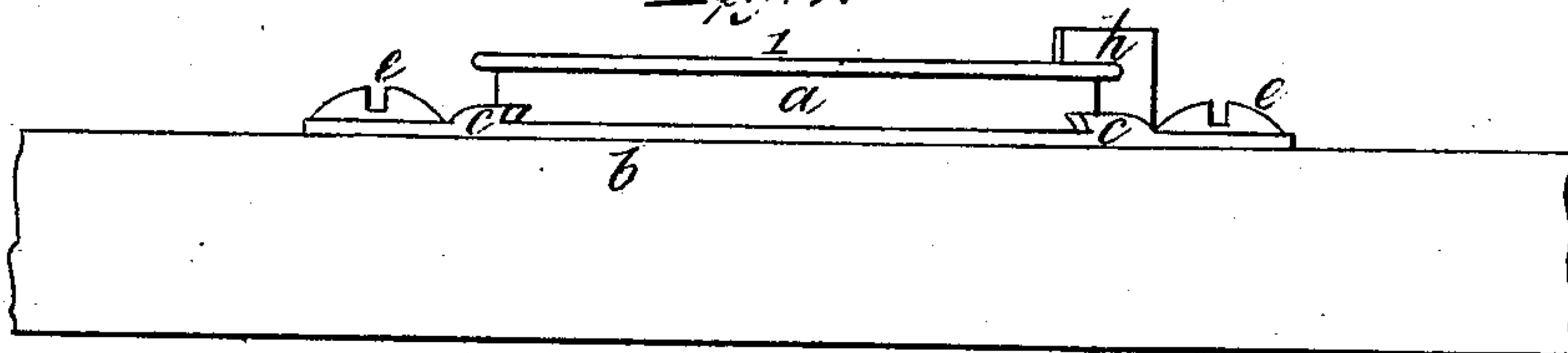


Fig. 2.

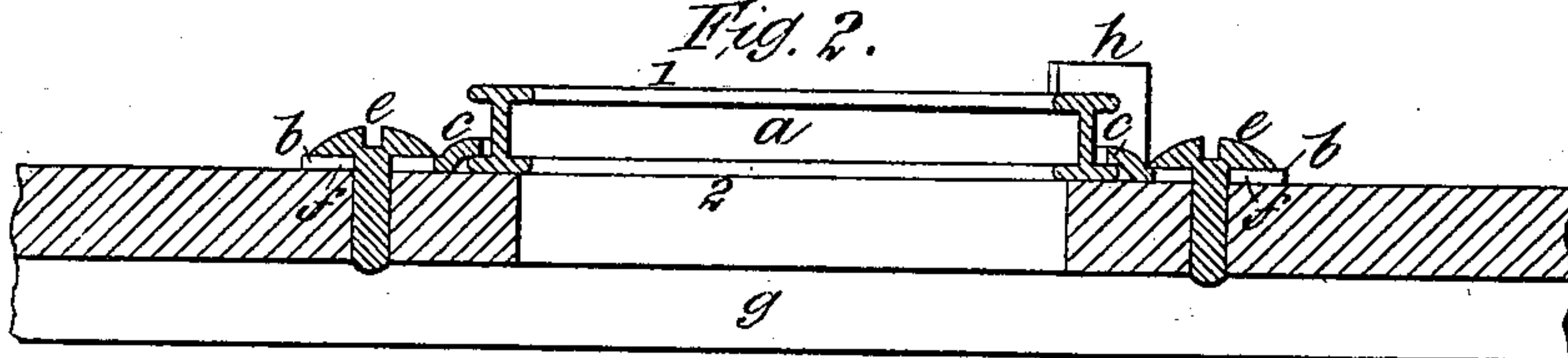


Fig. 3.

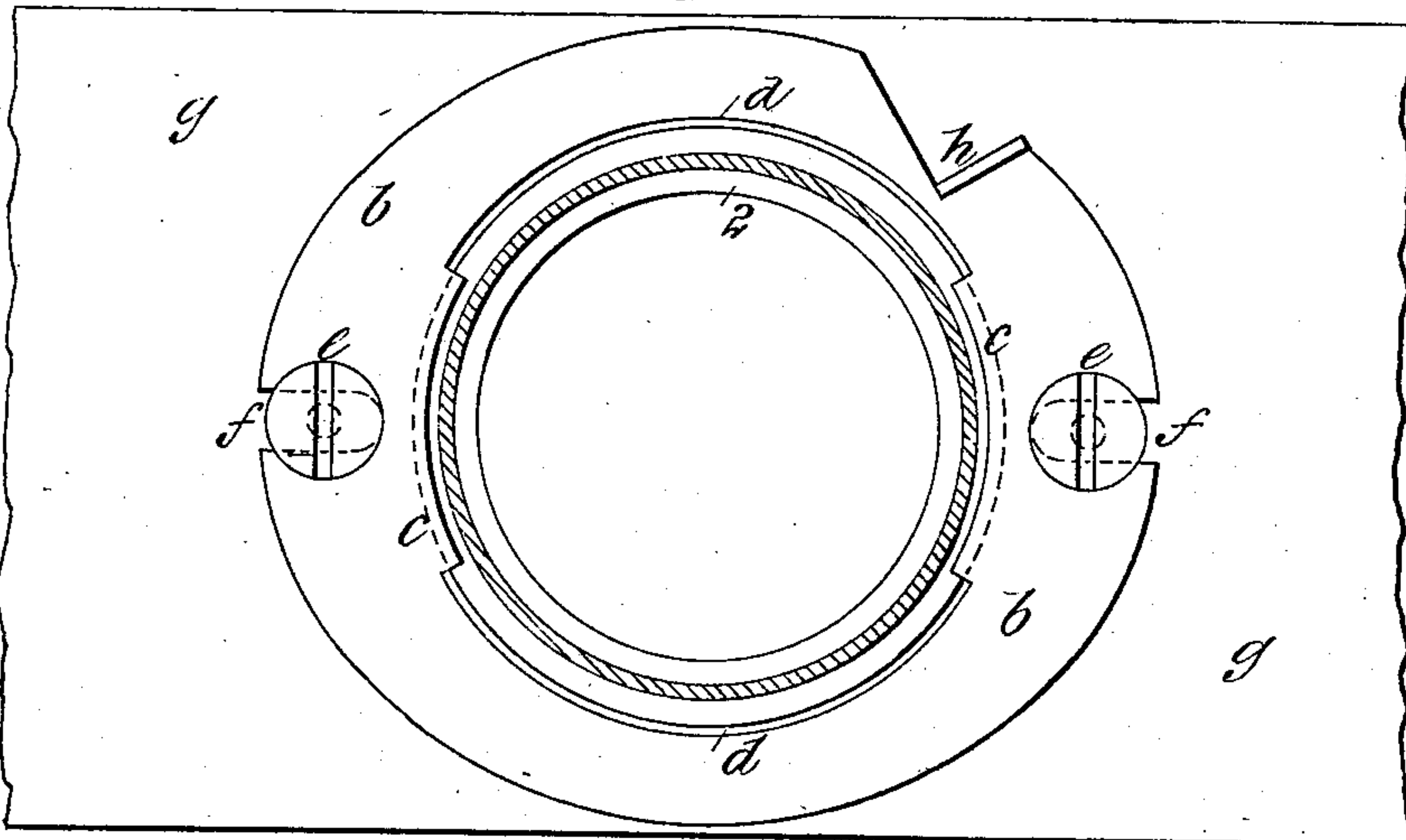
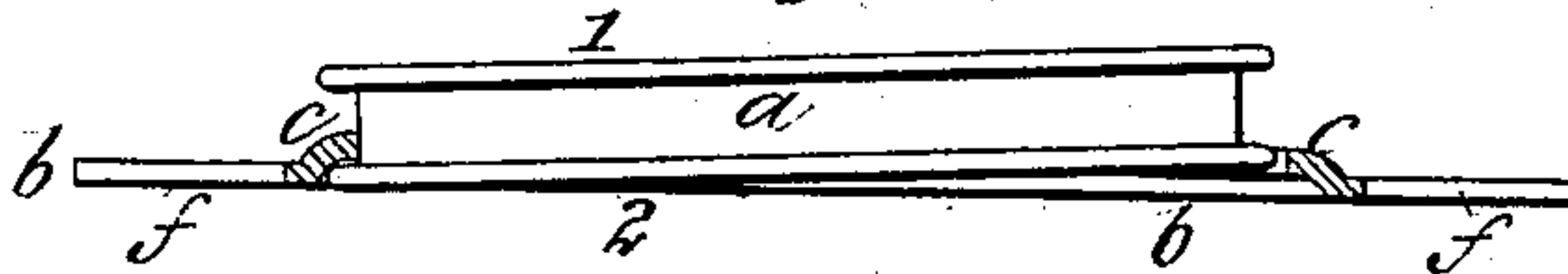


Fig. 4.



Inventor.

Gale W. Booth,  
Will. Melling

Thomas Coulthard.

# UNITED STATES PATENT OFFICE.

THOMAS COULTHARD, OF PRESTON, COUNTY OF LANCASTER, ENGLAND.

## RING-HOLDER FOR SPINNING AND TWISTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 254,618, dated March 7, 1882.

Application filed November 26, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS COULTHARD, a subject of the Queen of Great Britain and Ireland, residing at Preston, in the county of Lancaster, Kingdom of Great Britain and Ireland, have invented a new and useful Ring-Holder for Spinning and Twisting Machines, of which the following is a specification.

My improved ring-holder for ring spinning and doubling machines comprises a thin metal annulus with a round central opening and two lips or projections so constructed and arranged that the lower flange of a double ring may, without temporarily or otherwise springing or distorting the holder, be passed freely through its central opening and brought into such a position beneath the lips or projections that when the holder is screwed down the periphery of the flange of the ring will be surrounded by the annulus and overlapped by the lips or projections, and the ring will be firmly secured to the ring-rail without liability to bend, strain, or otherwise deform either ring or holder.

Referring to the accompanying drawings, Figure 1 is a side elevation of my improved holder and a double ring; Fig. 2, a section thereof; Fig. 3, a plan with top flange of ring removed; and Fig. 4, a view showing the ring in elevation and the holder in section, and illustrating the mode of inserting the ring into the holder.

*a* is a double ring—that is to say, a ring having two flanges or races, 1 and 2.

*b* is my improved holder, provided with lips or projections *c*, designed to rest upon the upper side of the lower flange, 2, of the double ring *a*. (The upper flange, 1, of the double ring *a* is omitted in Fig. 3 in order that the position and form of the jaws *c* may be better understood.) The central opening, *d*, of the holder *b* is made large enough to clear the periphery of the ring-flanges 1 and 2, as will be seen by reference to Figs. 2 and 3. The distance between the inner edges of the lips *c* is such that the lower flange, 2, of the ring *a* may be passed in a slanting direction through the central opening, *d*, and then brought beneath the lips *c*, each of which will overlap the flange 2 to the extent of about one-half of the width of the said flange. The screws *e* pass through

slot-openings *f*, and upon being screwed down into the ring-rail *g* the ring *a* and the holder *b* may be secured to the ring-rail by the same operation. The screw-openings *f* are of such a width and length relatively to the diameter of the holding-down screws *e* (which are provided with heads of suitably-large diameter) as to permit of the ring-holder and the ring being adjusted to a position concentric with the spindle.

I find it convenient to make my improved holder (when to be employed for spinning) with a lip-like clearer, *h*, as shown, which is of the kind described in the specification of a former patent granted to me, No. 218,236, dated August 5, A. D. 1879, and is formed by cutting the outer portion of the sheet-metal holder and bending it upward to a vertical position. The inner edge of the lip or clearer *h* is at such a distance from the ring *a* as to permit of the traveler passing clear of the lip, but near enough thereto to catch, and thereby remove loose fibers which the traveler may have caught up. The upper edge of the lip *h* may be in a line or at any desirable angle with a radial line passing from the center of the ring. For doubling rings I make the holder without the lip or clearer *h*.

I am aware attempts have been made by certain other constructions of sheet-metal ring-holders for ring spinning and doubling machines, to which I lay no claim, to provide for firmly holding a double-flanged ring down upon the planed surface of a ring-rail in such wise as to obviate liability of pressing out of shape of the ring and consequent impediment to the traveler in its traverse, which causes the twist to be imparted to the yarn irregularly and imperfectly. In particular I am acquainted with and lay no claim to the arrangement described in the specification of the United States Reissue Patent No. 7,334, A. D. 1876, in which the inner edge of the sheet-metal ring-holder is in the form of an annular lip, which rests upon the upper edge of the lower flange of a double ring, and the holder is split and has to be opened or sprung out to get the lower flange of the ring under the annular lip, which operation of opening or springing, however, is entirely obviated by my invention; also, I know of and lay no claim to the arrangement described in the specification of the United



States Patent No. 122,335, A. D. 1872, where-  
in there are two arcal bearings or rests for the  
support of the spinning-ring and two jaws, be-  
tween which the said ring has to be sprung,  
5 so that the outer edge of the lower flange of  
the ring is held between the said jaws, which  
have to hold or clasp the ring quite firmly,  
whereas by my invention this is obviated, as  
is also all consequent liability to press the ring  
10 out of its true shape.

What I claim is—

A ring-holder for ring spinning and doub-  
ling machines, consisting of a thin metal an-  
nulus provided with a round central opening

and two inner extending lips or projections, 15  
constructed and arranged substantially as here-  
in described, whereby the lower flange of the  
ring is, without springing the holder, passed  
freely through said opening, overlapped by  
said lips or projections, and its periphery sur- 20  
rounded by the annulus when the holder is  
fastened in place.

THOMAS COULTHARD.

Witnesses:

YATES W. BOOTH,

WILL MELLING,

*Both of Preston, Lancashire.*