

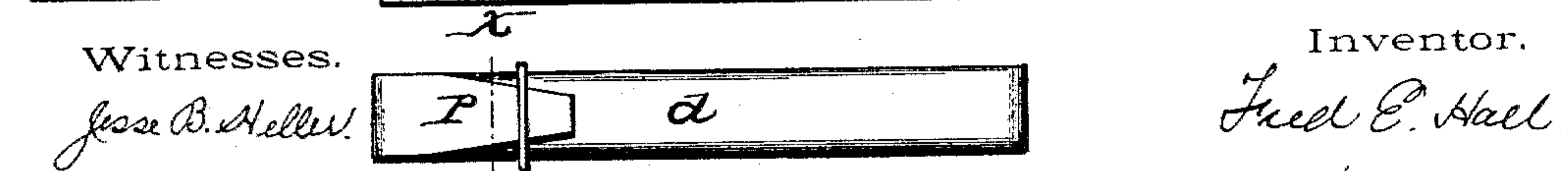
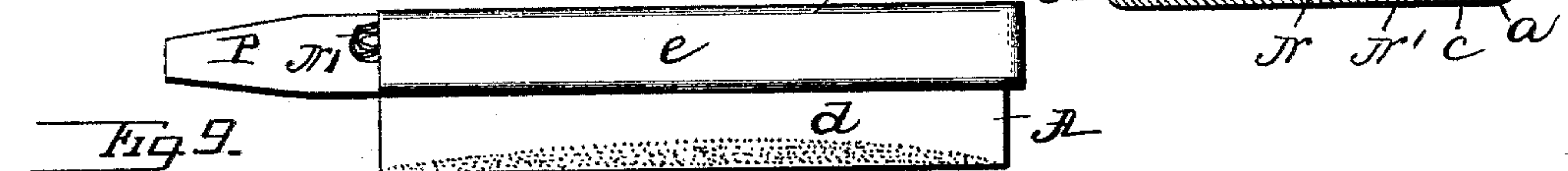
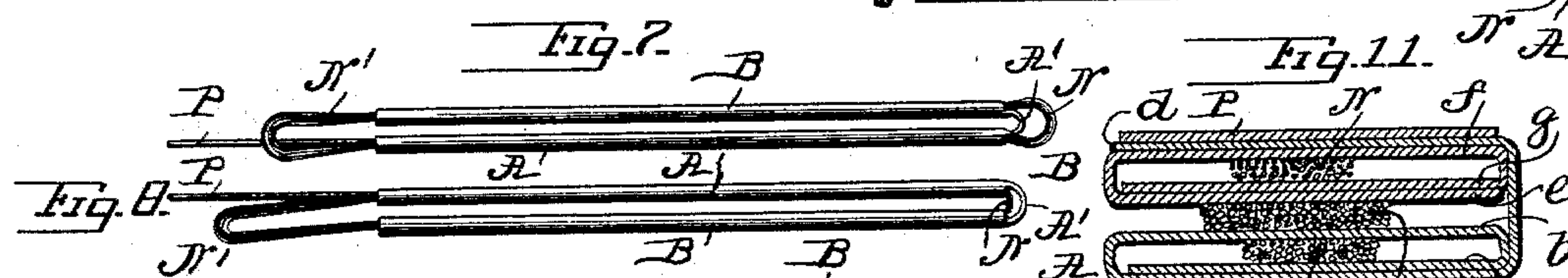
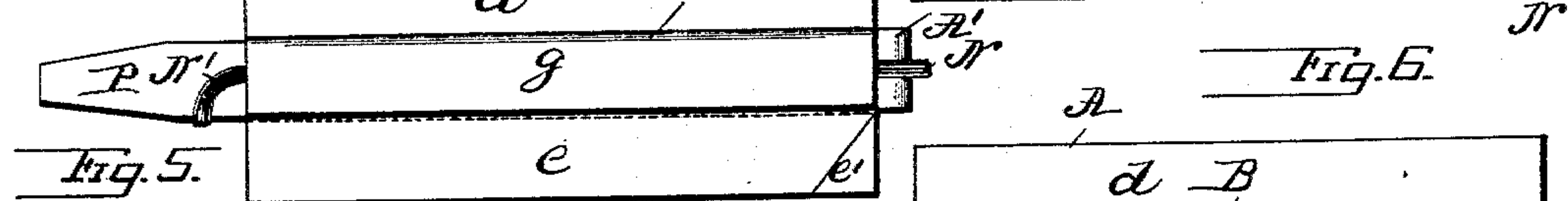
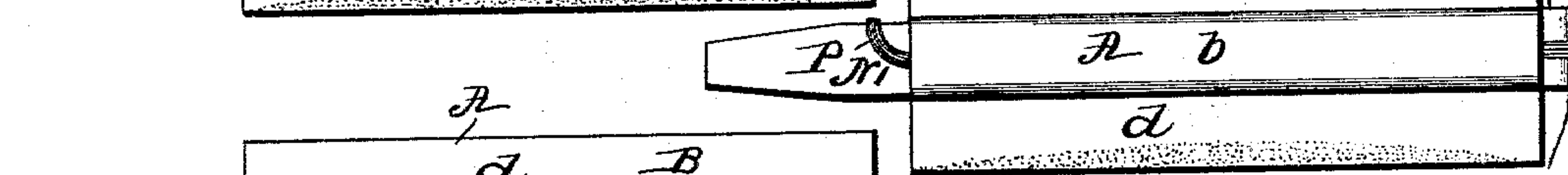
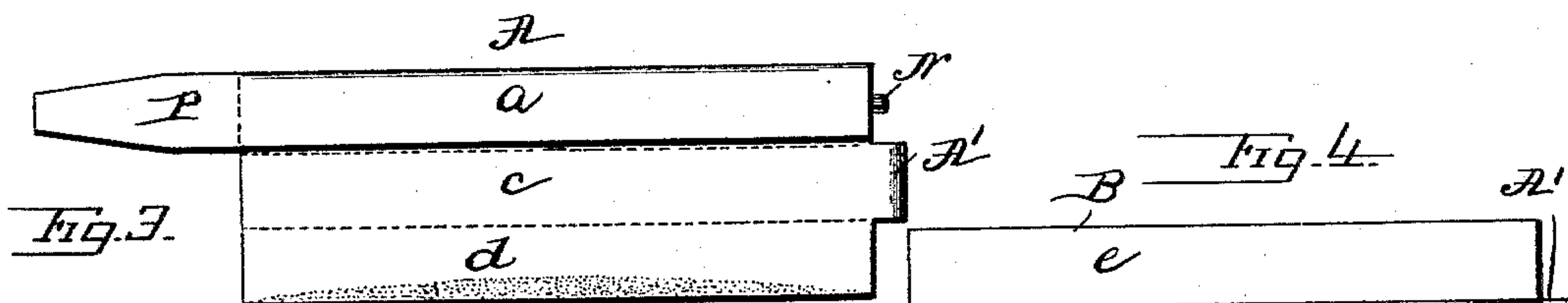
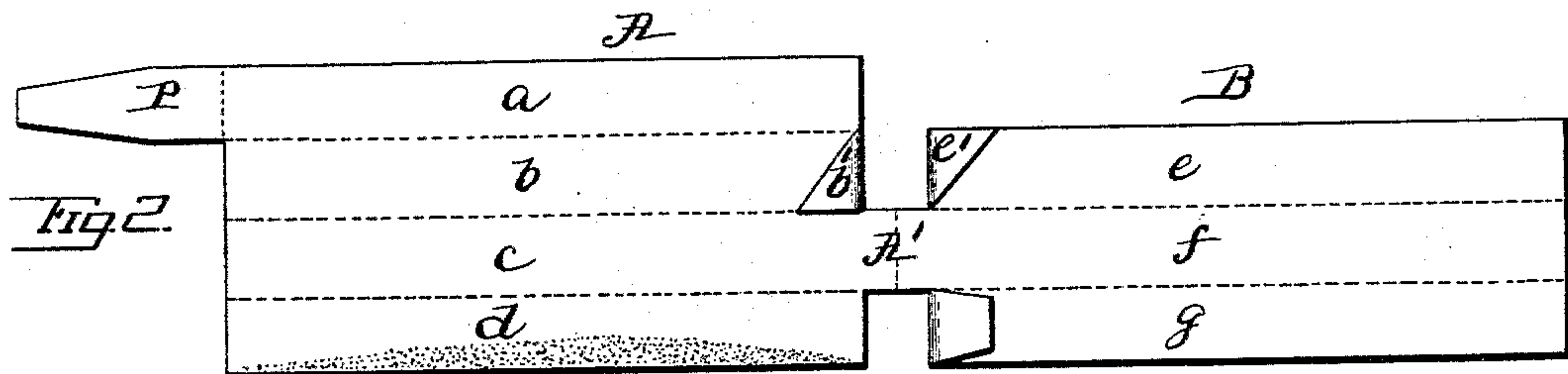
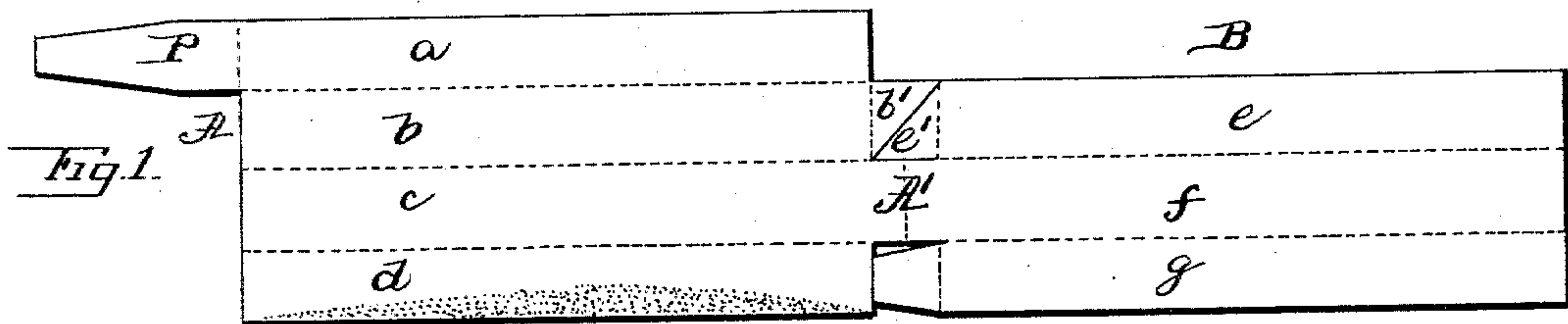
(No Model.)

3 Sheets—Sheet 1.

F. E. HALL.
THREAD PACKAGE.

No. 593,211.

Patented Nov. 9, 1897.



Witnesses.

Jesse B. Heller.

Minnie M. Ellis

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Fred E. Hall.

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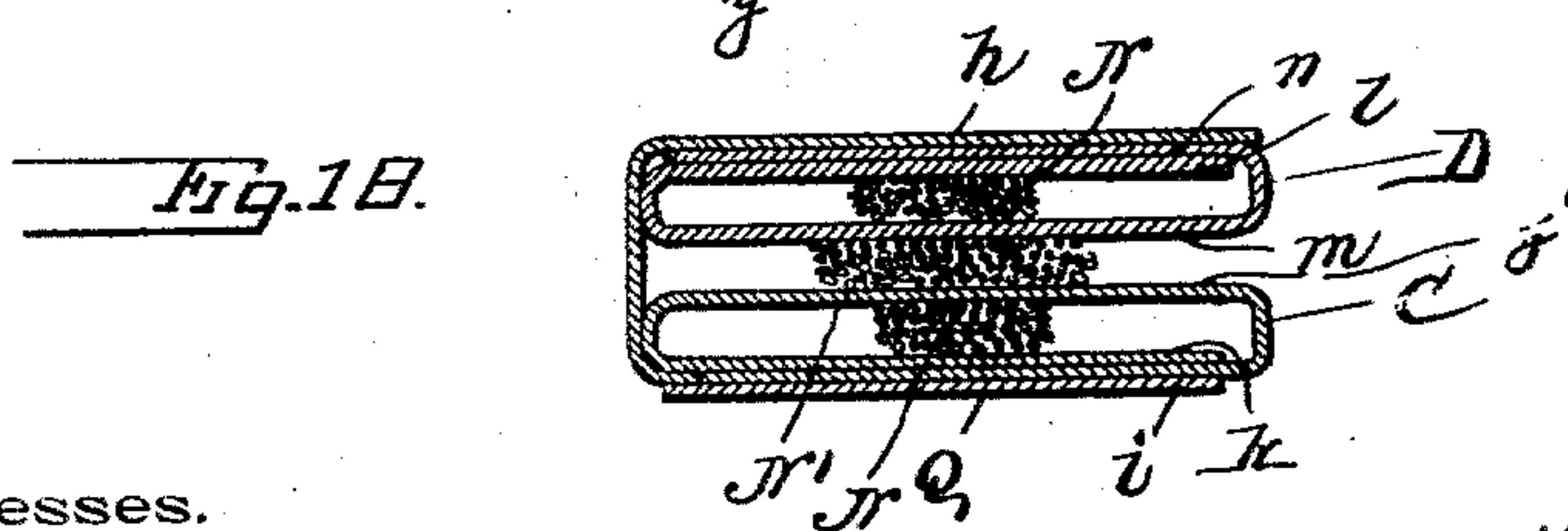
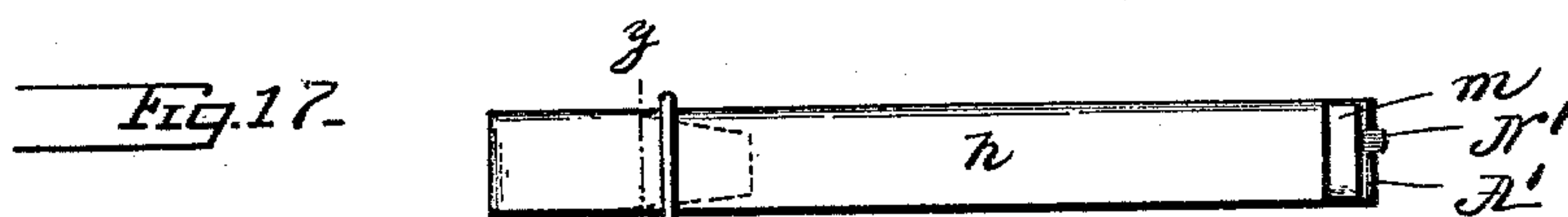
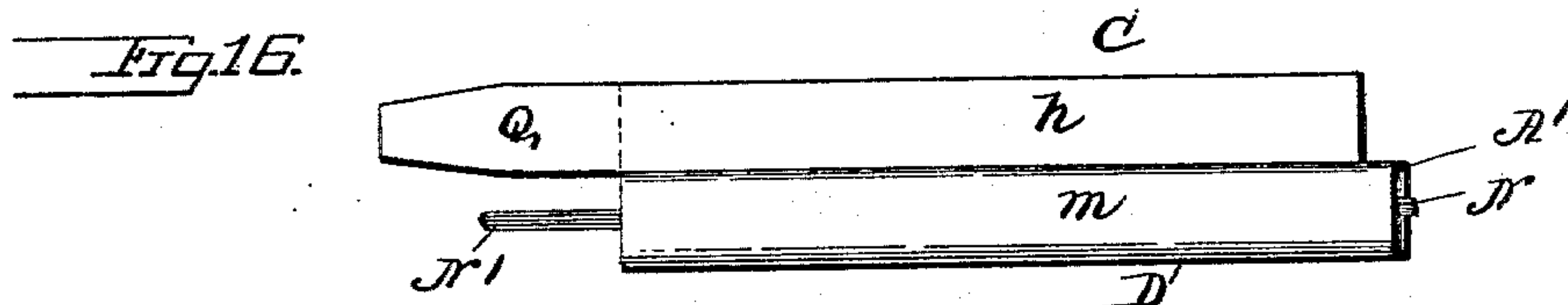
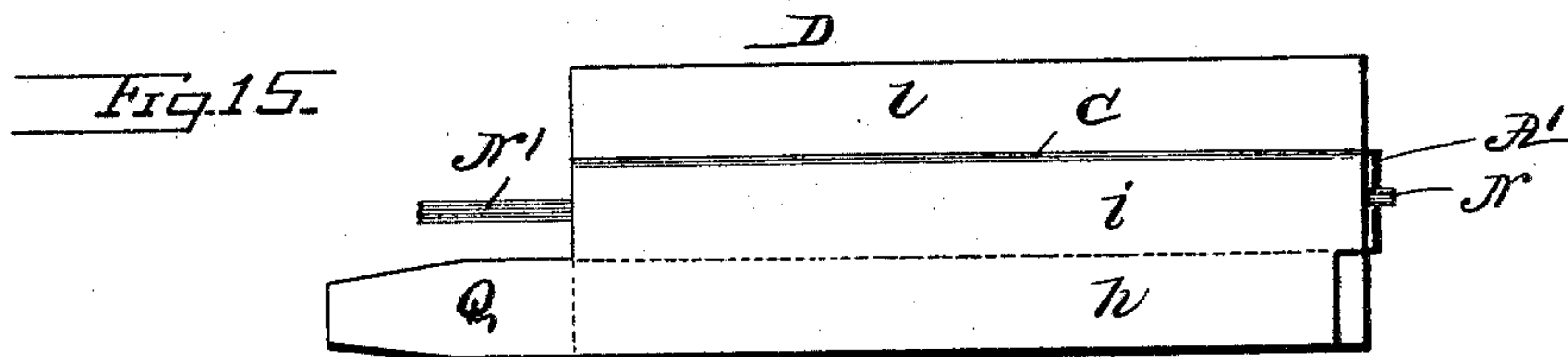
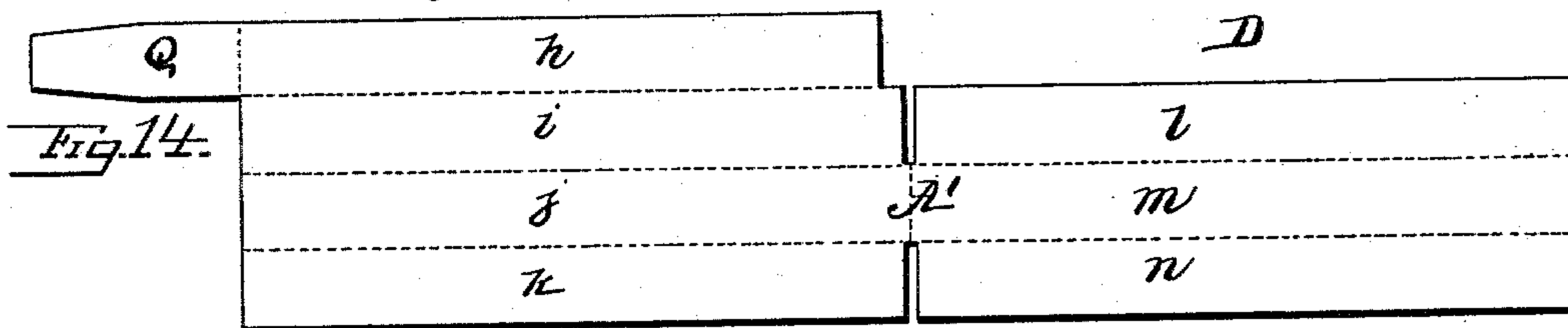
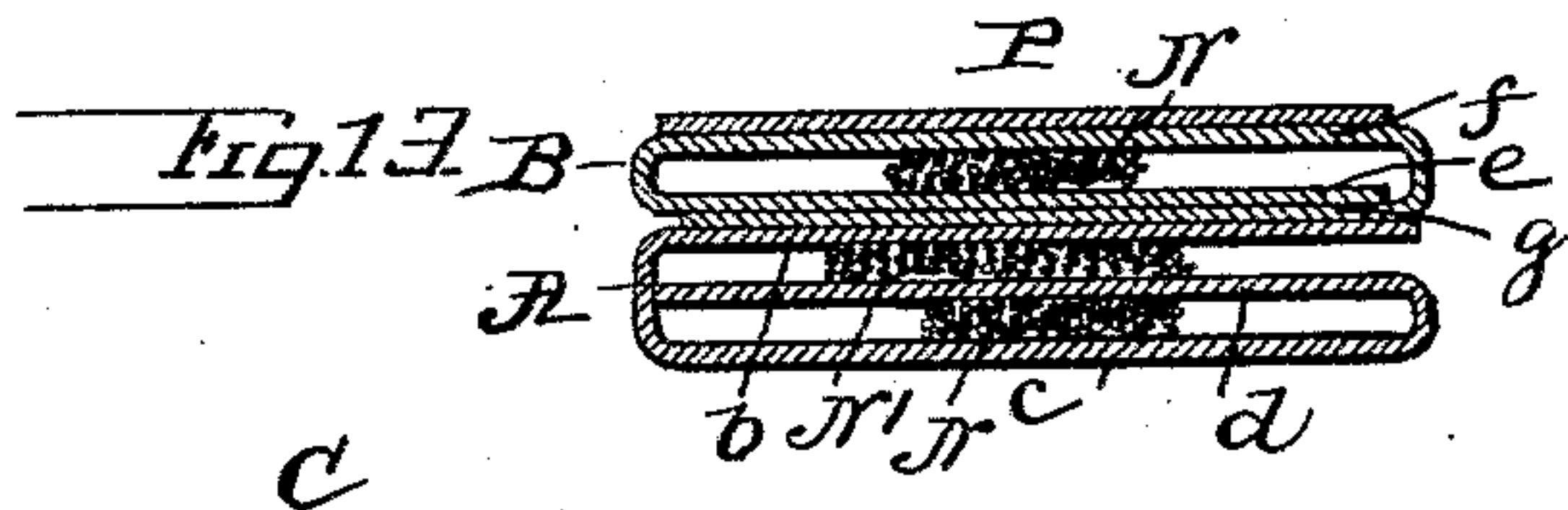
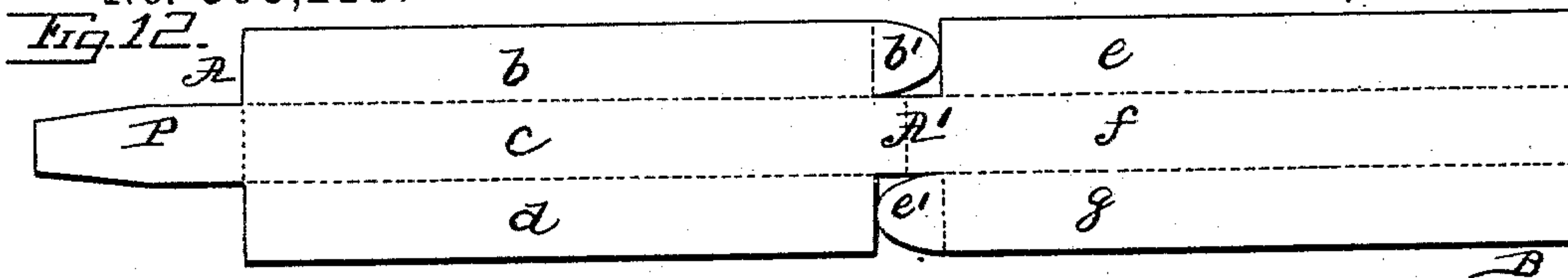
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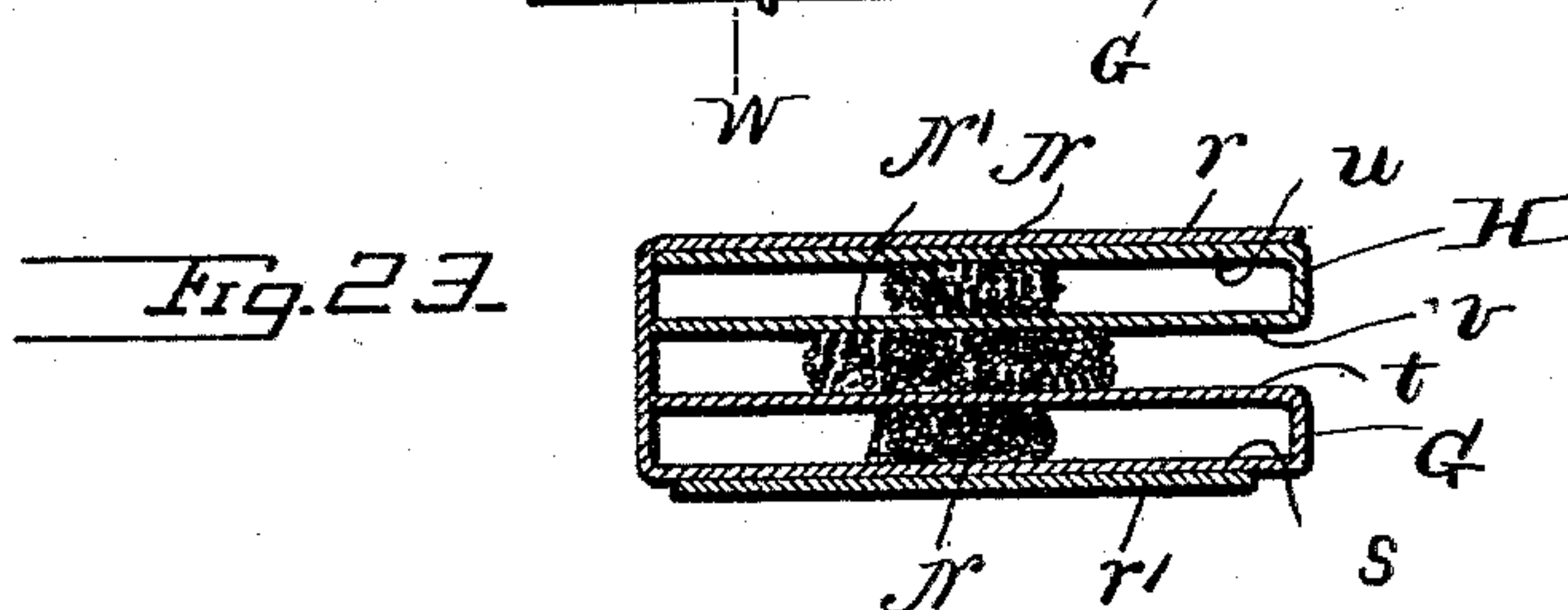
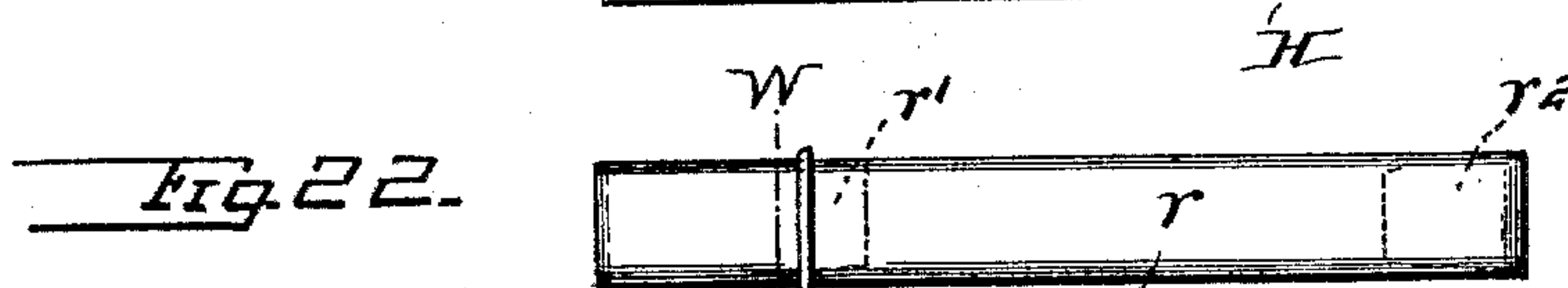
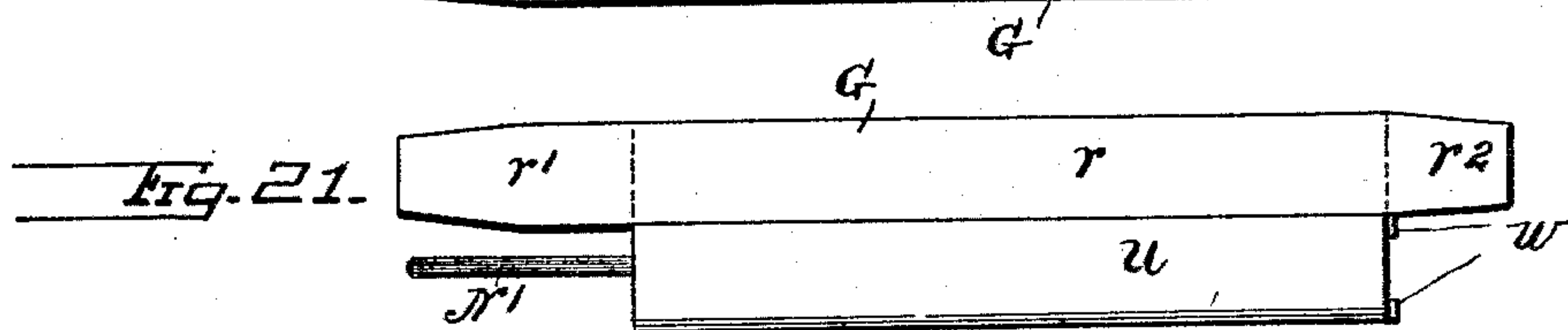
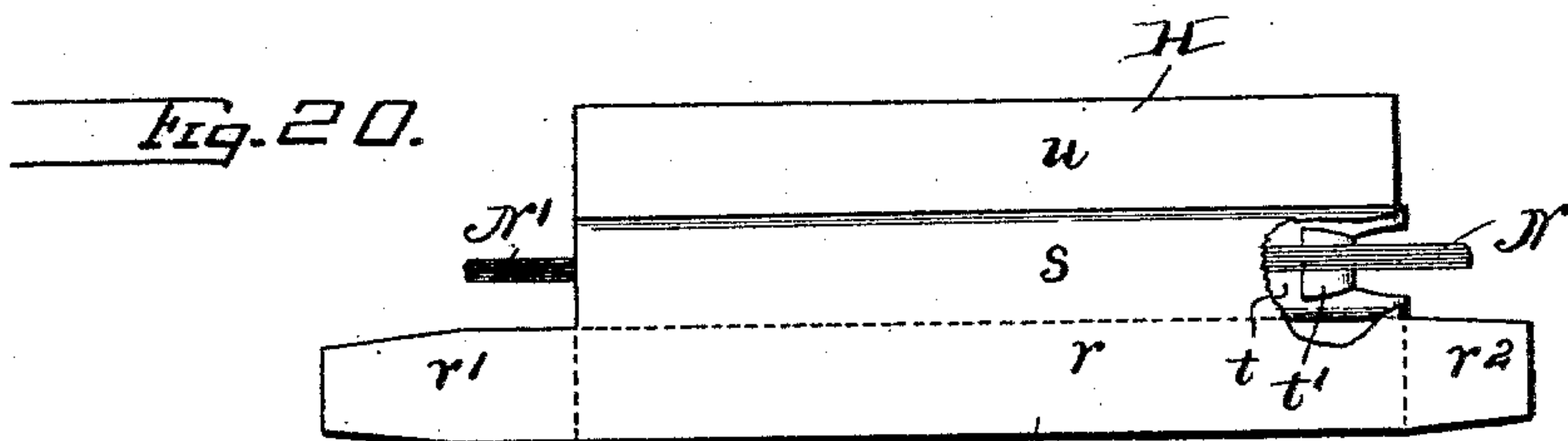
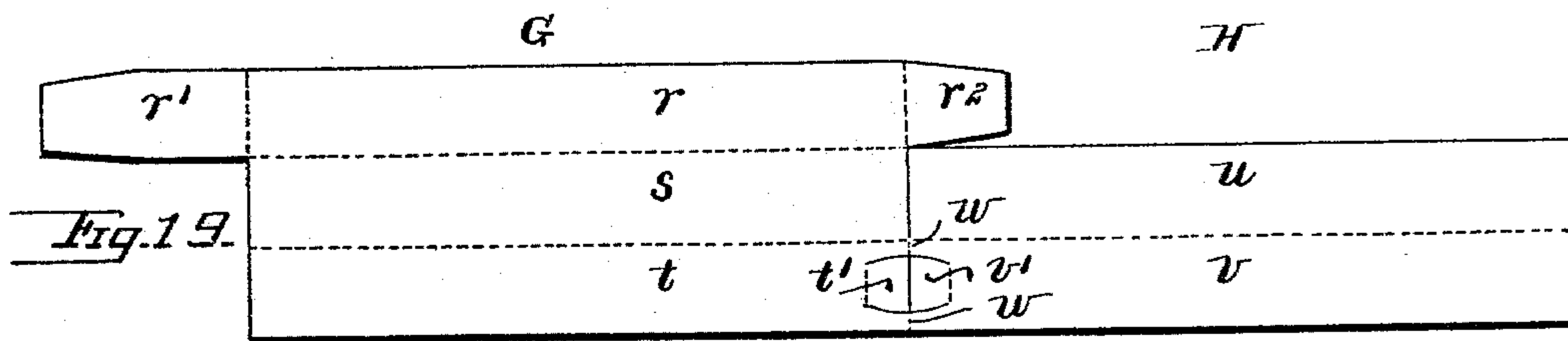
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UNITED STATES PATENT OFFICE.

FRED E. HALL, OF PHILADELPHIA, PENNSYLVANIA.

THREAD-PACKAGE.

SPECIFICATION forming part of Letters Patent No. 593,211, dated November 9, 1897.

Application filed September 18, 1896. Serial No. 606,206. (No model.)

To all whom it may concern:

Be it known that I, FRED E. HALL, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Thread-Packages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved device for holding a skein of thread or yarn or like material; and it consists in the novel construction of the same hereinafter set forth and described.

The object of my invention is to provide a simple and effective device for holding links or skeins of thread, which will protect the contents from becoming snarled or tangled, and which will permit the same to be neatly packed and readily exhibited or examined, and which when utilized will allow the ready removal of one or more threads of the skein two bevel-gears rotatably mounted upon said without disarranging the remaining contents.

One of the novel features of my package is that by its construction substantially all of the skein is inclosed within the folds of the package.

Speaking generally, my improved package is formed in the following manner: Two blanks are provided and connected together transversely by a hinge connection, said hinge connection being of less width than either blank, the whole being preferably constructed from a single piece of material. The hinge portion forms the connection between the two blanks. The skein is placed in the blanks, so that each blank contains substantially one-half the skein, the blanks being for this purpose bent together upon the hinge connection and the thread or silk resting outside the hinge. The blanks are then folded longitudinally, so as to inclose the skein. Preferably thereafter the two blanks are bent reversely at the hinge portion, so as to throw the thread within the hinge, and covered by the hinge, and the skein having its bearing upon the folds of each blank and not upon the hinge. This reverse bending may be omitted. Finally, whatever free end there may be of the skein can be turned over and

inserted between the two folded blanks, or between the folds of one of either of the blanks, and one of the blanks may be provided with a projecting portion which is bent over so as to cover the open ends of the blanks and, if desired, secured to the folded blanks. If desired, one or more of the folds of the blanks may be provided with a projecting portion at the juncture end of the blanks, which is bent longitudinally to cover the edge of the blank and form a bearing for the thread, thus preventing a sharp-edged bearing and giving an additional thickness of material at the bearing.

One of the features of my invention is to have a bearing for the thread formed by the contiguous end of a fold of each blank, the bearing being formed either by said two ends being riveted together, so as to form a hinge-joint, or, in case the said two ends are separate from each other, by providing each of them with flaps or projections which are bent over upon their respective folds, so as to prevent a sharp-edged bearing, as before stated.

The hinge connection may be omitted and the two blanks formed separately and the skein wound upon the blanks, so that a certain portion of the skein is in each blank and the blanks folded so as to contain and cover each its respective portion. This would satisfy one of the essential features of my invention, which is to use all the folds of each blank as a bearing and the skein to have frictional contact at its under surface only.

I will now proceed to describe the preferred embodiment of my invention and several modifications.

In the drawings, Figure 1 represents a plan view of the blanks ready for folding. Fig. 2 is a plan view similar to Fig. 1, with the exception that the projections at the juncture of the two blanks A and B are bent over to form the bearings for the thread. Fig. 3 represents the blanks A and B of Fig. 2, with the blank A having one fold laterally and the blank B being folded at the juncture-point of the blank A for the reception of the thread. Fig. 4 represents a similar view to Fig. 3, with the exception that the blank A has been folded once more laterally. Fig. 5 is a reverse view to that of Fig. 4 with one fold of the blank B. Fig. 6 is a similar view to Fig. 5 with one more

fold. Fig. 7 is an edge view of the blank after the blanks A and B have been folded in the position shown in Fig. 6. Fig. 8 shows a similar view to Fig. 7 with the blanks bent in the reverse direction to that of Fig. 7 at their junction-point or hinged connection. Fig. 9 is a plan view of Fig. 8. Fig. 10 shows a view similar to Fig. 9, with the exception that the projection of the thread has been inserted between the two blanks A and B and the projecting piece and a fold of the blank A passed over the blank B and a projection bent upon itself to cover the open ends of the packets. Fig. 11 is a section on the line $x x$, Fig. 10. Fig. 12 is a view similar to Fig. 1 of a modified form. Fig. 13 is a section similar to Fig. 11 after the blanks of Fig. 12 have been folded. Fig. 14 is a similar view to Fig. 1 of another modified form. Fig. 15 is a plan view of the blank C with the blank D folded upon it at the juncture and with two folds of C. Fig. 16 is a view of blank D in the position of Fig. 15 folded upon itself. Fig. 17 is a similar view to Fig. 10 of the modification of Fig. 14. Fig. 18 is a section on the line $y y$, Fig. 17. Fig. 19 is a plan view of the blanks of a third modification. Fig. 20 is a plan view of the blanks folded upon themselves, the two upper folds of one blank being bent upon its lower fold. Fig. 21 is a plan view of the blanks inverted, one fold of the other blank being folded upon its other fold. Fig. 22 is a plan view of the finished article. Fig. 23 is a section on the line $w w$, Fig. 19.

A and B are two blanks preferably cut from a single piece of material, preferably paper. These two blanks have a hinged connection formed by the narrow piece A'. The blank A is divided into four parts a , b , c , and d , and the blank B into three parts e , f , and g . From the part e is a projecting portion e' and from the part b a projecting portion b' . In manipulating this blank the projections e' and d' are bent upon their corresponding members b and e , bringing the blanks into the condition shown in Fig. 2. The blanks are then folded upon each other by bending upon the connecting portion A', which, as may be seen, is of less width than either blank A or blank B, thus bringing what will become the outside of the final package together. After the blanks are bent in this way the silk skein is placed upon what will become the inside of the portion b of blank A and the inside of fold e . The fold a is then bent over, so as to cover the inside of the portion or fold b , thus inclosing a part of the skein. This brings the blank A in the position shown in Fig. 3. The blank is further bent by turning the fold a again over upon the fold c , which causes the outside of fold b to come to the surface, and we then have the blank, so far as the view looking at the A blank is concerned, as shown in Fig. 4. In this condition the similar operation is performed upon the blank B, bringing it consecutively into the condition shown in Figs. 5 and 6—that is to say, the other

portion of the skein, which was against the fold e , having been shifted to the fold f by the last bending of fold b , the fold g of blank B is now bent on fold f , thus inclosing the other portion of the skein, and fold e is in turn bent over on fold g . When the folds have been made as in Fig. 6, the two blanks, together with their inclosed skein, are as shown in Fig. 7. In this case the skein is on the outside of the projecting portion A' and has its bearing thereon. The blanks are then turned inside out into the position shown in Fig. 8, which gives a twist to the skein, when the portion A' is without the slip and the silk or skein has its bearing upon the portions b' and e' . The fold d is then turned over, so as to cover the blank B, and the end N' of the skein N is twisted and laid between the two tubes or packets, and the projecting piece P of the blank A is turned so as to cover the open portion of the blank or packet, as shown in Fig. 10.

In Figs. 12 and 13 I have shown a modified form. In this case the blanks have an equal number of folds and their bending is substantially the same as shown in Figs. 1 to 11, with the exception that there is no fold a and no initial bending thereof, and the projection e' is upon the portion g instead of the portion e , as in Figs. 1 to 11.

In Figs. 14 to 18 I have shown another modified form in which C and D are the two blanks, having the narrow connecting-piece A'. The blank C has the folds h , i , and j and k and the blank D the folds l , m , and n . The blanks being in the position shown in Fig. 14, they are bent upon each other to leave the piece A' projecting. Around the folded portions m and j of the blanks D and C, respectively, and resting against what will become the inside of said folds is wound the silk, which rests upon the projecting piece A'. The inside of fold h is then bent upon the inside of fold j , then the inside of fold i over the outside of fold k , bringing the fold i over the fold k and the fold h beyond the fold k , making the two blanks appear from the C blank side, as shown in Fig. 15. The two blanks are then reversed, and the inside of fold l is folded on m and the inside of fold n on j , making the appearance of the two blanks from the D blank side, as shown in Fig. 16. The inside of fold h of blank C is then folded on top of fold n , and the projection Q, attached to the fold h , is then bent over to cover the open end of the packet, as shown in Fig. 17.

In Figs. 19 to 23 I have shown a third modification which in its main features of construction and mode of folding is substantially similar to the forms hereinbefore described, but which on account of its simplicity and the readiness with which it may be manipulated is in some respects superior to those forms. The blanks G and H, the former having the folds r , s , and t and the latter folds u and v , are shown in their extended position in Fig. 19. The two blanks are united at w , and the

hinged joint at that point is cut away, so as to leave two flaps t' and v' , which are bent, respectively, over upon folds t and v . Blank H is then bent underneath blank G, the skein 5 passed about folds v and t , having their bearing upon the flaps v' and t' , and folds r and s of blank G bent down upon fold t , so that the blanks at this stage of the manipulation present the appearance in plan illustrated in 10 Fig. 20. The blanks are then reversed and inverted and fold u bent upon fold v , Fig. 21, illustrating in plan the folds in this position. Fold r is then bent down upon fold u , as shown in Fig. 22, the folds being then se- 15 cured together in any desired manner. I have shown in the drawings the flaps r' and r'' projecting beyond both ends of fold r , which at the end of the manipulation, as I have described it, are bent around and un- 20 derneath the fold s and secured to the package in any convenient manner. These flaps may be omitted, if desired, thus leaving the package open at both ends.

The great advantage of my packet in either 25 the preferred or modified forms is that substantially all of the silk is covered by the folds of the packet. It also provides a ready means for covering the entire silk, so that there is no open projecting portion when it is 30 not in use or on exhibition, thus saving both wear and tear on the skein as well as fading of the material, also preventing knotting or snarling.

Having now fully described my invention, 35 what I claim, and desire to protect by Letters Patent, is—

1. A skein-holding device or thread-package comprising two blanks, each blank being 40 folded upon itself to inclose a portion of the skein, the end of one or more of the folded portions of each blank forming a bearing for the skein.

2. A skein-holding device or thread-package 45 comprising two blanks united transversely, the line of union being of less length than the width of either blank, each blank being folded upon itself laterally to inclose a portion of the skein, and the blanks doubled upon each other at the line of union whereby 50 when the blanks are doubled in one direction the skein has a bearing upon the point of union, and when doubled in the other direction, upon the end of one or more of the folded portions of each blank.

3. A skein-holding device or thread-package 55 comprising two blanks united transversely, the line of union being of less length than the width of either blank, one of said blanks being of greater width than the other, each blank being folded upon itself to inclose a portion of 60 the skein, and one fold of the wider blank overlying both folded blanks, the blanks being doubled upon each other at the line of union, whereby when the blanks are doubled 65 in one direction the skein has a bearing upon the point of union, and when doubled in the

other direction, upon the end of one or more of the folded portions of each blank.

4. A skein-holding device or thread-package 70 comprising two blanks united transversely, the line of union being of less length than the width of either blank, each blank being folded upon itself longitudinally to inclose a portion of the skein, and doubled upon each other at the line of union, and one or more of said folds 75 having projecting portions bent laterally to form bearing-surface for the thread.

5. A skein-holding device or thread-package comprising two blanks united transversely, 80 the line of union being of less length than the width of either blank, one of said blanks being of greater width than the other, each blank being folded upon itself longitudinally to inclose a portion of the thread, and one fold of 85 the wider blank overlying the folded blanks, the blanks being doubled upon each other at the line of union, and one or more of said folds having projecting portions bent laterally to form bearing-surface for the thread.

6. A skein-holding device or thread-package 90 comprising two blanks united transversely, the line of union being of less length than the width of either blank, each blank being folded upon itself longitudinally to inclose a portion of the skein, one blank having a greater num- 95 ber of folds than the other and one of the folds of the latter blank overlying the former blank, the blanks being doubled upon each other at the line of union and the ends of one or more of the folded portions of each blank forming a 100 bearing for the skein.

7. A skein-holding device or thread-package, comprising two blanks united transversely, 105 the line of union being of less length than the width of either blank, each blank being folded upon itself longitudinally to inclose a portion of the skein, and the blanks doubled upon each other at the line of union, and the ends of one or more of the folded portions of each blank forming a bearing for the skein the un- 110 covered end of the thread being adapted to be inserted between the two blanks or the folds thereof, and a projecting portion connected with one of the blanks adapted to be bent to cover the open ends of the blanks. 115

8. A skein-holding device or thread-package comprising two blanks united transversely, 120 each blank being folded upon itself longitudinally to inclose a portion of the skein, and doubled upon each other at the line of union, and one or more of said folds having projecting portions bent laterally to form bearing-surface for the thread.

9. A skein-holding device or thread-package 125 comprising two blanks united transversely and folded one upon the other, a ring or skein of thread longitudinally encircling or surrounding said folded blanks, each blank being also folded upon itself longitudinally to inclose a portion of the skein, the contiguous 130 end of one or more of the folded portions of each blank forming a bearing for the skein.

10. A skein - holding device or thread-
package comprising two blanks united trans-
versely and folded one upon the other, a ring
or skein of thread longitudinally encircling or
5 surrounding said folded blanks, each blank
being also folded upon itself longitudinally to
inclose a portion of the skein.

In testimony of which invention I have
hereunto set my hand.

FRED E. HALL.

Witnesses:

M. F. ELLIS,

JESSE B. HELLER.