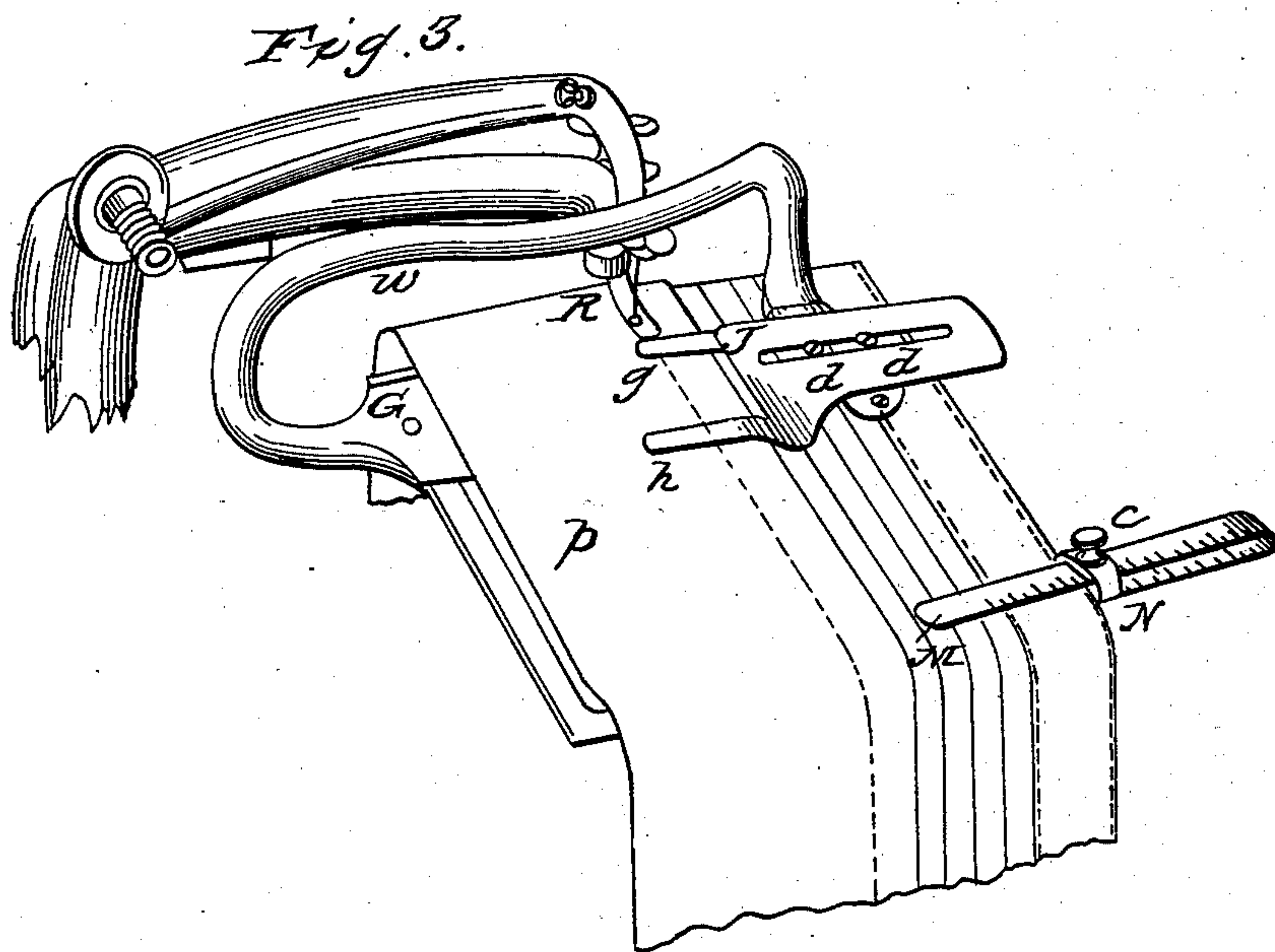
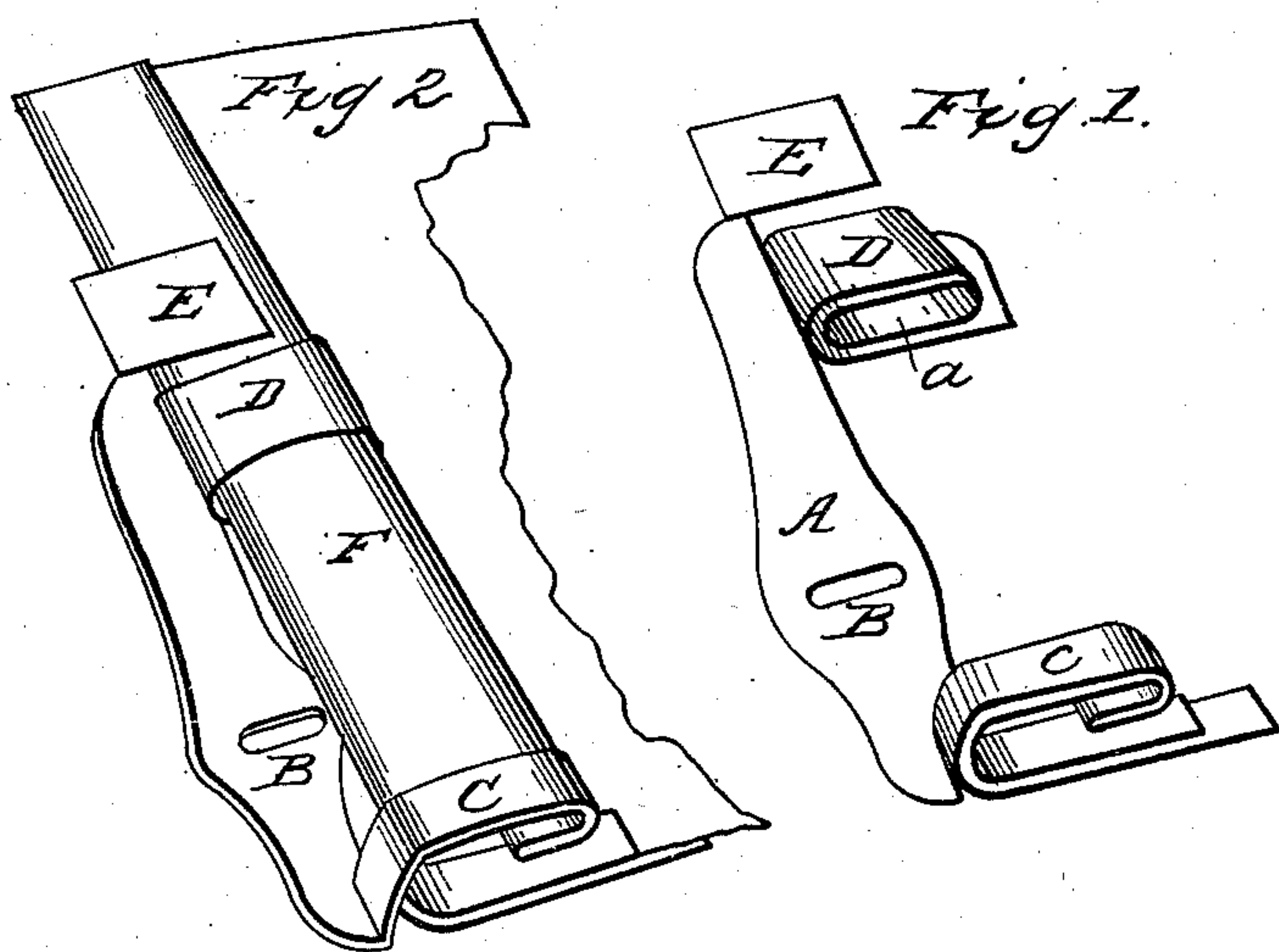


S. D. TUCKER.

Cloth Plaiting Attachment for Sewing Machines.

No. 80,243.

Patented July 21, 1868.



Witnesses:
Charles D. Kellum
E. Gorman

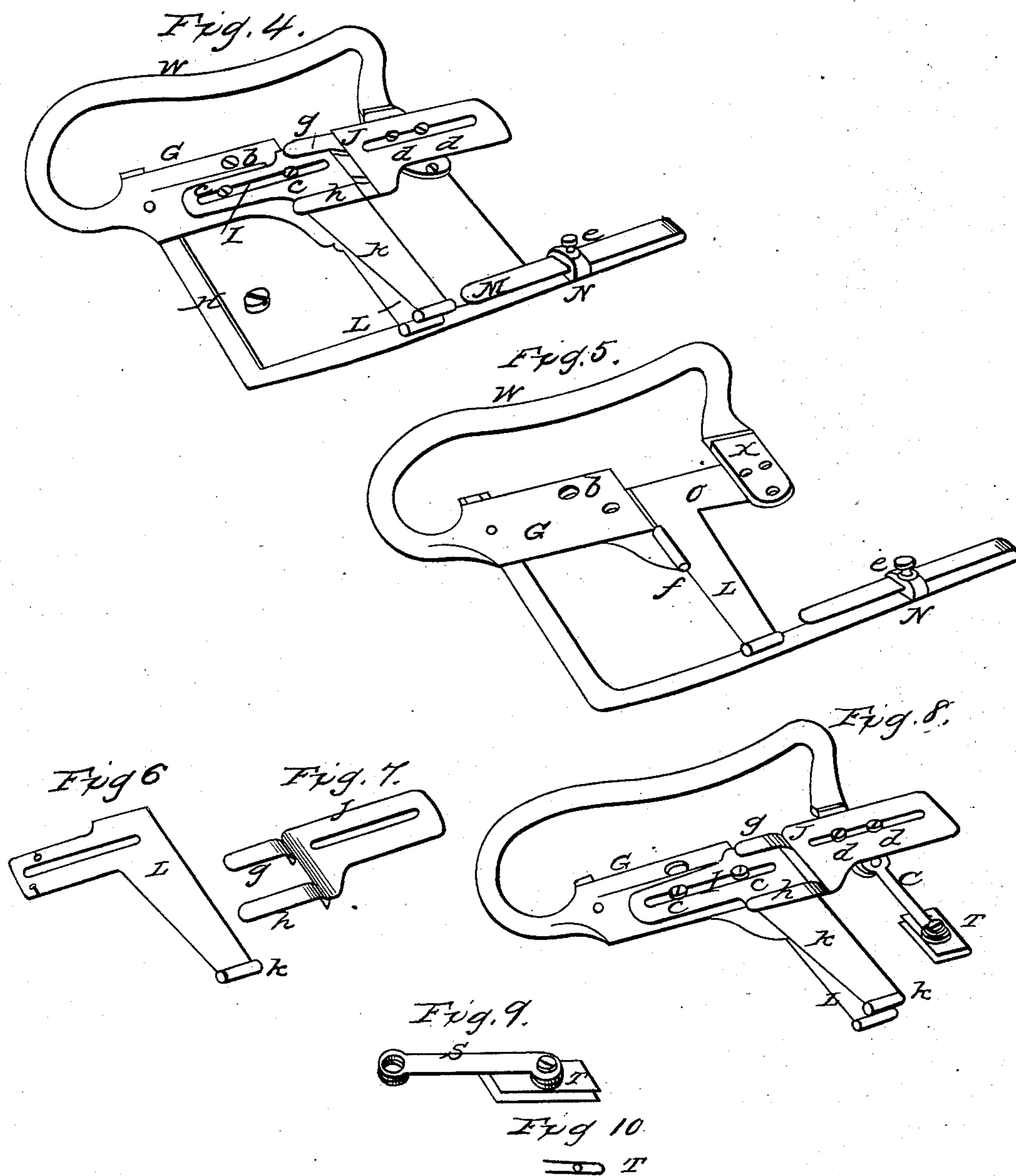
Inventor:
Sydney D. Tucker

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United States Patent Office.

SYDNEY D. TUCKER, OF TROY, NEW YORK.

Letters Patent No. 80,243, dated July 21, 1868.

IMPROVEMENT IN CLOTH-PLAITING ATTACHMENT FOR SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SYDNEY D. TUCKER, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Machine for Plaiting Linen or Cotton Cloth, and that the following is a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, which, with the letters of reference marked thereon, are hereby made a part of this specification.

Like letters represent and refer to like or corresponding parts.

Figure 1 represents the device used by me, in plaiting shirt-fronts, for laying the first or centre plait.

Figure 2 shows the same device, with the cloth passing through the same as when in operation.

Figure 3 shows my invention in operation, as the same is used upon shirt-fronts after the centre-plait is laid, and upon other work with narrow folds.

Figure 4 shows the same device without the cloth, setting forth the several parts more clearly.

Figure 5 represents the same device, with the top plate removed.

Figure 6 shows one of the folders used for shaping the cloth, and breaking the stiffness of the same.

Figure 7 is a view of the upper plate of the machine.

Figure 8 shows my said invention as used for plaiting skirts and other work where wide plaits are required; and

Figure 9 represents the guide used for laying wide plaits, as aforesaid.

In the plaiters heretofore invented, the cloth remains smooth and stiff up to about the point where the plait is actually laid, giving it a strong tendency to run irregularly, and requiring the constant attention of skilful operatives to make the plaits uniform and even.

I claim that by this invention I have substantially obviated these defects.

The nature of my invention consists in the employment of several devices for breaking down the stiffness of the cloth, and shaping and guiding the same at points some distance from the place where the plait is actually folded, substantially as hereinafter described and set forth.

My invention is an improvement on that of Frank A. Allen, patented February 7, 1860, and of which I am the owner by assignment.

To enable others skilled in the art to which my invention relates to make and use the same, I will here proceed to describe the construction and operation thereof, which is as follows, to wit:

The different parts of my invention may be made of brass, or steel, or other suitable metal, and of any size thought desirable.

Figs. 1 and 2 represent a device used only for the purpose of folding the centre plait in shirt-fronts, or other work where a single wide plait is to be made.

It consists of the plait A, which is attached to the table of the sewing-machine by a screw working in the slot B.

D is simply a common hemmer, of a size corresponding to the plait to be turned. A short distance back of this hemmer is placed the guide *e*, which consists of a doubled plate of metal bent in the form shown in the drawing. The cloth is passed through this guide, as shown in fig. 2, and is thereby broken and shaped so that it passes easily and steadily through the hemmer D, and requires very little attention to make the plait entirely uniform.

For any other purpose than laying a single wide plait at the edge of the cloth, I use the device shown in figs. 3, 4, and 8.

G, fig. 5, is a heavy plate screwed to the table of the sewing-machine, at *b*. From one end of this plate projects the arm W, ending in the thick plate X. Upon the under side of the plate X is fastened the thin plate O. On the upper side of said plate X is placed the adjustable plate J, figs. 3, 4, and 8.

g and *h* are projections from plate J, and form a part thereof. On the upper side of G is placed the adjustable plate I, moving between the projections *g* and *h* and the plate O.

It will be seen that the plates G and O are entirely disconnected, so that the cloth can run between them and under the plate O.

For the purpose of shaping and guiding the cloth before entering the plaiter proper, I employ the folders K and L, which are thin plates of metal forming parts of plates I and O. Upon the tips are placed small cylinders, K, to prevent catching the cloth, and to present as little resistance as possible. One of these folders is placed above and a little one side of the other, so that as the cloth passes between them, it is partially folded, its stiffness is broken, and it is in proper shape for going through the plaiter.

In working narrow strips of cloth, as shirt-fronts, I also employ the guide M, which is a bar of metal folded in the manner shown in the drawing, and fastened to plate G by a screw, and on which moves the adjustable slide N. This is so adjusted that it rests against the edge of the cloth, as in fig. 3, and is of great advantage in guiding it in the proper direction.

It is obvious that this guide cannot be employed when very wide cloth is used, as in plaiting skirts, &c. In that case I remove the guide M and use the device shown at S and T, figs. 8 and 9. This is simply a strip of metal, T, folded longitudinally, and fastened to the bar S by a screw. The bar S is also fastened to the plate X by a screw.

Both the guide T and bar S are adjustable by means of the screws above mentioned. They are used in the following manner: In plaiting wide cloth, after making the first plait, the said guide and guide-bar are adjusted by means of the screws at the proper distance for laying the next plait. Then the folded edge of the plait already made is placed in the guide T, which is of great advantage in giving the cloth the right direction in passing through the plaiter.

By these means, I am enabled to dispense with a great portion of the care and skill heretofore required in the use of machines for plaiting cloth, and I find that it requires but very little skill or previous knowledge of the business to use my invention to excellent advantage.

Having thus described the nature of my said invention and improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The folding guide C, hemmer D, plate A, having the slot B therein, the whole being constructed, arranged, and combined in the manner herein contained, described, and set forth.
2. The arm W, supporting plate X, plate J, adjustable plate I K $\frac{1}{2}$, and the plate G, all and each constructed and combined and arranged substantially as herein set forth.
3. The devices constructed as herein described, and forming a plaiter, in two parts, and in which the cloth moves under the plaiter, as shown, the whole being arranged and combined in the manner substantially as herein contained, described, and set forth.
4. I also claim the folders K and L, constructed and operated substantially as and for the purposes hereinbefore fully described.
5. I also claim, in combination with a plaiter, the guide M and slide N, substantially as hereinbefore described and set forth.
6. I also claim the guide T and guide-bar S, in combination with each other and with a plaiter, substantially as and for the purposes herein fully described and set forth.

In testimony whereof, I have hereunto set my hand, this 12th day of February, 1867.

S. D. TUCKER.

Witnesses:

CHARLES D. KELLUM,
E. COWEN.