

(No Model.)

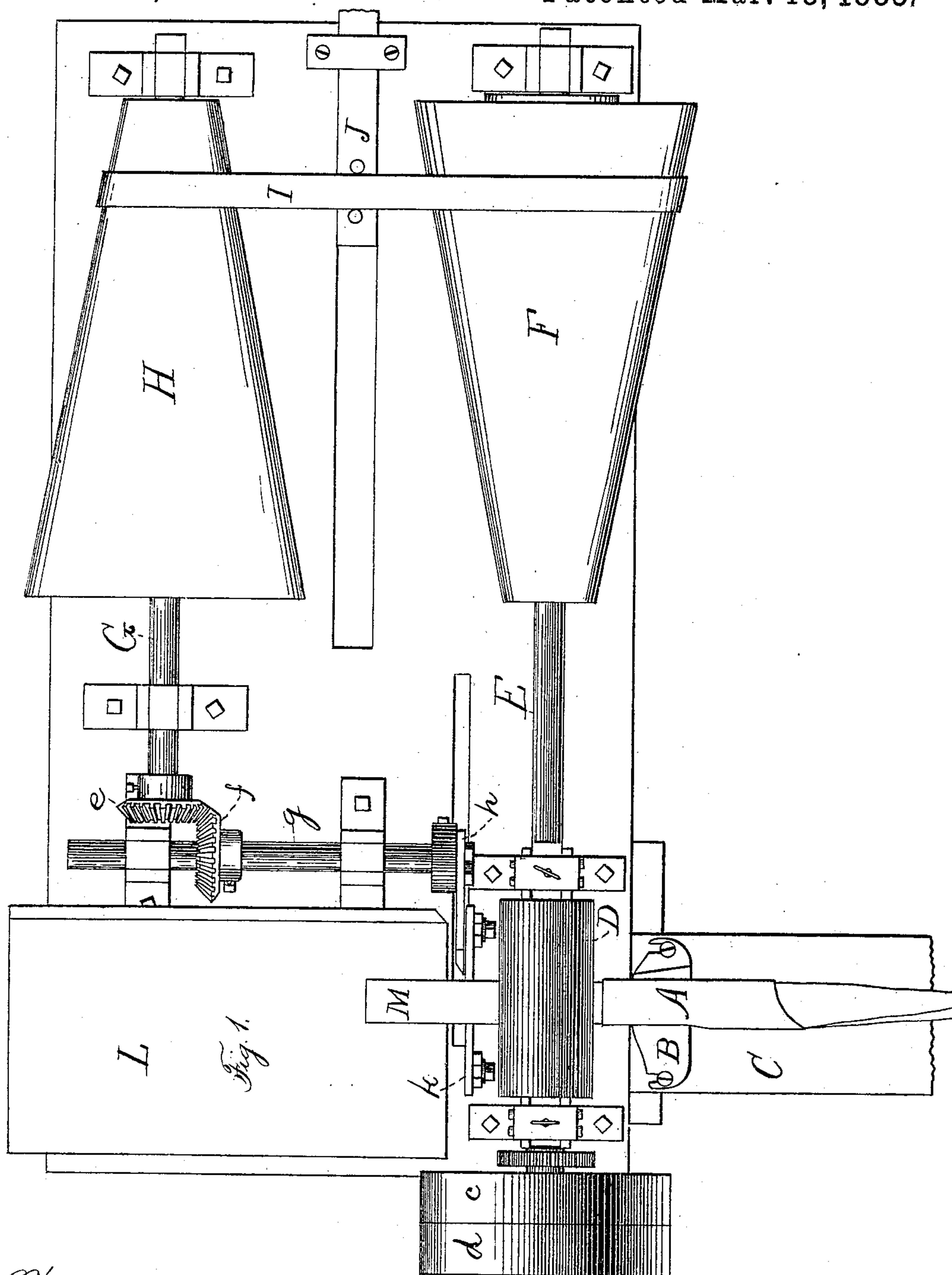
3 Sheets—Sheet 1.

T. WOODHOUSE.

MACHINE FOR CUTTING AND FOLDING STRIPS OF CLOTH.

No. 273,790.

Patented Mar. 13, 1883.



Witnesses.  
John Edwards, Jr.,  
Fred W. Morey, Jr.

Inventor.  
Thomas Woodhouse.  
By James Shepard  
att'y

(No Model.)

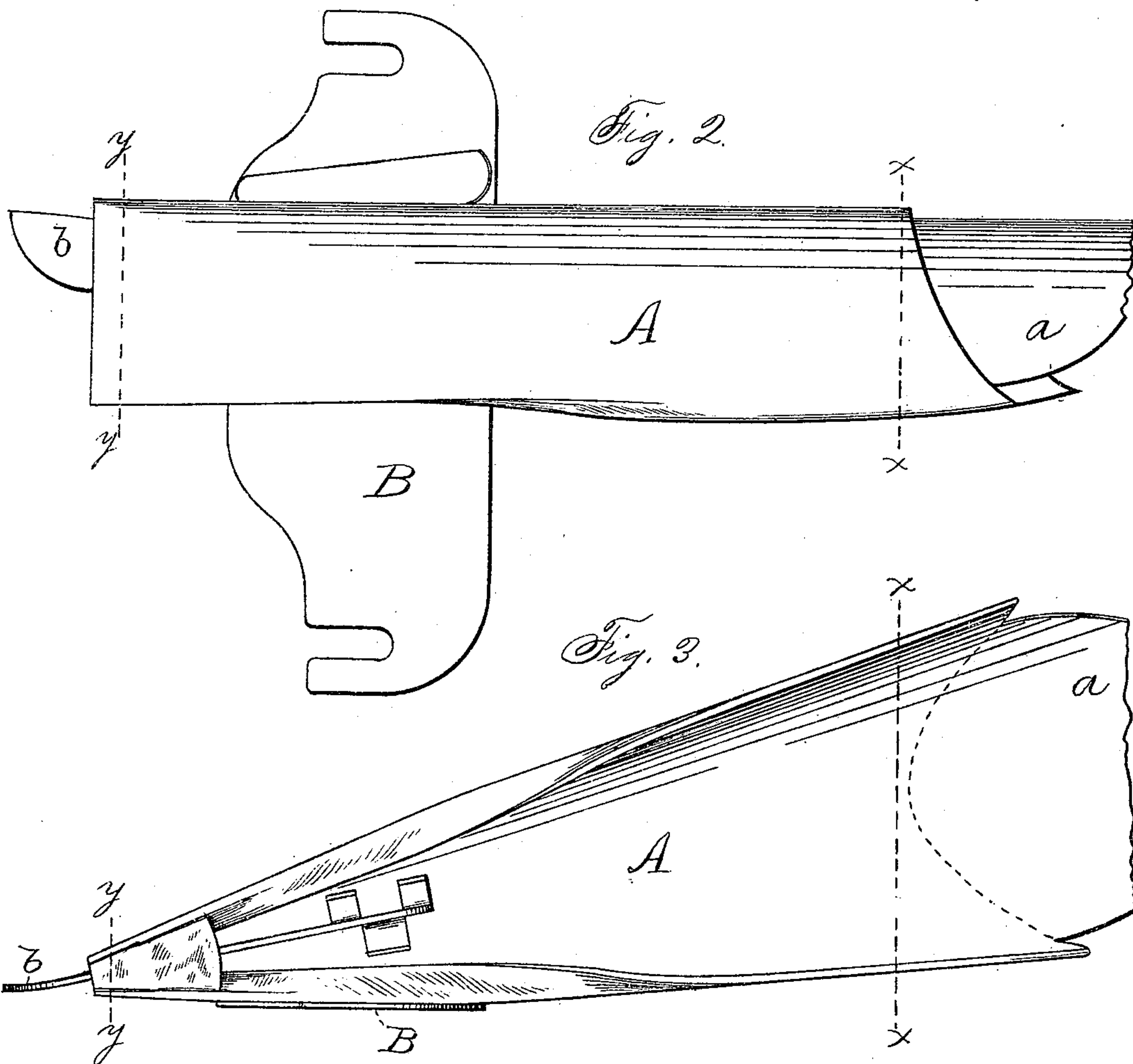
3 Sheets—Sheet 2.

T. WOODHOUSE.

MACHINE FOR CUTTING AND FOLDING STRIPS OF CLOTH.

No. 273,790.

Patented Mar. 13, 1883.



Witnesses.  
John Edwards, Jr.  
Fred H. Morey, Jr.

Inventor.  
Thomas Woodhouse.  
By James Shepard.  
attg.

(No Model.)

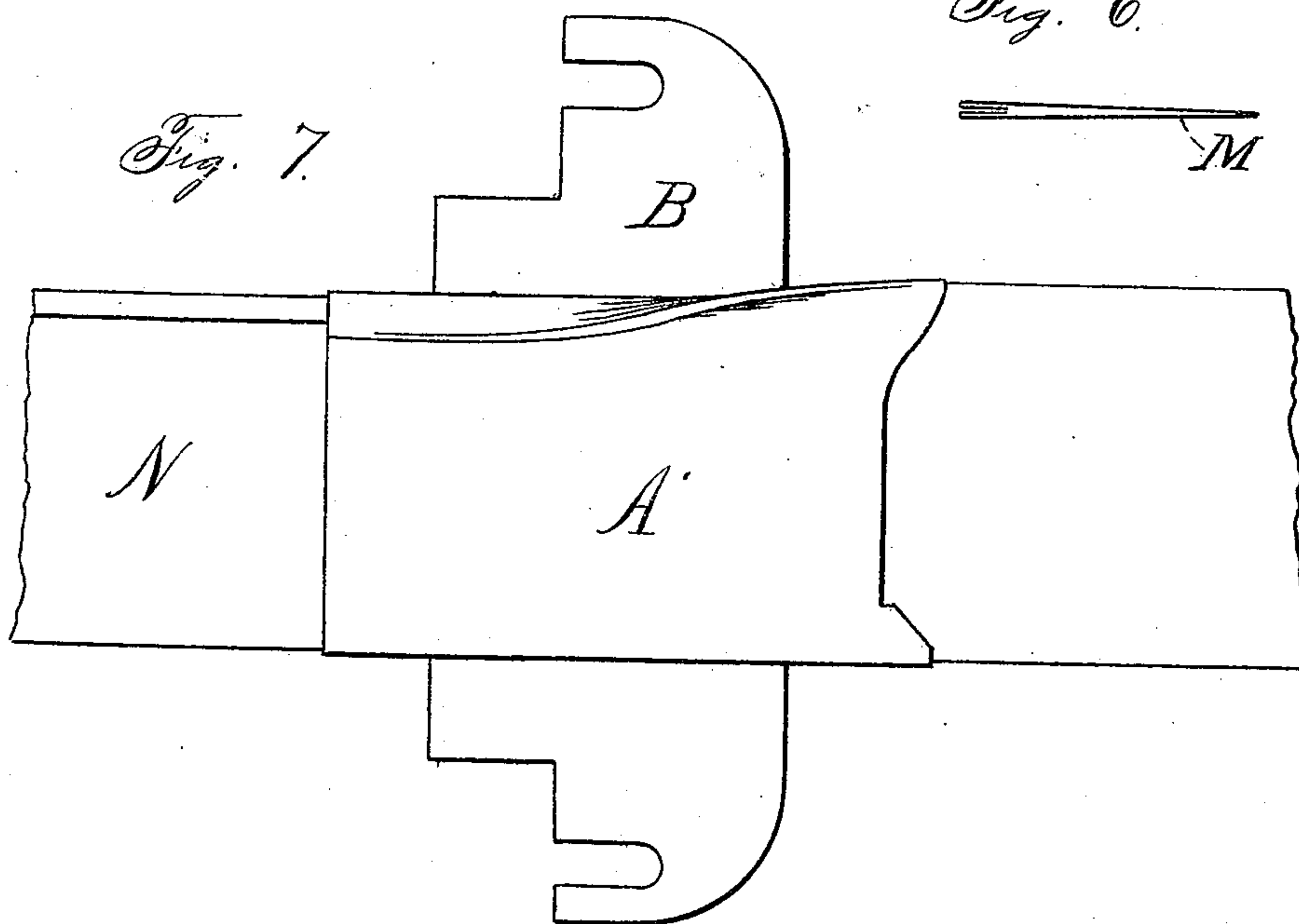
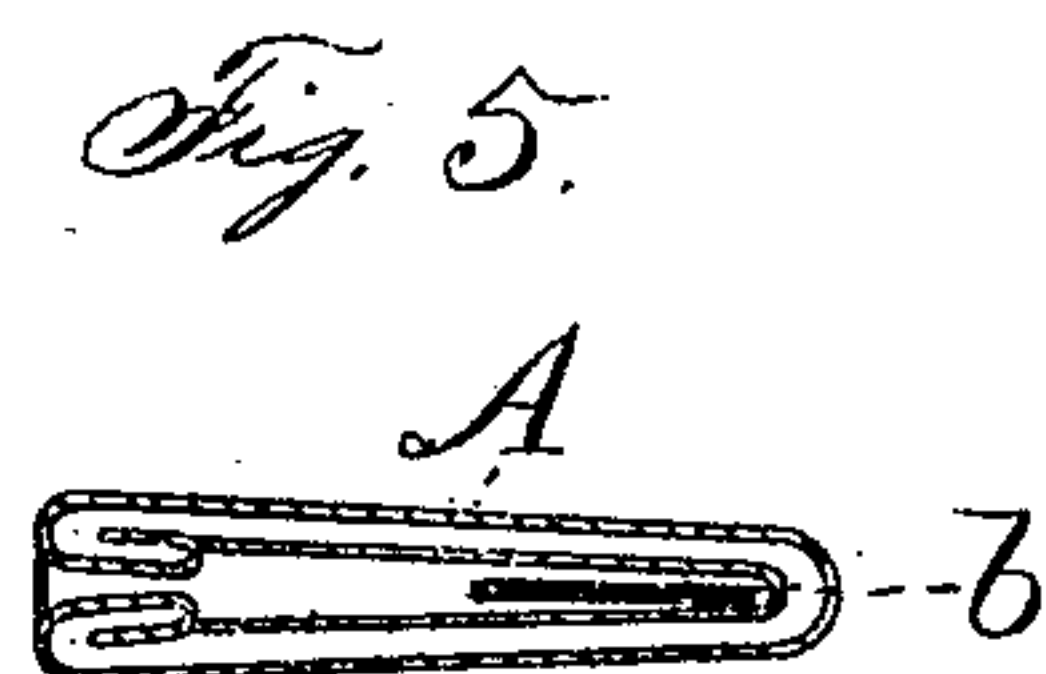
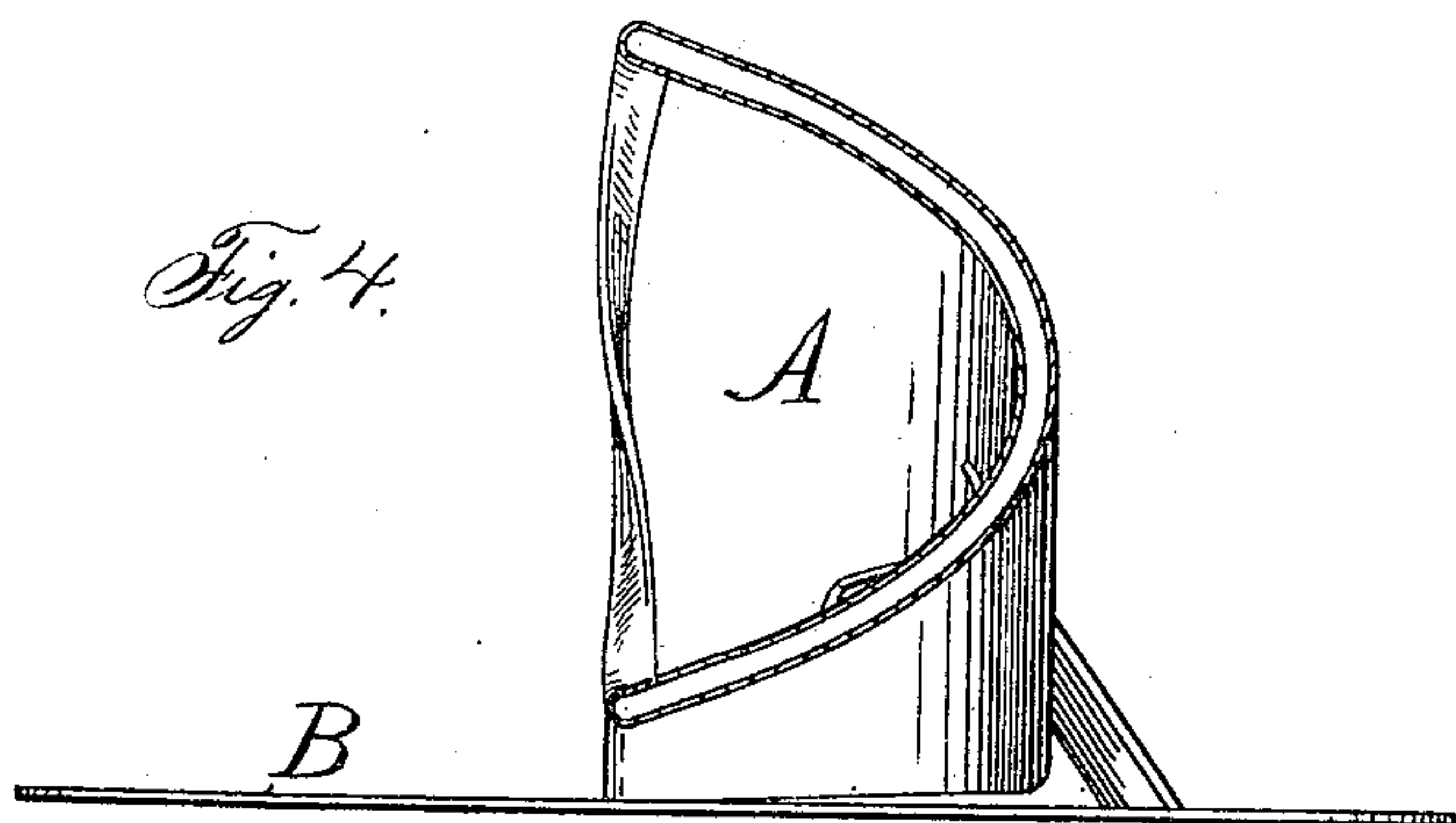
3 Sheets—Sheet 3.

T. WOODHOUSE.

MACHINE FOR CUTTING AND FOLDING STRIPS OF CLOTH.

No. 273,790.

Patented Mar. 13, 1883.



Witnesses:  
John Edwards Jr.  
Fred W. Morey Jr.

Inventor:  
Thomas Woodhouse.  
By James Shepard  
att.



# UNITED STATES PATENT OFFICE.

THOMAS WOODHOUSE, OF PLAINVILLE, CONNECTICUT.

## MACHINE FOR CUTTING AND FOLDING STRIPS OF CLOTH.

SPECIFICATION forming part of Letters Patent No. 273,790, dated March 13, 1883.

Application filed January 5, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS WOODHOUSE, of Plainville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Machines for Folding and Cutting Cloth, of which the following is a specification.

My invention relates to machines for folding and cutting off strips of cloth, for use in the finishing-room where knit garments are made, or for other analogous purposes; and the object of my invention is to do by machinery the work that has heretofore been done by hand, and thereby do the work faster, better, and cheaper. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my machine. Fig. 2 is a plan view of one of the folders for use with said machine. Fig. 3 is a side elevation of the same. Fig. 4 is a vertical section thereof on line *x x* of Figs. 2 and 3. Fig. 5 is a like section on line *y y* of Figs. 2 and 3. Fig. 6 is a transverse section of the strip of cloth as folded by said folder, and Fig. 7 is a plan view of another style of folder for use with said machine.

The several parts of my machine, with the exception of the double folder, when separately considered, are old; but their combination in one machine for folding and cutting off strips of cloth is believed to be new.

A designates what I term the "double folder," because it is designed to fold a strip of cloth in the middle and to turn in each edge, as shown in Fig. 6, said cloth, when folded and cut into proper lengths, being principally designed for bands and analogous uses in finishing knit garments; but it may of course be appropriated to other uses, as occasion requires. The folder, at its mouth and for some little distance toward its small end, is in the form substantially of a U-shaped tube, as shown most clearly by the sectional view, Fig. 4. I prefer to make the metal which is upon the inside of the U-shaped tube, as at *a*, project beyond the metal upon the outside thereof, for convenience of threading the folder with the strip of cloth to be folded; but this is not essential. As the U-shaped tube which forms the folder approaches the small end its edges

are rolled over inward, so that at and near said small end its form is substantially as represented by the sectional view, Fig. 5. I also provide said small or delivery end with a central tongue, *b*, which projects beyond said end and acts upon the inside of the cloth at the central fold after it has run through the folder proper, in order to crease or break the cloth at that point and make the fold sharper than it would be made by the rounded inside wall of the small end of the folder, which may be said to be in the form of a flattened U-shaped tube with rolled edges.

The folder A is provided with any suitable base-plate, B, by means of which it may be secured to any suitable table, C, at the front of the machine and immediately in front of the pressure and feeding rollers D, said rollers consisting of a pair of cylindrical rollers mounted one above the other in a suitable frame, made adjustable to and from each other, and connected by gears to move together in the ordinary manner for similar rolls in other machines. The lower one of these rollers is mounted upon the main driving-shaft E, which is provided with fast and loose pulleys *c d*. Said shaft is also provided with a tapering drum, F, and on a shaft, G, which is parallel thereto, is the companion tapering drum H, in connection with which drums the belt I and shipper J are arranged for changing the position of the belt, and consequently the speed of the shaft G, as in other cone-pulleys for changing speed. The shaft G is also provided with bevel-gear wheel *e*, which meshes into like wheel, *f*, and drives the shaft *g*, to carry the revolving shear-blade *h*, with a continuous revolving motion.

Just back of the rollers D, and in such position as to be acted upon by the revolving shear-blade *h*, is a stationary shear-blade, *k*, and back of said shears is a suitable table or incline, L.

The operation is as follows: Strips of cloth of any indefinite length, and of a width that will about fill the folder at its widest end, are inserted in the folder and drawn through, the end of the strip being tapered off or narrowed down for convenience of threading the folder. The strips are carried over any proper support that will present them to the folder smoothly.



The end of said strip, after it passes through the folder, is fed through the pressure and feeding rollers, after which said rollers draw the strip through the folder, which folds it substantially into the form represented in Fig. 6. 5 The rollers also press the cloth thus folded down flat, and with sufficient pressure to make it stay in its folded position. As the folded strip M leaves the rolls D it projects over the stationary shear-blade *h*, and when a given length thus projects the revolving shear-blade *h* comes around and cuts off the strip, and so on repeatedly as fast as the given length thus projects. The pieces thus cut off fall upon the 15 table L, or may be made to slide therefrom into any suitable receptacle.

If desired, a stamping device may be located over the table L and just back of the shears, to be worked either automatically or by hand, 20 and stamp in figures upon the strip the length of each band or the size of garment for which it is intended as fast as said strip projects beyond the shears. In fact, I intend to apply such stamping mechanism.

25 It will readily be seen that by changing the shipper J, so as to change the speed of the shafts G *g* and blade *h*, a longer or shorter length will be cut off, as may be desired.

I have herein described the revolving shear-blade and the tapering drums; but any other 30 ordinary cutting-off mechanism and speed-

changing mechanism for actuating the cut-off may be employed.

In Fig. 7, I have shown what I term a "single-folder," A', which may also be used upon 35 my machine, the same being for simply making a fold upon one edge only of the strip N, which is represented as passing through said folder. The form of said folder, at its small end, is substantially like one-half of the folder A, as represented in Fig. 5. 40

I claim as my invention—

1. The combination of a cloth-folder, feeding and pressure rolls, cutting-off mechanism, and mechanism for changing the speed of the cut-off 45 relatively to that of the feeding-rollers, substantially as described, and for the purpose specified.

2. The folder consisting of the U-shaped tube flattened and having its edges rolled inward at the small end, substantially as described, and for the purpose specified. 50

3. The folder consisting of the U-shaped tube flattened, and having its edge rolled inward at the small end, and also having the 55 central tongue projecting from the small end of the folder, substantially as described, and for the purpose specified.

THOMAS WOODHOUSE.

Witnesses:

WILLIAM H. JARVIS,  
FREDK. G. STEPHENSON.