

No. 694,373.

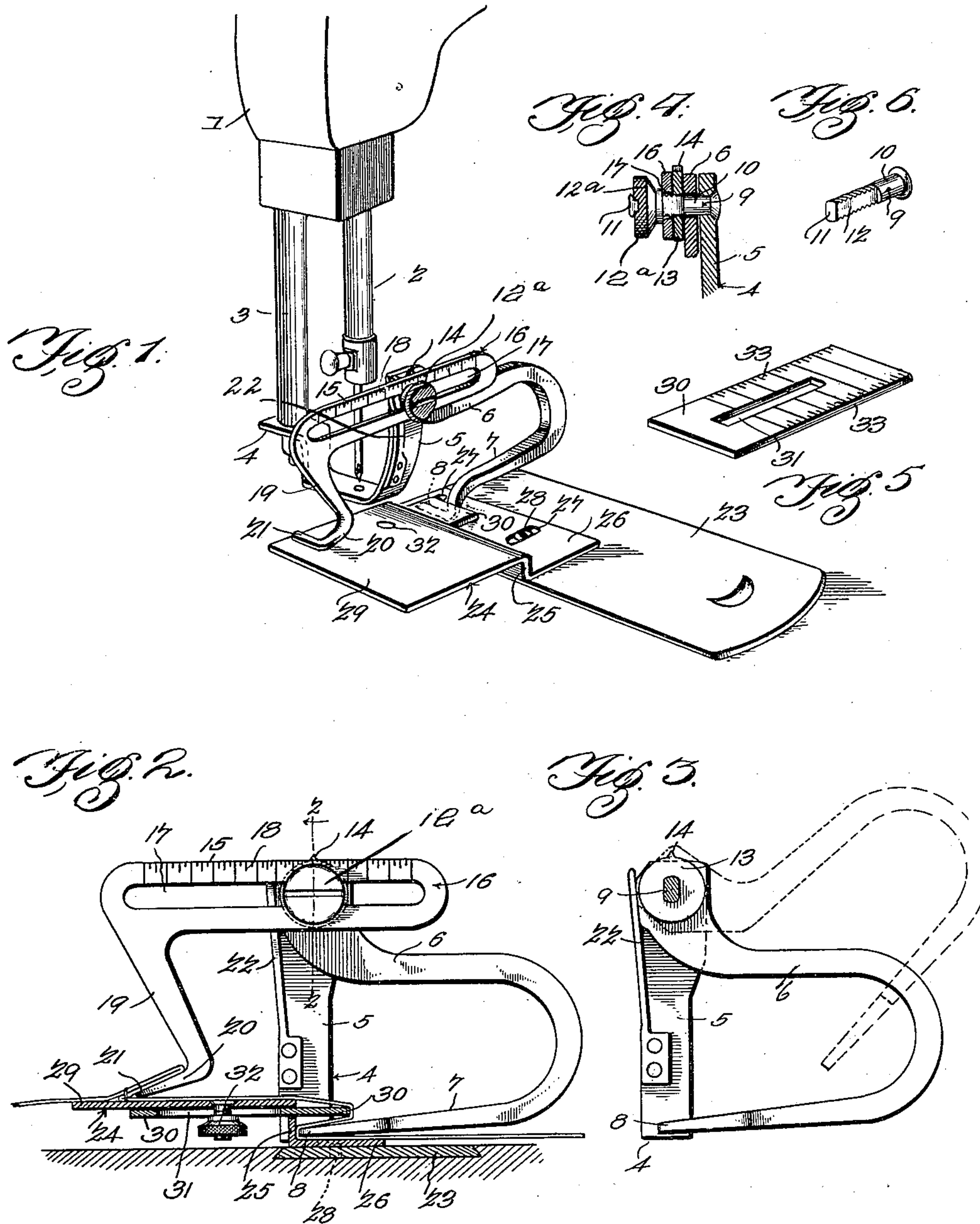
Patented Mar. 4, 1902.

C. F. & M. T. GOFORTH.  
TUCKER.

(Application filed Apr. 24, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses  
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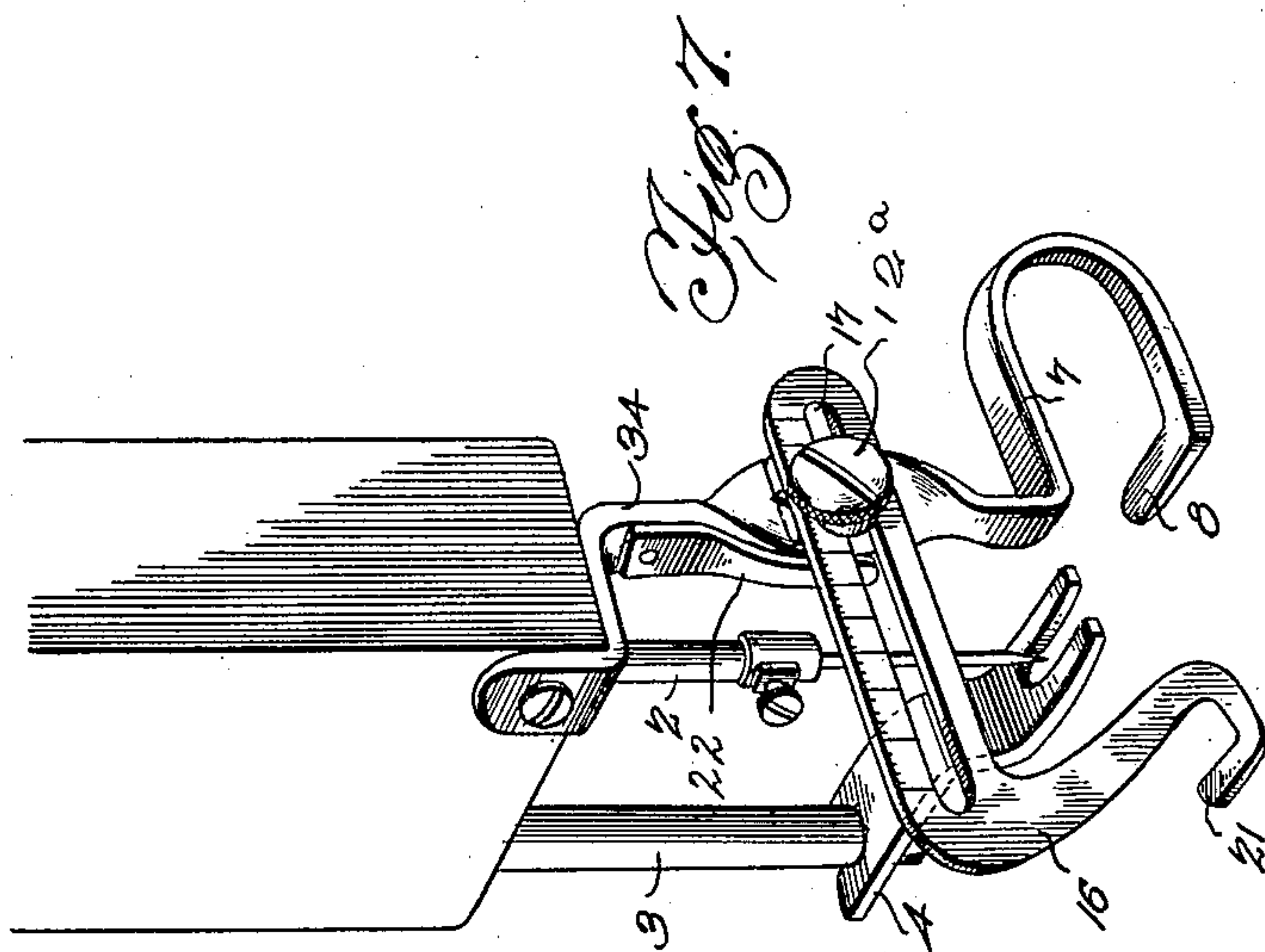
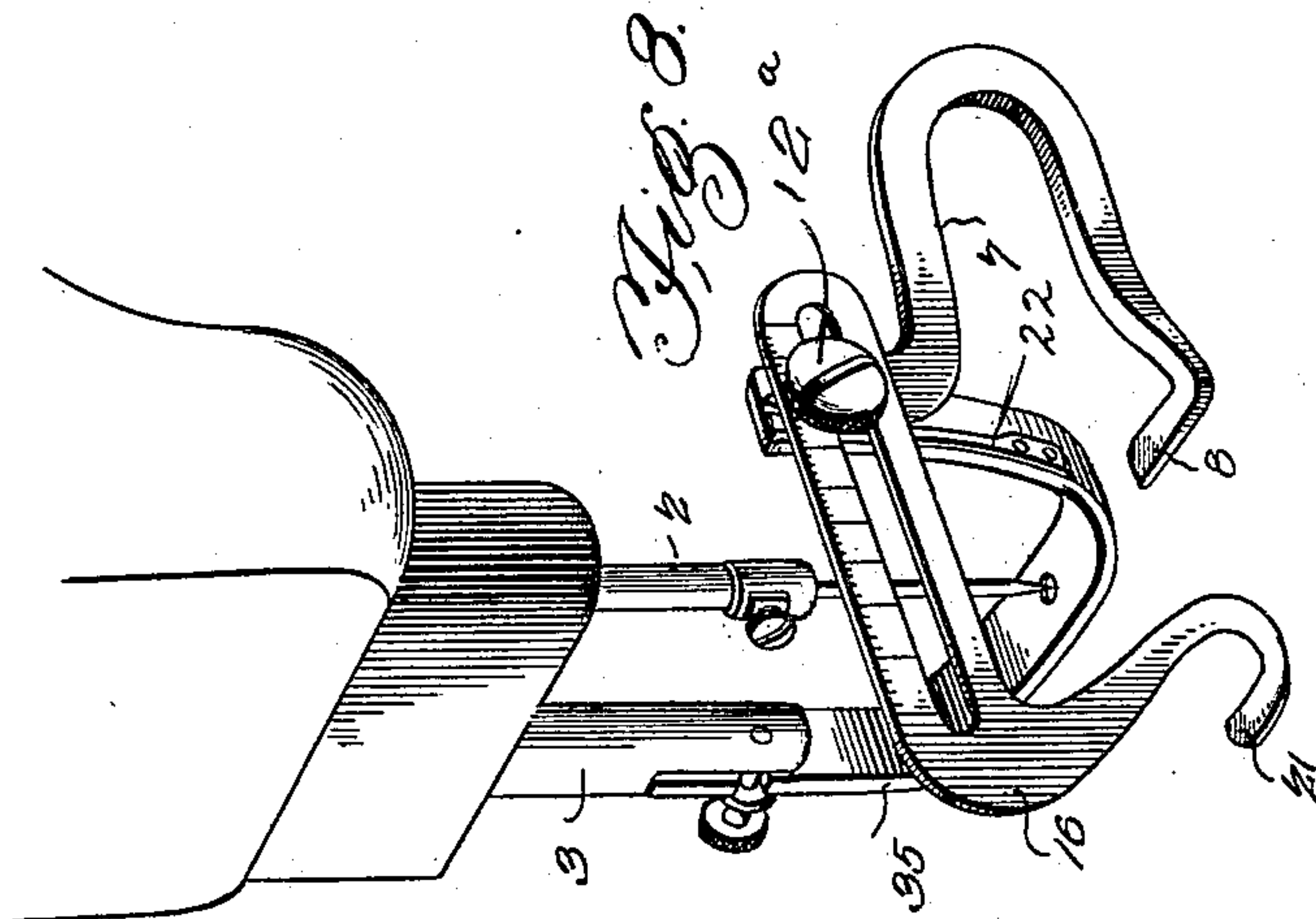
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# UNITED STATES PATENT OFFICE.

CHARLES FRANKLIN GOFORTH AND MARSHALL TILMON GOFORTH, OF  
WICHITA, KANSAS.

## TUCKER.

SPECIFICATION forming part of Letters Patent No. 694,373, dated March 4, 1902.

Application filed April 24, 1901. Serial No. 57,287. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES FRANKLIN GOFORTH and MARSHALL TILMON GOFORTH, citizens of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented a new and useful Tucker, of which the following is a specification.

This invention relates to tuckers for sewing-machines which are applicable to any type or make of machine; and the object in view is the production of a simple and effective tucking attachment having a reliable operation and of a strong and durable character.

The improved form of tucker completely folds the tucks as the tucking operation is pursued without the assistance of the operator and exclusively forms the tucks on the top side of the goods in full view of the operator at all times. The goods is not in the least cut or injured, as in the use of other tucking attachments having a knife-edge piece of metal under pressure to mark and crimp the goods for the succeeding tucks and which is a very unsatisfactory operation in working on silk goods or flannels, as it is almost impossible to mark said classes of goods so that the mark can be seen long enough as a guide for folding purposes. By the use of the improved tucker box-plaits can be formed, tucks are regularly gaged and folded automatically without the assistance of the operator, irrespective of the size or bulk of the goods operated upon, and the work is exclusively under the control of the tucker. The improved device is noiseless, does not add more draft to the machine when in use by reason of the absence of a marker, and is applicable either to the presser-bar or the face-plate of a machine.

With these and other objects and advantages in view the invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed, and subject to a wide range of modification in the size, form, proportions, and minor details without departing from the principle involved.

In the drawings, Figure 1 is a perspective view of a portion of a head of a sewing-machine, including the needle and presser bars, and showing the improved tucker applied in

operative position in relation thereto and as attached to the presser-bar. Fig. 2 is a front view of the improved device, partially in section and illustrating the manner of forming the tucks therewith. Fig. 3 is a front elevation of a portion of the tucker, showing the tucking-arm raised in dotted lines out of operative position. Fig. 4 is a transverse vertical section on the line 2 2, Fig. 2. Fig. 5 is a detail perspective view of a gage-plate attachment. Fig. 6 is a detail perspective view of one of the connecting-screws or screw-bolts. Fig. 7 is a perspective view of a portion of a sewing-machine head, showing a modification of the device. Fig. 8 is a view similar to Fig. 7, showing a further slight modification.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates the head of a sewing-machine arm, wherein is mounted, as usual, reciprocating needle and presser bars 2 and 3.

In the application of the improved device as shown by Figs. 1, 2, and 3, the ordinary presser-foot is removed from the presser-bar 3, and to the latter is removably secured a special foot 4, shaped as an ordinary foot, with the addition of a front upstanding extension 5. The extension is continued from the front portion of the foot 4 and is broad enough to provide a stable bearing means for the devices that are applied thereto, said extension being gradually broadened toward its upper end. On the front side of the upper portion of the extension the upper or head end 6 of a tucking-arm 7 is pivotally applied, the said arm being substantially of U-shaped form and when in operative position projects inwardly in a plane at a right angle to the said extension and has a lower terminal finger 8 extending rearwardly therefrom in a plane at a right angle thereto. The lower portion of the arm 7 has a downward inclination when in operative position and adjacent to the finger is slightly deflected in a forward direction to properly dispose the finger in relation to another part, with which it coacts, as will presently appear. The head end of the arm is held on the upper extremity of the extension by a pivot screw bolt or pin 9, having a rear cylin-



drical unscrew-threaded portion 10, on which the head end 6 of the arm has bearing, the said portion 10 being of a length just about equal to or a little greater than the thickness of the said arm-head. The remaining forwardly-projecting portion of the bolt or pin, as at 11, is cut away to form opposite flat parallel sides 12<sup>a</sup> and has the upper and lower portions formed with screw-threads. The screw-threaded portion of the bolt or pin 9 is engaged by a thumb-screw or screw-cap 12, which is cut in to receive the end of a screw-driver for firmly tightening the same. Next to the head end 6 of the arm 7 a washer 13 is mounted on the bolt or pin 9 and has an opening therein corresponding to the cross-sectional shape of the portion of said bolt or pin having the flattened sides, so that said washer will be prevented from turning, and on the upper edge of the washer, at the center, is an upwardly-projecting indicating point or projection 14. Between the washer 13 and the thumb screw or cap 12<sup>a</sup> the horizontal member 15 of a tuck-gage 16 is mounted to have movement in a plane at a right angle to the direction of the bolt or pin 9. The said member 15 of the tuck-gage is in the form of a flat metal strip having a slot 17 extending longitudinally thereof, and scale-marks 18 on the front of the upper portion, with which the point or projection 14 of the washer coacts by guiding the eye of the operator in making the necessary adjustment in changing the distance between the tucks to be formed on the goods. From the outer end or extremity of the said member a leg 19 depends at an inward inclination and has a lower outwardly bent or inclined portion 20, terminating in a rearwardly-projecting right-angular foot 21, which partakes of the same inclination as the said portion 20. The member 15, as before stated, is adjustable to vary the distance between the foot 21 thereof and the finger 8, and thus regulate the distance between the tucks or plaits, and when it is desired to have all the clearance possible for the application of the work or for other purposes the tucking-arm 7 may be thrown upwardly, as shown by dotted lines in Fig. 3. The outer portion of the head end 6 is engaged by the free end or extremity of a spring-finger 22, which is secured to the extension 5, and that portion of said head end upon which the spring bears when the arm 7 is down in normal working position is straight, so as to cause the arm to be locked down with sufficient firmness to prevent it from accidentally rising during the tucking operation; but at the same time the arm may be raised, as shown, and held in its elevated position by the pressure of the spring and the friction created thereby on the said head end 6 of the arm.

Another part of the tucker consists in a slide 23, which is mounted in the bed of the machine in place of the ordinary shuttle-covering slide, as clearly shown by Fig. 2, and on the rear outer portion thereof an angle-

plate 24 is mounted and provided with a right-angular deflection 25 nearer its inner end to provide a securing member 26, which is formed with a pair of slots 27 to receive countersunk screws 28, and thereby adjustably secure the said plate 24 as an entirety to the slide and also to provide an outer horizontal work-supporting table 29, over which the greater portion of the tuck-gage extends to have its foot 21 operate in close relation thereto. The angular deflection 25 forms a guiding-wall for the goods in producing the tucks, and projectible therethrough near the rear end is a tuck or plait width gage-plate 30, which is formed with a longitudinal slot 31, engaged by a thumb or set screw 32 to render the same adjustable, the said plate 30 having scale-marks 33 thereon in inches and fractions thereof whereby the width of the tuck or plait may be accurately determined, as desired, or the said plate 30 be set to form the width of tuck or plait desired. The plate 30 projects over a portion of the member 26 of the angle-plate 24, and between the said projecting portion of the plate 30 and member 26 the goods to be tucked is pressed by the finger 8 of the tucking-arm 7, as clearly shown by Fig. 2. As shown by Fig. 2, the adjusting thumb or set screw 32 is held by the table 29 of the angle-plate 24 and is always in one position for convenience in reaching the same. By shifting the plate 30 inwardly and outwardly wide and narrower tucks can be produced, and when the slide 23 is slipped into the bed of the machine the angular deflection 25 will be located in such position in relation to the foot 4 that the tuck or plait produced or folded will be fed properly to the needle or so that the line of stitching will be located at the proper point, and in some instances a slight adjustment of the angle-plate may be necessary to obtain this result, and for this purpose the slots 27 are provided in the securing member 26 of said angle-plate.

The tucker having been applied, as shown, the goods to be tucked is placed over a portion of the table 29 and brought down over the projecting portion of the width-gage 30 and pressed by the finger 8 of the arm 7 under said gage to thus form the first tuck, the remaining portion of the goods being carried under the lower portion of the said arm and the finger and over the bed of the machine for feeding under the arm of the latter. After the first tuck is completed it is arranged in connection with the foot 21 of the tuck-gage after the latter has been adjusted as desired and as clearly shown by Fig. 2, the goods stretched over the table 29 and the projecting portion of the gage 30 and pressed by the finger 8 under the said gage portion, as before, to fold and produce the hem, as before. This operation is regularly continued until as much of the goods is tucked as desired, and it will be seen that the goods is automatically folded and the tucks regularly



formed at the same distance apart and of the same width in accordance with the initial adjustments. The tucking operation is performed by the tucker without any careful guidance or arrangement or any other attention of the operator after each tuck is started, and there is no clicking or other noise of a marker or an additional draft experienced in running the machine.

The three essential elements of the improved device, including the slide and its angle-plate, the tucking-arm, and the tuck-gage, are not dependent on any form of presser-foot, and it is not necessary that they be supported directly by a portion of the said foot, but may be applied to the face-plate or any other part of the machine-head. In Fig. 7 the improved attachment in the main is shown secured to the face-plate of the head by an angular hanger 34, and in Fig. 8 the presser-foot 35 has its rear end vertically extended and held in a recess in the rear portion of the presser-foot. In Figs. 7 and 8 the slide 23 and angle-plate 24 are omitted.

Having thus described the invention, what is claimed as new is—

1. A tucking attachment for sewing-machines, comprising a work-plate having an angular offset disposed in alinement with the presser-foot and provided with a longitudinal slot, a horizontally-disposed tuck-width gage adjustably connected with the work-plate and projecting through the said slot, a pivoted tucking-arm coacting with the gage-plate, and a tuck-gage coacting with the work-plate.

2. A tucking attachment for sewing-machines, comprising an adjustable work-plate having an angular offset disposed in alinement with the presser-foot and provided with a longitudinal slot, a horizontally-disposed tuck-width gage adjustably connected with the work-plate and projecting through the said slot, a pivoted tucking-arm, including locking mechanism, coacting with the gage-plate, and an adjustable tuck-gage coacting with the work-plate.

3. A tucking attachment for sewing-ma-

chines, comprising an adjustable work-plate having an angular offset disposed in alinement with the presser-foot and provided with a longitudinal slot, a horizontally-disposed tuck-width gage adjustably connected with the work-plate and projecting through the said slot, a pivoted tucking-arm having an angular extension disposed beneath the projecting end of the gage-plate, and an adjustable tuck-gage coacting with the work-plate.

4. A tucking attachment for sewing-machines, comprising an adjustable work-plate having an angular offset disposed in alinement with the presser-foot and provided with a longitudinal slot, a horizontally-disposed tuck-width gage adjustably connected with the work-plate and projecting through the said slot, a pivoted tucking-arm having an angular extension disposed beneath the projecting end of the gage-plate, means for holding the said arm in operative position with relation to the gage-plate, and an adjustable tuck-gage having a foot disposed at an angle to and coacting with the work-plate.

5. In a tucking attachment for sewing-machines, the combination with a presser-foot having an upward-curved extension, of a tucking-arm pivoted to the presser-foot, a spring carried by the presser-foot and operating to lock the tucking-arm in operative position, an adjustable tuck-gage also carried by the presser-foot, an adjustable work-plate having an angular offset disposed in alinement with the presser-foot and provided with a longitudinal slot, and a horizontally-disposed tuck-width gage adjustably connected with the work-plate and projecting through the slot and coacting with the free end of the tucking-arm.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHARLES FRANKLIN GOFORTH.  
MARSHALL TILMON GOFORTH.

Witnesses:

M. C. MILLER,  
MEL. W. WARREN.