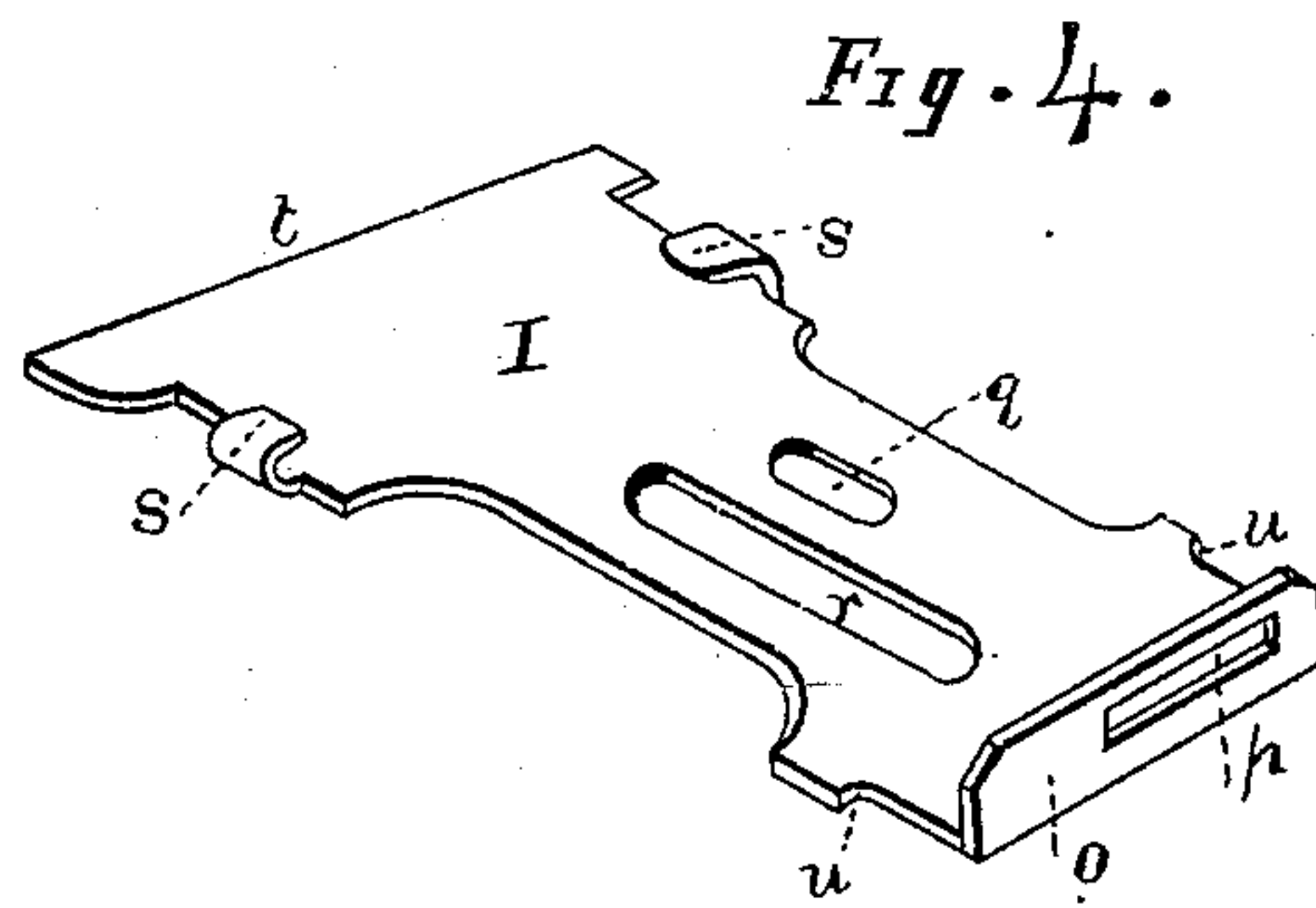
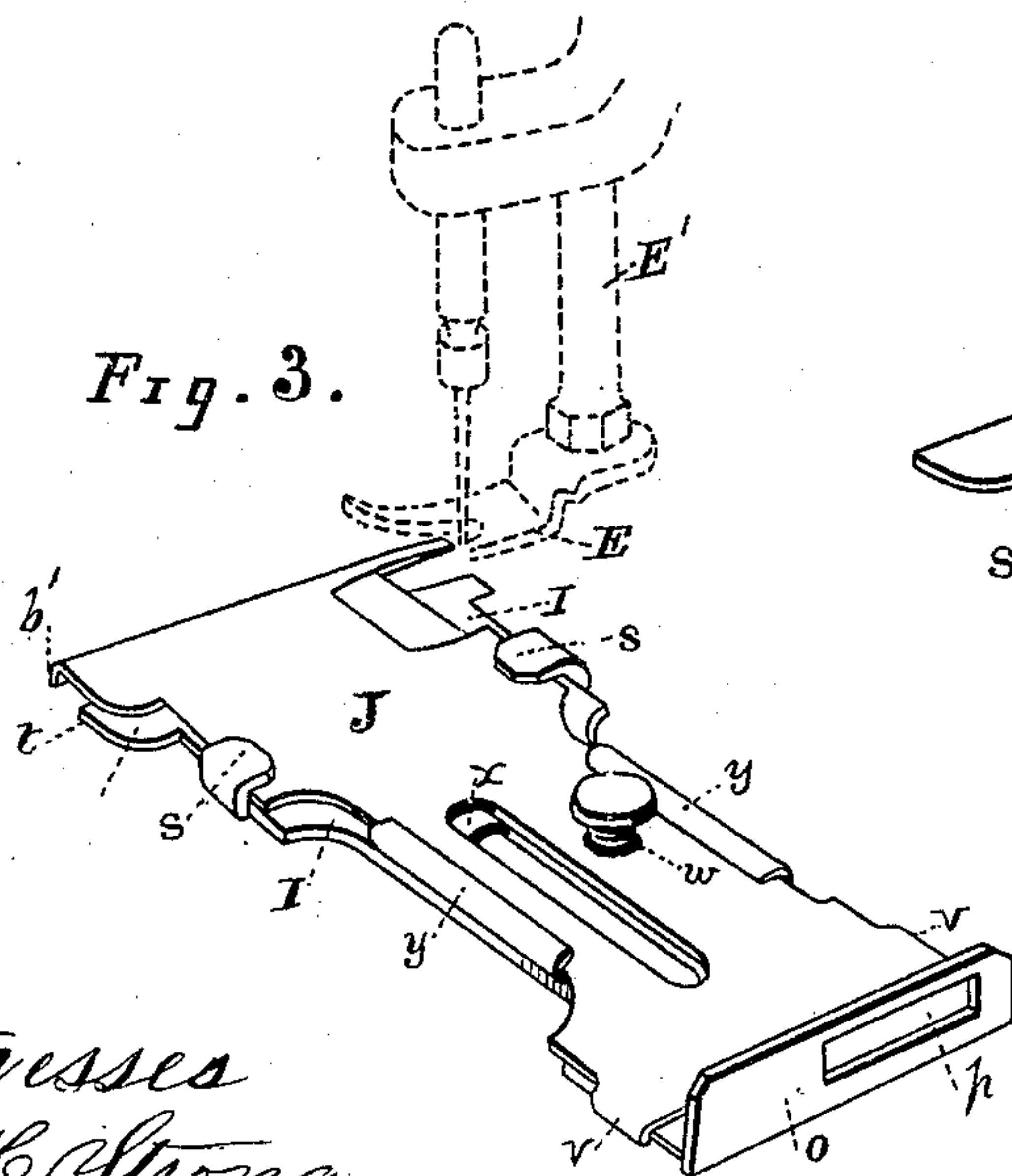
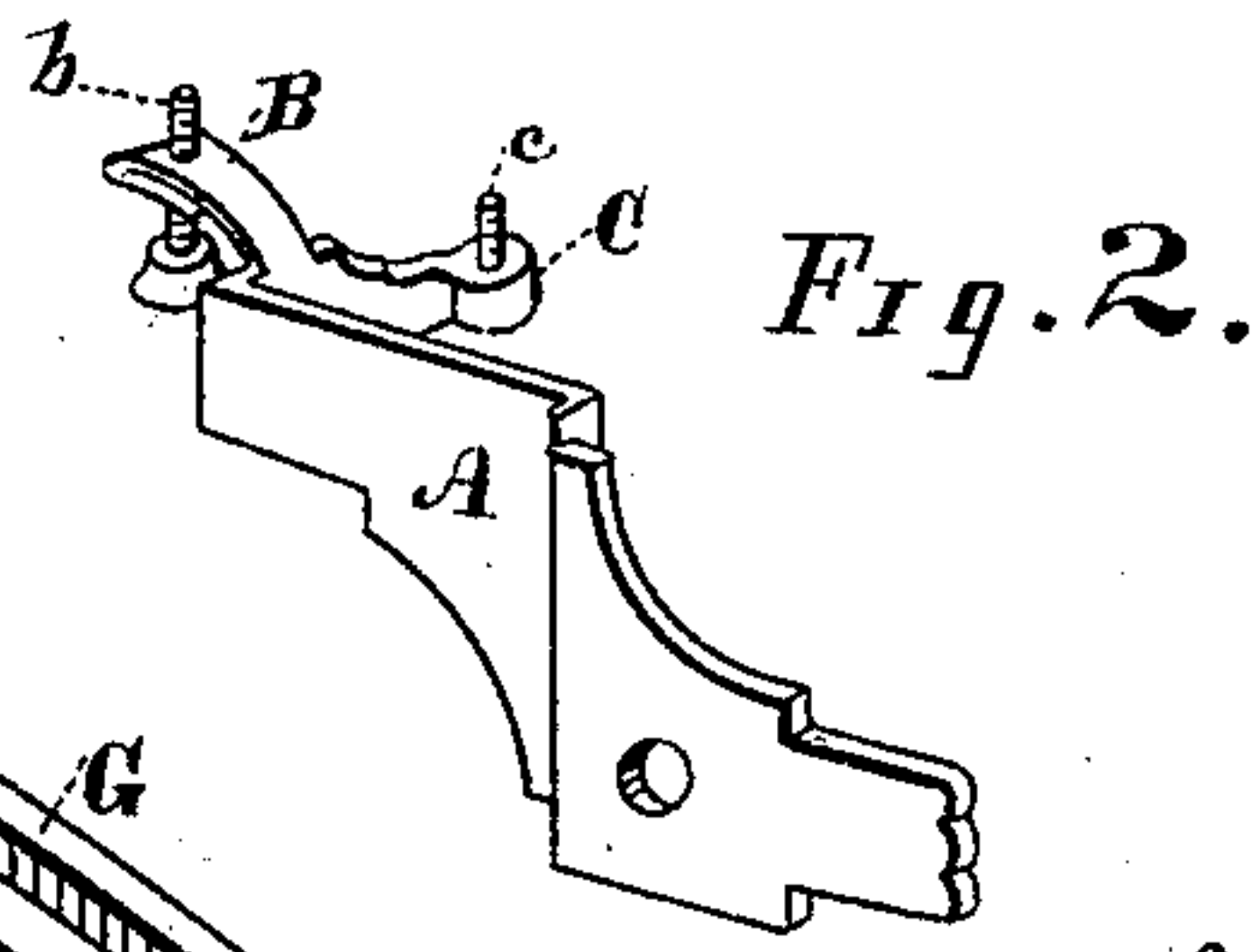
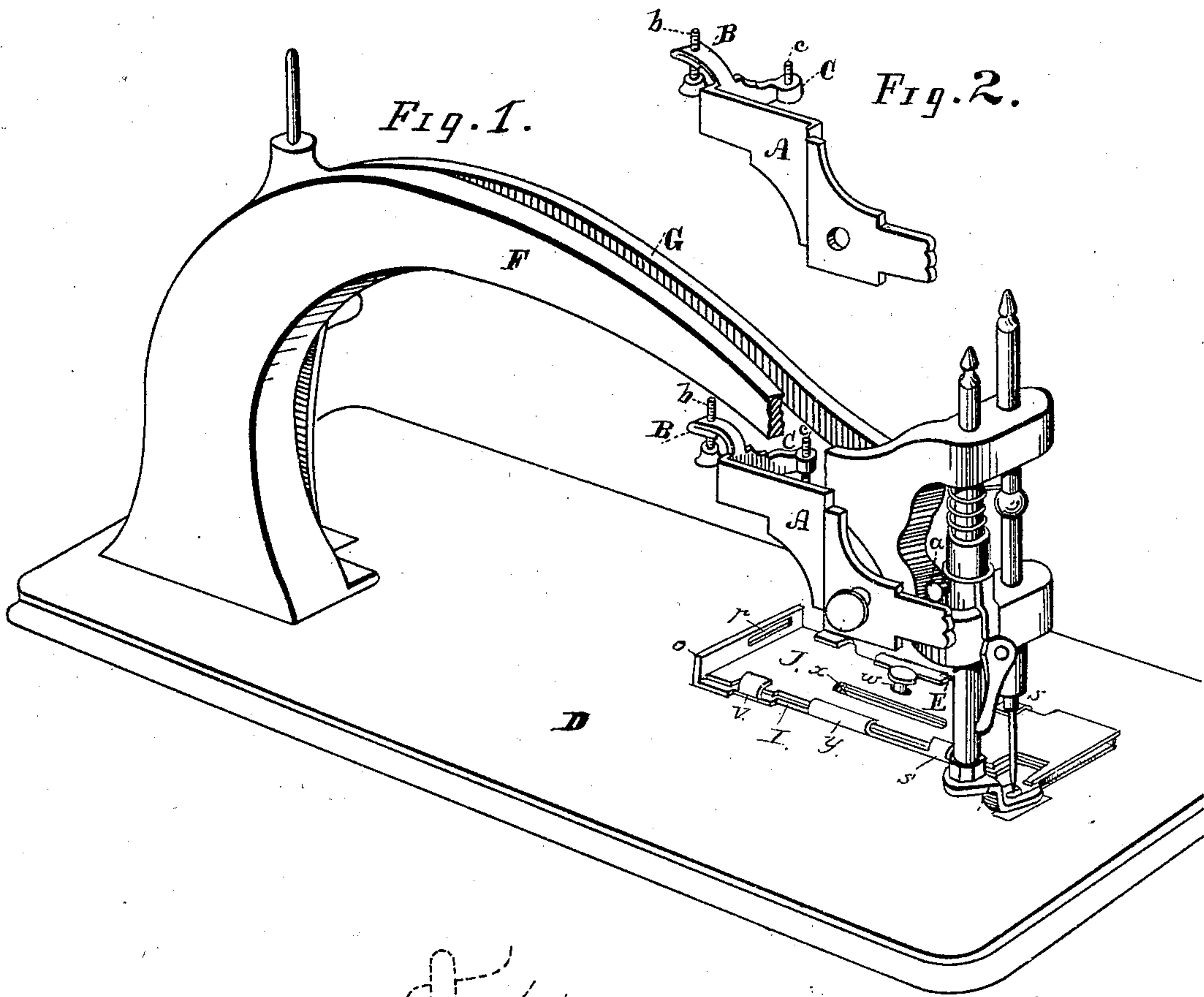


(No Model.)

A. A. FISHER & A. HART.
SEWING MACHINE ATTACHMENT.

No. 256,992.

Patented Apr. 25, 1882.



Witnesses
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UNITED STATES PATENT OFFICE.

ALFRED A. FISHER AND ALBERT HART, OF SAN FRANCISCO, CALIFORNIA.

SEWING-MACHINE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 256,992, dated April 25, 1882.

Application filed June 14, 1881. (No model.)

To all whom it may concern:

Be it known that we, ALFRED A. FISHER and ALBERT HART, of the city and county of San Francisco, State of California, have invented a Sewing-Machine Attachment; and we hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to the class of sewing-machines, and more especially to certain improvements therein, consisting in a novel attachment, the principal object of which is braiding, and in connection therewith darning and binding.

It consists in a plate adapted to hold and direct the braid, so that it may be sewed on underneath the goods, and thus leave the stamp clear above for the needle to follow; and in connection therewith, in order to render the use of this braiding-plate practicable and facilitate the operation, it consists, further, in a peculiar plate secured to the presser-arm and adapted to be struck by the oscillating needle-arm in such a manner that the cloth will be momentarily relieved from the presser-foot and allowed to make sharp turns upon the needle as a pivot-point, as will be fully explained hereinafter.

Referring to the accompanying drawings, Figure 1 represents a perspective view of a sewing-machine to which my improvements have been applied. Fig. 2 is a perspective detail view of one of the parts. Fig. 3 is a perspective view of the braider, and Fig. 4 a similar view of the bottom plate thereof.

Let D represent the base-plate of the machine, E the presser-foot, and F the presser-arm. The presser-foot is upon the end of the presser-shaft E', which has a vertical play in the ordinary manner.

Let G represent the needle-arm.

Let I represent a metal plate, flat on its lower side, having on its upper side, at one end, a raised flange, *o*, in which is a slot, *p*. It has small side shoulders or offsets, *u*, and the slots *q* and *r* in the surface. It has flange-guides *s* on its sides and a wide end *t*, as shown. Let J represent another plate, having downwardly-extending flanges *v* for fitting over the sides of the plate I, and abutting against the shoulders *u*. It has a hole, *w*, and has a slot, *x*, and a downwardly-turned end, *b'*, fitting over the end *t* of the lower plate. It has side flanges

or guides, *y*. The plate J is laid upon the plate I, the end of J fitting over the end of I, and the sides of the former fitting and sliding within the side flanges, *s*, and its end flanges, *v*, fitting over the sides of the plate I. The hole *w* falls over the slot *q*, and the slots *x* and *r* correspond. These two plates thus put together are fastened to the base-plate of the machine by means of an ordinary thumb-screw. The end of the top plate extends downwardly. By loosening the thumb-screw the lower plate, I, may be drawn back away from the upper plate, J, its slot *q* allowing it, so that the distance between the turned-down end of the top plate, J, and the end of the lower plate, I, may be increased or diminished.

In the space between the ends of the two plates the braid passes. The goods pass over the top plate and have the stamp up. The stamp is thus in plain sight, and the operation becomes as plain sewing. The braid is sewed on underneath on the under side of the goods. The difficulty first mentioned is thus overcome; but, as before stated, the stamp could not be followed in its turn unless the goods were relieved from the presser-foot. In order to complete the operation and overcome the second difficulty we have the metal strip A. One end has two arms or points, B and C, projecting at right angles, and each point is provided with a set-screw, (marked *b* and *c*, respectively.) Upon the upright portion or shaft E' of the presser-foot E is a projection, *a*, in many cases a necessary screw, and here shown as such. The metal strip A is pivoted to the presser-arm, as shown at *d*, by a thumb-screw. One end of the strip passes under the projection or screw *a* and the other end extends forward, its point B being under the presser-arm and its point C under the needle-arm. By turning up the screw *c* in the point C so that the oscillating needle-arm in descending will strike it the strip A will act as a lever. It turns on its pivot-point *d*, so that its end under the screw *a* rises and lifts the presser-foot. This is done at every downward stroke of the needle-arm. The advantage is that at the downward stroke of the needle-arm the needle penetrates the goods. Then is the moment to turn the goods, having the needle as a pivot. To do this the presser-foot must be raised so as to relieve the goods. This is done by the strip A, which,

acting as a lever, raises the presser-foot at the moment the needle penetrates. Now when the needle is withdrawn the presser-foot is dropped and the action of the feeder is again accomplished. Thus the cloth is momentarily relieved from the presser-foot, and may be turned and twisted to follow the stamp and render braiding possible upon the machine. By turning up the screw *b* in the point B of the strip A the said strip, acting as a lever, raises the presser-foot, and it may be adjusted at any point for different thicknesses of goods. The operation of binding is accomplished in like manner by the use of this device.

This attachment enables us to darn upon the machine, as we will now show. Goods which require darning—such as stockings, &c.—are generally thick, and the presser-foot is usually too close to the feeder to allow the goods the free play which is necessary. In darning, the goods have to be fed back and forth for short distances, and to raise the presser-foot by the hand every time is inconvenient and impracticable; but by the set-screw *b* we can nicely adjust the presser-foot for any thickness of cloth, and keep it out of the way. The cloth may be fed with the hand about the needle, and the machine-feeder may be dispensed with, so that we can draw the cloth back and forth at short distances without interference from the presser-foot or feeder.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A sewing-machine attachment consisting of the plate I, with its shoulders *u*, side flange-

guides, *s*, wide end *t*, and slots *q* and *r*, and the plate J, with its side flanges, *v*, down-turned end *b'*, hole *w*, and slot *x*, arranged and used substantially as and for the purpose herein described.

2. In a sewing-machine having an adjustable presser-foot and fixed arm and an oscillating or vibrating needle-arm, the strip A, pivoted to the presser-arm, as shown, one end fitting under a screw or projection, *a*, on the pressure-shaft, and its other end provided with points B and C, having set-screws *b* and *c*, fitting under the presser-arm and needle-arm, respectively, substantially as and for the purpose herein described.

3. In a sewing-machine having an adjustable presser-foot and fixed arm and an oscillating or vibrating needle-arm, the combination of the strip A, with its points B and C and screws *b* and *c*, and pivoted to the presser-arm, as shown, whereby its function is that of a lever acting upon the presser-foot at each stroke of the needle-arm, and the attachment consisting of the plate I, with its guide and slots, as shown, and the adjustable plate J, with its slots, as shown, and its down-turned end *b'*, arranged substantially as and for the uses and purposes herein described.

In witness whereof we have hereunto set our hands.

ALFRED A. FISHER.
ALBERT HART.

Witnesses:

J. H. BLOOD,
WM. F. BOOTH.