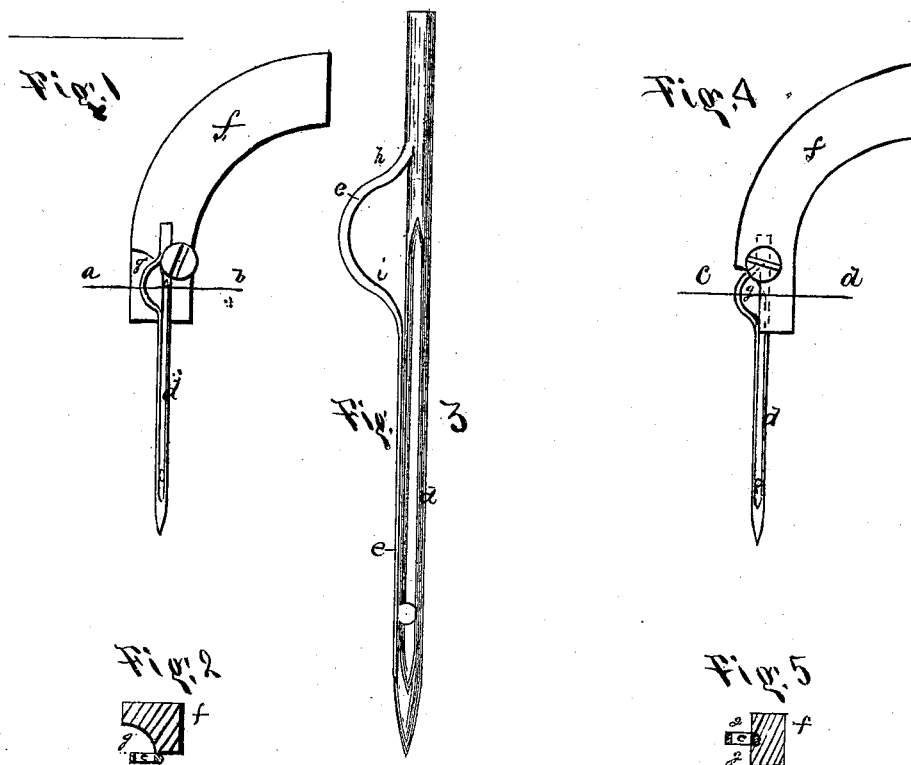


G. A. LLOYD.
 NEEDLES AND THEIR CARRYING ARMS FOR SEWING MACHINES.
 No. 110,480. Patented Dec. 27, 1870.



Witnesses:
David T. Smith
Thomp. R. Wilson

Inventor:
G. A. Lloyd
Assignor to himself & N. Smiley & James
McMechan & A. Rosenfield

United States Patent Office.

GEORGE A. LLOYD, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO HIMSELF, GEORGE W. SMILEY, JAMES McMEEHAN, AND ANTHONY ROSENFELD.

Letters Patent No. 110,480, dated December 27, 1870.

IMPROVEMENT IN NEEDLES AND THEIR CARRYING-ARMS 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, GEORGE A. LLOYD, of the city and county of San Francisco, State of California, have invented an "Improved Needle and Needle-Arm for Sewing-Machines;" and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters marked thereon.

This invention consists in the combination of a needle and needle-arm, the specific construction of which will be fully described hereinafter.

Figure 1 represents a side elevation of the needle and needle-arm, the latter being partially cut away, to facilitate the threading of the needle;

Figure 2 represents a sectional view, through the line *a b*, fig. 1;

Figure 3 represents a sectional elevation of the needle;

Figure 4, a side elevation of the needle and needle-arm, the latter being entirely cut away upon one side to facilitate the operation of threading; and

Figure 5 represents a sectional view, through the line *c d*, fig. 4.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and manner of operation.

d represents the needle, which is constructed with a dividing slit or passage upon one side, which affords communication from the eye below to the loop *g* above, as shown in fig. 3.

The upper part of this loop, at *h*, is made strong and heavy, but diminishes somewhat in thickness as

it extends to *i*, from which point downward the spring portion of the needle, as it may be termed, is comparatively light.

The object of this construction is to give the spring portion of the needle a firm support, and yet permit the part that is required to be elastic to yield freely, when necessary, for the passage of the thread.

This needle may be secured to the common needle-arm by a simple set-screw.

To enable it to be threaded, one side of the arm may be cut away, as shown in fig. 4, or a portion only of it, as shown in fig. 1.

The needle is threaded by simply passing one end of the thread through the loop, and then drawing it down into the eye.

I do not claim a divided needle having a large opening above, communicating with the eye, for such a needle I know is old; but

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The divided needle *d*, having the loop *g* upon only one side, the said loop being made more rigid than the light elastic portion *e* situated below, when combined with the notched needle arm, as described, for the purpose set forth.

In testimony whereof I have hereunto set my hand and seal.

G. A. LLOYD: [L. s.]

Witnesses:

C. W. M. SMITH,
T. A. WILSON.