

(No Model.)

2 Sheets—Sheet 1.

F. & E. E. BEAN.
WAX THREAD SEWING MACHINE.

No. 255,713.

Patented Mar. 28, 1882.

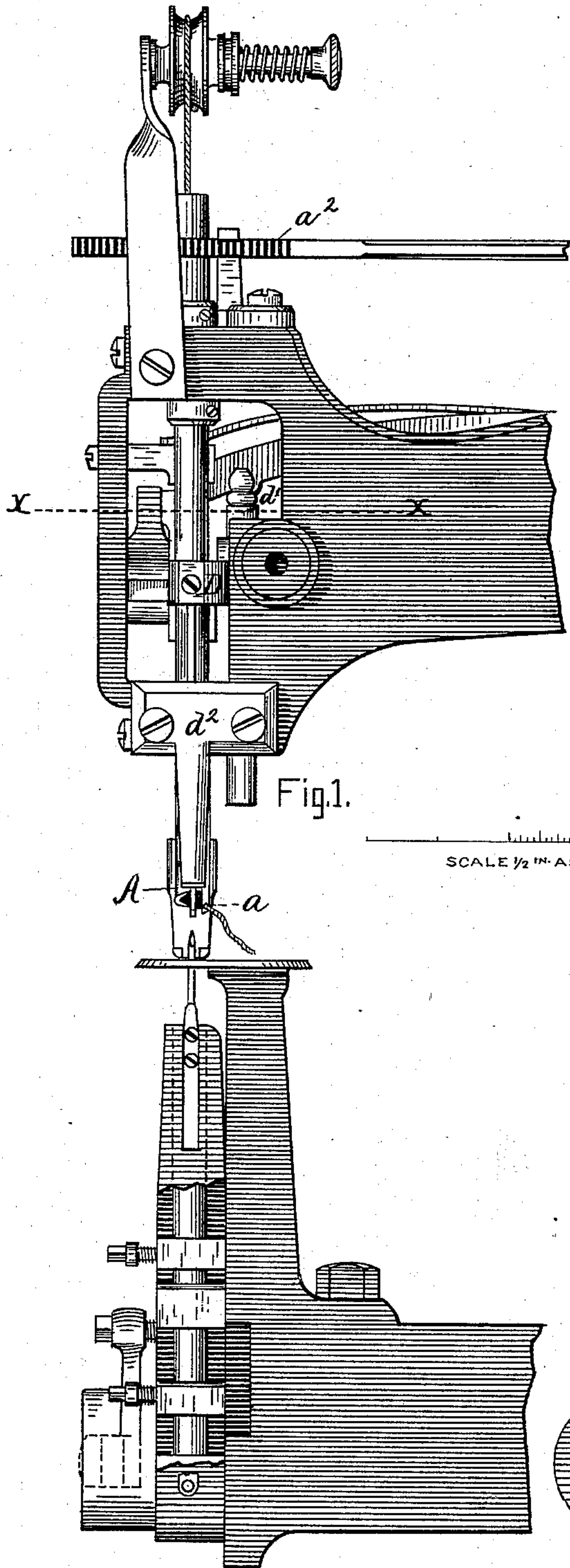


Fig. 1.

SCALE 1/2 IN. AS 1 IN.

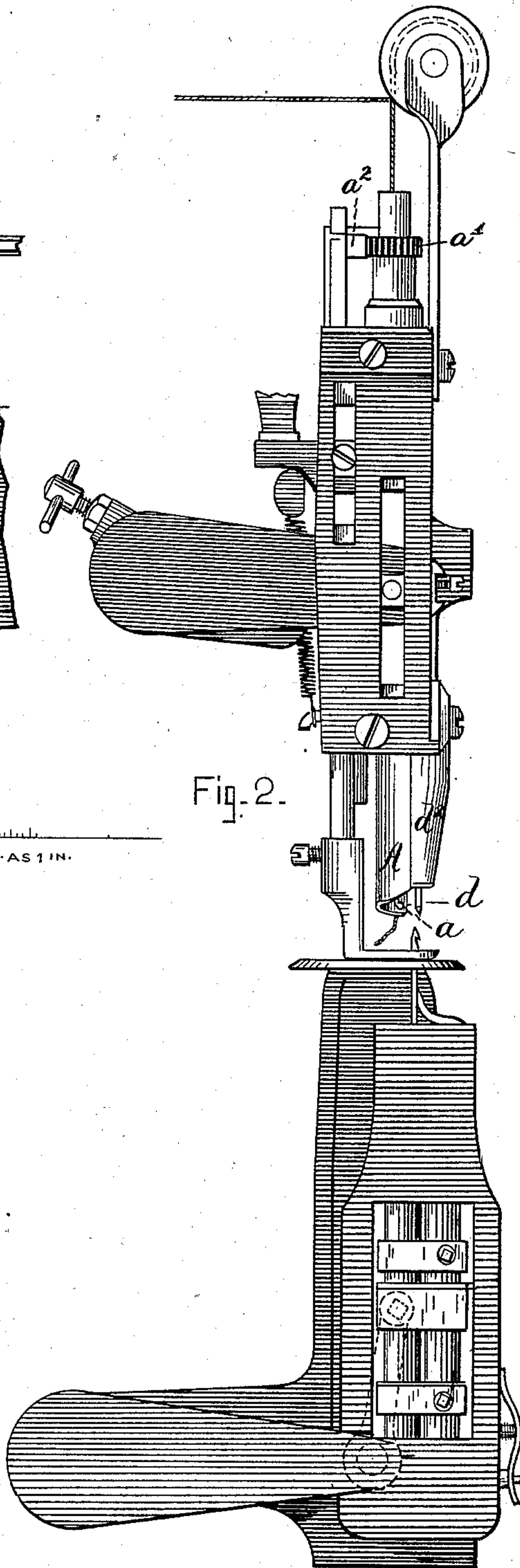


Fig. 2.

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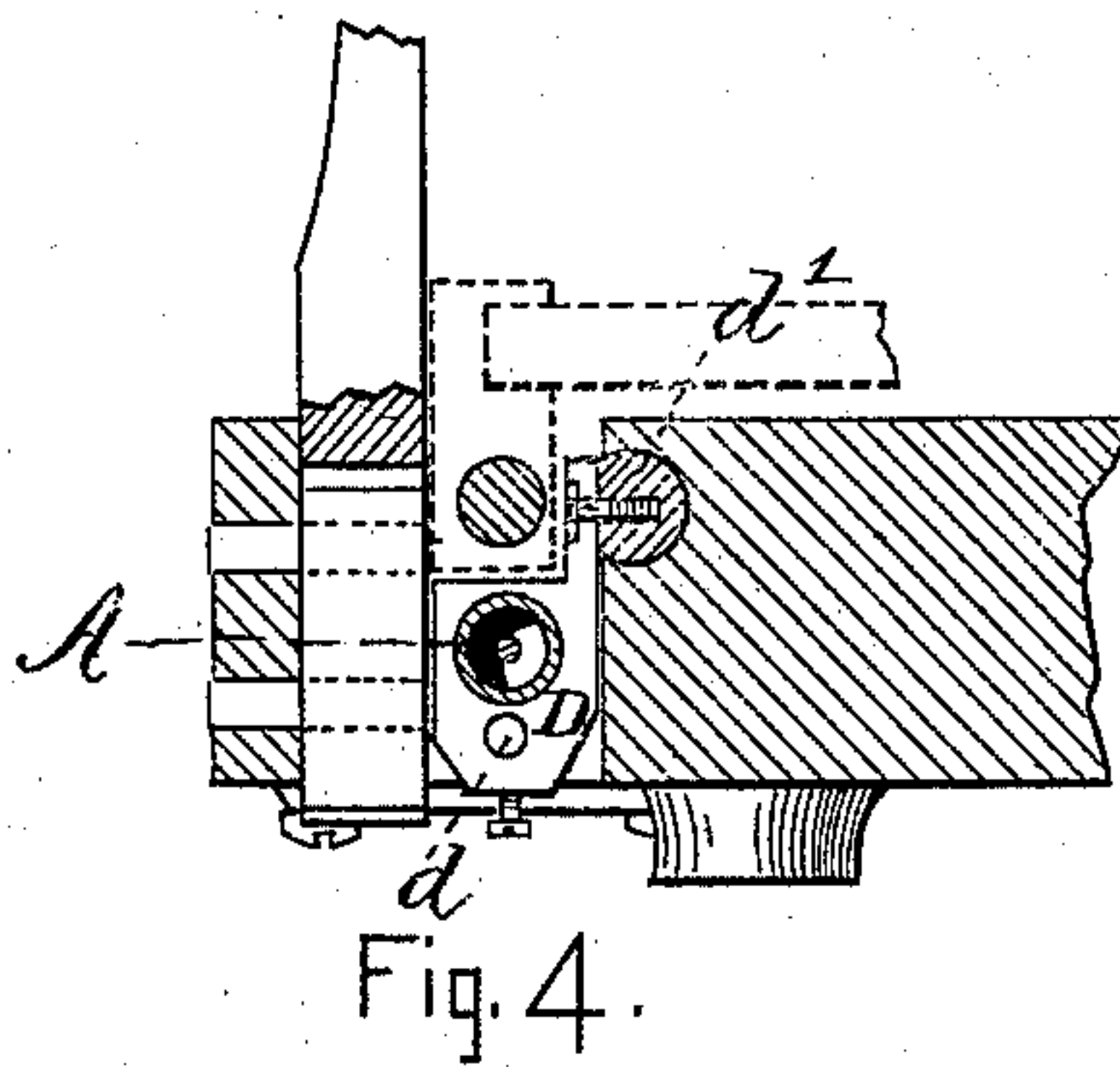
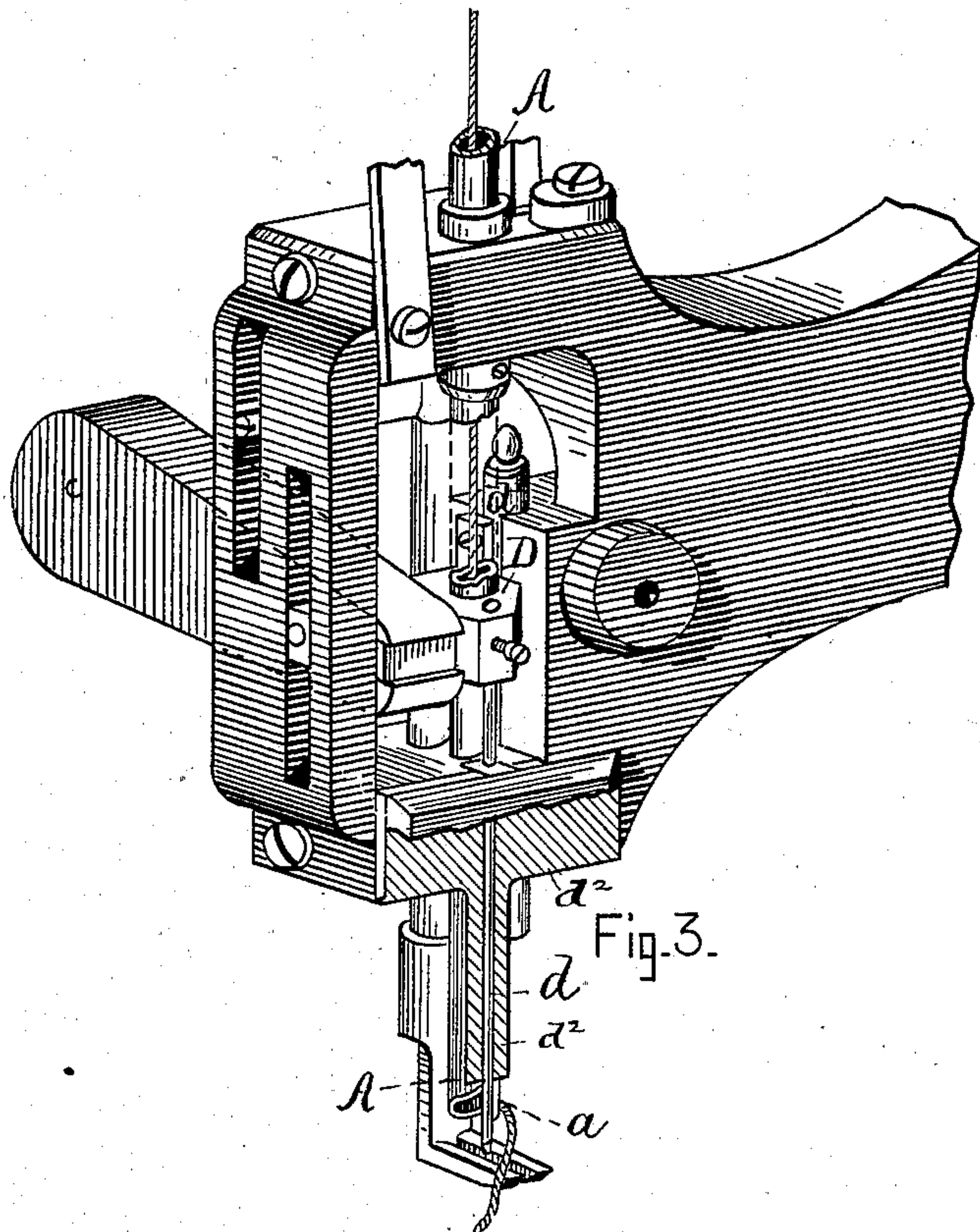
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UNITED STATES PATENT OFFICE.

FRANK BEAN AND EDWIN E. BEAN, OF BOSTON, MASSACHUSETTS, ASSIGNORS
TO THE NATIONAL SEWING MACHINE COMPANY, OF CONNECTICUT.

WAX-THREAD SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 255,713, dated March 28, 1882.

Application filed June 26, 1880. (No model.)

To all whom it may concern:

Be it known that we, FRANK BEAN and EDWIN E. BEAN, both of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Wax-Thread Sewing-Machines, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a side elevation of a part of a sewing-machine embodying our invention. Fig. 2 is a front elevation; Fig. 3, a perspective view; and Fig. 4, a section on line *xx*, Fig. 1, of the same.

The main object of our invention is to bring the axis of the thread-carrier directly over the needle in a waxed-thread sewing-machine in which an awl is used; and the main features of our invention are, first, a thread-carrier directly over the needle, both in the same vertical plane with the awl; and, secondly, the arrangement of the thread tube and carrier and the awl and its actuating mechanism in relation to the hooked needle.

In the ordinary waxed-thread sewing-machines the awl-carrier or awl-bar is directly over the needle, and the bar of the thread-carrier is arranged on one side of awl and presser-foot bars. We have substituted the thread-carrier tube A for the awl-bar, and have connected the awl-carrier D to the bar *d'*, previously used as the thread-carrier bar, and have provided an awl-guide, *d*².

The thread-carrier *a* is shown as the lower end of the tube A, but may of course be in a separate piece properly secured to tube A. The thread passes down through tube A and out through the eye in the thread-carrier *a*. When the needle is in the proper place, nearly in line with the axis of the tube A, the tube A is turned on its axis about three-quarters round, and the thread thereby carried into the hook of the needle.

The mechanism shown for actuating the tube A is the pinion *a'* and rack *a*². This rack is moved at the proper time by a lever and connecting-rod, (not shown,) the cam for actuating the lever being the same as that in common use for actuating the thread-carrier lever in the well-known National wax-thread sewing-machine. The eye of the thread-carrier *a* may be made to travel in the arc of a circle of a diameter only a little larger than the diameter of the needle, and the machine be thereby especially adapted for sewing around the edges of the soles of boots and shoes. The tube A also acts as a thread-guard.

The awl-carrier D is actuated by a forked rocker-arm precisely as in the National machine, before referred to. It is fast to bar *d'*, and the thread-carrier tube A passes through it, as shown in the drawings.

The awl *d* is secured to its carrier D, and is guided by the awl-guide *d*², which is secured to the overhanging arm of the machine, and extends down toward the work-plate, as shown. The axes of the awl *d*, thread-carrier *a*, and hooked needle are all in the same vertical plane.

What we claim as our invention is—

1. In a waxed-thread sewing-machine, the combination, substantially as hereinbefore set forth, of the thread-carrier *a*, awl *d*, and a hooked needle, the axes of all three being in substantially the same vertical plane.

2. In a waxed-thread sewing-machine, the combination, substantially as hereinbefore set forth, of the tube A, thread-carrier *a*, and guide *d*², awl *d*, awl-carrier D, and a hooked needle, for the purposes specified.

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Witnesses:

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