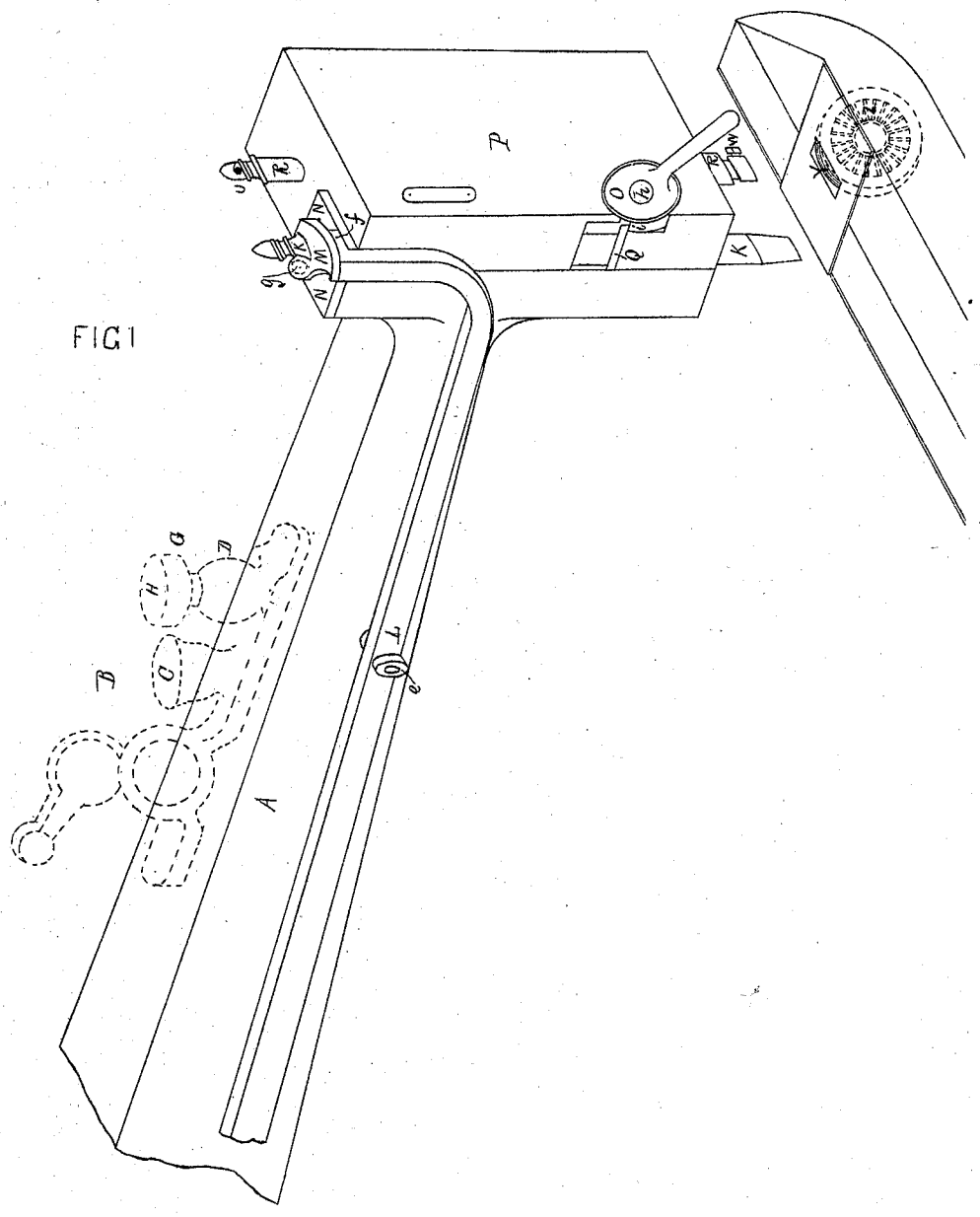
2 Sheets--Sheet 1.

# I. MANNNING.

## Improvement in Sewing-Machines.

No. 129,974. Patented July 30, 1872.

FIG 1




WITNESSES

Geo. H. Doherty

John Mills

INVENTOR

Ira Manning

by Francis D. Pastorius

his Atty in fact

2 Sheets--Sheet 2.

# I. MANNNING.

## Improvement in Sewing-Machines.

No. 129,974. Patented July 30, 1872.

Fig 2

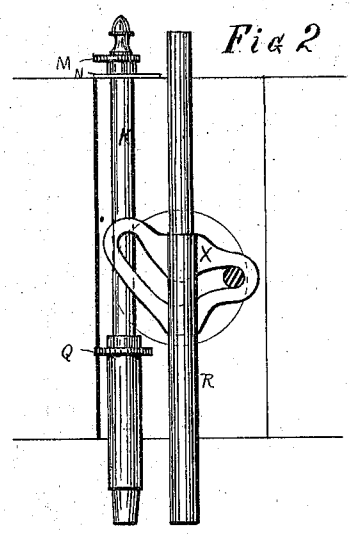



Fig 4

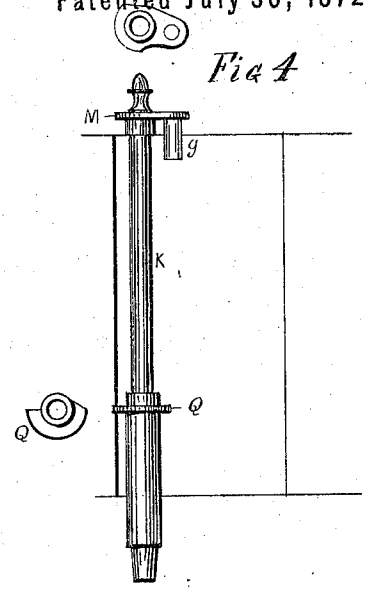



Fig 3


Fig 5

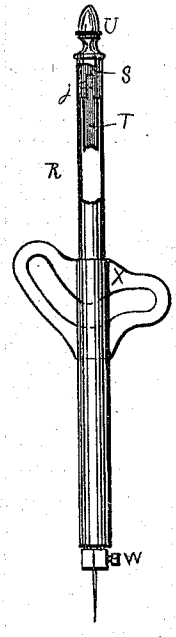



Fig 6

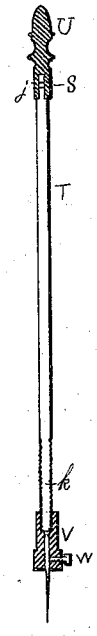



FIG 8

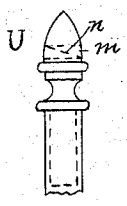



Fig 7

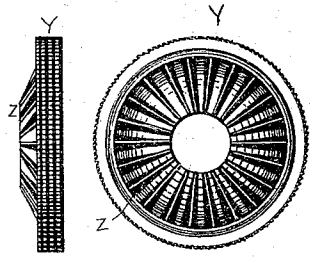
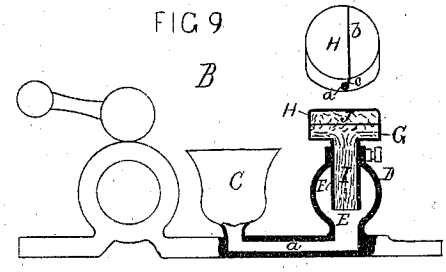



FIG 9




Witnesses.

Geo. W. Doherty

John Gille

Inventor.

Ira Manning

by Francis D. Pastorius

his Atty in fact

# UNITED STATES PATENT OFFICE.

IRA MANNING, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **129,974**, dated July 30, 1872.

Specification describing certain Improvements in Sewing-Machines, invented by IRA MANNING, of the city and county of Philadelphia and State of Pennsylvania.

The invention relates to an oil-cup and lubricator for lubricating the needle-thread of a sewing-machine, and to the construction and operation of the needle and presser-bars of the same, for the purpose shown and described.

Figure 1 is a perspective view of a needle and shuttle-arm. Figs. 2, 3, and 4 are views of the presser-bar and its several parts. Figs. 5 and 6 are views of the needle-bar and its several parts. Fig. 7 shows the feed-wheel and its bevel-gear. Fig. 8 is a view of the needle-bar head. Fig. 9 is a side view of the oil-cup and lubricator, partly sectioned.

On the needle-arm A, and in a direct line with the needle-thread from the spool to the needle-bar, is an oil-cup and lubricator. The cup C consists simply of an open holder, which communicates with the lubricator D by means of the channel *a*, Fig. 9. The lubricator D is composed of the holder E, which receives its oil from the cup C through the aforesaid channel *a*. F is a wick-tube, which takes into the tank E. Its upper end terminates in a bowl or wick-cup, G, on which is screwed the cap H. When wick I is inserted in the tube F and its cup, and a sponge, J, fixed in the cap H, the oil from the cup G rises to the same level in the holder E and soaks up the wick to the sponge, which it saturates.

The construction and operation of the cap H are as follows: A slot, *b*, Fig. 9, is cut through its top; the depending parts *c* of the same enter and terminate at the sides of the holes, so that the needle-thread, when passed through the cap for lubrication, will bear against the tops of the holes, and thereby be prevented from slipping and working out. If, when sewing, fine silk is to be used, which does not require lubricating, then the thread is not passed through the sponge; but the cap and cup are turned until its slot assumes a contrary position, that the thread may slip over its top. The presser-bar *k* is operated in two ways—first, by means of a treadle, L, Fig. 1, turning on a stud, *e*, at the side of the needle-arm A. The upper end of the presser-bar is provided with a lifting-plate, M, under which the loose end *f* of the lever L takes. To prevent the bar from turning the lifting-plate M is provided with a downwardly-projecting stud, *g*, which takes into a corresponding opening in the head of the needle-arm. To take up the lost motion caused by the wearing of the presser-bar a set-plate, N, on the needle-arm is so arranged as to be pressed against the stud or pin *g*, and thereby prevent it and the presser-bar, to which it is connected by the plate M, from wabbling. The second method employed for lifting the presser-bar is by means of a flange, *i*, circular elevator O, Fig. 3, which is set into the face-plate P, and turns in its own bearing, being held in place by the pin *h*. The rim or flange *i* is under a circular plate, Q, Figs. 1, 2, and 4, of the presser-bar. It is circular by reason of having to turn with the presser-bar when the needle is being threaded. The elevator O is set into the face-plate of the machine to give it a bearing independently of its holding-screw, which merely serves to hold it from working out. The stem S of the needle-bar head is made hollow, and is slotted, Figs. 5 and 6. The upper end of the screw-rod T of the hollow needle-bar R takes into the said slotted shank, and is kept from turning independently of the head U by a pin, *j*. The screw-end *k* of the rod screws into the needle-head V. The end of the needle bears against the end of it, whereby its height can be regulated, and it is also held from working up. The screw W can be used to assist in holding the needle. The screw-rod accommodates the sewing-machine to needles of all lengths, and serves to push out the shanks of broken needles. The heart-cam X and the needle-bar R, Figs. 2 and 5, are made in one piece, by casting or otherwise, of suitable material, which does away with considerable mechanical labor—as, for instance, drilling, fitting, milling a flat surface on the needle-bar to give a bearing to the bed of the cam. It also saves the trouble of truing off one side of it. It reduces the weight of the same. The top of the needle-bar or its head U is prepared for the reception of the needle-thread as follows: The usual hole *m*, Fig. 8, dotted lines, is drilled horizontally through. A fine slot, *n*, is then cut, commencing at a point low at the rear end of the hole and terminating slightly above the top of the front end of the same. The thread can be put into the hole without breaking it, and it cannot

swag out. The feed-wheel Y, Fig. 7, has the pinion-gear Z, through which motion is transmitted to it, cast with and made a component part, whereby economy of space is had and the shuttle-arm reduced in diameter.

I claim as my invention—

1. The wick-tube F, wick-cup G, and the cap H, when constructed and arranged substantially as and for the purpose shown and described.

2. The wick-tube F, wick-cup G, cap H, and the holder E, as shown and described.

3. The wick-tube F, cup G, cap H, wick I, and the sponge J, as shown and described.

4. The presser-bar K, plate M, stud *g*, and the set-up plate N, as shown and described.

5. The needle-head V, in combination with the screw-rod T and the hollow needle-bar R, for the purpose shown and described.

6. The needle-bar R, stem S, head U, screw T, and the needle-head V, as shown and described.

In testimony whereof I hereunto sign my name in presence of two subscribing witnesses.

IRA MANNING.

Witnesses:

FRANCIS D. PASTORIUS,

GEO. C. SHELMERDINE.