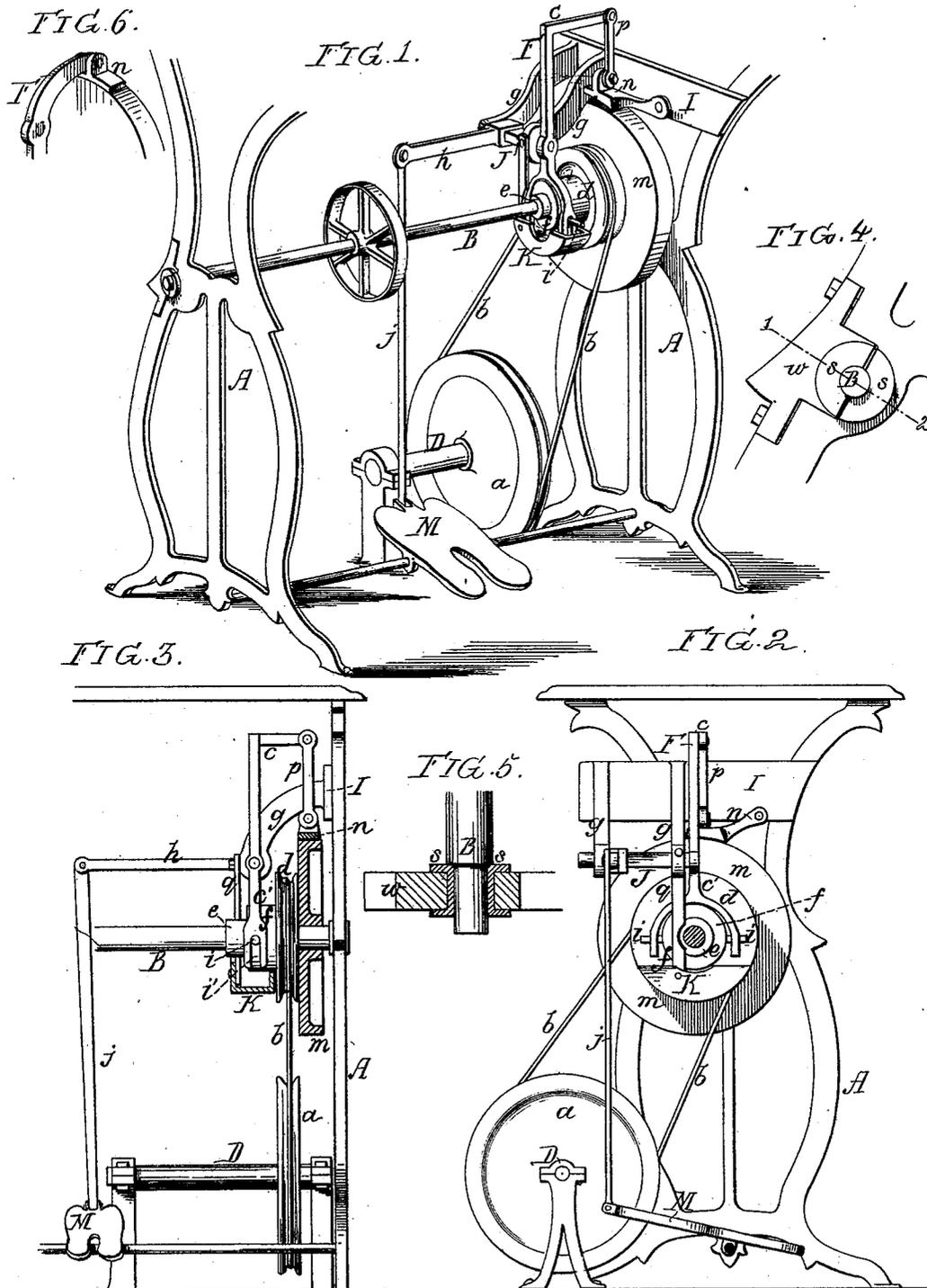


L. STERNBERGER.
Clutching and Braking Device for Power-Driven
Sewing-Machines.

No. 213,704.

Patented Mar. 25, 1879.



Witnesses,
Henry Howson Jr.
Harry A. Crawford.

L. Sternberger,
Inventor,
by his attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

LEOPOLD STERNBERGER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CLUTCHING AND BRAKING DEVICES FOR POWER-DRIVEN SEWING-MACHINES.

Specification forming part of Letters Patent No. 213,704, dated March 25, 1879; application filed August 19, 1878.

To all whom it may concern:

Be it known that I, LEOPOLD STERNBERGER, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Power-Driven Sewing-Machines, of which the following is a specification:

The object of my invention is to construct compact and instantaneously-acting clutching and braking devices for power-driven sewing-machines; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of sufficient of a sewing-machine to illustrate the application thereto of my improvement; Fig. 2, a transverse section of part of the same; Fig. 3, a longitudinal section; Fig. 4, an enlarged side view of one of the end bearings for the main shaft of the machine; Fig. 5, a sectional view of the same on the line 1 2, Fig. 4; and Fig. 6, a modification of part of the device.

A A are the side frames of the sewing-machine, the table being shown in Figs. 2 and 3. B is the main shaft of the machine, and D a longitudinal power-driven shaft, arranged at the rear of the machine, and by preference near the floor. Round a pulley, *a*, on this shaft passes a belt, *b*, which also passes around a pulley, *d*, secured to or forming part of a sleeve, *e*, which is loose on the shaft B.

The sleeve *e* is reduced in diameter near the end, and against the shoulder thus formed bears a ring, *f*, which fits loosely on the reduced portion of the sleeve, and has on opposite sides projecting lugs or pins *i*, adapted to slots *i'* in the forked lower arm, *c'*, of the lever F, secured to one end of a rock-shaft, J, the latter being adapted to bearings *g g*, projecting from a plate, I, which is secured to one of the side frames of the machine. The portion of this rock-shaft between the bearings is made of a square or angular section, and to this portion of the shaft is secured the inner end of an arm, *h*, the outer end of which is connected, by means of a rod, *j*, to the toe of the treadle M.

Secured to the shaft B is a disk or wheel, *m*, and to the plate I of the frame, above this disk, is pivoted a brake-shoe, *n*, which is con-

nected, by means of a link, *p*, with the bent upper end of the arm *c* of the lever F.

By this means the same movement of the lever F which causes the thrusting of the pulley *d* against the face of the disk *m*, and the consequent clutching of said pulley thereto, so as to revolve the same and the shaft B, causes the elevation of the brake-shoe *n* clear of the periphery of the disk *m*. A reverse movement of the lever, tending to withdraw the face of the pulley *d* from frictional contact with the face of the disk *m*, causes the application of the brake-shoe *n* upon the periphery of the disk with a force sufficient to effect its instant stoppage and that of the sewing-machine.

Instead of pivoting the brake-shoe *n* to the frame, it may have on it lugs, as shown in Fig. 6, these lugs being hinged directly to the lever F.

An arm, *q*, extends downward from one of the bearings *g*, and this arm carries at the lower end a cup or receptacle, K, for catching the oil which drips from the clutch.

Instead of adapting the ends of the shaft B to plain openings in the side frames of the machine, as usual, said shaft is embraced near each end by the halves of a split sleeve, *s*, one half of which rests in the semicircular base of a recess in the rear edge of the side frame, A, while the other half of the sleeve is embraced by the recessed inner end of a block, *w*, adapted to the enlarged outer portion of the recess in the frame, and held in place therein by means of suitable confining-bolts, Fig. 4.

By this means the outer half of the sleeve may be set up to compensate for the wear of the shaft B, so that the latter always has a firm bearing and runs without tremor, thereby overcoming a serious objection to power-driven sewing-machines having shafts adapted to the usual bearings. The shaft B and the parts carried thereby can be readily removed in a lateral direction, after disconnecting the lever F and removing the clamping-blocks *w*, without disturbing the table or frames of the machine.

By slotting the forked end of the lever F, and providing the ring *f* with projecting pins

or lugs *i*, I avoid the necessity of grooving said ring, and of employing set-screws on the lever.

I claim as my invention—

1. The combination of a sewing-machine shaft having a wheel or disk and clutching mechanism with a pivoted lever having two arms, one of which operates the clutch and the other a brake, all substantially as specified.

2. The combination of the shaft B, its disk *m*, and pulley *d*, the rock-shaft J, having an

arm, *h*, connected to the treadle, and the lever F, having an arm, *c'*, for acting on the pulley *d*, and an arm, *c*, for applying a brake to the disk *m*, as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEOPOLD STERNBERGER.

Witnesses:

HARRY A. CRAWFORD,
HARRY SMITH.