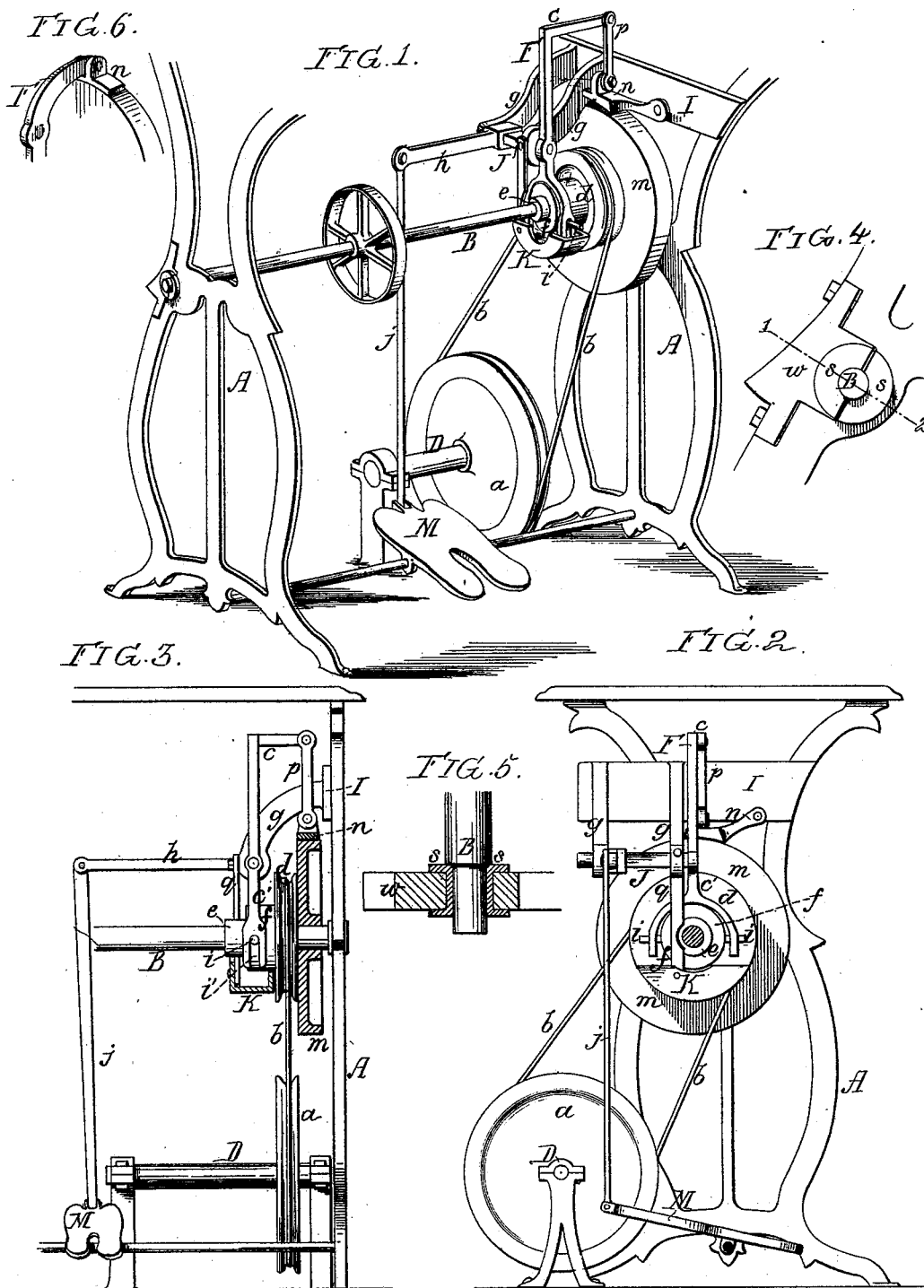


L. STERNBERGER.
Clutching and Braking Device for Power-Driven
Sewing-Machines.

No. 213,704.

Patented Mar. 25, 1879.



Witnesses,
Henry Howson Jr.
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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.