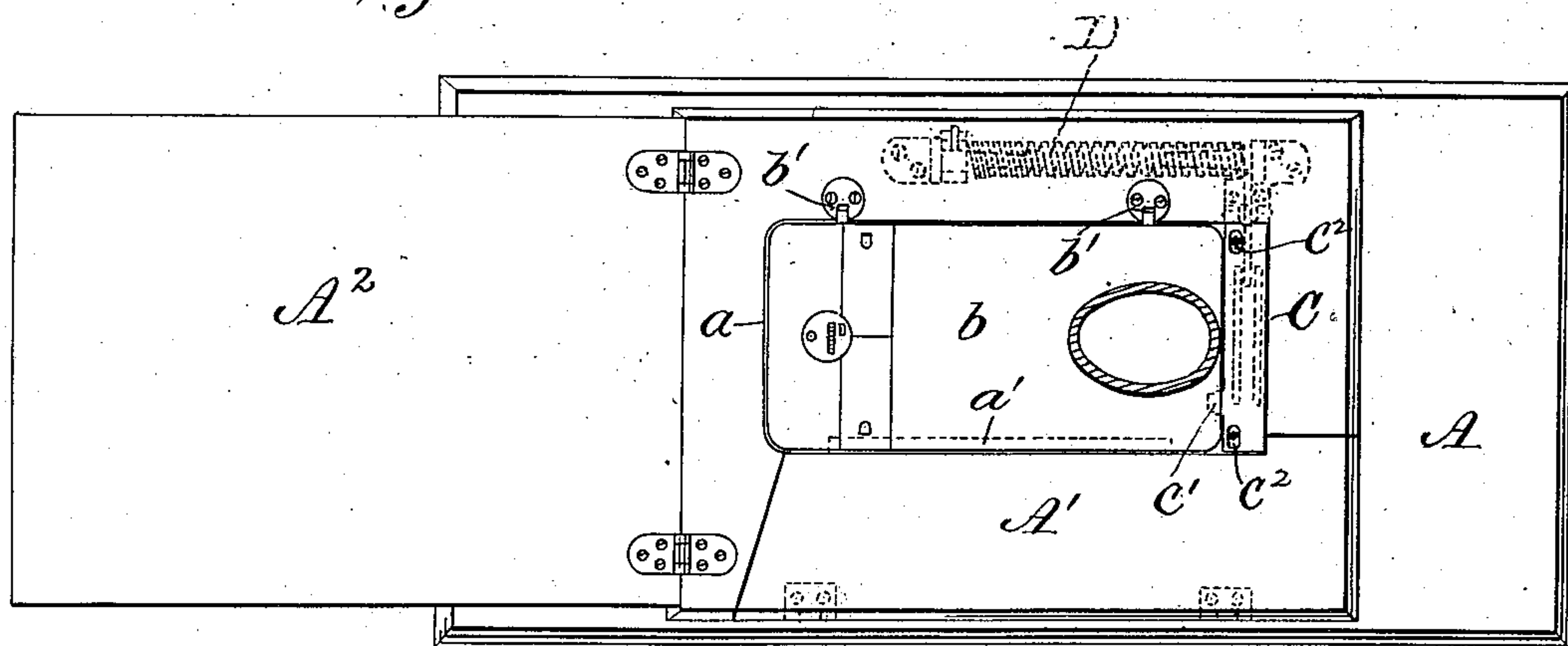


2 Sheets—Sheet 1.

No. 541,474.

Patented June 25, 1895.



WITNESSES:

WITNESSES:
C. W. Benjamin
C. M. Sweeney.

INVENTORS:

INVENTORS:
Philip Dill & Thos. Koenig

84

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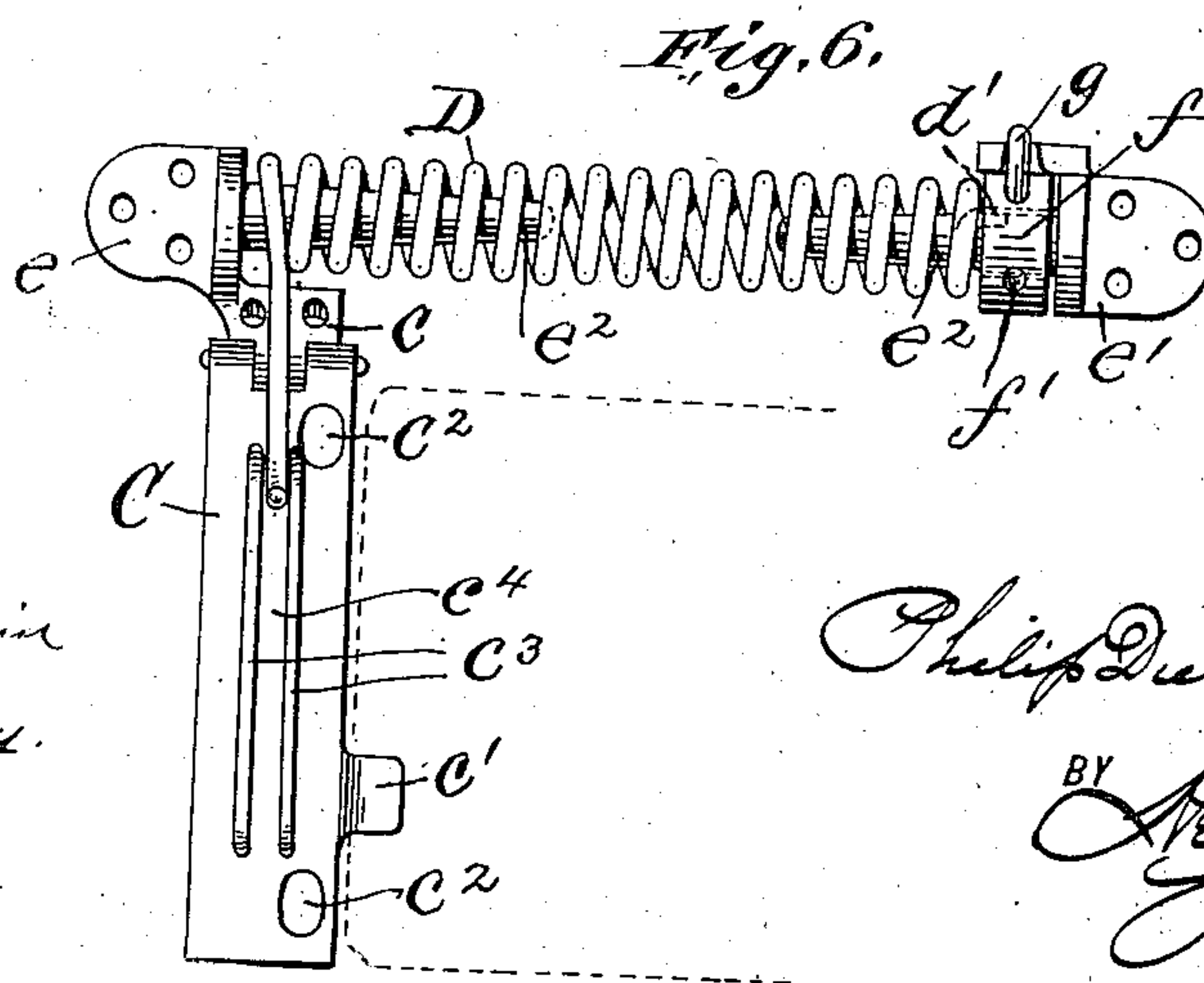
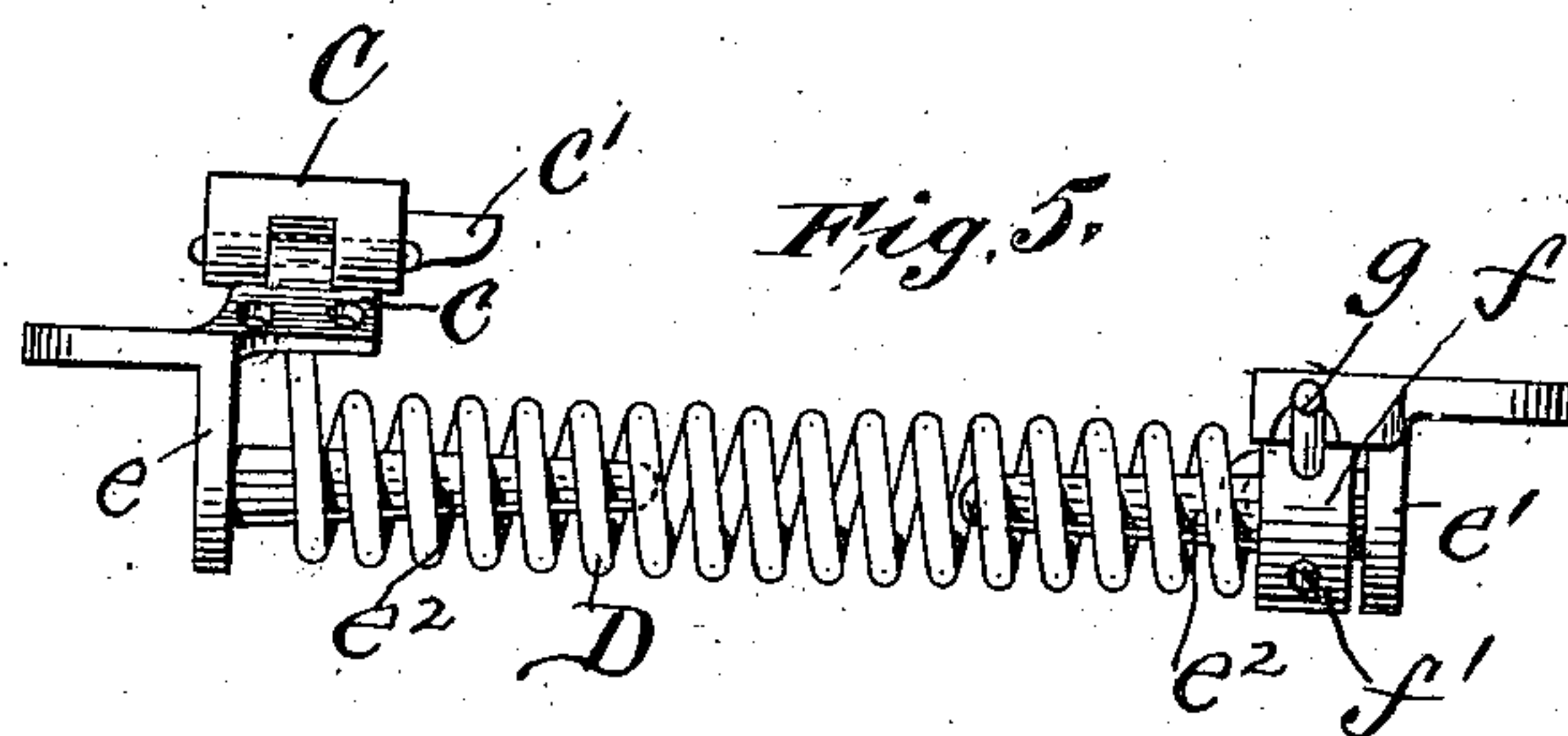
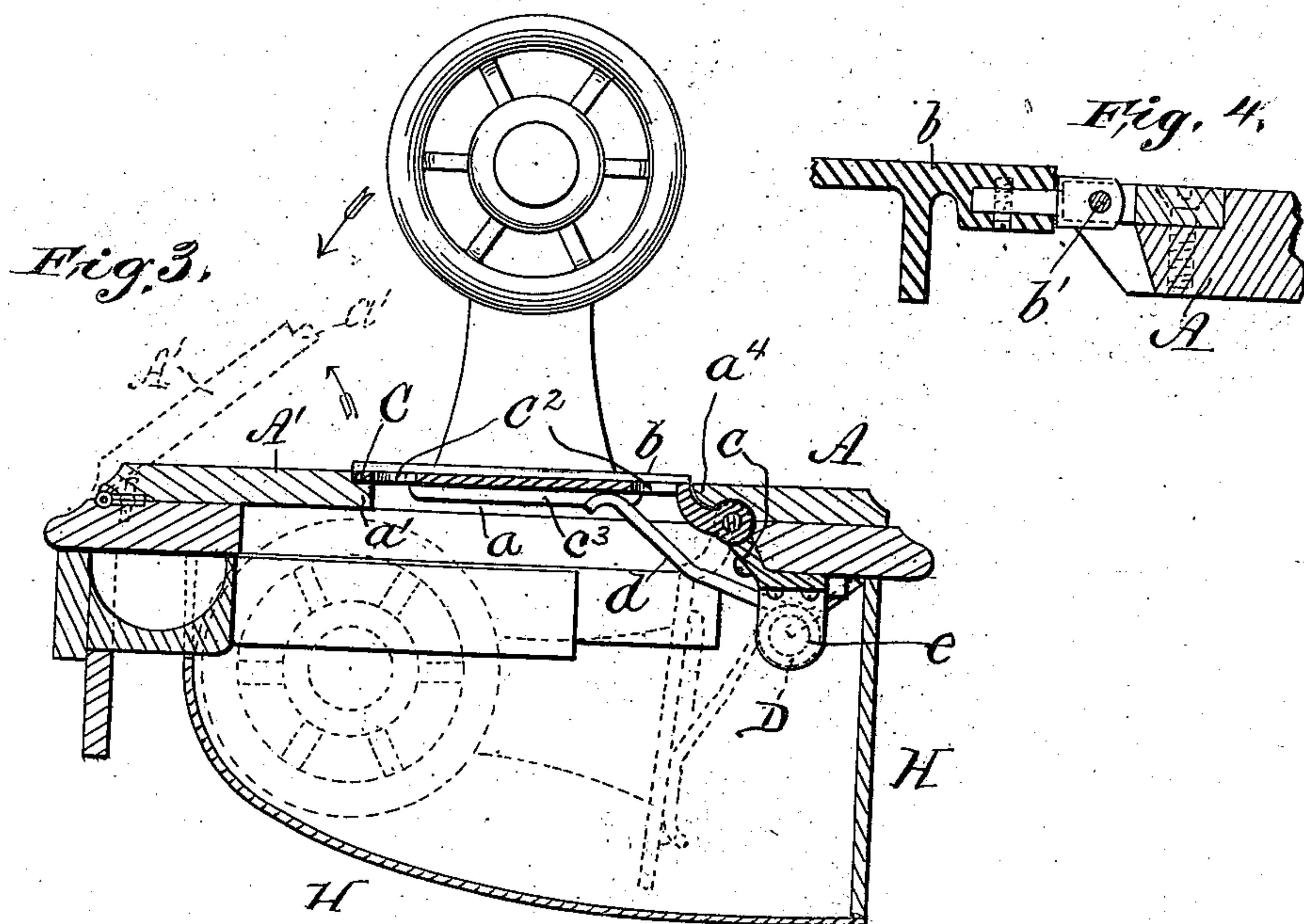
(No Model.)

2 Sheets—Sheet 2.

P. DIEHL & T. KRAEMER.²
DROP STAND FOR SEWING MACHINES.

No. 541,474.

Patented June 25, 1895.



WITNESSES:

WITNESSES:
C. M. Benjamin
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INVENTORS:

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UNITED STATES PATENT OFFICE.

PHILIP DIEHL AND THOMAS KRAEMER, OF ELIZABETH, NEW JERSEY, ASSIGN-
ORS TO THE SINGER MANUFACTURING COMPANY, OF NEW JERSEY.

DROP-STAND FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 541,474, dated June 25, 1895.

Application filed March 13, 1895. Serial No. 541,546. (No model.)

To all whom it may concern:

Be it known that we, PHILIP DIEHL and THOMAS KRAEMER, citizens of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Drop-Stands for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to that class of sewing machine stands or tables which are so constructed that the machines, when not in use, may be dropped down beneath the surfaces of the tables and the openings in the table-tops be then covered over by folding extension leaves so that the tables may be used for other purposes than as sewing machine tables; and our invention has for its object to provide a sewing machine drop-stand or table, of the class referred to, which will be strong and durable, and thus little liable to get out of order, while at the same time it will be neat and attractive in appearance and convenient in use, as well as simple in construction, so that it may be manufactured at a minimum cost.

In carrying our invention into effect we provide a hinged support which is arranged at the right hand end of the opening in the table-top in which the machine bed-plate is received, or at the end of said opening beneath the fly and pulley wheel of the machine. The said hinged support is provided with openings for the passage of the driving belt and has also a lip extending beneath the bed-plate of the machine. Beneath the table, at the rear of the machine, is a torsional coil spring one end of which is held stationary while the other end thereof engages said hinged support so that said spring serves to counterbalance the weight of the machine when the latter is turned down on its hinges beneath the table top.

In the accompanying drawings, Figure 1 is a front view of a sewing-machine stand embodying our invention. Fig. 2 is a plan view of the same. Fig. 3 is a section through the table. Fig. 4 is a detail of one of the hinges connecting the machine bed-plate to the table.

Figs. 5 and 6 are detail views of the torsional spring and adjacent parts.

A denotes the table having an opening *a* which receives the bed-plate *b* of the machine, said bed-plate being connected at its rear side to said table by double acting hinges *b'* of such construction as to permit the machine to be dropped down below the table-top or tilted over backward above the table when access to the mechanism under the bed-plate is desired. The bed-plate *b* is normally supported at its front side by a hinged leaf *A'* having a lip *a'* extending beneath said bed-plate.

*A*² is an extension leaf which, when the machine is dropped below the upper surface of the table, is folded over, as denoted by dotted lines in Fig. 1, to cover the opening down through which the machine has passed, to render the table fit for use for other purposes than as a sewing machine table.

C is a sustaining plate or support placed at the right hand end of the opening *a* and hinged at its rear end to a bracket *c* beneath the table top, said hinged support having near its front end a lip or lug *c'* extending under the machine bed-plate *b*, and said support being provided with belt openings *c*².

D is a torsional coil spring surrounding lateral extensions or bars *e*², preferably cast integral with brackets or hangers *e*, *e'* secured to the under side of the table *A*, the bracket or hanger *e* being preferably cast integral with the bracket *c* to which the support *C* is hinged. One end *d* of the spring *D* extends beneath the support *C* and is received in a groove *c*⁴ formed by ribs *c*³, and the other end *d'* of said spring engages a collar *f* on the extension *e*² of the bracket *e'*. The collar *f* is normally held stationary, as by a pin *g* engaging a part of the bracket *e'* and entering any one of the holes *f'* in said collar. The stress of the spring *D* may be regulated, to secure the proper tension, by turning the collar *f* in one direction or the other, as will be readily understood.

H denotes a box or housing secured to the under side of the table *A* and serving to inclose the machine and protect the same from dust when it is dropped beneath the table. The lower wall of the housing may also serve

as a drip pan, or may be metal line for this purpose.

When the machine is to be dropped below the table its front side is first lifted slightly so that the hinged leaf A' may be raised to bring its lip a' out of range of the front edge of the machine bed-plate and the machine may then be lowered into the receptacle beneath the table, and in this operation the counterbalancing spring D prevents any accidental jar or strain on the hinges b' which might otherwise result in thus lowering the machine into said receptacle. In fact if said spring be properly adjusted it will of itself limit the downwardly swinging movement of the machine, said spring being wound up in lowering the machine, so that its torsional stress is increased. In lifting the machine to working position the operation is assisted by the spring D as will be understood, so that but little force is required to be exerted by the operator.

When the machine is tilted over above the table for access to the works beneath the bed-plate, the support C is prevented from being lifted above the table A by the engagement of the rear end of said support with the part a^4 of the table A.

The part C, although herein termed a "support," does not sustain the machine when the latter is in working position, the machine, at such times, being supported by the hinges b' and the lip a' of the hinged leaf A'. The support C, in its normal or raised position, is preferably flush with the top of the table A and thus practically forms an extension of the machine bed-plate b which is of less length than the opening a , said support and bed-plate together just filling the said opening.

We do not wish to be understood as limiting our invention to all of the details herein shown, as these details may be varied considerably without departing from the spirit of our invention. For example, the machine bed-plate hinged to the table at one side might be supported at its opposite side by sliding latches or other movable equivalents for the hinged leaf A' with its lip a' . Also instead of employing the hinged support C, through the medium of which the stress of the torsional spring is conveyed to the hinged bed-plate of the machine, said support might be dispensed with and the said spring engaged directly with the machine bed-plate.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. The combination with a sewing machine table having an opening, of a sewing machine the bed plate of which is hinged to said table, a hinged support located at one end of said bed-plate and having a lip or portion extending beneath the latter, and a torsional coil spring acting on said support and serving to counterbalance the weight of said machine

when the latter is dropped below said table through said opening.

2. The combination with a sewing machine table having an opening, of a sewing machine the bed-plate of which is connected at its rear side to said table by double-acting hinges which permit it to be tilted over backward above the table, a hinged leaf having a lip or portion extending beneath the front side of said bed-plate, to support the said front side, the hinges sustaining the rear side thereof, and a torsional spring serving to counterbalance the weight of the said machine when the latter is dropped below said table through said opening.

3. The combination with a sewing machine table having an opening, of a sewing machine the bed-plate of which is connected at its rear side to said table by double acting hinges, a hinged leaf having a lip or portion extending beneath the front side of said bed-plate, to support the said front side, the hinges sustaining the rear side thereof, a hinged support located at one end of said bed-plate and having a lip or portion extending beneath the latter, and a coil torsional spring acting on said support and serving to counterbalance the weight of the said machine when the latter is dropped below said table through said opening.

4. The combination with a sewing machine table having an opening, of a sewing machine having a bed-plate which is hinged to said table and which is of less length than said opening, a hinged support in said opening at one end of said bed-plate and having a lip or portion extending beneath the latter, and a counterbalancing torsional coil spring beneath said table, one end of said spring being locked or held fast and the other end thereof engaging said hinged support.

5. The combination with a sewing machine table having an opening, of a sewing machine having a bed-plate which is hinged to said table and which is of less length than said opening, a hinged support in said opening at the driving wheel end of the machine, said support being provided with belt holes and with a lip or portion extending beneath said bed-plate, and a torsional coil spring having a part engaging said hinged support and serving to counterbalance the weight of said machine when the latter is dropped below the table through said opening.

6. The combination with the table A having the opening a , of a sewing machine the bed-plate of which is attached to said table at its rear side by the hinges b' and which bed-plate is of less length than said opening, the hinged support C in said opening at the driving wheel end of said bed-plate and having a lip or portion c extending beneath the latter and having also belt openings c' , the torsional spring D one end of which engages said support and the other end of which

is fixed, and the brackets *e*, *e'* having lateral bars or extensions *e*² to sustain said spring.

7. The combination with the table A having the opening *a*, of a sewing machine the bed-plate of which is attached to said table at its rear side by the hinges *b'* and which bed-plate is of less length than said opening, the hinged support C in said opening at the driving wheel end of said bed-plate and having a lip or portion *c* extending beneath the latter and having also belt opening *c'*, the torsional spring D one end of which engages said support, the brackets *e*, *e'* having the lateral bars or extensions *e*² to sustain said spring, and the normally stationary but adjustable collar *f* which is engaged by the other end of said spring.

8. The combination with the table A having the opening *a*, of a sewing machine the bed-plate of which is hinged at its rear side to said table, the hinged leaf A' having the lip *a'* to support the front side of said bed-plate, the hinged support C having a lip or portion extending beneath said bed-plate, the

coiled torsional spring D one end of which engages said support and the other end of which is fixed, and the brackets *e*, *e'*, having the bars *e*² to sustain said spring.

9. The combination with the table A having the opening *a*, of a sewing machine the bed-plate of which is hinged at its rear side to said table, the hinged leaf A' having the lip *a'* to support the front side of said bed-plate, the hinged support C having a lip or portion extending beneath said bed-plate, the coiled torsional spring D one end of which engages said support and the other end of which is fixed, the brackets *e*, *e'* having the bars *e*² to sustain the said spring, and the extension leaf A² to cover said opening *a* when the machine is lowered beneath the table.

In testimony whereof we affix our signatures in presence of two witnesses.

PHILIP DIEHL.

THOMAS KRAEMER.

Witnesses:

HENRY CALVER,

JOSEPH F. JAQUITH.