

(No Model.)

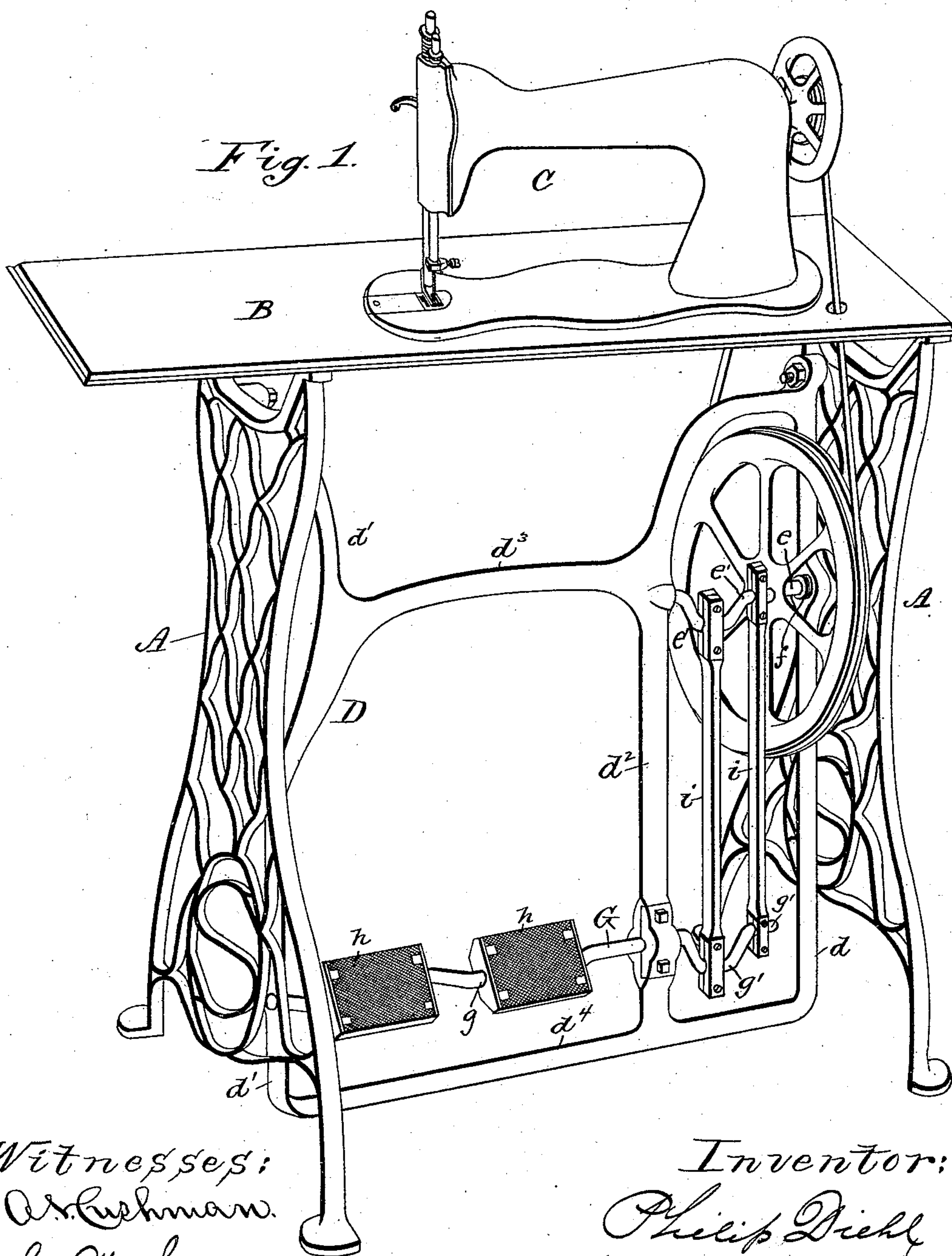
2 Sheets—Sheet 1.

P. DIEHL.

TREADLE MECHANISM FOR SEWING MACHINES.

No. 464,277.

Patented Dec. 1, 1891.



Witnesses:
A. S. Cushman.
G. M. Sweeney.

Inventor:
Philip Diehl
by Macleod, Calver & Handley,
Attorneys

UNITED STATES PATENT OFFICE.

PHILIP DIEHL, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO THE SINGER
MANUFACTURING COMPANY OF NEW JERSEY.

TREADLE MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 464,277, dated December 1, 1891.

Application filed August 4, 1891. Serial No. 401,635. (No model.)

To all whom it may concern:

Be it known that I, PHILIP DIEHL, a citizen 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 Treadle Mechanism for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object to provide an improved treadle mechanism for sewing-machines, by which the operator is enabled to drive a machine at high speed with a minimum expenditure of power. To this end I provide a stand with a cross-brace of suitable construction to afford bearings for the driving-shaft and for a rotary pedal-shaft, which latter is provided with two cranks arranged at one hundred and eighty degrees apart and provided with suitable pedals. The pedal-shaft and the driving-wheel shaft are each provided with two cranks, preferably arranged ninety degrees apart and connected by suitable pitmen. The pedal-shaft, being provided with twin cranks and pedals, affords an easier driving movement than the rocking or vibrating pedals heretofore generally in use, while the twin quartering-crank, through which and the pitmen the movements of the pedal-shaft are transmitted to the driving-wheel shaft, avoid any difficulties which might otherwise arise from dead-centers.

In the accompanying drawings, Figure 1 is a perspective view of a sewing-machine stand embodying my invention. Fig. 2 is a front side view of the same. Figs. 3 and 4 are detail views to illustrate the arrangements of the cranks on the driving and pedal shafts.

A denotes the side frames of a sewing-machine stand supporting the table B, on which is mounted the sewing-machine C. The side frames A are connected by the brace D, consisting of the outer uprights d and d' , the intermediate upright d^2 , and the upper and lower cross-bars d^3 and d^4 , the said brace being connected to the side frames by suitable bolts.

E denotes the driving fly-wheel carried by the shaft e , preferably formed with conical ends journaled in the cross-bar d^3 , and an adjustable socket-screw f , attached to the up-

right d , the said shaft e being provided with quartering twin cranks e' , one of which is preferably at right angles to or ninety degrees from the other.

Journaled in the lower portions of the uprights d' and d^2 is a pedal-shaft G, provided with oppositely-arranged twin cranks g , carrying suitable pedals h , the said shaft having at its right-hand end outside of the upright d^2 , the quartering-crank g' , connected by pitmen i with the quartering-crank e' of the driving-shaft e . It will be obvious that the pedal-shaft, with its twin cranks and pedals, may be rapidly rotated with an easy movement, and that the power applied thereto will be positively transmitted to the driving-shaft through the quartering twin cranks on the pedal and driving shaft and their connecting pitmen.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A sewing-machine stand consisting of side frames and a brace connecting the same, the said brace being composed of upper and lower cross-bars, two outer uprights, and an intermediate upright, combined with a driving crank-shaft and a rotating crank pedal-shaft, both of which are suitably journaled in said brace, and a suitable connection between said shafts.

2. A treadle mechanism for sewing-machines, consisting of the combination, with a sewing-machine stand, of a rotating pedal-shaft provided with twin driving cranks and pedals and with twin transmitting-crank, a driving-shaft, also provided with twin cranks, and twin pitmen connecting the transmitting-crank of the pedal-shaft with the cranks of the driving-shaft.

3. A sewing-machine-treadle mechanism consisting of the combination, with a sewing-machine stand, of a rotating pedal-shaft mounted in the lower part thereof and provided with oppositely-arranged twin driving cranks and pedals and with quartering transmitting-crank, a driving-shaft mounted in said stand above the pedal-shaft and also provided with quartering twin cranks, and pitmen connecting the said quartering-crank of the pedal and driving shafts.

4. The combination, with the side frames

A, of the brace D, consisting of the outer up-
rights d and d' , the intermediate upright d^2 ,
and the cross-bars d^3 and d^4 , the driving-shaft
5 e , carrying the driving fly-wheel E and pro-
vided with twin quartering-cranks e' , the ro-
tating pedal-shaft G, journaled in the up-
rights d' and d^2 and provided with opposite-
ly-arranged twin driving-cranks g , carrying
the pedals h , said shaft also having twin quar-
10 tering transmitting-cranks g' , and the twin

pitmen i , connecting the said transmitting-
cranks g' with the said cranks e' of the driv-
ing-shaft e .

In testimony whereof I affix my signature in
presence of two witnesses.

PHILIP DIEHL.

Witnesses:

J. G. GREENE,
JOHN T. EARL.