

(No Model.)

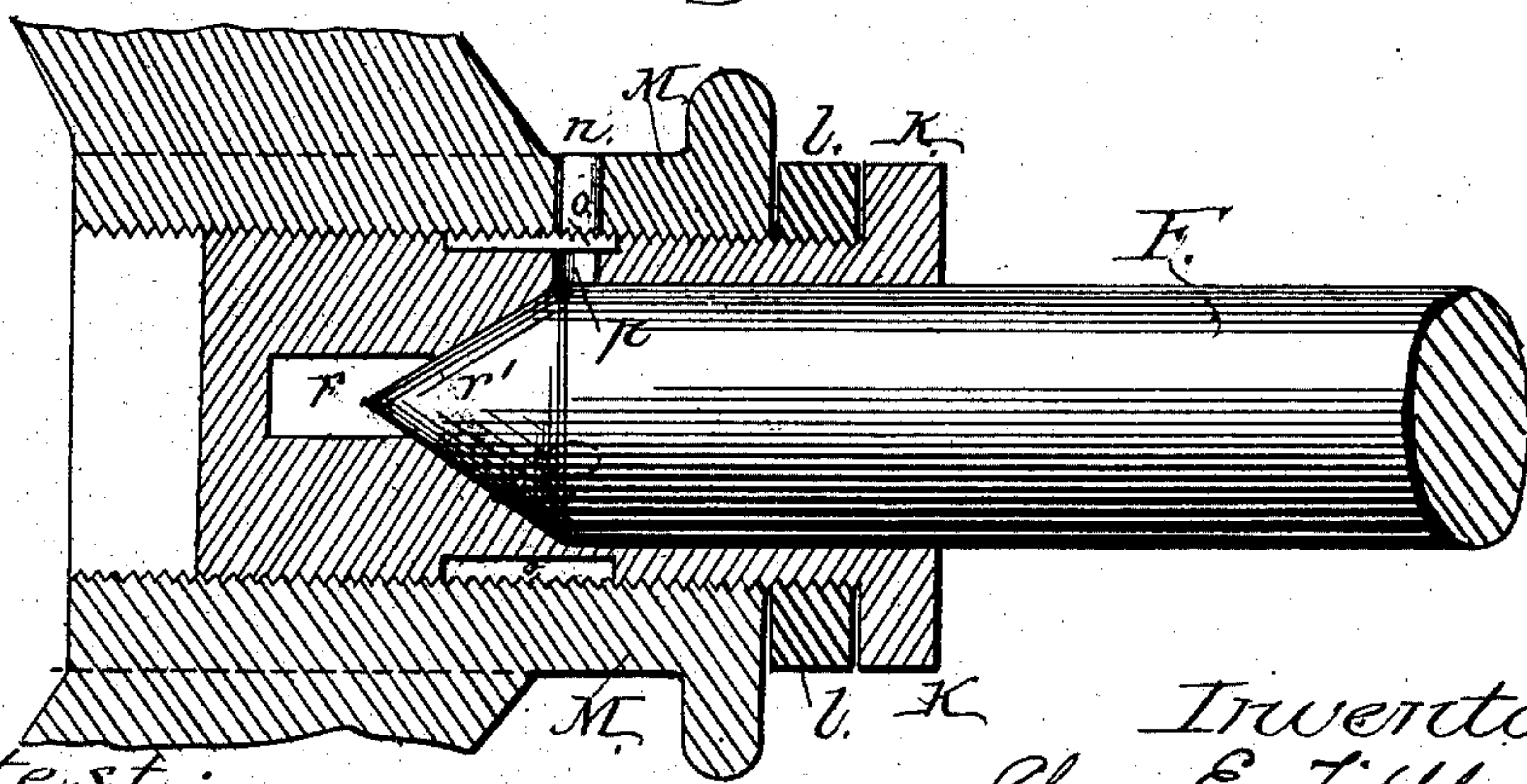
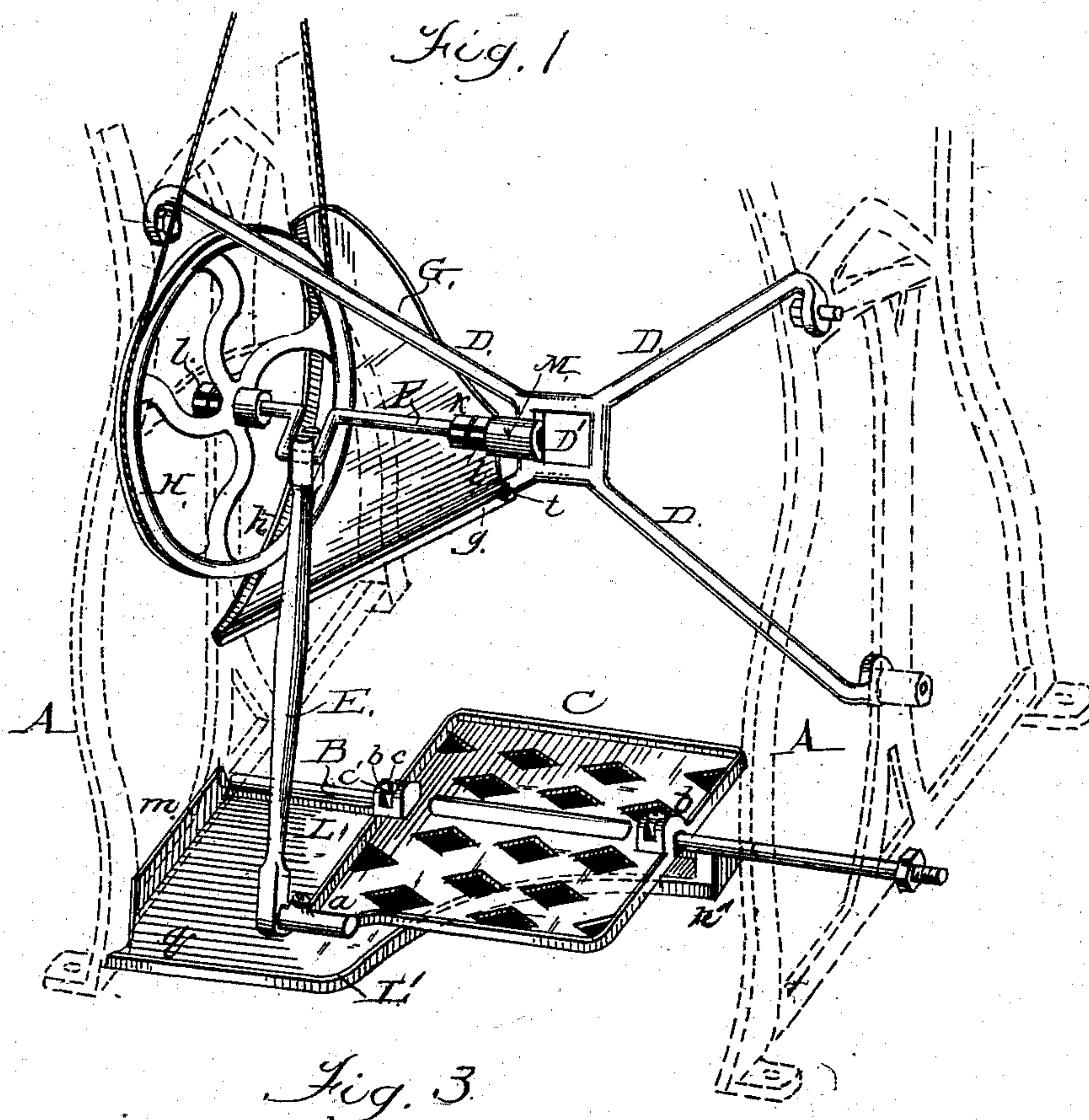
2 Sheets—Sheet 1.

C. E. TIBBLES.

TREADLE FOR SEWING MACHINES.

No. 274,058.

Patented Mar. 13, 1883.



Attest:
J. Walter Fowler,
R. K. Ewing

7. K Inventor
Chas. E. Tibbles
by A. H. Evans & Co
Attys

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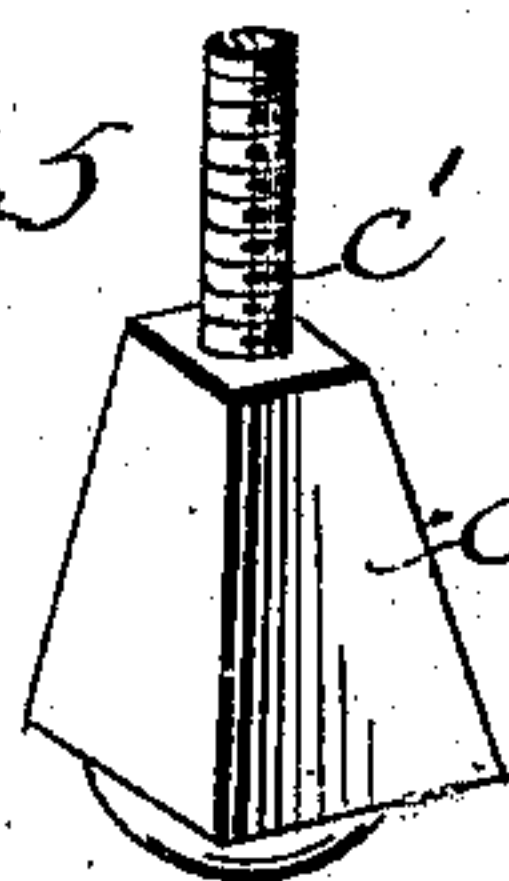
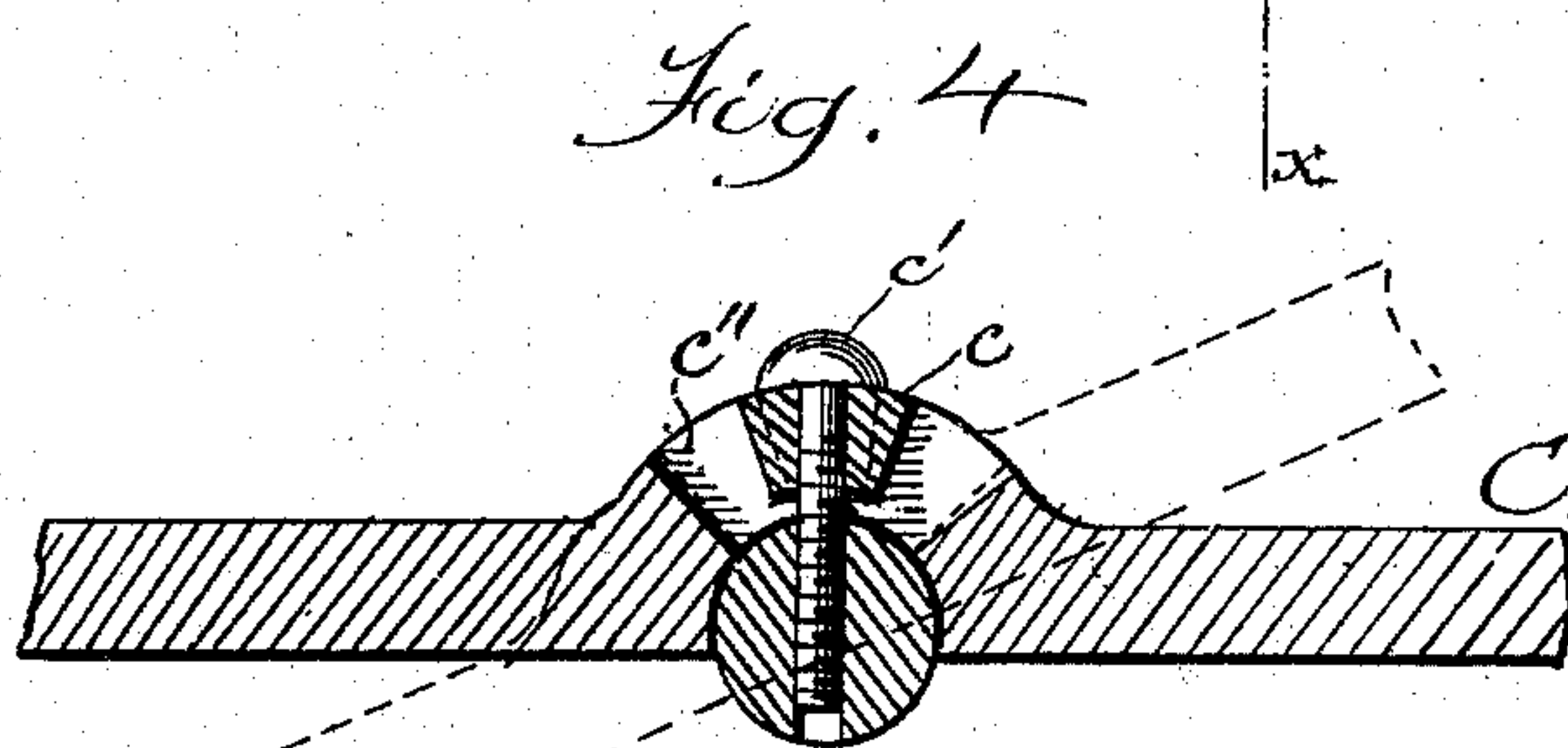
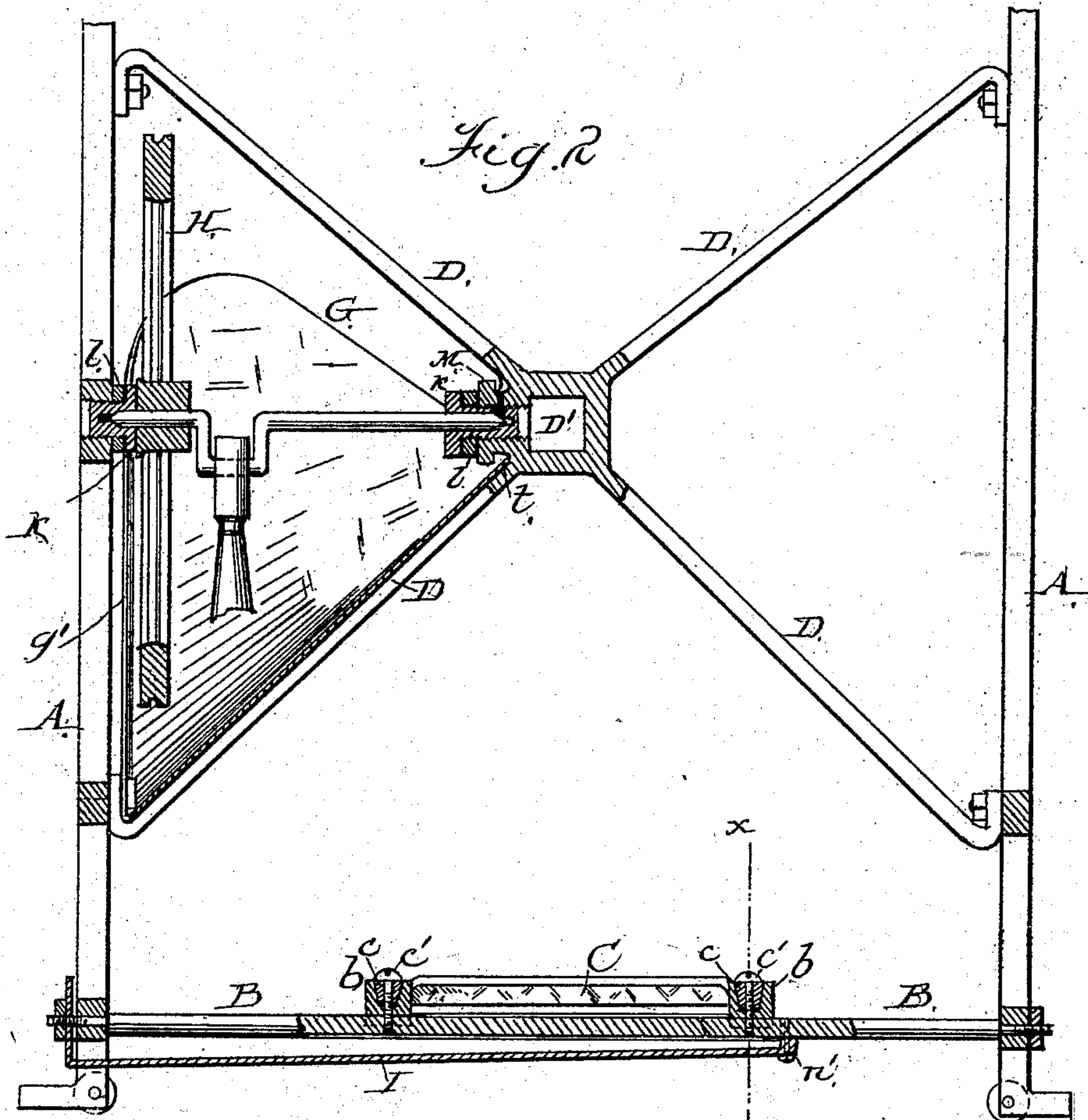
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Attest;
 Charles Fowler
 R. H. Evans

Inventor:
Chas. E. Tibbles
by A. H. Conus & Co.

UNITED STATES PATENT OFFICE.

CHARLES E. TIBBLES, OF BURLINGTON, IOWA, ASSIGNOR TO THE TIBBLES SEWING MACHINE COMPANY, OF SAME PLACE.

TREADLE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 274,058, dated March 13, 1883.

Application filed December 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHAS. EDWIN TIBBLES, of Burlington, in the county of Des Moines and State of Iowa, have invented certain improvements in treadles for sewing-machines, bearings therefor, and surrounding guards; and I hereby declare the following to be a full, clear, and exact account of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the whole mechanism, the supports being in dotted lines. Fig. 2 is a vertical sectional view of the mechanism. Fig. 3 is a vertical section through the shaft-bearing. Figs. 4 and 5 are details of the treadle-bearing.

The object of my invention is to provide a sewing-machine treadle mechanism and driving mechanism in which the lost motion caused by wear can be compensated for, and all the journals or bearings be provided with proper guards.

My invention consists of sundry details of construction and arrangement, as will be hereinafter fully described, and specifically pointed out in the claims.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the frame-work, supporting the treadle and other working parts and shafts, and in it is supported a centrally-arranged four-arm casting, D D D D'. A shaft or rod, B, having bearings in the frame at *b' b'*, where it is held stationary by nuts, affords a bearing for the treadle C, which is cast with two side ribs having half-round bearings *b b*, which rest on said shaft or rod B. Through the top of the half-round bearings in the ribs are cut slots *c''* in the arc of the circle, and the said slots have beveled sides, as shown in Fig. 2, and through them pass screws *c'*, surrounded by blocks or washers *c*, having the same bevel as the slots *c''*. The screws *c'*, by means of proper threads, hold the blocks *c* rigidly to the shaft B, and the treadle oscillates back and forth on the shaft, being held in place by the screws and blocks *c*. The tapering blocks are made as frusta of pyramids, (see Fig. 5,) and are shorter somewhat than the depth of slots

c'', so that the treadle shall bear against their sides only, and the said blocks can be fed down into the beveled slot as the bearing-surfaces wear away. The pitman is connected with the treadle and the crank in any desirable manner. The crank-shaft or driving-shaft F does not extend entirely across the frame-work, and has bearings at one end in the frame and at the other end in the central piece, D', of the four-arm casting or brace. The bearings for the ends of this shaft form an important feature of my invention, and are designed to take up all lost motion caused by wear. The bearings at each end of shaft are alike, and for illustration I will describe the one in the central frame-piece, D'.

Cast with the frame-piece is a sleeve, M, having an interior screw-thread. Into this is screwed a bushing, K, the interior of which is partially cylindrical and partially conical, (see Fig. 3,) and the tip of the cone cut away into a cylindrical recess, *r*. This bushing forms the bearing in which the crank-shaft turns, the said shaft having its ends turned down to a cone, as seen at *r'*, Fig. 3. For a portion of the surface the threads on the exterior of bushing K are turned off, as seen at *o o*, Fig. 3, so as to form a wide shallow groove entirely around the bushing and between it and the sleeve M. At sundry points around the circumference holes *p* connect the groove *o* with the interior of the bushing or bearing K. On the top of the sleeve M is an opening or hole, *n*, communicating with the groove *o* in bushing K. By introducing oil through opening or hole *n* it flows into and fills groove *o*, and thence passes through holes *p p* to the interior of bushing K, and lubricates the crank-shaft. A jam-nut, *l*, around bushing K, serves to fix said bushing in any relation to sleeve M. As the end-thrust bearing of crank-shaft F wears away, the lost motion is taken up by withdrawing, by means of a wrench or other device, the bushings K from their sleeves, so as to properly center the crank.

A pan, L, to catch all drip-oil, is screwed at *n'*, by an abutment to the lower side of rod B, and extends toward and beneath the fly-wheel, where it has an enlargement, L', projecting beneath the travel of the pitman-bearings, and has its outer edge, *m*, bent upward outside of

the lower braces of the frame. The pitch of pan L is toward the point *q*, so all the waste oil will collect at that point, which is the most accessible for its removal.

5 Between the front of the machine, the driving-wheel, and the bearings, I interpose a solid combined dress-guard and oil-deflecting pan, G, having in general formation a triangular outline, one side supported at *t* on the central
10 brace and the other end at any desired point on the upright frame-work, as the guard-plate G may extend downward any distance whatsoever without departing from my invention. The plate or guard G has a general curve con-
15 forming to the outline of the driving-wheel, and on its outer and lower edges, *g' g*, it is provided with turned-up edges to direct the oil to its lowest point, *g''*, where the drip or waste oil will be collected in a cup provided for the
20 purpose, or drop upon pan L and be removed at proper intervals. This construction of the guard-plate G insures absolute immunity from soiling or entangling the dress of the operator.

25 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The sewing-machine treadle cast with the beveled slots *c''* and the half-round bearings *b*, in combination with the tapering blocks *c* and screws *c'*, for the purpose set forth. 30

2. The sewing-machine crank-shaft having conical ends and adapted to be operated by treadle C, in combination with the sleeves M, provided with holes *n* and threaded interiorly, and bushings K, having partially-cylindrical
35 and partially-conical bearing-surfaces, central cylindrical recesses, *r*, grooves *o*, and holes *p*, all constructed and arranged substantially as described.

3. The oil-pan C, bolted to rod B through
40 abutment *n'*, its outer end turned up at *m* and secured to the frame, the enlargement L', and standing so as to have a general pitch to a lowest point, *q*, as specified.

4. The solid imperforate guard-plate G, con-
45 structed and secured substantially as set forth.

CHARLES E. TIBBLES.

Witnesses:

R. K. EVANS,
JOHN HANLON.