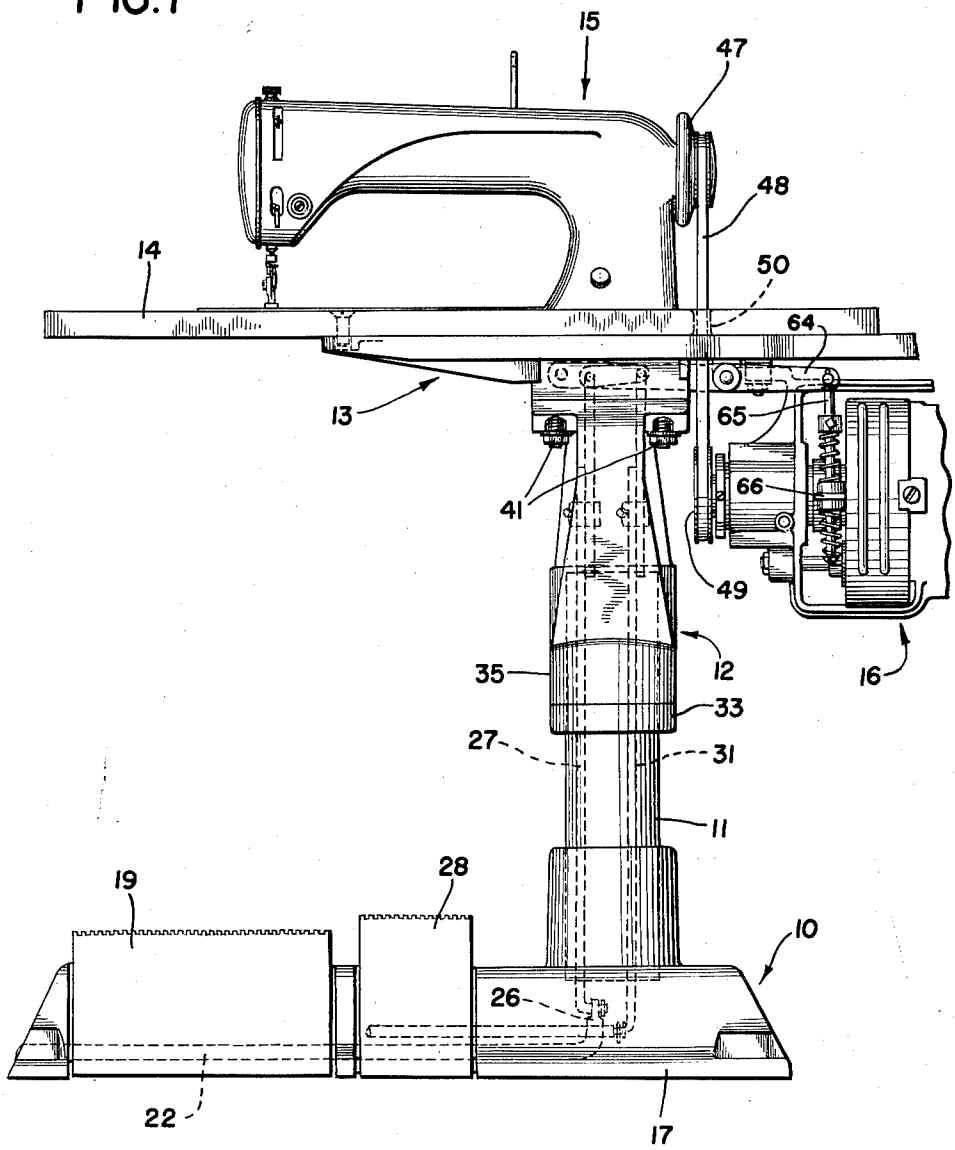
March 4, 1952 A. C. PETERSON ET AL 2,587,887

SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

Filed Sept. 16, 1949 9 Sheets-Sheet 1

FIG. 1



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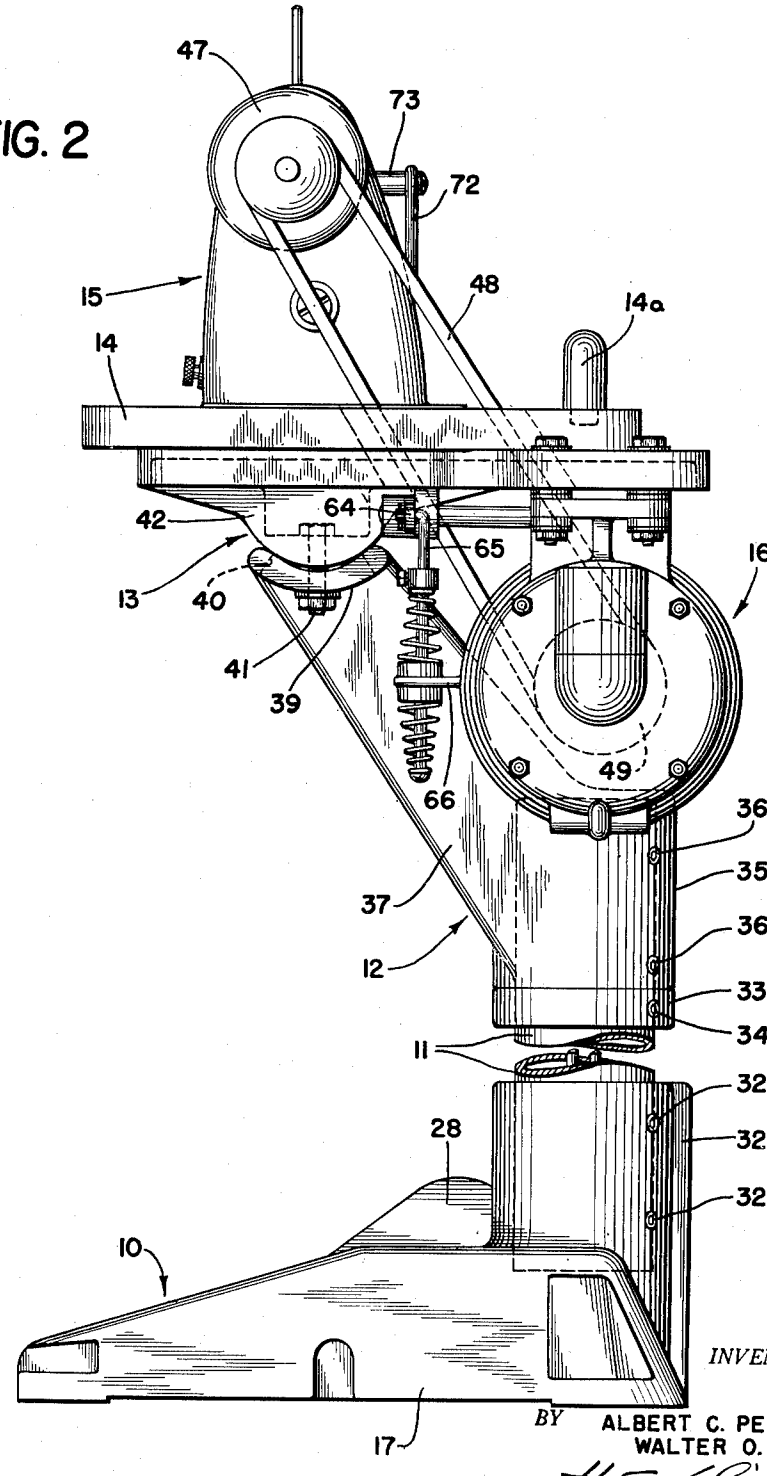
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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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FIG. 2



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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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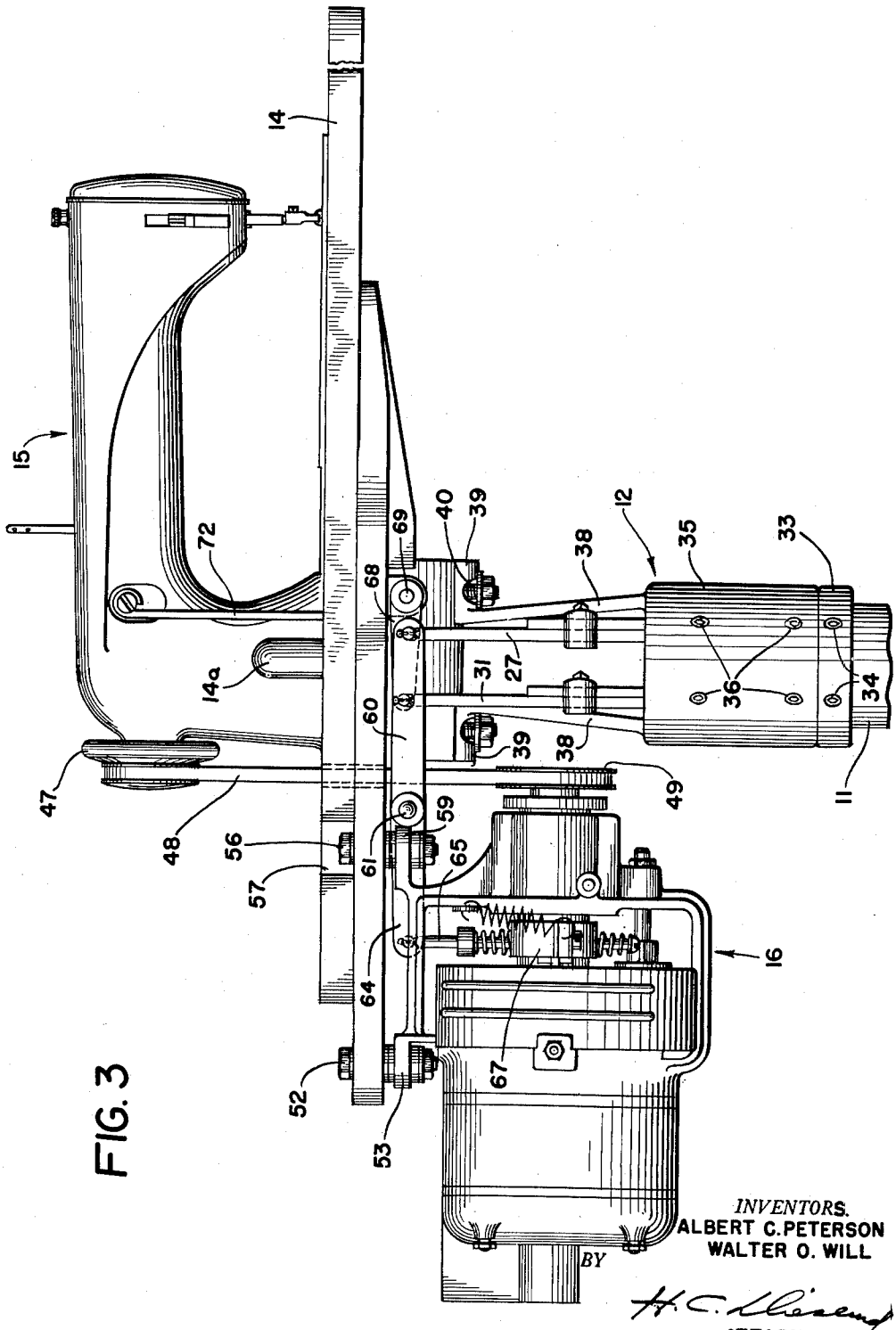


FIG. 3

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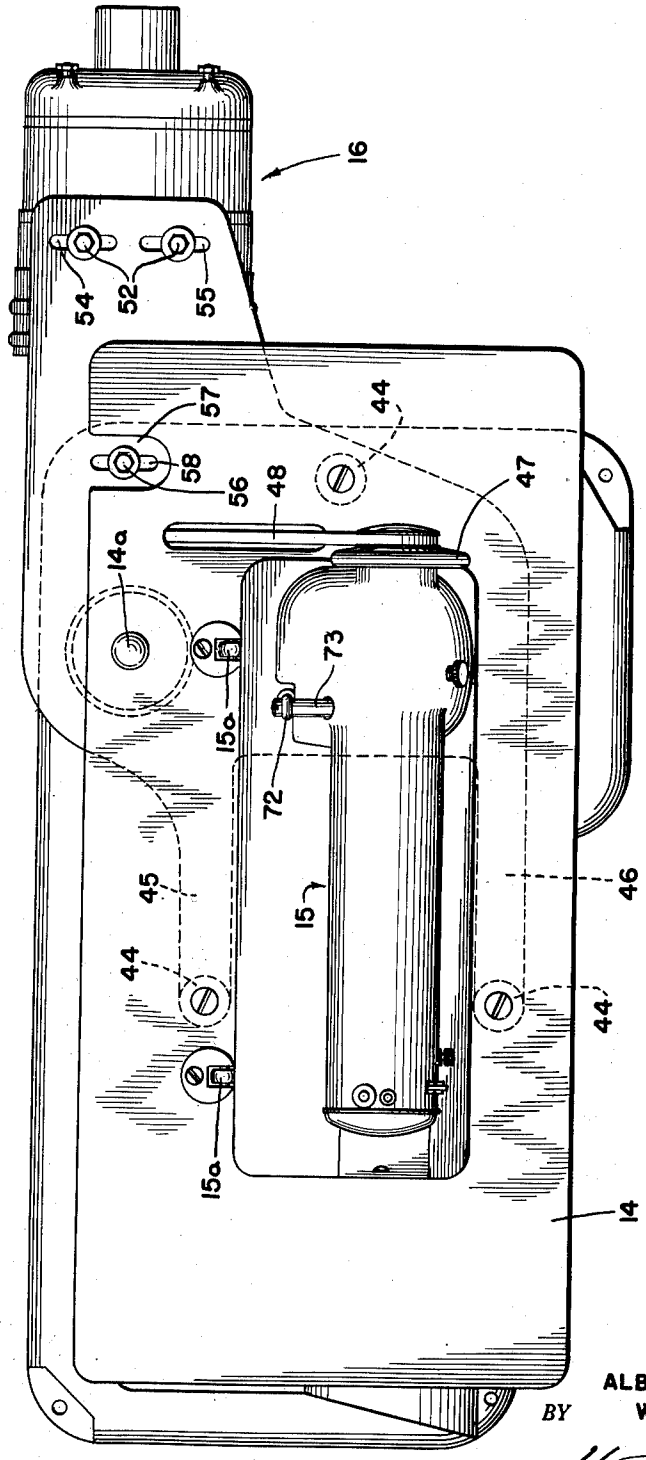
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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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FIG. 4



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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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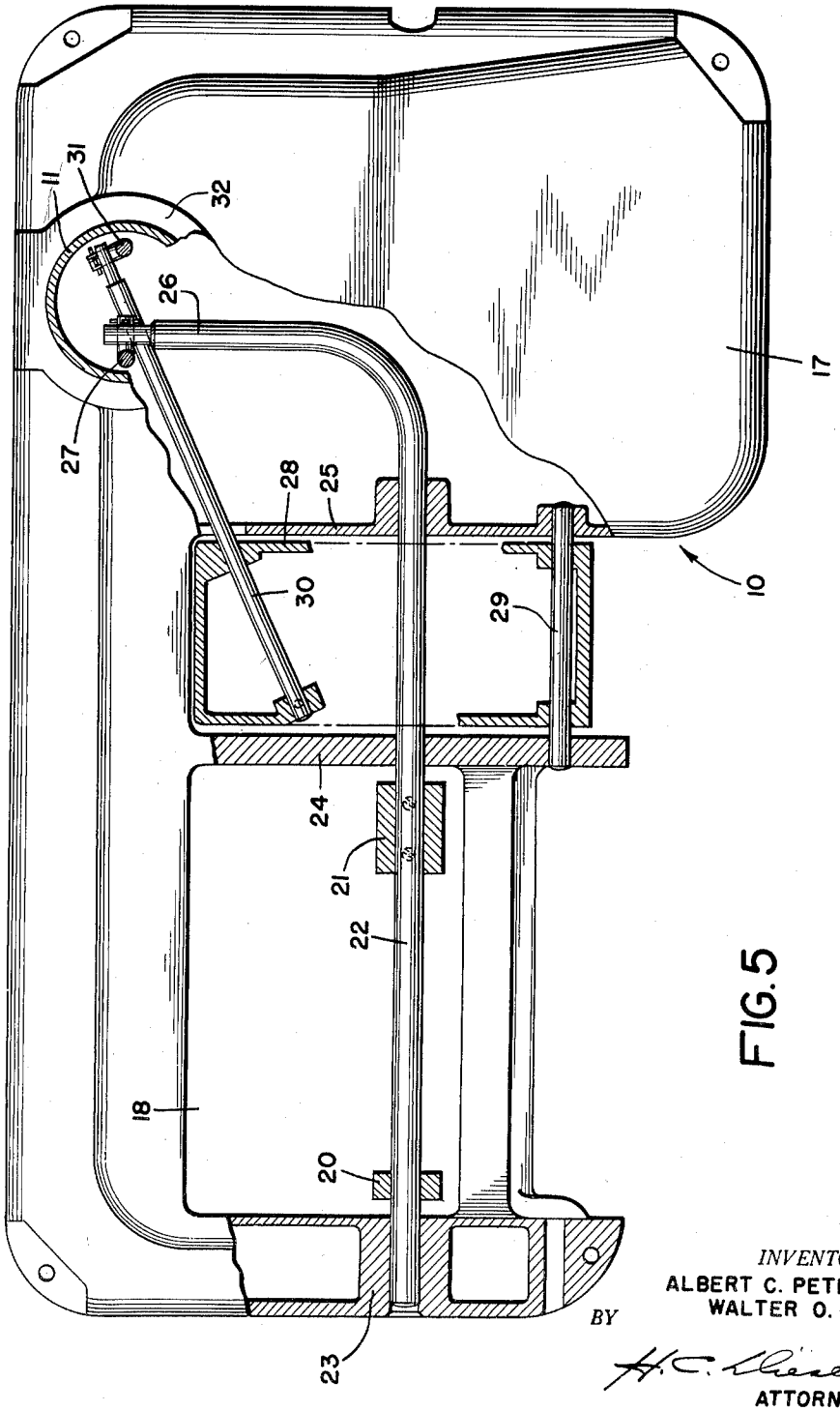


FIG. 5

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March 4, 1952 A. C. PETERSON ET AL 2,587,887

SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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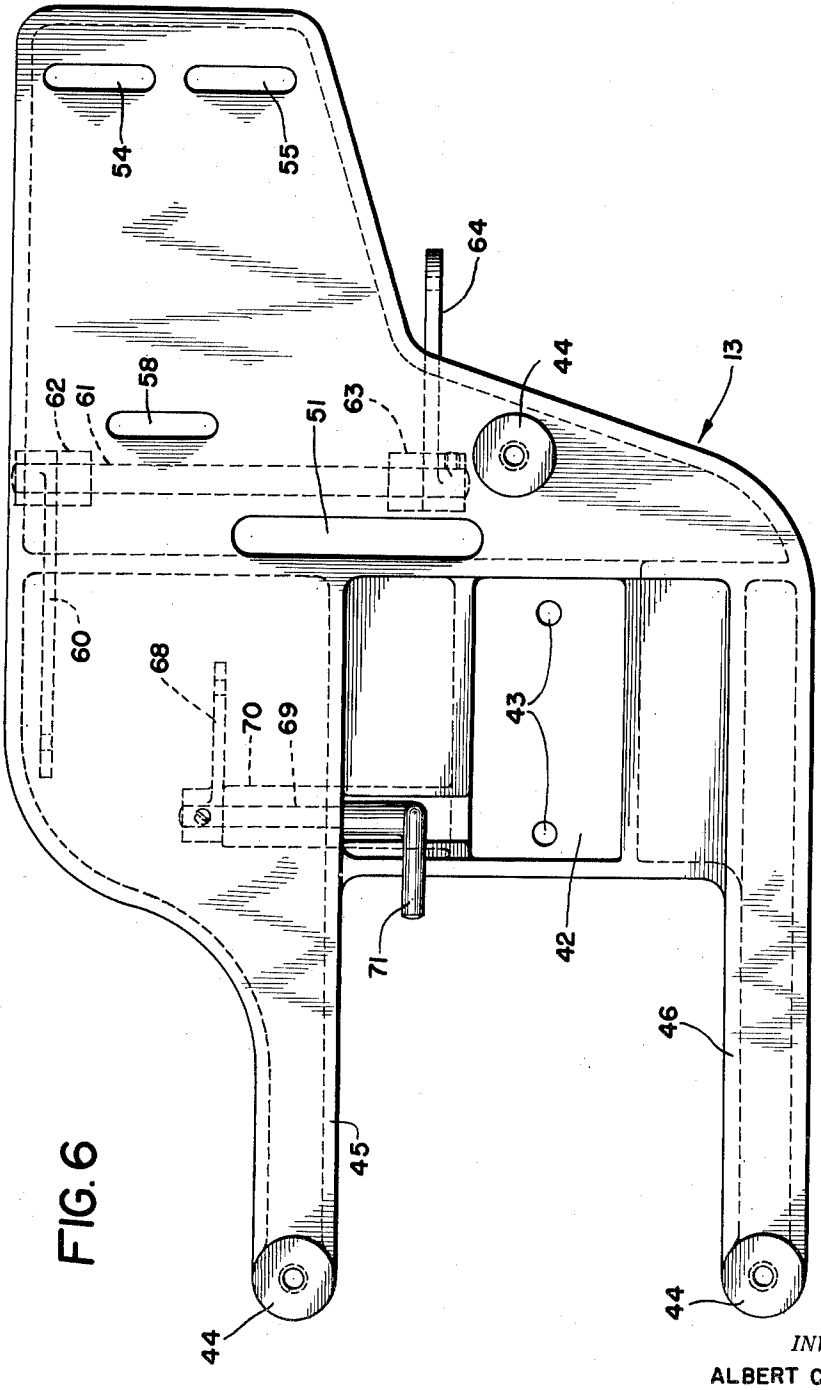


FIG. 6

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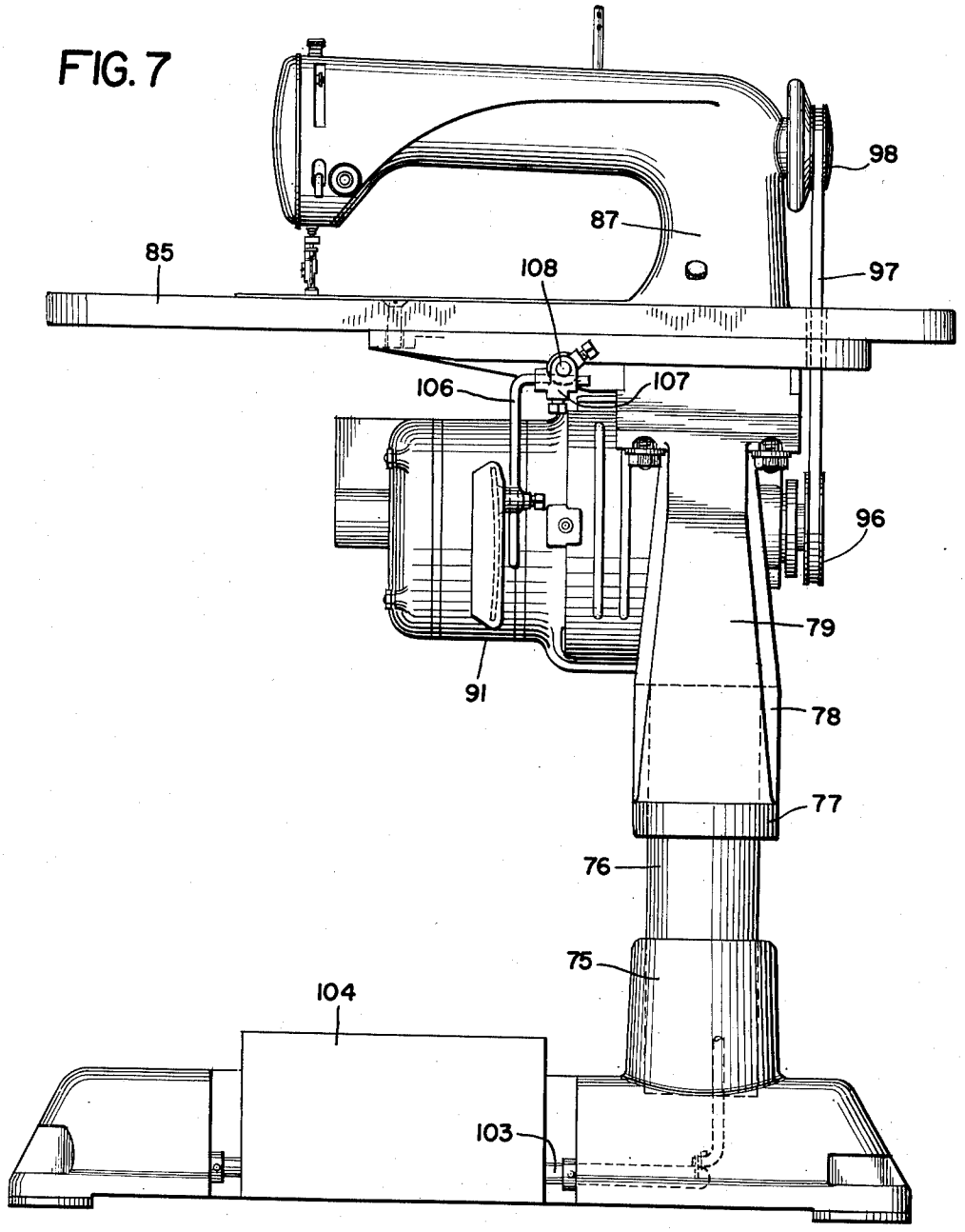
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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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FIG. 7



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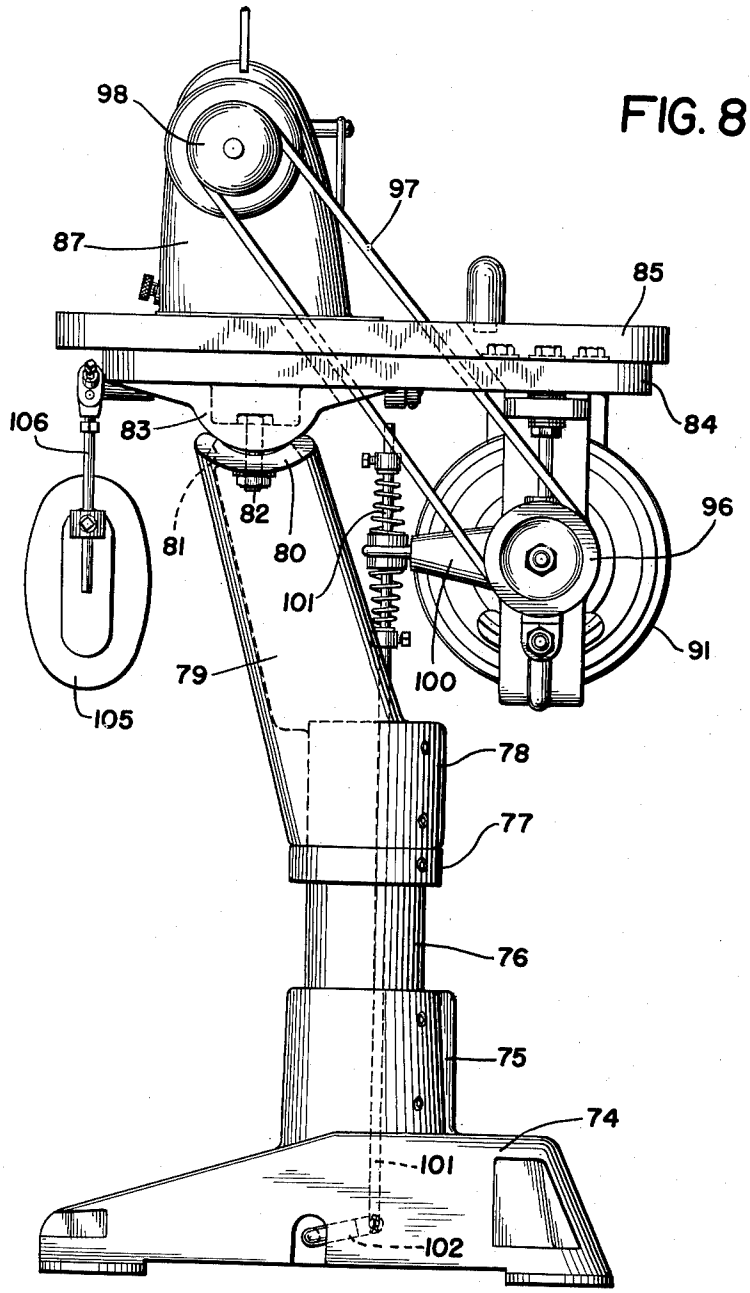
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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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FIG. 8



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SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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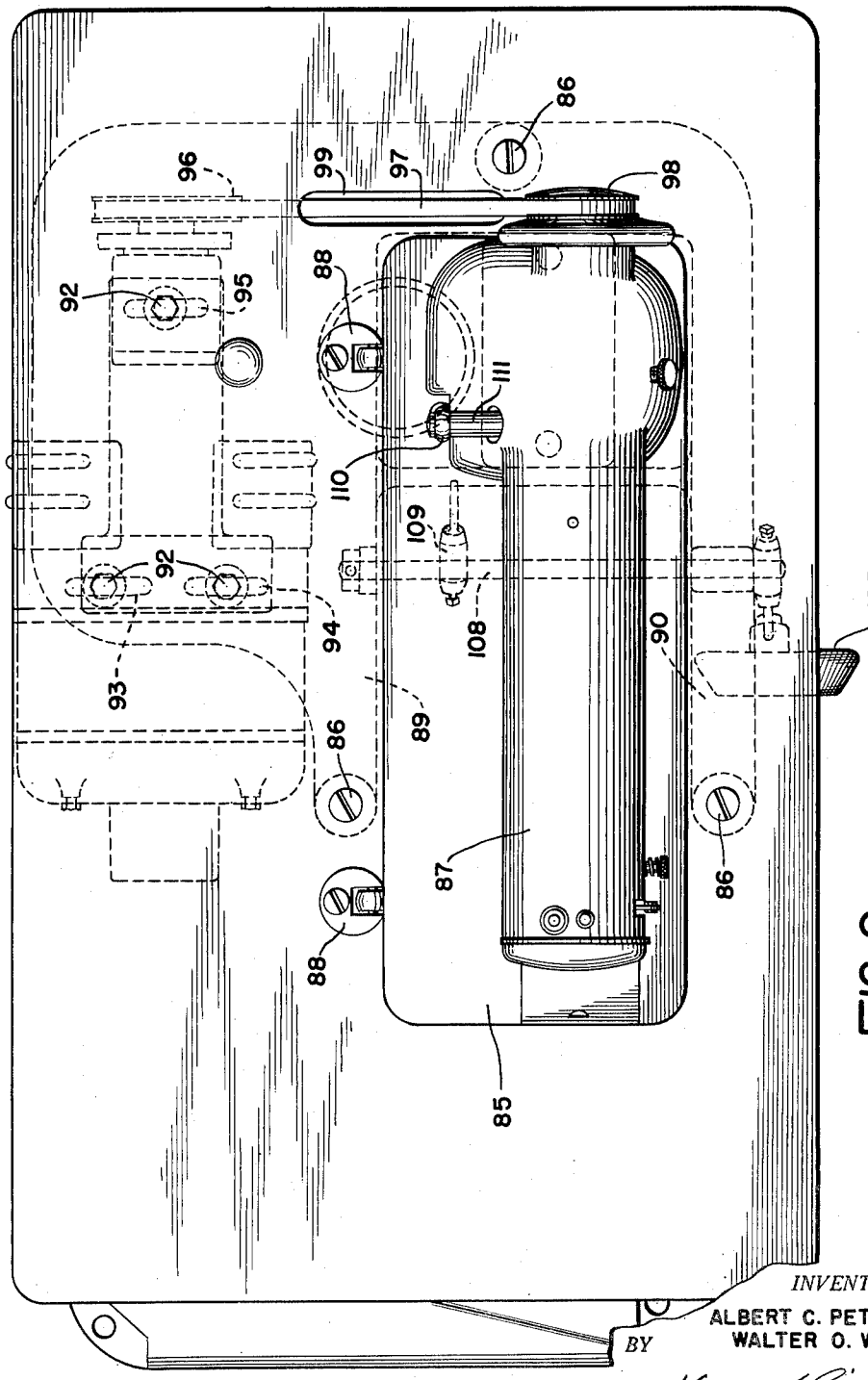


FIG. 9

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Patented Mar. 4, 1952 2,587,887

UNITED STATES PATENT OFFICE

2,587,887

SEWING MACHINE AND DRIVE WITH SUPPORT THEREFOR

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Application September 16, 1949, Serial No. 115,968

12 Claims. (Cl. 112—258)

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This invention relates to an improved sewing unit comprising a sewing machine, an individual motor drive therefore, and a pedestal type of support for said machine and drive. It relates particularly to a unit of this character having a sewing machine of the flat bed type.

A primary object of the invention has been to provide a unit of the character indicated which is of simple but sturdy and durable construction and which, at the same time, provides for relative adjustment, both angularly and bodily, between various parts of the supporting structure and between other parts of the unit so that it may be best adapted for the performance of various types of operation and for the convenience of different operators.

Another object has been to support a flat bed sewing machine on a pedestal or column in such a way that abundant space is available around the sewing machine for the comfort and convenience of the operator and for the free manipulation of the work. The arrangement is such that the sewing machine and the controls therefor are positioned for most convenient use and no part of the supporting structure interferes with the comfort of the operator or with the control of the machine or the handling of the work.

Incidental to the foregoing it has been a further object to provide for relative adjustment between the sewing machine and the pedestal supporting structure to suit the convenience and preferences of different operators and also to adapt the unit for the performance, to best advantage, of a variety of different operations.

In certain operations it is desirable to have the sewing machine tilted forwardly toward the operator so that the latter may more easily look downwardly upon the work to see that the desired seam is being formed correctly. In other operations it is important that the operator should see more clearly the approach of the work to the stitching point and for this purpose it is best to have the sewing machine tilted rearwardly away from the operator at a suitable angle. In accordance with the present invention simple but effective means are provided for these purposes. It permits tilting of the machine, either forwardly or rearwardly, to any desired extent within relatively wide limits, from the normal position in which the work supporting surface of the machine is horizontal. In addition, provision is made for varying the general elevation of the machine in relation to the floor and for swinging it in a horizontal direction about the supporting column either toward or away from the position assumed by the operator.

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Other objects, features, and advantages of the invention will appear from the detailed description of several illustrative embodiments of the same which will now be given in conjunction with the accompanying drawings, in which:

Fig. 1 is a front elevational view of a sewing unit constructed in accordance with the invention, a portion of the driving motor being broken away;

Fig. 2 is an end view of the unit shown in Fig. 1, as seen from the right, on a slightly enlarged scale, a portion of the supporting pedestal being broken away to condense the view;

Fig. 3 is a rear view of the upper portion of the sewing unit, showing the relation between the sewing machine, the drive therefor and the upper part of the pedestal support;

Fig. 4 is a top plan view of the sewing unit;

Fig. 5 is an enlarged view, partly in plan and partly in horizontal section, showing certain details of the construction of the base portion of the pedestal support;

Fig. 6 is a detail view showing in plan, on an enlarged scale, an adjustable support member embodied in the unit;

Fig. 7 is a front elevational view of a modified form of sewing unit embodying the invention;

Fig. 8 is an end elevational view of the unit shown in Fig. 7, as seen from the right in Fig. 7; and

Fig. 9 is a top plan view of the modified form of unit.

Referring now to Figs. 1 to 6 of the drawings, which illustrate one embodiment of the invention, the sewing unit comprises a supporting structure having a base member identified generally as 10. This carries a vertically extending tubular column 11 which at its upper end carries a bracket member identified generally as 12. On this there is, in turn, mounted a normally horizontally disposed supporting plate 13 to the upper surface of which is secured, by means of screws or the like, a table board 14. The latter carries a sewing machine 15 which is preferably hingedly mounted on the table board, in a conventional manner, by hinges 15a (Fig. 4) so that it may be tilted rearwardly whenever desired to inspect and service the mechanism in the base portion of the sewing machine. A post 14a carried by the table board engages the frame of the machine to support it when so tilted. Suspended from the under side of the support 13 is a driving unit 16 which includes an electric motor and a clutch adapted to place the sewing machine into and out of operation, under the control of a foot treadle, during the continuous operation of the motor.

Base 10 comprises a main casting 17 adapted to engage the floor at spaced points over a substantial area and thus provide a sturdy support for the unit, while, at the same time, permitting the unit to be shifted about whenever it is desired to change its location in a factory as when the sequence of operations in a line production system is altered. In a recess 18, provided in the casting 17 (Fig. 5), there is mounted a foot treadle 19 (Fig. 1) having vertically disposed downward extensions 20 and 21 mounted on and adapted to rock with shaft 22 journalled in portions 23, 24 and 25 of the base casting. The right hand end portion of the shaft (Figs. 1 and 5) is bent at right angles to the main axis of the shaft as indicated at 26. The extreme end of this portion of the shaft is flattened and apertured to receive the bent over end of a vertically disposed rod 27 which extends upwardly through the column 11 to a point in the region of the support member 13 where it is connected to certain devices, to be hereinafter described, for the purpose of operating the clutch of the driving unit 16. The connecting rod 27 is preferably formed in two sections which are clamped together so that an extensible link is provided to enable the adjustments of the supporting structure to be hereinafter described.

Within a further recess provided between the walls 24 and 25 of the base casting there is mounted a second foot treadle 28 (Figs. 1 and 5) which is pivoted upon the casting by means of a pivot pin 29. Suitable clearance is provided between treadle 28 and the shaft 22 to permit rocking of the treadle without interference with the shaft. In its rear portion the treadle 28 carries an angularly disposed rod 30, the outer end of which is flattened and apertured to receive the lower bent over end of a rod 31 which extends upwardly through the hollow column 11. This rod is preferably formed in two sections to permit variation in the length of the link which it provides. At its upper end rod 31 is connected, in a manner to be described, with devices for lifting the presser bar of the sewing machine.

The tubular column 11 is inserted in an upwardly extending sleeve or collar 32 forming an integral part of the base casting. This sleeve, as shown in Figs. 1, 2 and 5, is near the right, rear corner of the base casting. Any suitable means may be provided for clamping the column 11 within the sleeve, set screws 32a being shown for this purpose in Fig. 2. This arrangement permits the column 11 to be adjusted vertically to a certain extent within sleeve 32 to vary the overall height of the support. At an intermediate point along the column there is secured thereto a collar 33 which may be clamped to the column in any suitable way, as by means of set screws 34. Above the collar 33, there is mounted on the column a hub or collar-like portion 35 of the bracket 12. Set screws 36 may be provided for securing the hub 35 to the column. This arrangement is such that the bracket 12 may be adjusted both axially and angularly in relation to the column. It will be understood that the collar 33 assists in making the desired adjustments of the bracket, since it will carry the load of the bracket when the set screws 36 are loosened and, for example, permit the bracket to be shifted angularly about the column without varying its axial position in relation to the column. Integral with the hub 35 is a forwardly and upwardly extending arm 37 which, as shown in Fig. 2, may be inclined at an angle of about 30° to the vertical. This arm is preferably enclosed on three sides, i. e., its front and two side faces, but is open along its upwardly

and rearwardly presented face, as indicated by the edges 38 in Fig. 3. It thus forms an open channel which conveniently receives certain of the operating connections. At its upper end the arm 37 carries a pair of laterally extending arcuate supports 39 which present alined, upwardly facing, concave, bearing surfaces. Each of these extensions is provided with a circumferentially extending, elongated, arcuate slot 40 adapted to receive the shank of a bolt 41 which is secured to and extends downwardly from a depressed portion 42 of the support member 13. The under face of portion 42 is convexly curved and adapted to seat in the concave faces of the supports 39. As best shown in Fig. 6 the downward projection 42 is provided with apertures 43 which receive the shanks of the bolts 41, the latter being suspended by their heads from the portion 42. Preferably the radius of curvature of the convex face of the portion 42 is slightly greater than that of the concave upper faces of the supports 39 so that only line contact, along two spaced lines, occurs between these surfaces. This facilitates rocking of the projection 42 about the supporting element 39. If desired, however, these surfaces may be formed to fit with full surface contact, in the manner of a journal in its bearing. It will be understood that the bolts 41 serve to clamp the projection 42, and hence the support member 13, in any desired tilted position, within the limits permitted by the slots 40, in relation to the upper end of the arm 37.

Each of a plurality of bosses 44 (Fig. 6) suitably located on the support member 13, is provided with a screw threaded opening adapted to receive a screw for securing the table board 14 to the support member. It will be understood that the table board is provided with a relatively large opening in the region of the hinges 15a to receive the base portion of the sewing machine. The latter may be of any suitable construction. That illustrated is of the type shown in the patent to Quist No. 2,414,168, granted January 14, 1947. The base portion of the machine extends somewhat below the lower surface of the table board and is received between extensions 45 and 46 of the support member 13 and by the recessed or depressed portion of said member provided in the region of the downward projection 42. A flange provided by the work support of the sewing machine normally engages the periphery of the opening through the table board to retain the machine in the position indicated.

The main shaft of the sewing machine, which extends longitudinally of the overhanging arm, is provided at its end, outwardly of the frame of the machine, with a combined handwheel and pulley 47 through which the machine is driven. Member 47 is connected by a belt 48 with a pulley 49 carried by the driven element of the motor and clutch driving unit 16. An opening 50 extending through the table board and an alined opening 51 in the support member 13 permit the passage of the belt through these parts. Provision is made for suspending the driving unit 16 from the underside of the support member 13 in such a way that the driving unit may be shifted bodily in a direction transverse to its axis. For this purpose a pair of bolts 52, cooperating with lugs or feet 53 formed on the frame of the driving unit (Fig. 3), pass through elongated slots 54 and 55 in the support member 13 (Fig. 6). Similarly a bolt 56, made accessible by a cutout 57 in the edge of the table board, passes through an

elongated opening 58 in the support member 13 and is received by an opening in a lug or foot 59 formed on the frame of the unit 16. Upon loosening the several bolts 52 and 56, the unit 16 may be adjusted in a direction transverse to its axis, for belt tightening purposes and the like, and it may be set in adjusted position by tightening the bolts. Rubber or felt washers or the like are preferably employed around the bolts at the upper and lower surfaces of the support member 13 and the lugs 53 and 59 to absorb vibration and deaden any sound that may be generated by the driving unit.

For the purpose of controlling the clutch of the transmitter, the upper end of the rod or link 27 (Fig. 3) is connected with an arm 60 secured to a rock shaft 61 journalled in suitable bearings 62 and 63 on the underside of the support member 13 (Fig. 6). An oppositely extending arm 64 is secured to the opposite end of the shaft 61 and is connected by a rod 65 with an arm 66 (Figs. 1 and 2) extending outwardly from a collar 67 secured to the clutch shifting sleeve (not shown) of the driving unit. This unit may be of any suitable, known construction. That illustrated is of the type disclosed in the Peets et al. Patent No. 2,004,055, granted June 4, 1935. The arrangement is such that, on depressing the treadle 19, the rod 27 will be drawn downwardly and through the connections described will rock the clutch engaging sleeve of the driving unit to cause the sewing machine to be driven.

An arm 68 (Fig. 6) secured to a rock shaft 69, journalled in a bearing sleeve 70 carried by the under side of the support member 13, is adapted to be connected with the upper end of the rod 31 which is operated by the foot treadle 28. At its opposite end the rock shaft 69 is provided with a transversely extending finger 71 which is connected through a lever (not shown) with a rod 72 (Figs. 2 and 3) connected with an arm 73 extending rearwardly through the frame of the sewing machine. Arm 73 forms a part of the presser bar lifting mechanism (not shown) which may be of any suitable construction, such as that illustrated in the above mentioned Quist Patent No. 2,414,168.

It will be seen from the foregoing that the sewing machine and its controls are very conveniently disposed in relation to an operator seated in front of the treadles 19 and 28 (Fig. 1), that is, seated at the left in Fig. 2 and facing toward the right of said figure. A very sturdy support is provided for the sewing machine and its driving unit. Moreover, the sewing machine is positioned conveniently over the foot treadles, while at the same time a maximum amount of free space is provided beneath the supporting table so that the operator is free to assume the most comfortable position. There is nothing to interfere with any part of the operator's body nor with the free handling of the work to be stitched. The improved supporting structure permits the pedestal or column 11 to be located toward the rear of the supporting structure to provide the freedom of movement indicated. At the same time, provision is made for a variety of relative adjustments of the various parts. The height of the supporting table 14 may be adjusted either by lifting the column 11 within the sleeve 32 or by lifting the collar 35 of the bracket 12 in relation to the upper end of the column. So also the supporting table, together with the sewing machine and the driving unit may be swung in a horizontal direction about the axis of the column 11, by swivelling the hub 35 about the column. The angular position of the sewing machine in relation to the treadles 19 and 28 may thus be varied to suit the preferences of particular operators or the requirements of particular operations. So also the cooperating arcuate, partial cylindrical surfaces of the elements 39 and 42 permit tilting of the support member 13 in relation to the bracket 12 to any extent desired within the limits permitted by the arcuate slots 40. The preferences of various operators and the requirements of various operations may thus be accommodated to maximum advantage. As has previously been indicated, the driving unit is also made bodily adjustable in a direction transverse to its axis for belt tightening purposes and the like. As will be best seen in Fig. 2, the slope of the rearward edge of arm 37 is such that the pulley 49 of the driving unit is readily accessible for removal when the support member 13 is in its horizontal position.

Referring now to Figs. 7, 8 and 9, another embodiment of the invention is shown. This differs from the first embodiment primarily in the location and arrangement of the driving unit in relation to the sewing machine and its supporting table. The pedestal support comprises a floor engaging base member 74 having an upstanding collar or sleeve 75 which, in this case, is located toward one side of the base member but at a point near the longitudinal center line of the base member. This, as will appear later, provides for more direct connections between the treadle and the clutch operating arm of the driving unit and makes the driving unit more readily accessible. A tubular column 76 is received by the hub or sleeve 75 and is secured therein, in adjusted position, by means of set screws or the like. A collar 77 is mounted on the column 66 at an intermediate point and secured thereto by one or more set screws. Above this collar the column carries a hub portion 78 of a bracket having an upwardly and forwardly extending arm 79, preferably of the same general construction as the arm 37 of the first embodiment but inclined forwardly at a smaller angle to the vertical. The upper end of arm 79 is provided with two laterally extending flanges 80, of arcuate form, presenting upwardly extending concave, partial cylindrical surfaces. Elongated slots 81 extending through the flanges 80 receive bolts 82 carried by a downwardly extending bearing portion 83 of a plate-like support 84. Projection 83 has a convex, partial cylindrical surface adapted to engage the concave upper surfaces of the flanges 80. The radius of curvature of the projection 83 is preferably slightly greater than that of the supporting surfaces of the flanges 80 to produce line contact, rather than surface contact, between these parts. As in the first embodiment, however, these surfaces may, if desired, have a journal and bearing relationship. It will be understood that this arrangement, similar to that provided in the first embodiment, enables tilting of the support member 84 either forwardly or rearwardly to any desired extent within the limits permitted by the slots 81. Bolts 82 serve to clamp the support member in any adjusted position.

Secured to the upper surface of the support member is a table board 85 which may be held in place by a number of screws 86 (Fig. 9). A sewing machine 87 of any suitable construction, such as that provided in the first embodi-

ment, is mounted on the table board by means of hinge plates 88. The base portion of the sewing machine is adapted to pass through a suitable opening in the table board and is seated between arms 89 and 90 of the support member 84. A flange provided by a slight extension of the work supporting member of the sewing machine cooperates with the upper surface of the table board, in the region of the opening therethrough, to retain the machine in proper position.

Support member 84 is similar in construction to support member 13 of the first embodiment, but, as best shown in Fig. 9, is of somewhat different configuration in plan. It is provided with a rearward extension for suspending the driving unit 91. The latter is attached to the support member by a plurality of bolts 92, three being shown, which cooperate with elongated slots 93, 94 and 95 extending transversely of the axis of the driving unit. Table board 85 may be suitably grooved on its under surface to accommodate the heads of these bolts. The means for attaching the driving unit may be similar to that described in relation to the first embodiment and preferably includes shock absorbing and sound deadening means. A driven pulley 96, connected with the driven element of the clutch of the unit, is connected by a belt 97 with a combined handwheel and pulley 98 on the sewing machine. This belt passes through an opening 99 in the table board and a corresponding opening through the support member 84. Elongated slots 93, 94 and 95 permit adjustment of the driving unit in a direction transverse to its axis for belt tightening purposes.

The driving unit may suitably be of the same type as in the first embodiment and may include an operating arm 100 extending radially from a clutch engaging sleeve. This arm is connected through the balanced springs shown in Fig. 8 with a rod 101 which extends downwardly through the column 76 and is connected with an arm 102 formed preferably as a bent extension of a treadle supporting shaft 103. A treadle 104, which may be similar to treadle 19 of Fig. 1, is secured to the shaft 103 for operating the latter to cause engagement of the clutch of the driving unit.

Means for lifting the presser bar may also be controlled by a treadle, as in the first embodiment, but for simplicity it is preferably placed under knee control. For this purpose a knee pad 105 is carried by a rod 106 mounted in a clamp 107 secured to a rock shaft 108. The latter is journalled in suitable bearings on the underside of the support member 84 and carries at an intermediate point an arm 109 adapted to cooperate, either by a link connection or by a camming action, with a rock lever (not shown) similar to that shown in Quist Patent No. 2,414,168. The opposite arm of said lever is connected by a rod 110 with an arm 111 extending outwardly through the frame of the sewing machine and connected in the manner disclosed in said Quist patent with the presser bar lifting means.

The embodiment of Figs. 7 to 9 does not provide quite as much free space beneath the supporting table as does the first embodiment, but it has the advantages of greater compactness in a longitudinal direction and simpler and more direct control connections, among others.

While several illustrative embodiments of the invention have been disclosed in some detail, it will be understood that various modifications may be made in the construction and arrangement of the various parts. Features disclosed in connection with one embodiment may, if desired, be incorporated in the other.

What we claim is:

1. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a vertically disposed column, the combination which comprises a bracket secured to said column adjacent its upper end and having an arm extending upwardly therefrom at an acute angle to the axis of said column, a substantially flat support member mounted on the upper end of said arm, said arm and support member having cooperating arcuate surfaces through which the load is transmitted from said member to said arm, means for clamping said arcuate surfaces together in a plurality of relative positions, and means for attaching said sewing machine and driving unit to said support member.

2. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a vertically disposed column, the combination which comprises a bracket secured to said column adjacent its upper end and having an arm extending upwardly therefrom at an acute angle to the axis of said column, a substantially flat support member mounted on the upper end of said arm, said arm and support member having cooperating arcuate surfaces through which the load is transmitted from said member to said arm, one of said surfaces being convex and the other concave, the convex surface having a greater radius of curvature than the concave surface, means for clamping said arcuate surfaces together in a plurality of relative positions, and means for attaching said sewing machine and driving unit to said support member.

3. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a vertically disposed column, the combination which comprises a bracket secured to said column adjacent its upper end for axial and angular adjustment in relation thereto and having an arm extending upwardly therefrom at an acute angle to the axis of said column, a substantially flat support member mounted on the upper end of said arm, said arm and support member having cooperating arcuate surfaces through which the load is transmitted from said member to said arm, means for clamping said arcuate surfaces together in a plurality of relative positions, and means for attaching said sewing machine and driving unit to said support member.

4. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a vertically disposed hollow column, the combination which comprises a bracket secured to said column adjacent its upper end and having an arm extending upwardly therefrom at an acute angle to the axis of said column, said arm being hollow and providing an open-backed channel communicating with said hollow column, a substantially flat support member mounted on the upper end of said arm, said arm and support member having cooperating arcuate surfaces through which the load is transmitted from said member to said arm, means for clamping said arcuate surfaces together in a plurality of relative positions, means for attaching said sewing machine and driving unit to said support mem-

ber, and means housed in part within said column and arm for controlling the operation of said driving unit.

5. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a floor engaging base and a column carried by said base and extending upwardly therefrom adjacent one side, the combination which comprises a bracket secured to said column adjacent its upper end, said bracket having a forwardly and upwardly extending arm, a substantially flat support member mounted on the upper end of said arm, said support member and arm having substantially complemental partial cylindrical surfaces in load supporting engagement, one of said surfaces being concave and the other convex and said surfaces having their axes extending transversely of said arm, means for clamping said surfaces together, said means enabling tilting of said support member forwardly or rearwardly from a horizontal position on said arm and the clamping of said member in tilted position, means for securing said sewing machine and driving unit to said support member, and means connecting said driving unit with said sewing machine for driving the latter.

6. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a floor engaging base and a column carried by said base and extending upwardly therefrom adjacent one side, the combination which comprises a bracket secured to said column adjacent its upper end, said bracket having a forwardly and upwardly extending arm, a substantially flat support member mounted on the upper end of said arm, said support member and arm having substantially complemental partial cylindrical surfaces in load supporting engagement, one of said surfaces being concave and the other convex and said surfaces having their axes extending transversely of said arm, means for clamping said surfaces together, said means enabling tilting of said support member forwardly or rearwardly from a horizontal position on said arm and the clamping of said member in tilted position, means for securing said sewing machine and driving unit to said support member, said driving unit being arranged directly in rear of said sewing machine, and means connecting said driving unit with said sewing machine for driving the latter.

7. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support, the support including a floor engaging base and a hollow column carried by said base and extending upwardly therefrom adjacent one side, the combination which comprises a bracket secured to said column adjacent its upper end, said bracket having a forwardly and upwardly extending arm, a substantially flat support member mounted on the upper end of said arm, said support member and arm having substantially complemental partial cylindrical surfaces in load supporting engagement, one of said surfaces being concave and the other convex and said surfaces having their axes extending transversely of said arm, means for clamping said surfaces together, said means enabling tilting of said support member forwardly or rearwardly from a horizontal position on said arm and the clamping of said member in tilted position, means for securing said sewing machine and driving unit to said support member, means connecting said driving unit with said sewing machine for driving the latter, a foot treadle rockably mounted on said base, and connections from said treadle extending through said hollow column for controlling the driving connection between said driving unit and said sewing machine.

8. In sewing apparatus having a pedestal support and a sewing machine and a driving unit therefor mounted on said support including a clutch, the support including a floor engaging base and a column carried by said base and extending upwardly therefrom adjacent one side, the combination which comprises a bracket secured to said column adjacent its upper end, said bracket having a forwardly and upwardly extending arm, a substantially flat support member mounted on the upper end of said arm, said support member and arm having substantially complemental partial cylindrical surfaces in load supporting engagement, one of said surfaces being concave and the other convex and said surfaces having their axes extending transversely of said arm, means for clamping said surfaces together, said means enabling tilting of said support member forwardly or rearwardly from a horizontal position on said arm and the clamping of said member in tilted position, means for securing said sewing machine and driving unit to said support member, said driving unit having a clutch controlling arm extending laterally therefrom to a point over the top of said column, a treadle carried by said base, connections from said treadle to said clutch controlling arm including a rod extending upwardly through said column and connected directly with said arm, and means connecting said driving unit with said sewing machine for driving the latter.

9. In sewing apparatus comprising a pedestal support having a vertically disposed column and a sewing machine and a driving unit therefor mounted on said column, the combination which comprises a bracket member carried by said column, a plate-like member carried by said bracket member, said bracket and plate-like members having cooperating concave and convex load transmitting surfaces, respectively, permitting rocking of said plate-like member in relation to said bracket member, means for clamping said surfaces together in a selected relative position, means for mounting said sewing machine and driving unit on said plate-like member, and means connecting said driving unit with said sewing machine for driving the latter.

10. In sewing apparatus comprising a pedestal support having a vertically disposed column and a sewing machine and a driving unit therefor mounted on said column, the combination which comprises a bracket member carried by said column, a plate-like member carried by said bracket member, said members having cooperating concave and convex load transmitting surfaces permitting rocking of said plate-like member in relation to said bracket member, means for clamping said surfaces together in a selected relative position, said clamping means comprising a bolt carried in fixed relation by one of said members and passing through an elongated slot in the other of said members, means for mounting said sewing machine and driving unit on said plate-like member, and means connecting said driving unit with said sewing machine for driving the latter.

11. In sewing apparatus comprising a pedestal support having a vertically disposed column and a sewing machine and a driving unit therefor mounted on said column, the combination which

comprises a bracket member carried by said column, a plate-like member carried by said bracket member, said bracket and plate-like members having cooperating concave and convex load transmitting surfaces, respectively, permitting rocking of said plate-like member in relation to said bracket member, means for clamping said surfaces together in a selected relative position, said plate-like member having a recess for the reception of the base of the sewing machine and a plurality of elongated slots transverse to the axis of said recess directly in rear thereof, means cooperating with said slots for adjustably suspending said driving unit parallel with and directly in rear of said sewing machine, and means connecting said driving unit with said sewing machine for driving the latter.

12. In sewing apparatus comprising a pedestal support having a vertically disposed column and a sewing machine and a driving unit therefor mounted on said column, the combination which comprises a bracket member carried by said column, a plate-like member carried by said bracket member, said members having cooperating concave and convex load transmitting surfaces permitting rocking of said plate-like member in relation to said bracket member, the radius of curvature of said concave surface being less than that of said convex surface, means for clamping said surfaces together in a selected relative position, said clamping means comprising a bolt carried in fixed relation by one of said members and passing through an elongated slot in the other of said members, means for mounting said sewing machine and driving unit on said plate-like member, and means connecting said driving unit with said sewing machine for driving the latter.

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The following references are of record in the file of this patent:

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