April 24, 1951 W. J. SOPER 2,550,306

CONVEYER SERVICE TRAY FOR OPERATING TABLES

Filed April 18, 1947

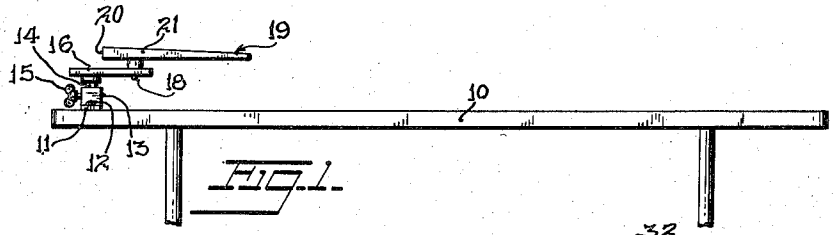


FIG. 1.

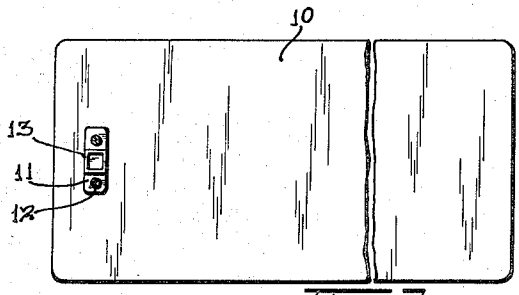


FIG. 2.

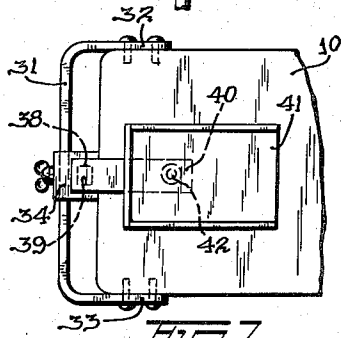


FIG. 7.

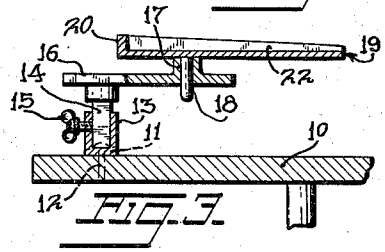


FIG. 3.

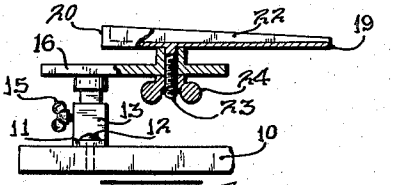


FIG. 4.

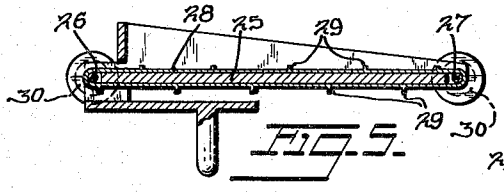


FIG. 5.

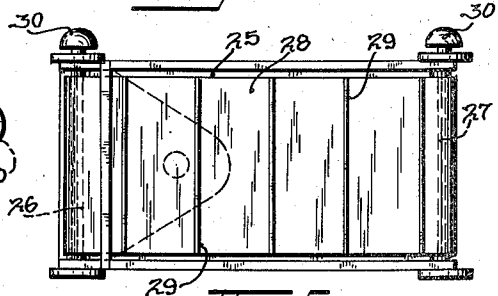


FIG. 6.

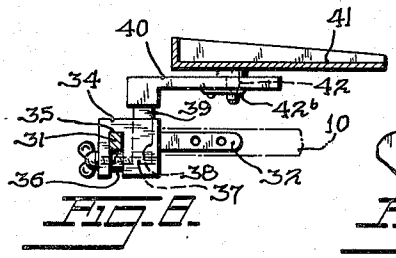


FIG. 8.

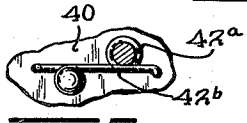


FIG. 9.

INVENTOR.
WILLIAM J. SOPER
BY Zoltan A. Polacheck
ATTORNEY

Patented Apr. 24, 1951 2,550,306

UNITED STATES PATENT OFFICE

2,550,306

CONVEYER SERVICE TRAY FOR OPERATING TABLES

William J. Soper, Kingston, N. Y.

Application April 18, 1947, Serial No. 742,321

1 Claim. (Cl. 311—10)

1

This invention relates to an attachment for operating tables used by physicians and surgeons and in particular to provide an arm rest for the patient being operated on in any position on the horizontal level, the same being on a level with the table mat, so that the anesthetist can check the blood pressure, give intravenous anesthesia, infusions, etc.

One of the objects of the invention is the provision of a work tray and support for the same, which can be mounted on a standard operating table, and which will permit the tray to swing to any position for service use.

Another object of the invention is the provision of means for advancing the position of the service units or tools on the tray, so that they may be used in the sequence established by the steps required to complete an operation or any phase of it.

For further comprehension of the invention and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a side elevation of an operating table equipped with the attachment.

Fig. 2 is a plan view of the operating table but with the attachment except for the base removed.

Fig. 3 is a side elevational view of the service tray and its supporting bracket arm partly in section.

Fig. 4 is a view similar to Fig. 3 of a modified form of the tray and a pivot clamp therefor.

Fig. 5 is a partial side elevation, partly in section, of another modified form of the tray, showing a tool or work conveyer.

Fig. 6 is a plan view of Fig. 5.

Fig. 7 is a partial plan view of an operating table provided with a sliding tray constructed in accordance with another modification of the invention.

Fig. 8 is a vertical sectional view through the sliding block and stems of the tray shown in Fig. 7.

Fig. 9 is a detail bottom plan view, partly in section, of the spring lock for holding the tray pivot in place in the modification shown in Fig. 7.

Referring to the drawings which illustrate the practical embodiments of the invention, 10 designates a conventional operating table on

2

which a physical or surgical inspection, or any suitable operation may be made. On this table, a base 11 is attached as by the screws 12, and this base is formed with an upstanding integral socket 13, which is shown to be square in shape.

In the socket 13, a stem 14, of corresponding shape and size, is placed, and the vertical position of the stem 14 may be adjusted by means of a set screw 15, which is threaded through the wall of the socket 13. The stem 14 is integral with a service tray bracket 16, so that the bracket will not turn on the stem but will be held in fixed relation to the stem and to the socket 13 and the table which supports it.

The stem 14 is located at one end of the bracket 16 and this bracket is provided with a round socket or bearing hole 17 at the opposite end thereof. The socket or bearing hole 17 receives the pivot pin 18 of the service tray 19, which may be made of aluminum, plastic, or any other material which is resistant to corrosion.

The service tray 19 has an end guard flange 20, side guard flanges 21 and 22, and one end thereof is devoid of any flange. The pivot pin 18 is located at one end of the service tray, and supports the service tray in an approximately horizontal position, for free turning in all directions to bring the units or tools supported by the service tray into the best working relation to the surgeon or physician engaged in the operation, or the assistant who is cooperating in aiding the surgeon or physician.

To restrict the free pivotal movement of the service tray, the pivot pin thereof, as shown at 23 in Fig. 4, may be screw threaded and a nut 24 may be adjusted thereon, so that the frictional resistance to turning may be varied at will.

In Figs. 5 and 6, a service tray 25 is shown which has a roller 26 mounted to turn on one end thereof, and a roller 27 mounted to turn on the opposite end thereof. On these rollers, an endless belt or conveyer 28 is arranged to travel, with one run above the tray and the other run below the tray. This belt or conveyer 28 is provided with transverse cleats 29 which tend to separate articles, tools or service units placed on the conveyer from each other and to prevent slipping on the conveyer.

Each of the rollers 26 and 27 is provided with a knob 30, so that by turning the knob the conveyer 28 may be advanced. The conveyer may also be advanced by placing the hand on the upper run of the conveyer and pushing the run in the direction desired.

In Figs. 7, 8 and 9, a modified form of the at-

tachment is shown, which includes a horizontal bar 31, mounted on the operating table 10, as by the side arms 32 and 33. On this bar 31, which is approximately square or rectangular, a block 34 is mounted to move horizontally, and for this purpose is constructed with a vertical slot 35 which receives the body of the bar 31. The sliding block 34 is held against vertical displacement by means of the roller 36, which engages the bottom side of the bar 31, and turns on the cross shaft 37 mounted on the block 34.

The sliding block 34 is formed with a rectangular vertical socket 38, which receives a vertical stem 39 of a bracket 40. On the end of this bracket 40, the service tray 41 is mounted to turn by means of its pivot post 42, which extends through a hole in the bracket 40.

This construction permits the service tray to be shifted from one side of the operating table to the other, and if the supporting bar 31 is secured lengthwise of the table, the service tray can then be shifted from one end to the other end of the operating table.

In order to prevent the accidental displacement of the service tray 41 from the bracket 40, the pivot 42 is formed with a circumscribing groove 42^a, which is engaged by a spring latch finger or arm 42^b, which is attached to the bracket 40.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

In a service tray, a flat tray member, a depending pin supported from said tray member, parallel side walls extended along the sides of said tray member and having their free ends projected beyond the ends of said tray member and formed with aligned holes, rollers extended between said ends of said side walls, said rollers being formed with trunnions engaging said holes of said side walls, said holes of said side walls being located on a plane common with said tray member so that said rollers will be rotatively supported on a plane common with said tray member, a continuous belt engaged over said rollers with one run traversing the top face of said tray member and with one run traversing the bottom face of said tray member, said trunnions at one of their ends being extended beyond the respective side wall, knobs mounted on the extended ends of said trunnions by which either roller can be turned in one direction or the other to similarly move said belt with relation to said tray member, and spaced cleats extended transversely across the exposed face of said continuous belt.

WILLIAM J. SOPER.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
519,630	Hogg	May 8, 1894
995,114	Clark et al.	June 13, 1911
1,007,590	Miller	Oct. 31, 1911
1,239,146	Wantz	Sept. 4, 1917
1,700,834	Farr	Feb. 5, 1929
1,797,847	Vandagriff	Mar. 24, 1931
1,801,637	Nichols	Apr. 21, 1931
1,836,511	Severns	Dec. 15, 1931
2,051,712	Holt	Aug. 18, 1936
2,072,009	Moore	Feb. 23, 1937
2,193,647	Rush et al.	Mar. 12, 1940
2,211,648	Currie	Aug. 13, 1940
2,241,082	Dabelstein	May 6, 1941
2,317,438	Bradley	Apr. 27, 1943
2,400,667	Toews	May 21, 1946