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D. COCHRAN

2,149,239

SEWING-MACHINE SHEARS

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Fig. 1.

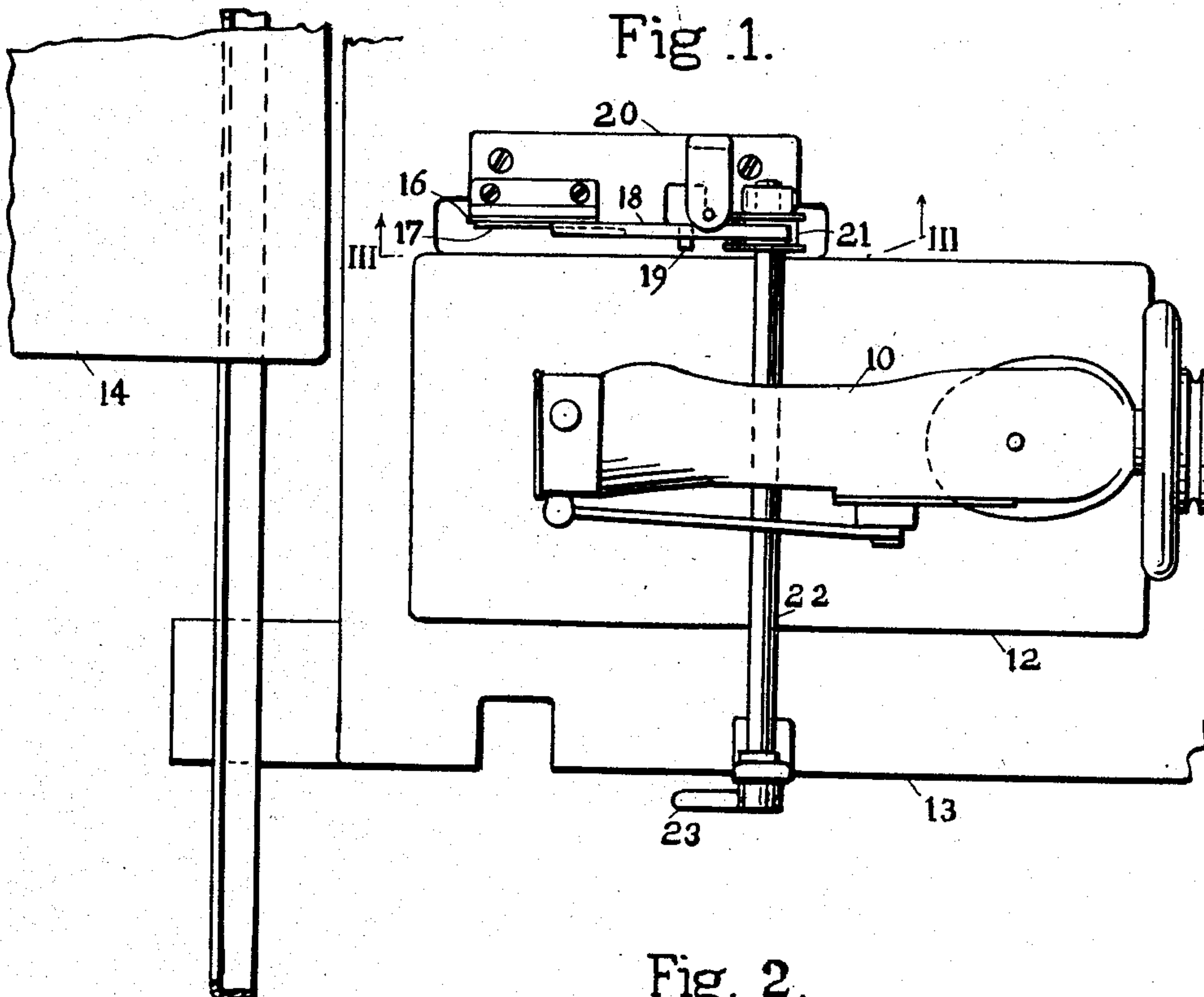


Fig. 2.

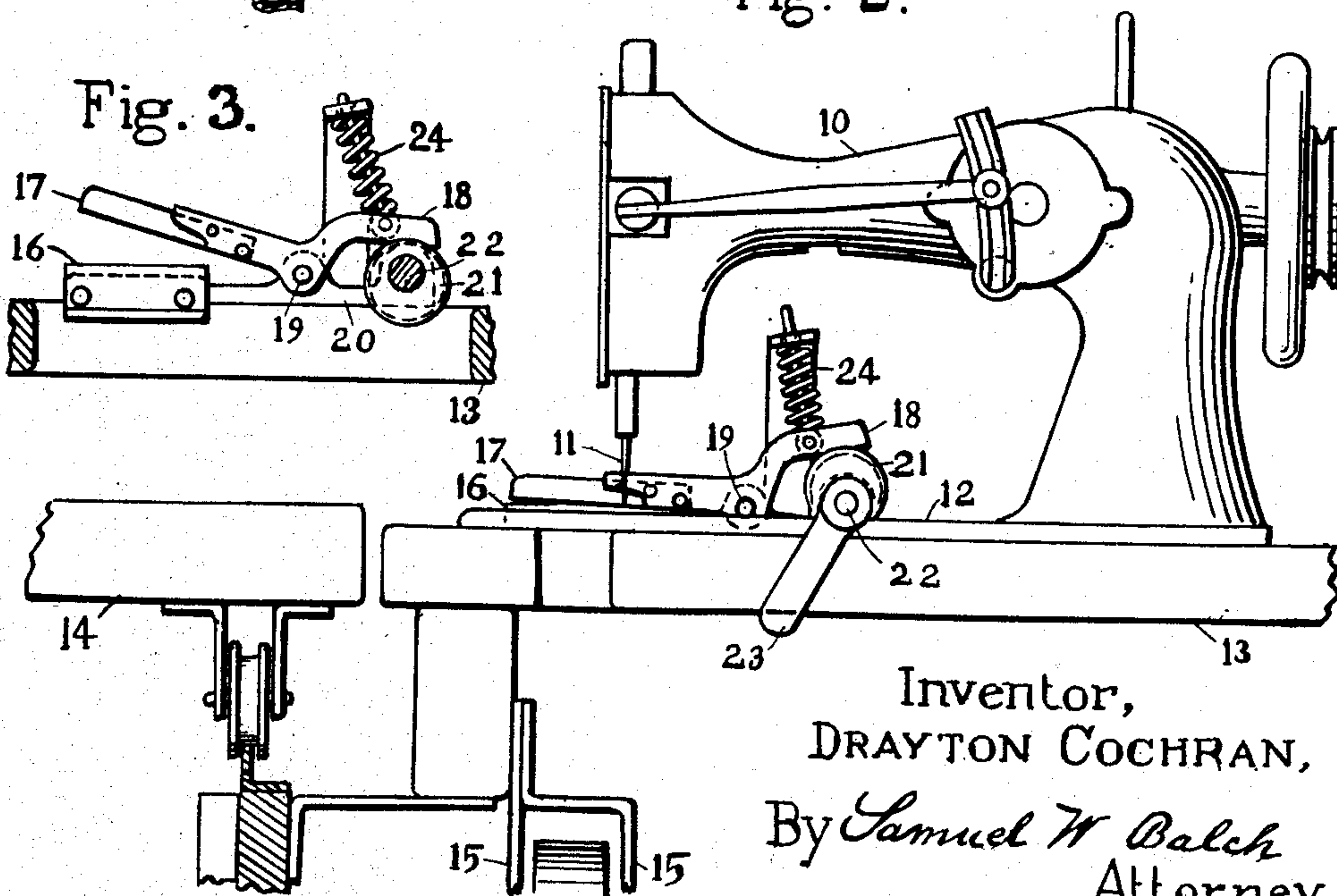
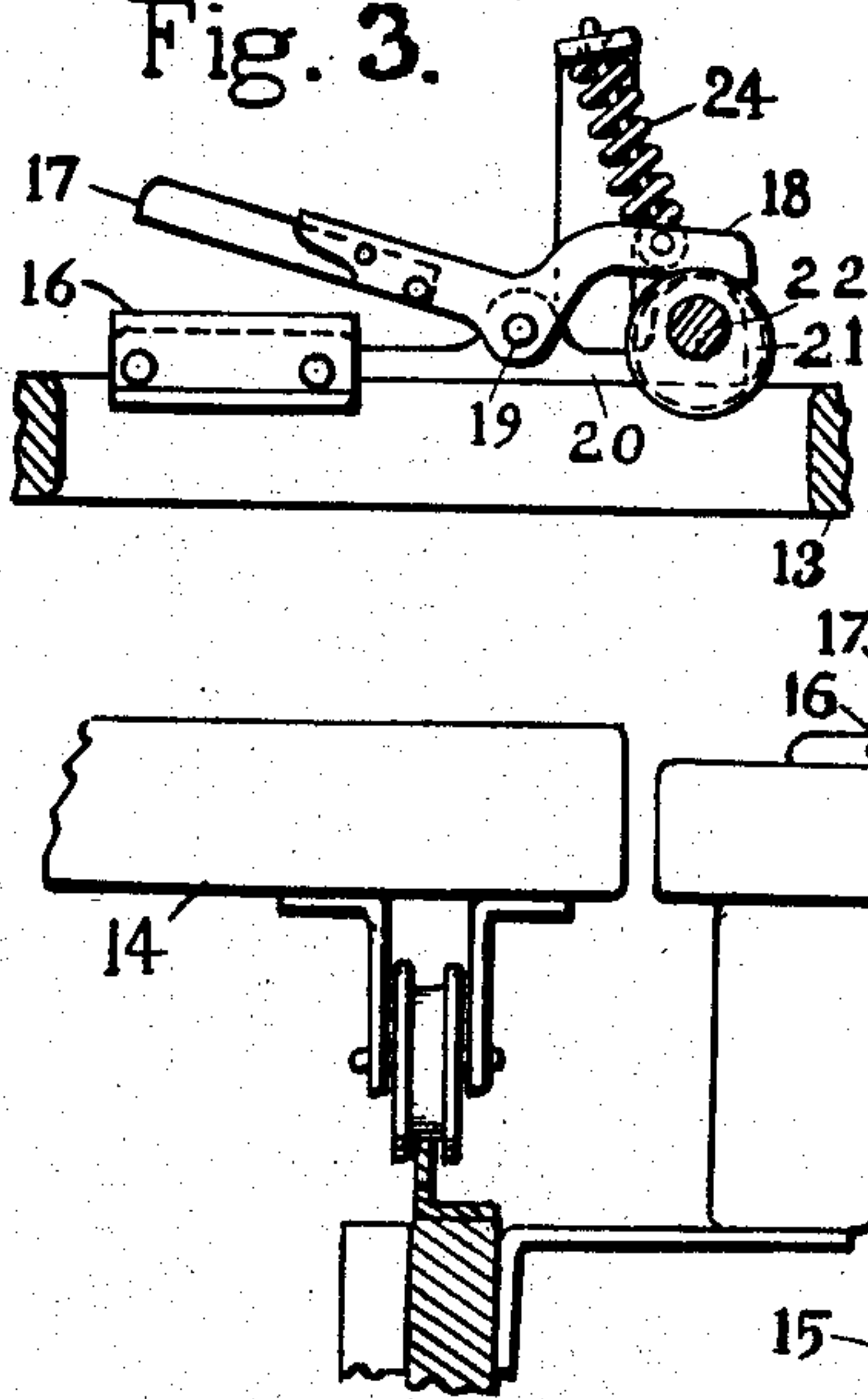


Fig. 3.



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SEWING-MACHINE SHEARS

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Application October 14, 1937, Serial No. 168,990

1 Claim. (Cl. 112—130)

In the expeditious sewing of goods in quantity production one piece closely follows another in the sewing machine so that the seam runs from one piece to the next and connects them in order to obviate the necessity of picking up free ends of the needle and shuttle threads with each piece to be sewed. The pieces are subsequently cut apart. In the stitching of bindings to the edges of fabrics, and particularly in the stitching of binding tape to the edges of rugs and carpets it is necessary to cut across the binding and free each rug as the stitching is completed, remove it and return the traveling table from the rear of the sewing machine to the front of the sewing machine to receive the next rug. The severing has to be made by shears located in line with edge and binding after they have been sewed together and on the opposite side of the machine from where the operator is seated.

The object of this invention is to provide a shears that is suitably located for severing the tape close to the ends of the rug seam and provided with means for its operation in convenient location for the operator of the sewing machine.

In the accompanying sheet of drawings which forms a part of this description,

Figure 1 is a top view of a sewing machine and associated shears which embodies this invention.

Fig. 2 is a front elevation of the same with the shears closed.

Fig. 3 is a vertical section through the supporting table of the sewing machine showing the shears in elevation and open.

The invention is shown in connection with a sewing machine such as is set forth in United States Patent No. 1,975,728, dated October 2, 1934, for a Sewing machine for attaching a binding tape to the cut edge of a rug or carpet, to which reference is made for details not shown herein.

The sewing machine has the usual overhanging bracket arm 10, needle 11, and bed plate 12, setting on a table 13. At the side of the machine is a traveling table 14 which can be slid from a position in front of the sewing machine to a position at the rear of the machine, and has a width of about thirty inches and a length of about twelve feet convenient for the support of a rolled-up rug or carpet. A roll of tape to be stitched to the edge of the rug is carried by depending bars 15. The rug moves with the traveling table as the edge passes through the sewing machine.

Shears mounted in line with the stitched edge consist of a fixed blade 16 parallel with the bed plate and a movable blade 17 carried by a lever 18 fulcrumed on a pivot 19 of a frame 20. In order that cutting edge of the fixed blade may be low enough for the work to readily pass over it, the frame projects into a mortice in the sewing-machine table. The blades are of sufficient length to sever the tape in one stroke. The lever is operated by an eccentric or cam 21 on a shaft 22 which connects with an actuating handle 23 on the opposite side of the sewing machine from the shears in convenient location for operation by the operator of the machine. The eccentric operates with progressively increasing mechanical advantage as the blades close on the work, and, when the severing is being effected near the tips of the shear blades, the eccentric is brought to its uppermost point with maximum mechanical advantage. A spring 24 opens the shears.

The rug rolled up is placed upon the traveling table, partially unrolled and the edge with the tape leading underneath are fed through the sewing machine, the table traveling with the rug as the sewing proceeds. When the end of the rug seam has reached the shears and a few stitches have been taken in the tape by itself, the sewing machine is stopped and the tape is severed close to the end of the rug seam thereby freeing the rug which is then removed and the traveling table is run back to the front of the sewing machine and the next rug is placed thereon, the edge entered in the machine and its stitching is commenced. When the forward end of the stitched edge reaches the shears there is a short length of tape projecting which is sheared off and discarded.

I claim:

The combination with a sewing machine having an overhanging bracket arm adapted for sewing a binding tape to the edge of a fabric, of shears comprising a fixed blade mounted in line with the tape and fabric and a cooperating pivoted movable blade, a lever for carrying the movable blade, a cam for operating the lever with progressively increasing mechanical advantage as the blades are closed on the work, a shaft extending to the front of the machine and carrying the cam, and an actuating handle mounted on the shaft on the opposite side of the machine from the shears.

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