(No Model.)

S. H. RANDALL.

STITCHING HORSE.

No. 307,141. Patented Oct. 28, 1884.

FIG. 1.

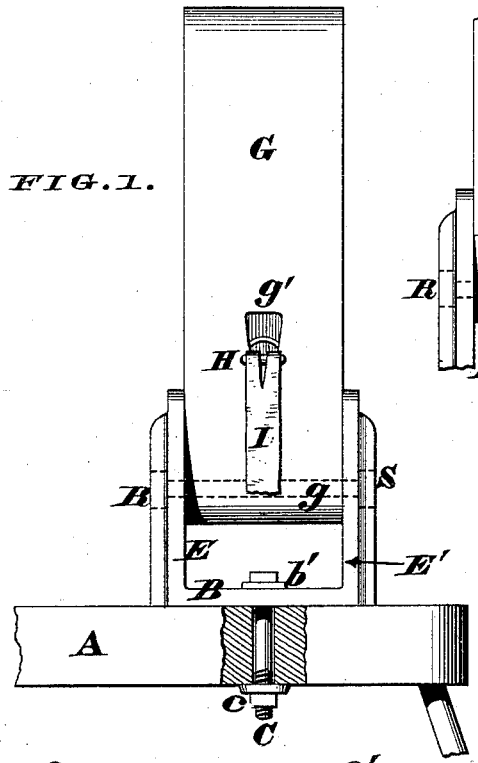


FIG. 9.

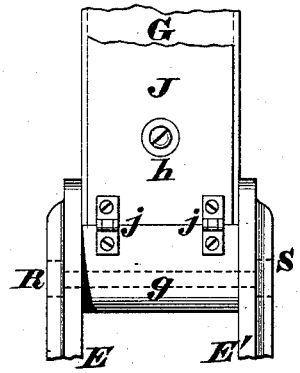


FIG. 2.

FIG. 3.

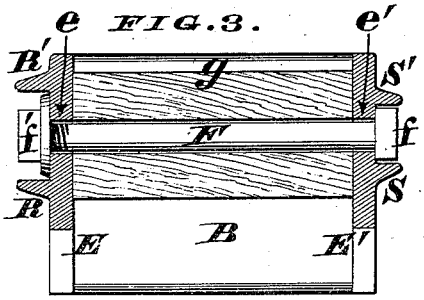


FIG. 4.

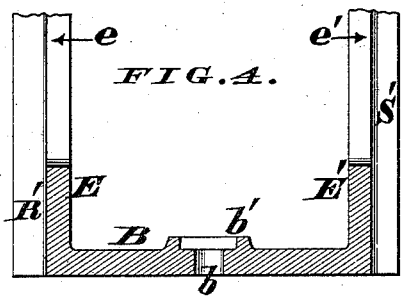


FIG. 5.

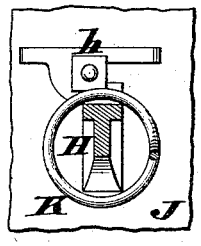


FIG. 8.

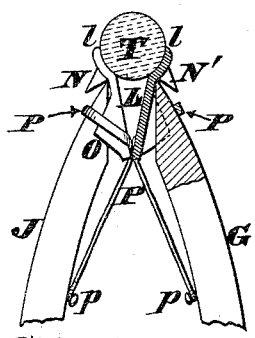


FIG. 7.

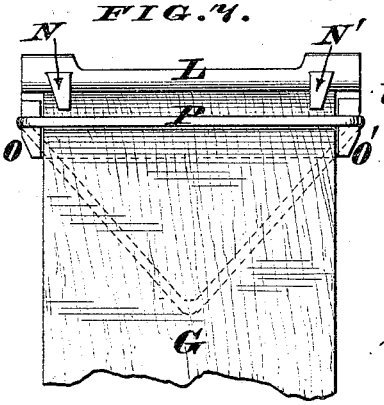
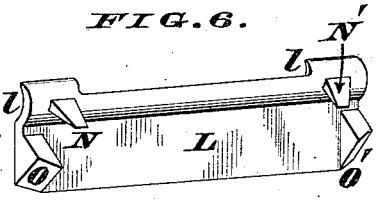


FIG. 6.



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UNITED STATES PATENT OFFICE.

SILAS H. RANDALL, OF CINCINNATI, OHIO, ASSIGNOR TO SILAS B. RANDALL, OF SAME PLACE.

STITCHING-HORSE.

SPECIFICATION forming part of Letters Patent No. 307,141, dated October 28, 1884.

Application filed June 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, SILAS H. RANDALL, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Stitching-Horses, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to those stitching-horses which include a pair of jaws mounted on a seat or bench and adapted to be operated by a treadle to which a cord or strap is attached; and the first part of my improvements comprises a novel combination of devices that allows the jaws to be inclined at any desired angle, to be raised or lower to suit the convenience of the harness-maker, or to be turned completely around, so as to bring the hinged jaw either on the right or left side of the seat, or to dispose said jaw at any intermediate position. To accomplish these results, I pass a pivot-bolt horizontally through the head of the fixed jaw, and cause the opposite ends of said bolt to traverse vertical slots in the side plates of a turn-table, which latter is swiveled upon the bench, upper surface of the seat, or horse proper. This horizontal pivot-bolt has a nut at one end, the slackening of which nut relieves the jaw-head of the pressure of the side plates and allows the jaws to be either raised or lowered, or to be canted over to any desired angle, after which act the nut is screwed home, thereby clamping the head between said plates and holding the fixed jaw immovably in position, but permitting free play of the hinged jaw of the horse. A vertical bolt passes through the turn-table, in order that the latter may be swung completely around in a horizontal plane, for the purpose of disposing the hinged jaw in such a position as will be the most convenient either for a right or left hand workman, as hereinafter more fully described.

The second part of my invention comprises a novel construction of supplementary or extra jaws adapted to be readily mounted on the main jaws of the horse, said extra jaws being retained in place by lugs projecting from them, although additional security may be afforded by passing elastic bands around each of said jaws and engaging said bands with tacks or their equivalents on the inner side of the main jaws, as hereinafter more fully described.

The third part of my invention consists in slotting the fixed jaw and passing through this slot an arm, one end of which is fastened to the inner side of the hinged jaw, while the other or outer end of said arm has applied to it the upper end of the strap that connects with the treadle of the horse. By this arrangement the hinged jaw is firmly closed when the treadle is depressed, a spring coiled around the aforesaid arm serving to open the jaw the instant said treadle is liberated from its catch or ratchet, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a sectional side elevation of my improved stitching-horse. Fig. 2 is a transverse section of a modified form of the horse, the jaws being shown canted over to one side. Fig. 3 is an enlarged horizontal section of the jaw-head and its accessories, said section being taken in the plane of the horizontal pivot. Fig. 4 is an enlarged vertical section of the turn-table taken in the plane of its slots. Fig. 5 is an enlarged transverse section of the arm that actuates the hinged jaw. Fig. 6 is a perspective view of one of the supplementary jaws. Fig. 7 is a side elevation showing said jaw applied to one of the main jaws of the horse. Fig. 8 is a sectional elevation showing both of the extra jaws secured to the main jaws. Fig. 9 is an elevation of the lower portion of said jaws.

A represents the bench or seat of an ordinary stitching-horse, said bench being mounted on customary legs and being provided with the usual arrangement of treadle for operating the movable jaw. Swiveled directly upon the upper surface of this seat, and near the front end thereof, is a turn-table, consisting of a single plate or casting, B, pierced at *b* to permit the passage of the vertical pivot-bolt C, the head of the latter being seated in a square socket, *b'*, of table B, in order to prevent said bolt turning when the nut *c* is screwed either on or off. Projecting vertically from the opposite sides of said turn-table are plates or ears E E' of any suitable height, said plates being slotted, respectively, at *e e'* to admit the

horizontal pivot-bolt F, which has a customary head, *f*, at one end and a nut, *f'*, at the opposite end thereof. Furthermore, this pivot F traverses a suitable opening in the head *g* of what may be called the "fixed jaw" G, as clearly seen in Fig. 3. This jaw is slotted longitudinally at *g'* to allow free play of an arm, H, to whose outer end is applied one extremity of a strap or cord, I, the outer extremity thereof being attached to a treadle in the usual manner. The inner end of arm H is fastened to the movable jaw J by means of a bolt, *h*, (seen in Fig. 5,) said jaw J being hinged at *j* to head *g* of the fixed jaw. Arm H is T-shaped in transverse section, and has coiled around it a spiral spring, K, whose stress opens the movable jaw J.

L represents one of the supplementary or extra jaws, which device consists of a light casting having a longitudinal concavity, *l*, at top to receive reins or other parts of harness, &c., that are usually made round, said casting being provided with two inclined lugs, N N', adapted to rest on top of either of the main jaws, as seen in Figs. 7 and 8. Furthermore, this plate L has a pair of laterally-projecting stops, O O', that bear against the opposite sides of the main jaw, so as to prevent said plate shifting longitudinally.

P is an india-rubber or other elastic band passed around the main jaw directly above the stops O O', and then drawn down and engaged over a pin or tack, *p*, projecting from the inner side of said jaw. The side plate, E, of turn-table B has two vertical flanges or ribs, R R', that house in the nut *f'* of the pivot F.

S S' are similar ribs or flanges of the other side plate, E^2, which flanges not only house in the head *f* of said pivot, but prevent turning of said pivot when nut *f'* is screwed home.

When the horse is to be employed in the usual manner, the various parts thereof are disposed as seen in Figs. 1 and 2, the turn-table B being locked in the most convenient position by screwing the nut *c* against the under side of said bench, so as to prevent said table swinging around horizontally either to right or left. If the jaws J G should be either too high or too low for the workman, the nut f^2 can be slackened and the pivot F adjusted until the proper level is obtained, after which act said nut can be tightened so as to bring the side plates, E E', to press firmly against the ends of the head *g*, and thereby clamp the fixed jaw G immovably in position. If it should be found more convenient to cant the fixed jaw either to the right or left, it can be done at the same time the vertical adjustment thereof is effected, as the clamping action of plates E E' will be the same no matter what position the jaw may be caused to assume. The horse is now employed in precisely the same manner as the old-fashioned devices, a downward pull on the strap or other medium I being all that is necessary to close the jaw J and cause the work to be securely grasped; but the instant pressure is thrown off of the treadle the spring K opens the jaw J and permits the work to be either shifted or withdrawn. This ready opening and closing of the movable jaw J is due to the fact that its lower portion is somewhat narrower than the other jaw, G, as seen in Fig. 9. Consequently no pressure is brought to bear against the edges of jaw J when the side plates, E E', are clamped against the ends of the head *g* of the other jaw, G. In case the horse is to be used by a workman who stitches with his left hand, the nut *c* is slackened and table B is turned around so as to dispose the jaws in the proper position, after which act said nut is screwed up and the turn-table is locked against rotation. When reins or other round straps, &c., are to be stitched on the horse, the plates L L are applied to the jaws J G, as seen in Fig. 8, the lugs N N' permitting said plates to swing freely and accommodate themselves to any thickness of material T grasped between them, while the stops O O' prevent longitudinal shifting of said plates. Furthermore, this illustration shows that the free swinging of plates L L causes their lower edges to come in contact with each other the moment the rein or other round object T is seated in the concaves *l l* and the jaws G J closed to afford the proper grip. Hence it will be seen that these plates not only adjust themthemselves to any size of straps, &c., but they clamp the largest or smallest strap or rein with equal facility, and hold them in place until they are stitched, the flexible band P preventing accidental detachment of said plates when the work is removed from the horse.

Another advantage peculiar to my invention is due to the fact that the turn-table is swiveled directly on the upper surface of the bench or seat A. Consequently the vertical and angular adjustment of the jaws G J can be readily effected and without compelling the workman to leave his seat. Another advantage is due to the fact that the turn-table is a single member or casting which is complete in itself and can be easily manipulated by the least experienced workman, because said table has only one simple movement, and that is horizontally around the vertical connection C or U.

The above is a description of the preferred construction of my stitching-horse; but the arrangement of the turn-table may be varied, as seen in Fig. 2, where the plate B has a spindle, U, cast with it, the latter being slotted to admit a key or wedge, V, that clamps said plate to the bench A. This plate has a single lug or vertical standard, W, that takes the place of the ears E E', and said standard is provided with a horizontal stud or shaft, X, for supporting the jaws G J, the head *g* of said jaws being slotted longitudinally at Y to allow vertical adjustment of said jaws and to permit them to be canted in either direction. A nut and washer on the end of this stud-shaft serve to maintain the jaws at the desired position.

I am aware it is not new to apply a spring

to a stitching-horse for the purpose of opening the movable jaw of the same, as such a device is seen in the patent granted to H. H. Huntington, February 22, 1876. Furthermore, I am aware that it is not new to apply detachable jaws to the main jaws of a stitching-horse for the purpose of holding "round work," as detachable jaws are seen in the patent granted to Joseph Temple, December 3, 1867. Therefore my claims are not to be construed as an attempt to cover the devices seen in either of said patents, but are limited to the special construction herein shown and described.

I am aware it is not new to apply two separate and distinct standards to a stitching-horse and cause them to project both above and below the seat for the purpose of affording vertical and angular adjustments of the jaws, as such a construction of stitching-horse is seen in the patent granted August 14, 1877, to F. Huot. Therefore I expressly disclaim any arrangement of stitching-horse that necessitates the use of two separate standards for supporting the jaws, or that compels the latter to pass down through a hole in the seat, in order to afford sufficient swing for the angular adjustment of said jaws.

I claim as my invention—

1. The combination, in a stitching-horse, of the fixed jaw G and movable jaw J, mounted on the horizontal pivot F and clamped in position by a retaining device on the end of said pivot, the latter being carried by a single swiveled support or table that turns directly on top of seat A, and is coupled thereto by a vertical connection, substantially as herein described.

2. The combination, in a stitching-horse, of a pair of jaws, G J, secured to the pivot F of a swiveled support, the jaw J being relatively narrower than the other jaw, G, and being hinged to the head of the latter at *j*, for the purpose described.

3. The combination, in a stitching-horse, of the turn-table B, consisting of a single casting having on its opposite sides the vertically-slotted plates E *e* and E′ *e*′, which plates are provided, respectively, with laterally-projecting flanges or ribs R R′ and S S′, for the purpose herein described.

4. The combination, in a stitching-horse, of fixed jaw G and movable jaw J, to which latter is attached the inner end of a rigid arm, H, that traverses the longitudinal slot *g*′ of jaw G, a spiral spring, K, being coiled around said rigid arm, and the outer end of the latter having a suitable provision for the attachment of a strap that operates said movable jaw, as herein described.

5. The combination, in a stitching-horse, of the plate L, having a concave upper portion, *l*, inclined lugs N N′, and lateral stumps O O′, for the purpose specified.

6. The combination, in a stitching-horse, of jaw G, detachable plate L *l* N N′ O O′, flexible band P, and retaining device *p*, for the purpose specified.

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

SILAS H. RANDALL.

Witnesses:
JAMES H. LAYMAN,
SAML. S. CARPENTER.