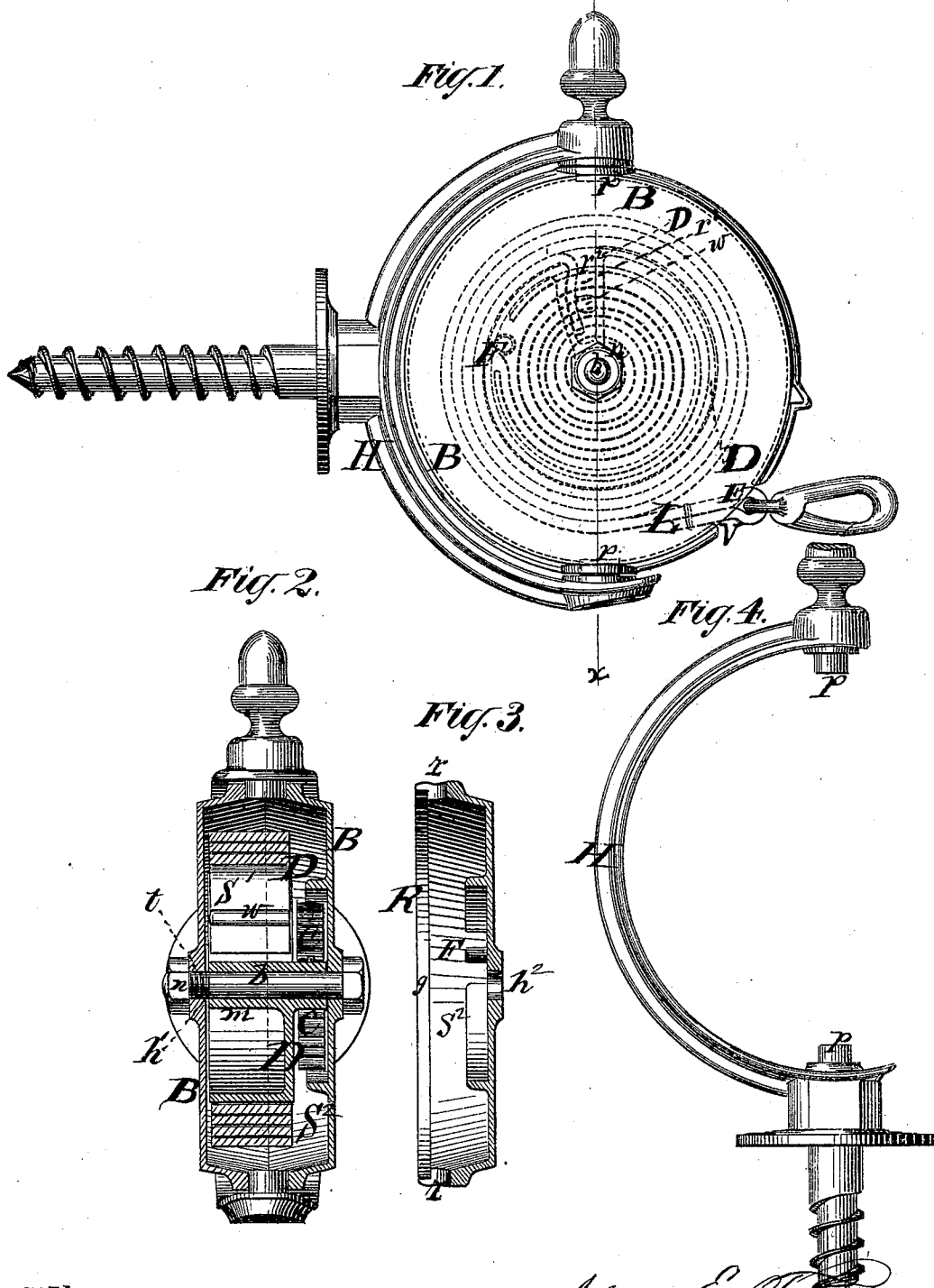


A. E. FRANCIS.
HORSE HITCHING DEVICE.

No. 175,446.

Patented March 28, 1876



Witnesses
John Becker
Jas. H. Hays

Allan E. Francis
by his Attorneys
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UNITED STATES PATENT OFFICE

ALLAN E. FRANCIS, OF GARRETTSVILLE, OHIO.

IMPROVEMENT IN HORSE-HITCHING DEVICES.

Specification forming part of Letters Patent No. **175,446**, dated March 28, 1876; application filed January 31, 1876.

To all whom it may concern:

Be it known that I, ALLAN E. FRANCIS, of Garrettsville, in the county of Portage and State of Ohio, have invented a new and useful Improvement in Hitching Devices for Horses and other animals; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms a part of this specification.

This invention relates to hitching devices, in which the hitching strap, cord, or chain is drawn up into a box, by means of a spring, in such manner as to keep the slack of the strap, cord, or chain always taken up; and the improvement consists in the combination, with such box, of a yoke in which said box is pivoted or swiveled in such manner as to allow rotation on its vertical axis, to prevent the binding of the said cord, chain, or strap against the edges of the slit through which the strap is drawn, thus permitting a lighter and easier working spring.

Figure 1 is a side view of that form of yoke adapted to insertion in mangers; also showing the swiveled box and its appurtenances, a portion of said box being removed to exhibit the interior. Fig. 2 is a vertical section of the same made on the line *x x*. Fig. 3 is a vertical section of a portion of the swiveled box. Fig. 4 is a view of a yoke designed for attachment to hitching-posts for the support of the swiveled box.

Similar letters refer to like parts in all the figures.

B is the box which contains the drum and coiled spring. It is of cast-iron, and made of two parts, $S^1 S^2$. These parts are cup-shaped, and one of the parts, S^2 , has on the inner side of the edge of its rim R a recess or groove, *g*, extending entirely around it, into which the edge of the rim of the part S^1 is fitted. A screw-bolt, *b*, is passed through the holes $h^1 h^2$, Fig. 2 and 3, said holes being formed in the centers of both the parts S^1 and S^2 .

When the sections S^1 and S^2 are placed together, as shown in Fig. 2, and the screw-bolt *b* is inserted, the nut *n* is screwed down on the thread *t* of the said screw-bolt, which presses together and holds firmly the said sections S^1 and S^2 . Moreover, in each of the said sections

S^1 and S^2 , at opposite points in the rim R, is formed a half-round recess, *r*, Fig. 3, which, when the said two parts S^1 and S^2 are put together and fastened by the screw-bolt *b*, form round holes for the reception of the pivots *p* cast or forged on the yoke H.

The screw-bolt *b* acts also as a pivot for the hub *m* of the drum D contained in said box, the said hub *m* being fitted to turn freely on said screw-bolt *b*. The rim of said drum D is re-curved inward on one side, so as to form a recess, r^2 , Figs. 1 and 2. Into the said recess r^2 is inserted the inner end of the strap, cord, or chain L, which is fastened to the drum preferably by driving a wedge or pin, *w*, into the space between the said strap and one of the walls of the recess r^2 , as shown in dotted outline in Fig. 1. The strap is thus wedged and bound to the drum D, upon the outer surface of which the said strap is wound in coils *c*, the outer end E of said strap being caused to protrude through a slit, V, formed in the side of the box B. To the end E of the strap may be attached a ring or snap for the attachment of halters or bridles.

The hub *m* of the drum D projects out at one side of said drum, and to the projection thus formed is attached one end of a coiled spring, C, said spring being coiled around the projecting part of the hub *m*, and its outer end being attached to the pin F, Fig. 1.

When the strap, cord, or chain L is drawn outward, by pulling upon the end E the spring C is wound upon the hub *m*, and the elasticity of said spring will cause the drum D to turn and wind thereon the said strap when not pulled upon, so that the arrangement forms an elastic attachment for the halters or bridles of animals, permitting said animals to lie down or stand up at will, but without allowing the said strap, cord, or chain to slacken, and also without exerting an unpleasant tension upon said strap.

The box B, with its appurtenances, is mounted in a yoke preferably made in one or other of the forms shown in Fig. 1 and Fig. 4, the said box being swiveled on the pivots *p*, as hereinbefore described.

I prefer to provide said yoke with pointed wood-screws W for their insertion in proper supports, that form of yoke designed for at-

tachment to mangers being shown in Fig. 1, the said pointed wood-screw W being placed about midway between the pivot *p* of said yoke for insertion into the side of its support. That form of yoke preferred for posts has the pointed wood-screw W placed nearly in line or parallel with the pivots *p* of said yoke H, for insertion into the top of the post.

I am aware of the patent to Charles Rogers dated November 13, 1866, No. 59,660, and I disclaim the construction therein shown.

I claim—

The yoke H having the pivots *p* rigidly attached to the same, and having the box B containing the spring C, drum D, and chain L, swiveled or pivoted on said yoke, substantially as and for the object specified.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ALLAN E. FRANCIS.

Witnesses:

HENRY T. BROWN,
MICHAEL RYAN.