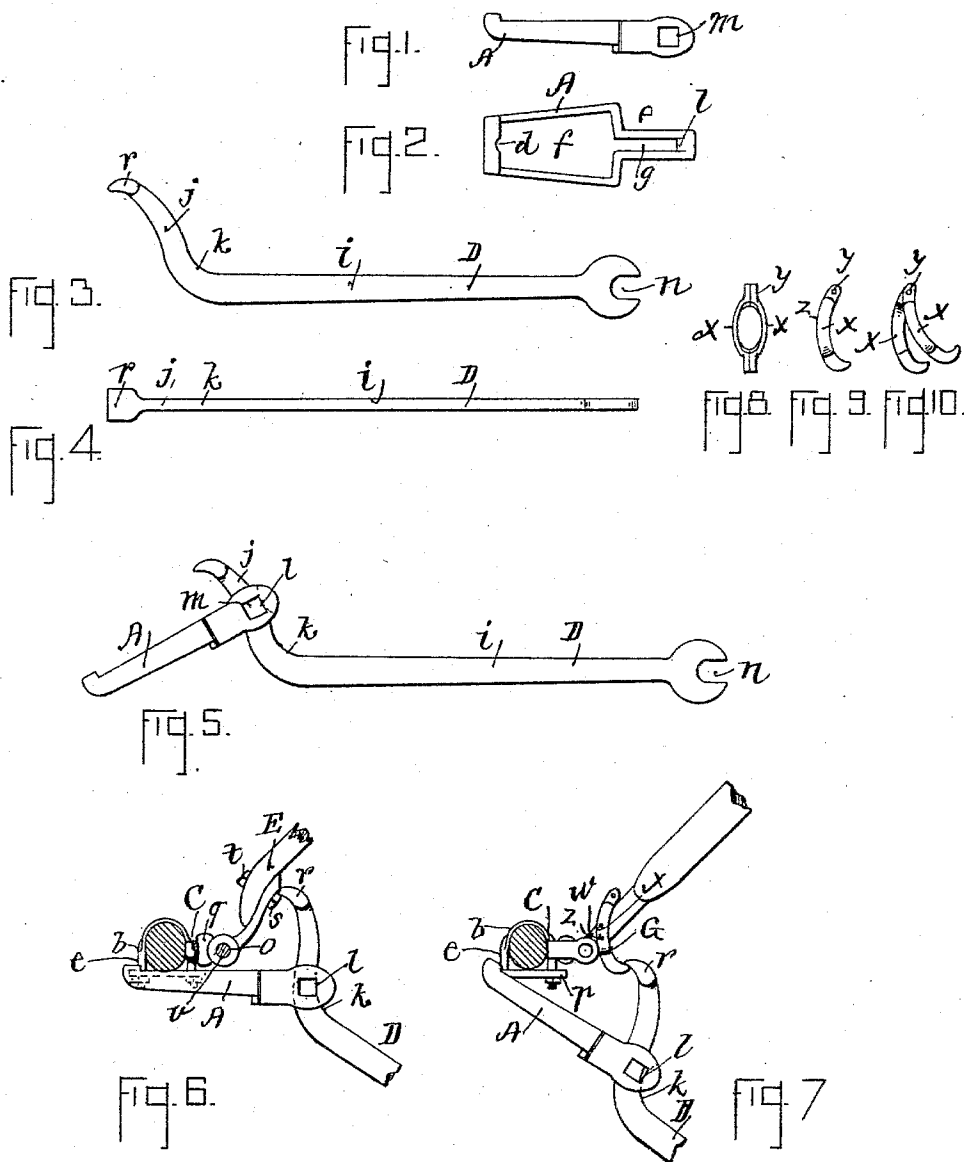


(No Model.)

J. B. MAINES.
THILL COUPLING JACK.

No. 569,583.

Patented Oct. 13, 1896.



WITNESSES:

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JOHN B. MAINES, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO HIMSELF
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THILL-COUPPLING JACK.

SPECIFICATION forming part of Letters Patent No. 569,583, dated October 13, 1896.

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To all whom it may concern:

Be it known that I, JOHN B. MAINES, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Means for Inserting the Eye of a Carriage Shaft or Pole into the Shackle, of which the following is a specification.

My invention consists in the improved construction of the several parts of the apparatus, as hereinafter fully set forth.

In the accompanying drawings, Figure 1 represents a side view of the hook portion of my improved apparatus. Fig. 2 represents a top view of the same. Fig. 3 represents a side view of the lever. Fig. 4 represents a top view of the same. Fig. 5 represents a side view of the combined hook and lever. Fig. 6 represents a side view of the apparatus as employed for inserting the eye of the carriage-shaft, one of the ears of the shackle being broken away. Fig. 7 represents a side view of the apparatus as employed to insert the eye of the pole. Figs. 8, 9, and 10 represent different views of the engaging-piece for inserting the eye of the pole.

In the accompanying drawings, A represents the hook, which is adapted for engagement with the clip *b* of the shackle C, the said hook being provided with a recess *d*, adapted to receive the side of the bead *e* of the shackle-clip. The hook A is provided with an opening *f*, with the narrow opening *g* leading therefrom, the said opening being adapted to receive the forward portion of the lever D, the said lever being provided with the straight handle portion *i* and the upwardly-turned head portion *j*, the plain curved surface *k* of the lever, when in use, resting against the plain curved surface *l* of the hook, which surface forms the adjustable fulcrum upon which the lever turns. The hook A is provided at its opposite sides with square openings *m*, whereby the said hook may be employed as a wrench, and the lever D is provided at its end with the opening *n*, whereby the said lever may also be used as a wrench.

In using the apparatus for the purpose of inserting the shaft-eye *o* into the shackle the parts A and D are first to be assembled, as

shown in Fig. 5, and then, after placing the hook portion A of the apparatus into engagement with the yoke *b* of the shackle-clip and with the bead *e* of the same and the insertion of the spring *q* into the shackle, the lever D is to be brought to its proper position in the opening *g* for turning upon its fulcrum *l* when the upper end *r* of the lever is in engagement with the nut *s* of the bolt *t* and the shaft-eye *o* is inserted into the shackle. Then upon raising the outer end of the lever D the shaft-eye *o* will be forced inward against the resisting-spring *q* until the said eye has passed so far inwardly that the pivot-bolt *v* of the shackle may be passed through the eye *o*, thus retaining the shaft E in proper attachment to the shackle in connection with the antirattler-spring *q*.

In attaching the pole-eye *w* to the shackle C, I employ the bearing-piece G, which embraces the pole-eye and serves to form an engaging-bearing for the end of the lever D, the said bearing-piece being formed of the two curved pieces *x x*, which are pivoted to each other at the point *y*, so that they may be opened out, as shown in Fig. 10, and thus be readily attached to the pole-eye *w* and be readily removed therefrom, the rear edge *z* of the bearing-piece being beveled in order to prevent engagement with the sides of the shackle when forcing the pole-eye to its proper position for the insertion of the pivot-bolt.

I claim as my invention—

1. The combination of the hook A, provided with the opening *f*, *g*, and the curved surface *l* in the portion *g* of the opening with the lever D, provided with the curved bearing-surface *k*, substantially as described for the purpose specified.

2. The combination of the hook A, provided with the opening *f*, *g*, with the lever D, provided with the curved bearing-surface *k*, and the bearing-piece G, made in two pivoted parts, substantially as and for the purpose specified.

JOHN B. MAINES.

Witnesses:

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