C. O. GARDINER.

Thill-Coupling.

No. 163,762. Patented May 25, 1875.

Fig. 1.

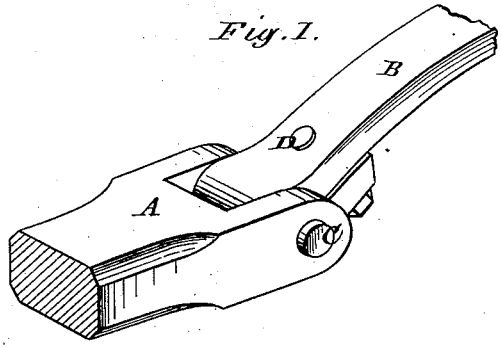


Fig. 2.

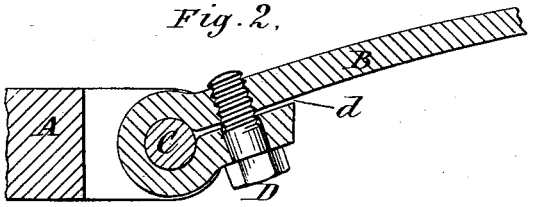


Fig. 3.

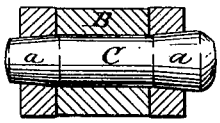
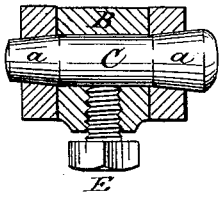


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES O. GARDINER, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **163,762**, dated May 25, 1875; application filed March 27, 1875.

To all whom it may concern:

Be it known that I, CHARLES O. GARDINER, of Springfield, in the county of Clark and State of Ohio, have invented certain Improvements in Coupling-Joints or Connections for Attaching Carriage-Thills, Pitmen, &c., of which the following is a specification:

My invention consists in the combination of a forked head or jaw, a tongue fitting therein, and a pivot or coupling pin having conical ends, and a cylindrical waist, and also in the manner of securing said pivot-pin in place.

Figure 1 represents a perspective view of my coupling; Fig. 2, a longitudinal central section of the same; Fig. 3, a transverse central section of the same; Fig. 4, a transverse section of a modified form of the coupling.

A represents a head or jaw, having its end forked or split to receive the end of a tongue, B, which is secured in place therein by a transverse pivot-pin, C, which passes through both tongue and jaw, as shown. The middle portion or waist of the pin, which bears in the tongue B, is made cylindrical, or of uniform diameter; but the two ends which bear in the sides of the head or jaw are tapered in the same direction, so that by driving the pin endwise its ends may be tightened up firmly in the head A. The end of the tongue B, through which the pin passes, is provided with a slit, *d*, extending inward to the pivot-hole, and with a bolt, D, extending through it across the slit, as shown in Figs. 1 and 2, so that by tightening up the screw the end of the finger may be clamped or compressed tightly upon the pin, which will thereby be caused to turn with the finger, and prevented from moving endwise.

As the pin turns with the tongue B, the whole wear is upon its conical or tapered ends, so that by simply loosening the bolt D, and driving the pin endwise, compensation may be made for all wear, and the joint thus kept tight and in good working order.

Instead of splitting the end of the tongue, and compressing it upon the pivot-pin, as above described, and as shown in Figs. 1 and 2, it may be left solid, and provided with a set-screw, E, bearing against the middle of the pivot-pin, to hold the same in place, as shown in Fig. 4.

The joint, constructed in either of the forms above described, is very cheap, simple, and strong, and is easily kept tight and noiseless in operation.

The size and the external form of the parts may be varied as desired, and the parts made of any suitable metal.

The joint is applicable to carriage thills and poles, to harvester-pitmen and pitmen generally, and to a variety of other uses.

I am aware that the use of a pivot-pin tapered its entire length is not new, and also that it is not new to use a split or divided tongue and a tightening-screw therein, in combination with a cylindrical pin held in place by a nut; but I am not aware that any one has hitherto used the coupling-pin with the conical ends and cylindrical waist, nor that the split tongue has been arranged to secure in place a pin which, by a movement endwise, would compensate for all wear in the joint.

Having described my invention, what I claim is—

1. In combination with the forked head A, and the tongue B fitting therein, the pivot-pin C, with a cylindrical waist and tapered ends, and secured to the tongue, so as to turn therewith, substantially as set forth.

2. The combination of forked head A, the split tongue B, screw D, and the coupling-pin C, with tapered ends and a cylindrical waist, and clamped fast in the end of the tongue, substantially as set forth.

CHARLES O. GARDINER.

Witnesses:
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