

H. ESSEX.  
Pitman.

No. 197,770

Patented Dec. 4, 1877.

Fig. 1.

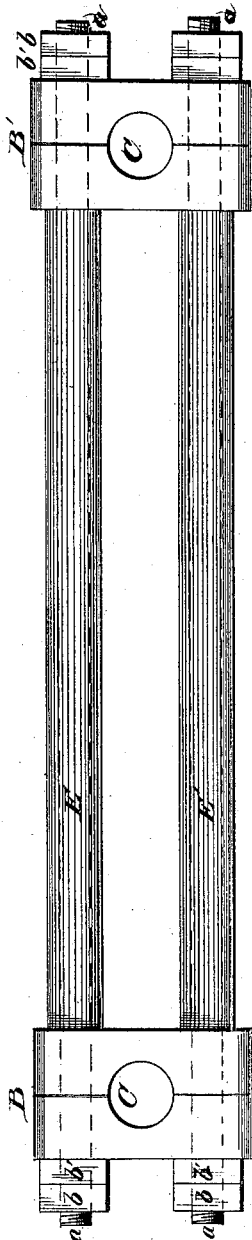
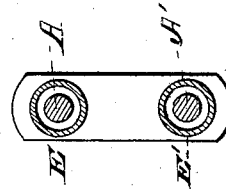
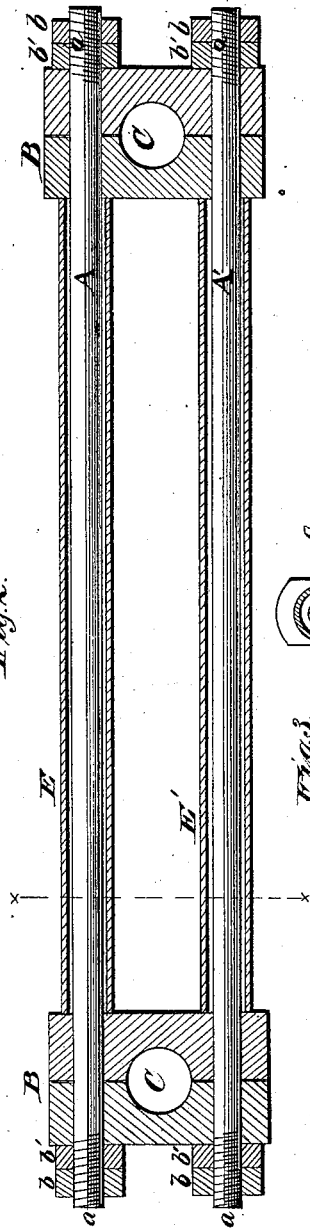


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PITMEN.

Specification forming part of Letters Patent No. **197,770**, dated December 4, 1877; application filed November 15, 1877.

*To all whom it may concern:*

Be it known that I, HENRY ESSEX, of Meadville, county of Crawford, State of Pennsylvania, have invented certain new and useful Improvements in Connecting-Rods, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a side elevation of my improved connecting-rod. Fig. 2 represents longitudinal section through said rod; and Fig. 3 is a transverse section of the same, taken on line *x x*, Fig. 2.

Similar letters of reference denote corresponding parts in all the figures.

My invention relates to a novel construction of pitman or connecting rod, whereby increased strength and stiffness are obtained with a reduced amount of metal, and whereby, also, the adjustment or tightening of its boxes upon the wrists or pins with which it is connected is facilitated; and it consists in making the rod double, or consisting of two rods passing through the ends of the boxes on opposite sides of the bearing or eye, and provided with threaded ends, and with sleeves intermediate between the boxes, whereby, by means of nuts, the boxes may be tightened, as hereinafter explained.

In the accompanying drawings, A A' represent two rods, placed in parallel lines, their ends passing through perforations in the opposite ends of the divided boxes B B', at right angles to the eye or seat C therein, for the reception of the wrist or pin with which the pitman is to be connected. The ends of these rods are threaded at *a a*, at one or both ends, as may be preferred. Where they are threaded to receive nuts *b b'* at one end only, the opposite ends will have heads formed upon them, against which the box at that end will rest, being slipped upon the rods from the opposite end. The boxes B B' are made in two parts, or divided transversely in line with the eye or bearing C, for facilitating their application to or removal from the wrist or pin, and are held at the required distance apart on the rods by means of sleeves E, of the required length, surrounding the rods A A' intermediate between the boxes.

The nuts at one end being backed off or removed, the two parts of the divided boxes are allowed to separate sufficiently to allow the box to be placed on the wrist or pins with which the pitman is to be connected, when, by tightening the nuts *b*, the two parts of both boxes will be drawn together simultaneously, each upon its respective wrist or pin, the sleeves E E' holding the inner half of each box up against the action of the clamping-nuts, or nuts and heads.

By the arrangement of parts as shown and described, it will be seen that the pitman or connecting rod is not only adapted to be readily applied or removed, but wear in the boxes may be compensated for by the tightening of the nuts, thus drawing the parts of the box more snugly together.

The sleeves E E' give great stiffness to the rod, and permit the employment of much lighter through-rods, A, than could otherwise be used, while the employment of the two rods, one on each side of the eye, for the reception of the pin or wrist, permits an adjustment for distributing the take-up, and for compensating for any unevenness in the wear upon the boxes.

The jam-nuts *b'* serve to prevent any accidental backing or loosening of the clamping-nuts *b*.

By the construction shown and described I make a strong and durable connecting-rod, adapted to any of the various uses to which connecting-rods are applied.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a connecting-rod, the parallel rods A A', provided with the tubes or sleeves intermediate between the boxes B B', and with the clamping-nuts or their equivalents, substantially as and for the purpose described.

2. The combination of the two rods A A', divided boxes B B', sleeves E E', and nuts *b b'*, arranged and operating substantially as and for the purpose set forth.

HENRY ESSEX.

Witnesses:

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