

W. Blissold, Machine Gearing.

N^o 40,910.

Patented Dec. 15, 1863.

Fig. 1.

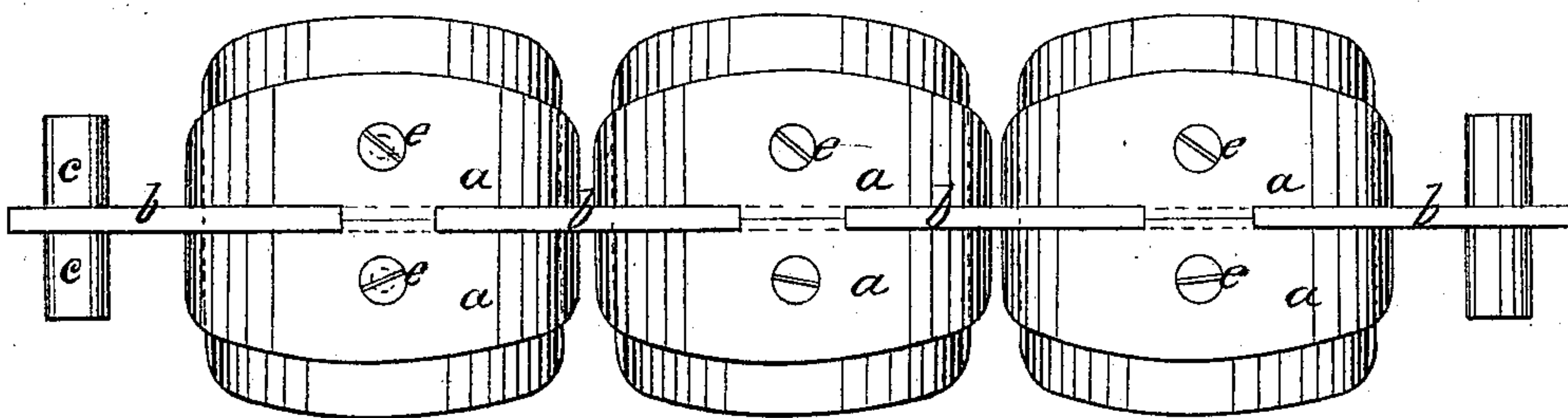


Fig. 5.

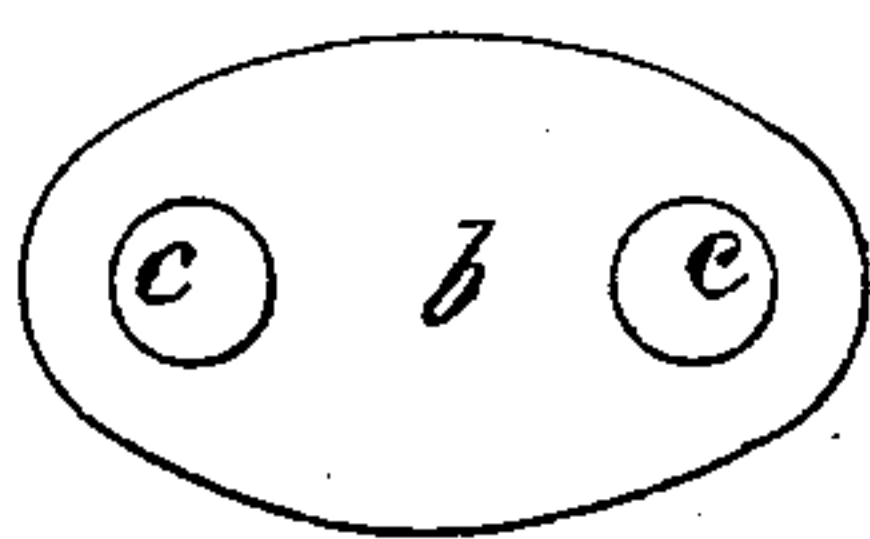


Fig. 6.

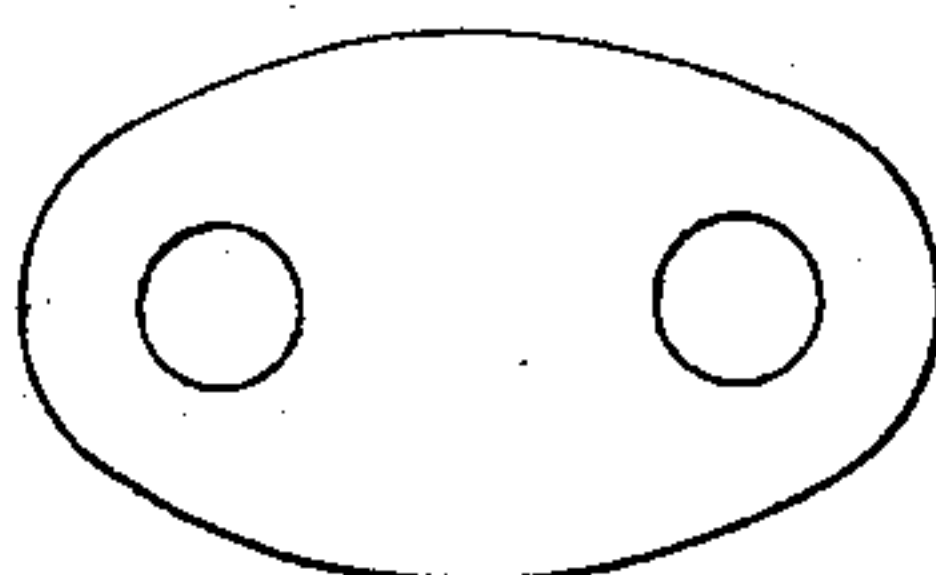


Fig. 7.

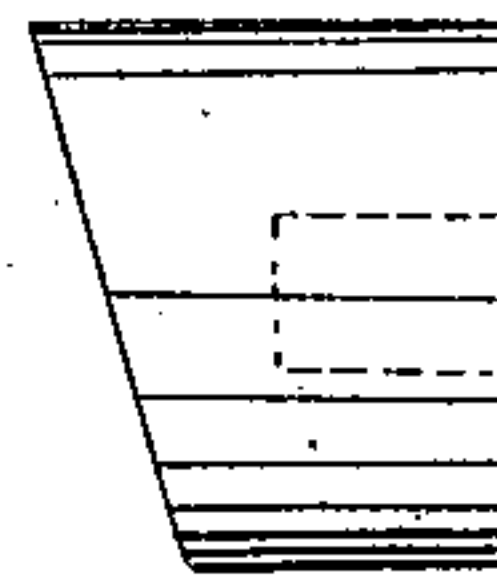


Fig. 2.

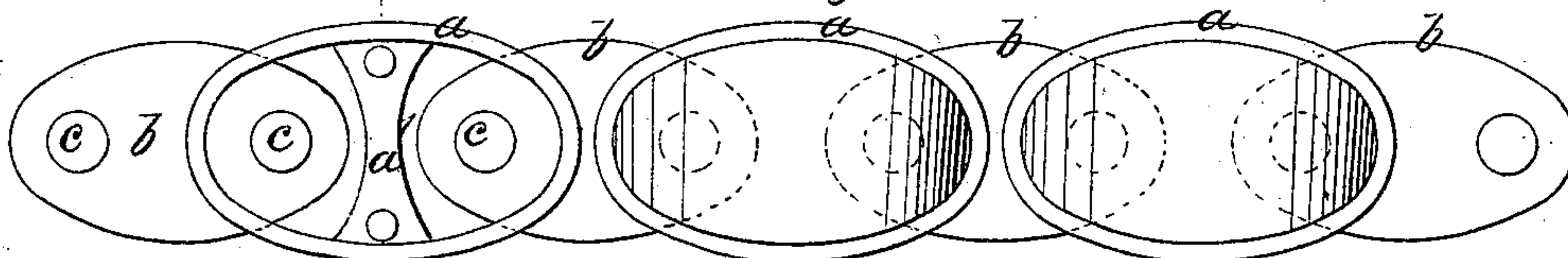


Fig. 4.

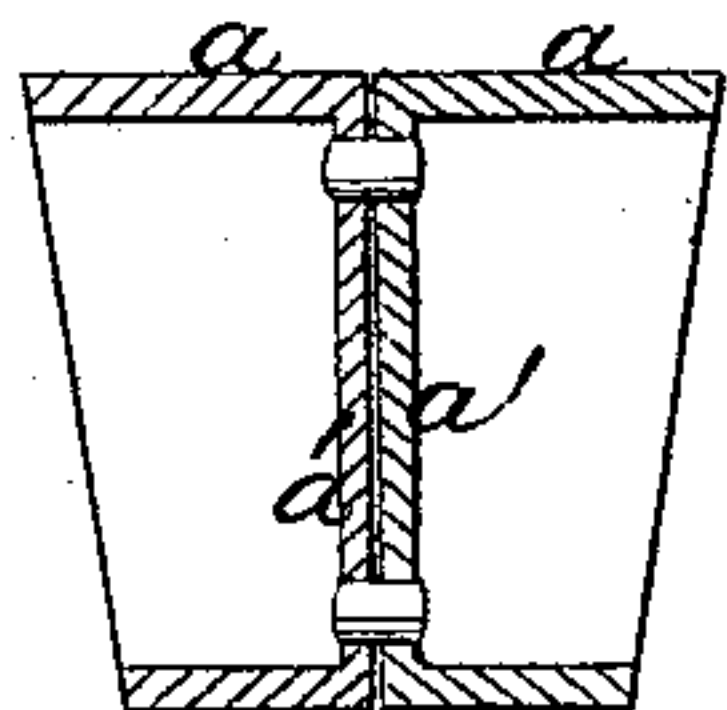
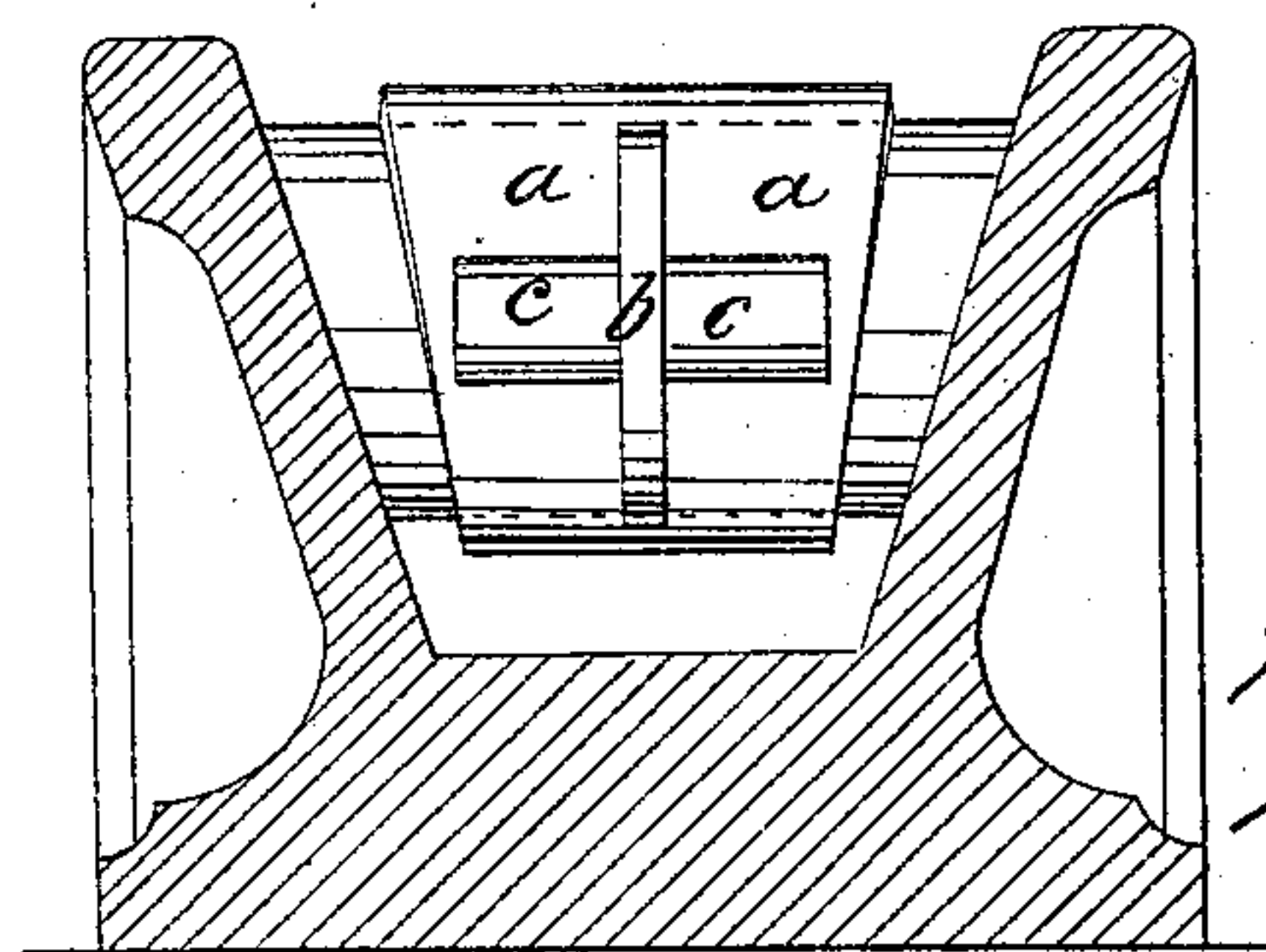


Fig. 3.



Witnesses,
J. W. Coombs
Geo. W. Reed

Inventor;
W. Blissold
per Munn & Co
attys

UNITED STATES PATENT OFFICE.

WILLIAM CLISSOLD, OF DUDBRIDGE, ENGLAND.

IMPROVEMENT IN DRIVING CHAINS OR BELTS.

Specification forming part of Letters Patent No. 40,910, dated December 15, 1863.

To all whom it may concern:

Be it known that I, WILLIAM CLISSOLD, of Dudbridge, in the county of Gloucester, in that part of the United Kingdom of Great Britain and Ireland known as England, engineer, have invented an Improved Mode of Constructing Hauling or Driving Chains or Belts; and I do hereby declare that the following is a full and exact description of my said invention.

This invention relates to an improvement on an invention for which I obtained Letters Patent in the United States dated 27th August, 1861, for constructing driving and hauling chains or belts which bind by lateral pressure to their pulleys, such pulleys having grooves with inclined sides formed on their periphery for receiving the chains or belts.

The chief object of the present improvement is to construct such chains or belts in an economical manner with due regard to their strength and efficiency.

In the accompanying drawings, Figure 1 is a plan view of a portion of a chain or belt constructed according to my invention. Fig. 2 is a side view of the same, and Fig. 3 is an end view of a detached portion.

a a are compound links made, by preference, of malleable cast-iron. Each link may be described as consisting of flattened or oval-shaped hoops formed with cross-bars *a' a'* across the smaller diameter of the oval. These bars project slightly beyond the edge of the oval, and are pierced with corresponding holes to receive rivets, as shown in the cross-section, Fig. 4, by which means the ovals are coupled together in pairs. When thus secured, they form a hollow split link having spaces midway of their breadth to receive oval plates *b*, which serve as coupling-pieces to the links *a*, and are free to move in those spaces, and it is to allow of the insertion of these plates that the links *a* are divided, as explained. The plates *b* have studs *c c* projecting from their opposite sides, as shown in the detached view, Fig. 5, and they are made by preference of malleable cast-iron. In putting together the pieces that form the links *a*

the plates *b* are inserted in their places, as shown at Figs. 1 and 2, before the insertion of the rivets. When a loose chain is thus formed, filling blocks of wood *d d* are inserted in the links *a*, the inner faces of the blocks being countersunk, as shown at Fig. 6, to receive the ends of the studs *c c*. The blocks, therefore, form bearings for the plates *b* to rock upon. They have also another and more important office to serve, for which purpose their outer faces are beveled, as shown in the end view, Fig. 7. When, therefore, a pair of these blocks *d d* is inserted in a link, *a*, as shown best in the end view, Fig. 3, the chain will have a wedge shape in cross-section, and it will therefore fit a V or wedge shaped groove formed in the driving-pulleys, to which the chain is to be applied. A firm bite of the driving-pulleys is thereby insured, and as the wood blocks wear away their reduced size is compensated for by the chain dropping lower into the V-groove. The sides of the hollow link are beveled off to correspond to the angle of the acting faces of the blocks, and, in order to secure the blocks in position, screws *e e*, Fig. 1, are passed through holes in the links and made to enter the blocks.

Having now explained the nature of my invention, I wish it to be understood that I do not claim the making of driving or hauling chains or belts of a wedge shape in cross-section; but

I claim—

The compound links *a* with the wood filling-pieces *d d*, in combination with the coupling-plates *b* or their equivalent, substantially as described.

In witness whereof I, the said WILLIAM CLISSOLD, have hereunto set my hand and seal the 22d day of September, in the year of our Lord, 1863.

WILLIAM CLISSOLD.

Witnesses:

W. HURLE CLARKE,
Notary public, Bristol.

WILLIAM LITTLE,
His clerk.