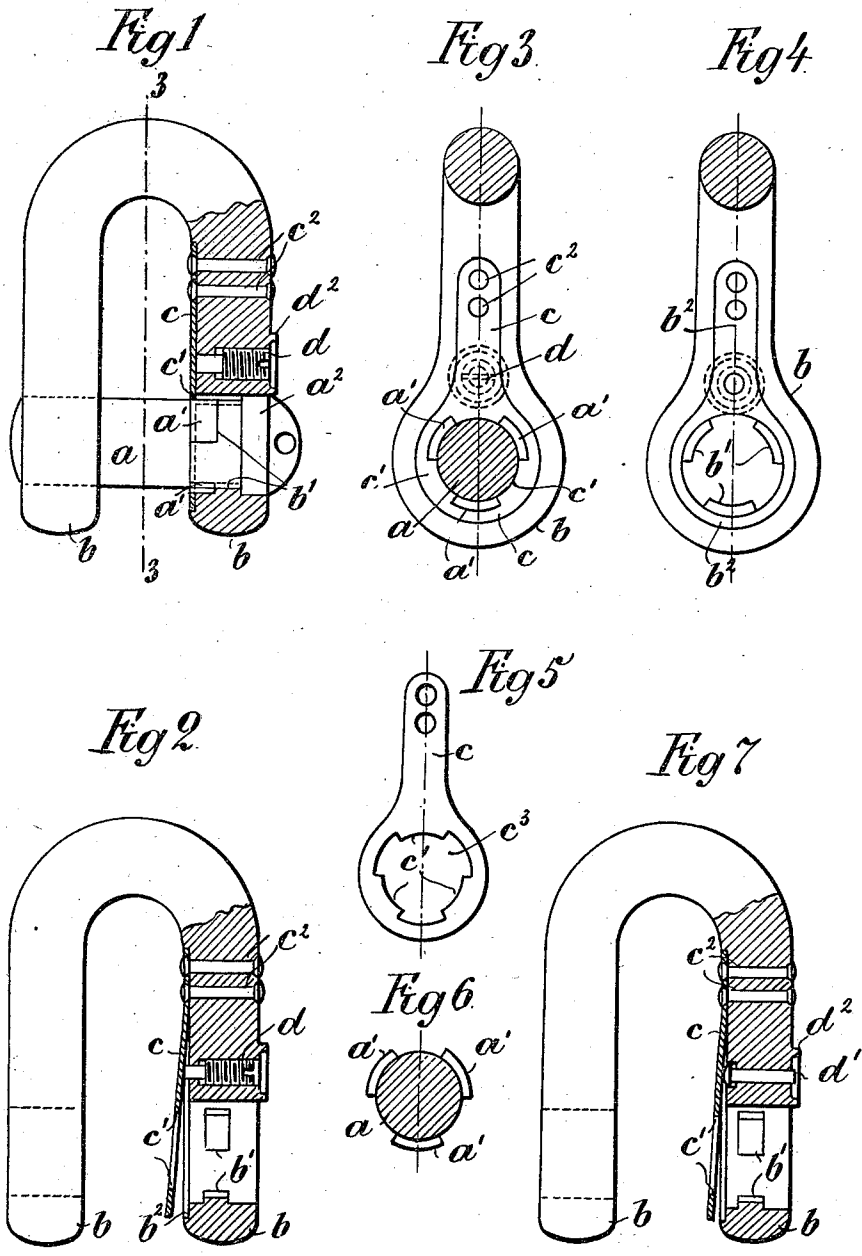


1,002,120.

Patented Aug. 29, 1911.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

CORRÈZE AAGE OSCAR BERNER, OF LONDON, ENGLAND.

## SHACKLE.

1,002,120.

Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed April 12, 1911. Serial No. 620,634.

To all whom it may concern:

Be it known that I, CORRÈZE AAGE OSCAR BERNER, citizen of the Kingdom of England, and a resident of 19 Craigerne road, Blackheath, county of Kent, London, England, engineer, have invented new and useful Improvements in Shackles, of which the following is a specification.

My invention relates to an improvement in shackles, and has for its object to provide a lock for the shackle pin, in such a manner that the pin can under no circumstances accidentally work out, but can be easily and quickly removed when desired.

The invention is shown in the accompanying drawings, wherein,

Figure 1 shows the shackle partly in section, Fig. 2 shows the shackle partly in section and with the pin removed, Fig. 3 is a cross section of Fig. 1, Fig. 4 shows the same section as Fig. 3, but with the pin and spring plate removed, Fig. 5 is a detail of the spring plate, Fig. 6 is a section through the pin, Fig. 7 shows a modified releasing device.

The shackle is provided with legs  $b$  having openings therein for the passage of the shackle pin  $a$ . The shackle pin  $a$  has at one end a number of lugs  $a'$  (say three) projecting radially from it, the width of the lugs  $a'$  being preferably about equal the width of the spaces between said lugs.

In the opening of one of the legs of the shackle is a series of lugs  $b'$  and on the inner side of the said legs is a spring plate  $c$ , provided with a hole  $c^2$  for the passage of the pin  $a$ , and with lugs  $c'$  projecting into the opening and arranged opposite the spaces between the lugs  $b'$  in the said opening. The spring plate  $c$  is secured by rivets or screws  $c^2$  in a recess  $b^2$  on the inside of the legs of the shackle. To insert the pin  $a$  it is brought into such position that as it is passed into the openings its lugs  $a'$  will pass between the lugs  $b'$  in the opening and engage the lugs  $c'$  of the spring plate  $c$  and force it back out of its recess when the pin is turned so as to bring its lugs opposite the lugs  $b'$  and at the

same time the spring  $c$  will be released and move back into its recess with its lugs between the lugs of the pin. When in this position the pin is prevented from turning by the lugs  $c'$  of the spring plate  $c$ , being between the lugs  $a'$  on the pin and the pin is prevented from being withdrawn by its lugs  $a'$  engaging the lugs  $b'$ . To release the pin means is provided for operating the spring plate  $c$  so that its lugs  $c'$  are moved from between the lugs  $a'$  of the pin  $a$ . This means consists of the screw  $d$  whose end bears on the inside of the spring plate. The screw is arranged in a threaded hole in the shackle leg and the outer end of the screw is protected by a raised ring  $d^2$  on the outside of the leg of the shackle. By screwing the screw inward against the spring plate the plate is pushed out of its recess thus freeing the lugs  $a'$ , of the pin, and permitting the pin to be turned to bring its lugs opposite the spaces between the lugs  $b'$ , when the pin can be removed. Instead of a screw  $d$  a headed pin  $d'$  working loosely in an opening in the leg of the shackle may be used as shown in Fig. 7.

What I claim, and desire to secure by Letters Patent, is:

1. A shackle having legs each provided with an aperture, one of which has lugs projecting from the surface thereof, a shackle pin in the openings of the legs of the shackle and provided with a number of lugs, corresponding to the lugs of the shackle leg, and a spring plate arranged in a recess at end of said opening and provided with corresponding lugs arranged opposite the spaces between the lugs in the opening whereby when the pin is inserted in said openings and turned, it is held fast by the spring plate.

2. The combination of a shackle provided with registering openings, one of which has a plurality of lugs therein, a pin in the openings of the shackle and having lugs thereon, an apertured spring plate provided with lugs and secured to the shackle with its aperture opposite the opening of the shackle

having lugs therein, and a member working in an opening in the shackle and engaging the spring plate.

3. The combination of a shackle having  
5 registering openings, one of which has a plurality of lugs therein, a pin in the said openings and provided with lugs, and a spring plate secured to the shackle and provided with an opening and lugs in said

opening, said lugs corresponding with the 10 spaces between the lugs of the opening of the shackle.

Signed by me at London England, this 31st day of March 1911.

CORRÈZE AAGE OSCAR BERNER.

Witnesses:

R. WESTACOTT,  
H. D. JAMESON.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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