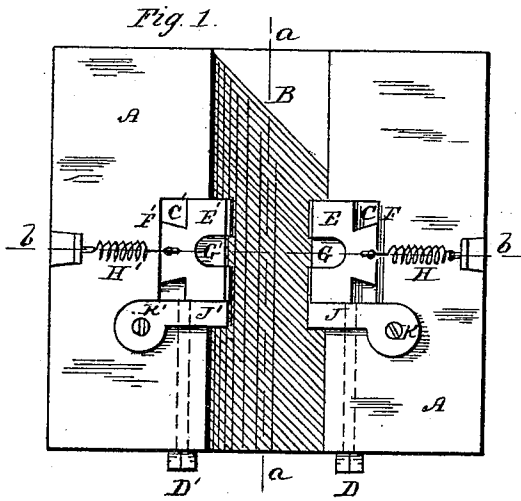
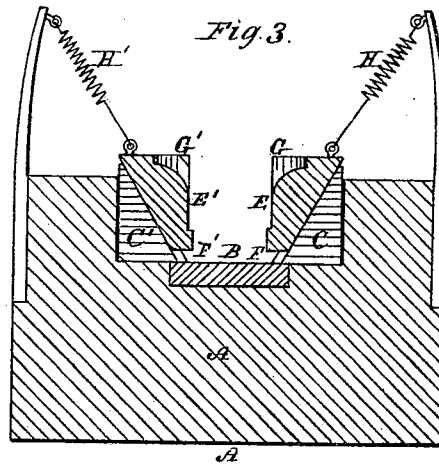
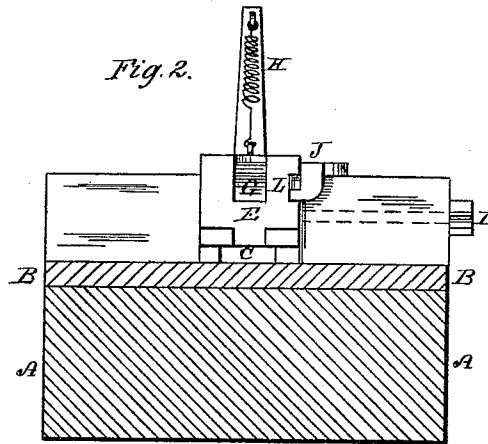


W. PEARCE.

DIE FOR FORMING CARRIAGE SHAFT COUPLINGS.

No. 265,431.

Patented Oct. 3, 1882.



Witnesses:

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H. H. Marsh

Inventor:

William Pearce
by Theo. G. Ellis, Attorney

(No Model.)

2 Sheets—Sheet 2

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Fig. 4.

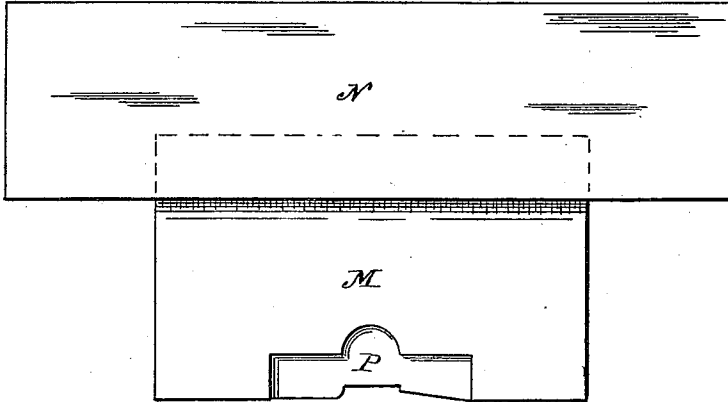


Fig. 6.

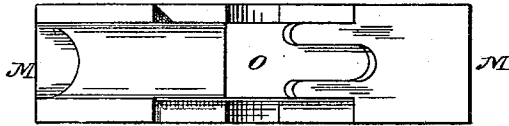


Fig. 5.



Fig. 7.

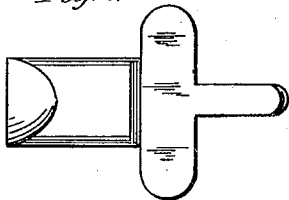


Fig. 8.

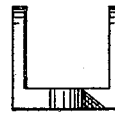
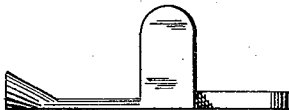


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM PEARCE, OF PLANTSVILLE, CONNECTICUT, ASSIGNOR TO HIMSELF
AND MERRITT N. WOODRUFF AND NORMAN A. BARNES, BOTH OF SOUTH-
INGTON, CONNECTICUT.

DIE FOR FORMING CARRIAGE-SHAFT COUPLINGS.

SPECIFICATION forming part of Letters Patent No. 265,431, dated October 3, 1882.

Application filed April 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PEARCE, of
Plantville, in the county of Hartford and State
of Connecticut, have invented certain new and
5 useful Improvements in Dies for Forming Car-
riage-Shaft Couplings; and I do hereby declare
that the following is a full, clear, and exact de-
scription thereof, whereby a person skilled in
the art can make and use the same, reference
10 being had to the accompanying drawings, and
to the letters of reference marked thereon.

Like letters in the figures indicate the same
parts.

My improvement relates to the construc-
15 tion of dies for turning up and forming the
ears upon the couplings which are attached to
the forward axle of a carriage for the purpose
of holding the bolt which passes through the
thill-iron. Dies have previously been in use
20 for this purpose, upon which my dies are an
improvement.

The object of my invention is to provide
dies which shall more easily and efficiently bend
up the ears of such couplings and press them
25 more perfectly into their proper shape.

In the accompanying drawings on two sheets,
illustrating my invention, Figure 1 is a top
view of the lower die or lower part of my im-
proved dies. Fig. 2 is a vertical section on
30 the line *a a* of Fig. 1, looking to one side. Fig.
3 is a cross-section through Fig. 1 on the line
b b. Fig. 4 is a side view of the upper die,
which passes downward between the two parts
of the lower die. Fig. 5 is an end view, and
35 Fig. 6 is a bottom view of the same. Fig. 7
is a top view of the blank operated upon be-
fore the ears have been bent up and formed
by the dies. Fig. 8 is an end view of the
blank after the ears have been bent up and
40 formed, and Fig. 9 is a side view of the same.

A is the base-block.

B is a removable and adjustable bed, which
can be made of steel or other material and set
in the base-block to receive the blow of the
upper die. This bed can be adjusted by the
45 introduction of plates of different thickness
sliding endwise through the opening in the
base-block.

C C' are the die-carriers. They are set in re-
50 cesses in the base-block, and are held in posi-

tion by being clamped by the set-screws *D D'*.
These die-carriers are adjusted to their exact
position by shims or thin plates placed behind
them to hold them against the pressure of the
dies. This adjustment is made before the dies
55 are fastened by the set-screws *D D'*.

E and *E'* are two movable blocks forming
the two sides of the lower die. They are mov-
able upon the inclined guides *F F'*, so that
when they are slightly raised, as shown in
the drawings, they move apart, so as to make
the space between them greater, and when
pressed downward they are forced together
and are intended to close tightly upon the up-
per die, which passes down between them. The
65 inclined guides *F F'* are formed by dovetailed
tongues on *E E'* entering corresponding
grooves in *C* and *C'*, upon which the dies can
slide longitudinally in the said grooves and
be held in contact with the carriers *C C'*, upon
70 which they move, and by which they are sup-
ported.

G and *G'* are sockets in the top part of the
dies *E* and *E'*, for the reception of the ears of
the blank before they are bent upward by be-
75 ing pressed in the dies.

H and *H'* are springs for holding the parts
E E' up, but which yield when the upper die
descends and presses down the parts *E E'*.

J J' are latches, which are pivoted to the
80 base-block *A* at *K* and *K'* and lock into slots
L in the dies *E E'*. These are for the purpose
of limiting the movement of the dies upward
when they are drawn by the springs *H H'*. If
it is desired to adjust the dies so as to move
85 upward a greater distance, washers are intro-
duced under the pivots of the latches, so as to
raise them farther from the base-block.

M is the upper die. It is held in the block
N by means of a dovetailed key, or in any
90 other convenient manner. This is intended
to be the movable die, and to be pressed or
forced down between the parts *E E'* in a drop
hammer or press. Its lower side, *O*, is adapted
to fit the blank operated upon, and its sides *P*
95 are adapted to fit the shape of the finished
ears of the shaft-couplings and give them their
proper form.

The operation of my improved dies is as
follows: The base-block *A* is fitted upon the 100

bed of a drop-hammer or suitable press, and securely fastened in position. The upper die-block, N, is attached to the drop or movable part of the press in such a position that when
5 the die descends it will pass exactly midway between the parts E E' of the lower die. These last-mentioned parts are slightly raised, as shown in the drawings. The blank shown in Fig. 7 is then placed in the lower die, so that the
10 ears rest in the recesses G G', and the upper die is then forced down upon it. This bends the ears upward, and as the upper die passes downward brings them between the sides of the upper and lower dies. The blank is forced
15 down against the flat bottom plate, B, and lies within the recesses on the bottom of the upper die. As the upper die approaches its lowest position the block N strikes the parts E E' and forces them down, which presses them
20 inward against the sides of the ears and gives them their final shape. This last operation strikes the blank in three directions at once, and gives the final blow in three directions. By means of this final pressing inward of the
25 sides of the die a more perfect form is given to the coupling than is the case with dies of the common construction, as in the ordinary

dies for this purpose the pressure is only downward, which does not permit of the parts of the die being brought so closely together, 30 nor give so perfect a finish to the coupling.

What I claim as my invention is—

1. In dies for forming carriage-shaft couplings, the dies E E', having the inclined ways F F', by which they move upon the carriers in 35 both a horizontal and vertical direction, substantially as described.

2. The dies E E' and the die-carriers C C', between which are the inclined guides F F', in combination with the base-block A and the 40 bed-plate B, substantially as described.

3. The latch J, in combination with the die E, the block A, and the spring H, substantially as described.

4. The combination of the vertically-moving 45 die M, the diagonally-moving dies E E', the die-carriers C C', and the bed-plate B, whereby the clip is pressed in three directions at the same time, substantially as described.

WILLIAM PEARCE.

Witnesses:

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