

S. RIGBY, 3d.

Machines for Bending Car Braces.

No. 152,416.

Patented June 23, 1874.

Fig. 1.

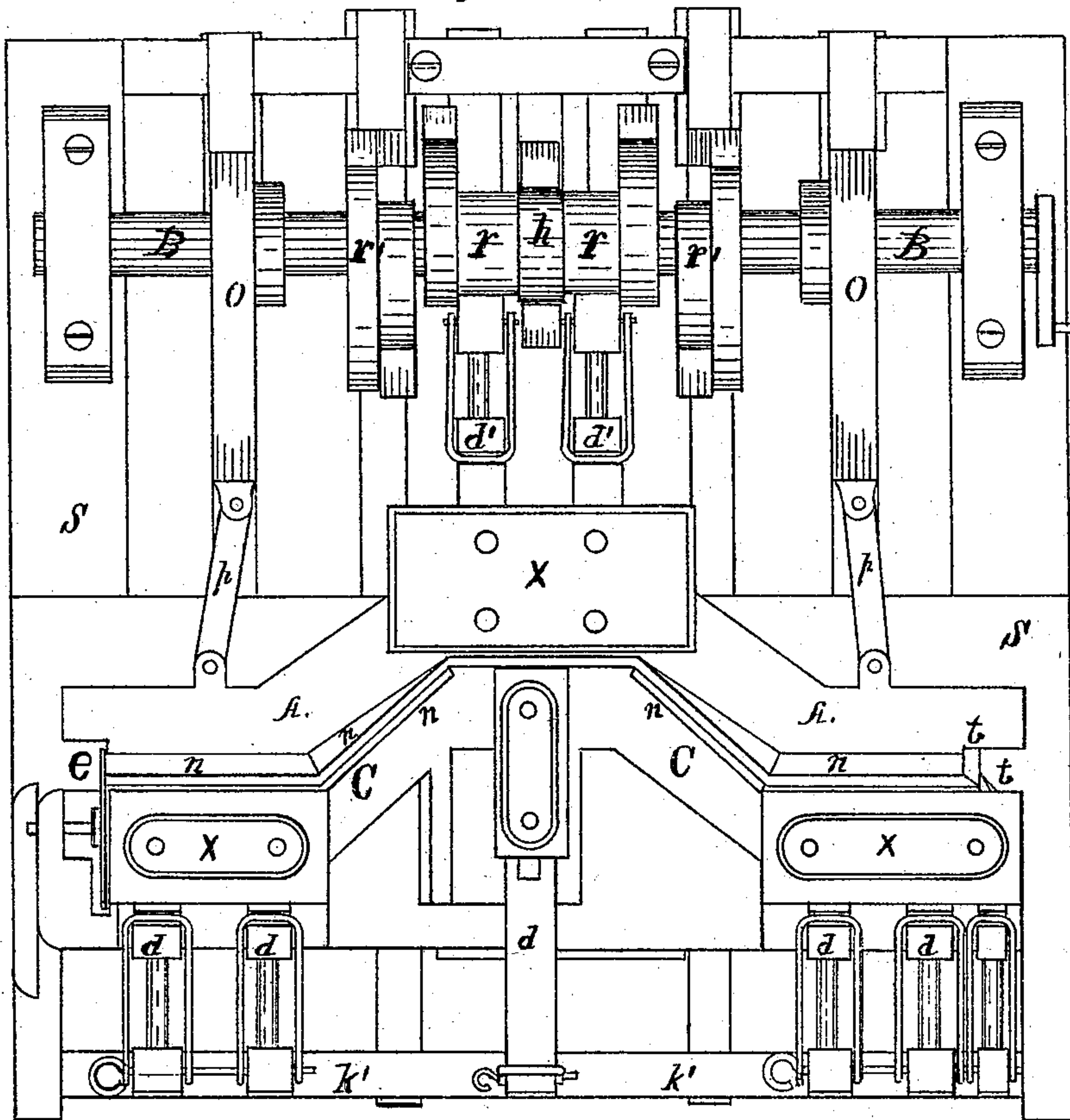


Fig 4

Witnesses

Robt Boyd
James M'Gown

Inventor

Seth Rigby 3rd

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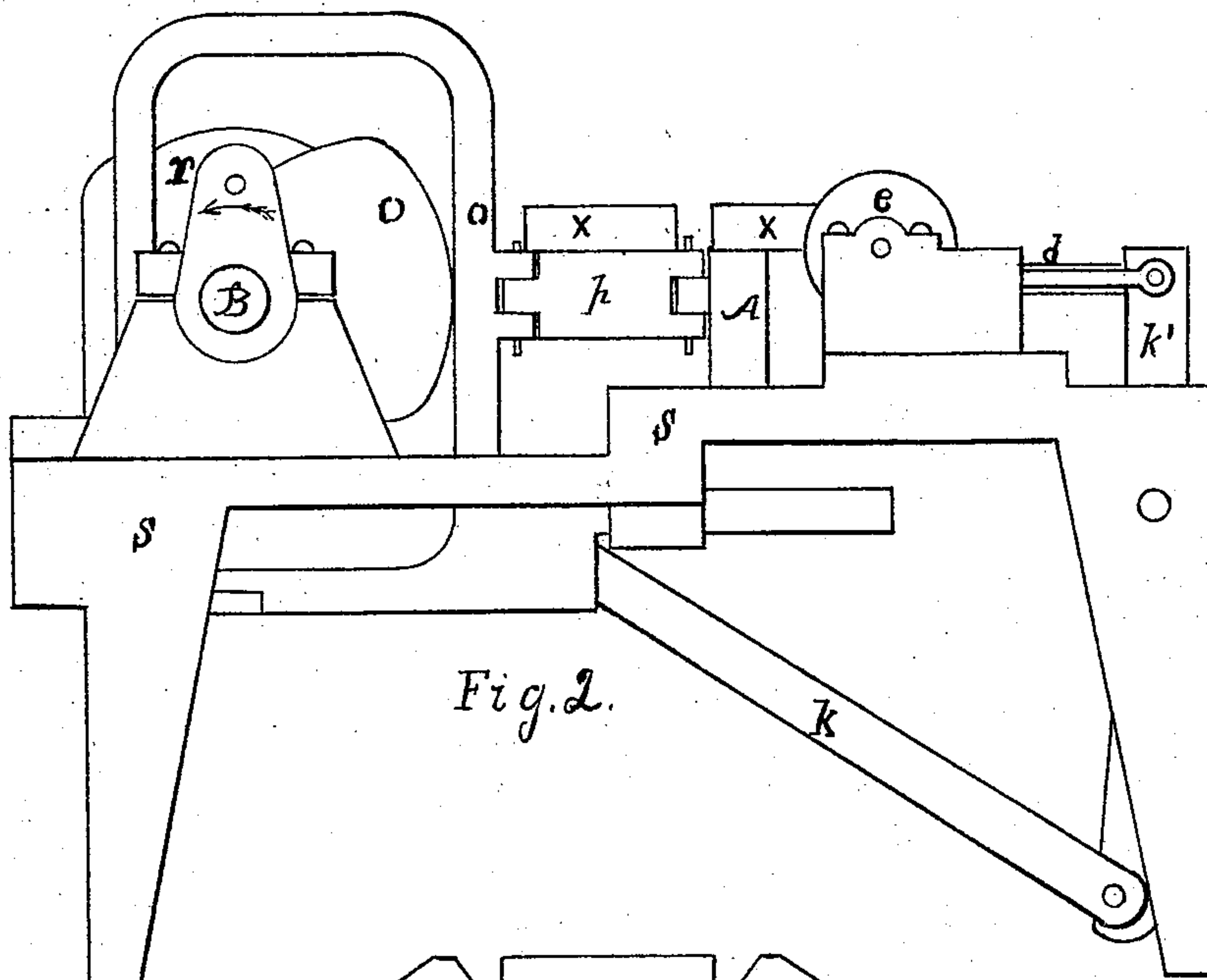


Fig. 2.

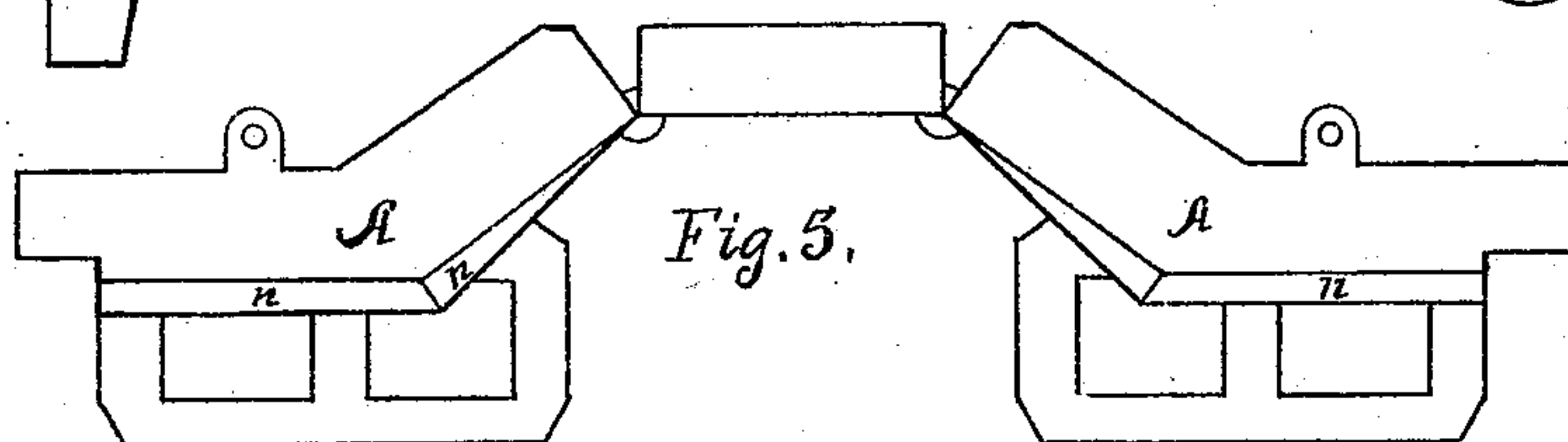


Fig. 5.

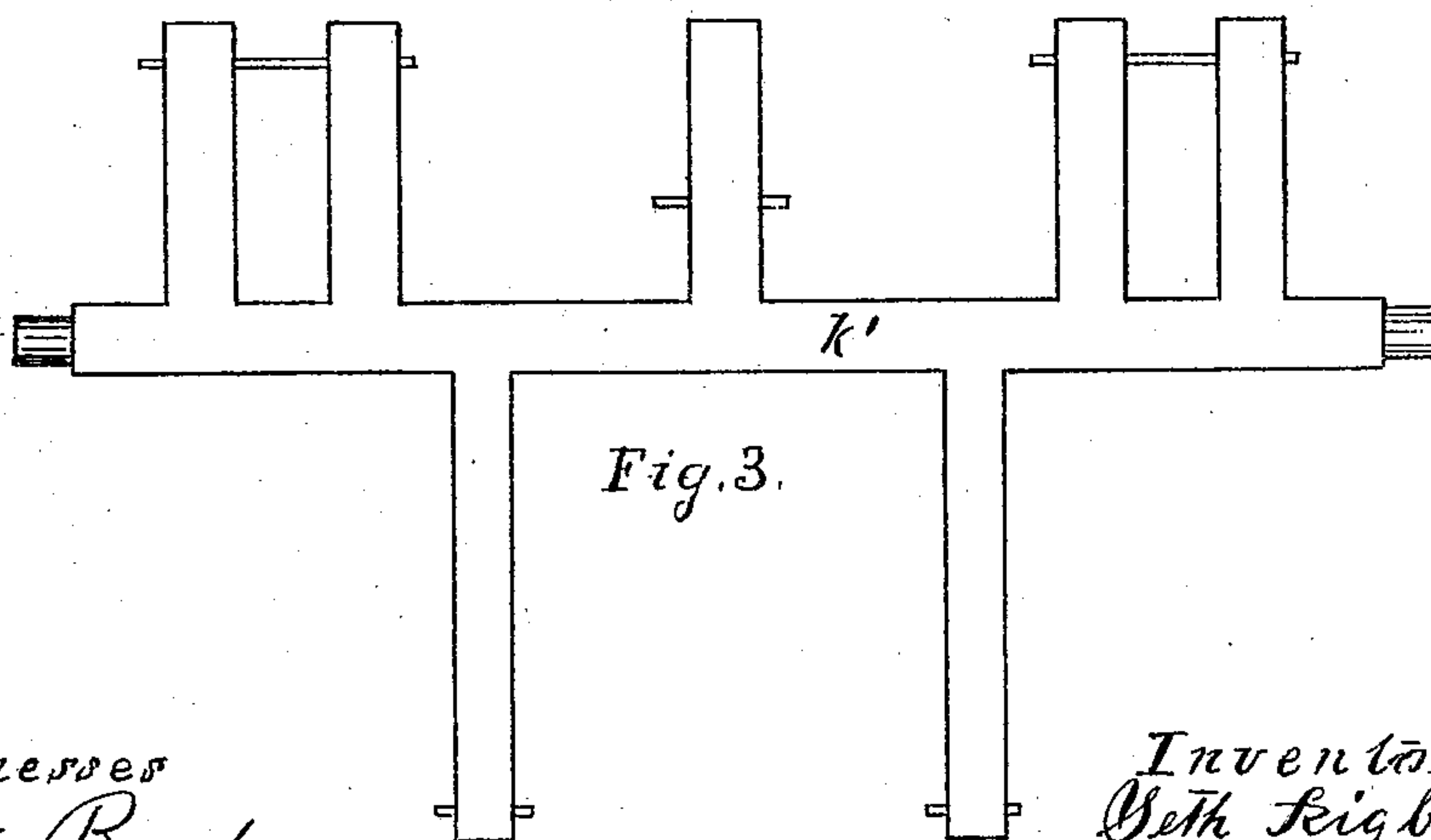


Fig. 3.

Witnesses
Robt Boyd
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UNITED STATES PATENT OFFICE.

SETH RIGBY, 3D, OF NEWCASTLE, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR BENDING CAR-BRACES.

Specification forming part of Letters Patent No. **152,416**, dated June 23, 1874; application filed April 23, 1874.

To all whom it may concern:

Be it known that I, SETH RIGBY, 3d, of Newcastle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brace-Bending Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to properly shape or bend, cut off, and punch all the holes in braces used for supporting the lower end of pedestals on car-trucks.

In Figure 1 a plan or top view of the machine is given; Fig. 2, a side elevation; Fig. 3, an end elevation, and Figs. 4 and 5 details more fully hereinafter described.

To enable others skilled in mechanics to fully comprehend my invention, I will describe its construction and operation.

In Fig. 1, C C is a stationary form, securely fastened to the frame S S by means of screws, admitting of its being removed, and different sized and shaped forms put in its place.

A A are the moving dies, to which are given, first, a direct linear movement, by which the middle of the bar to be bent is held firmly in place, while the dies oscillate and drive in both ends of the bar against the form c c, at which point a period of rest is given said dies, allowing punches d d and d' d' to be driven through and withdrawn from the bar during said period of rest. At the same time the ends of the bar may be cut off by means of the saw e, which moves forward with the punches, and is propelled by any of the well-known appliances; or they may be cut off by the cutters t t, applied on the stationary form C, and moving die A.

The form C C and dies A A are provided with adjustable shoes n n, which may be changed to correspond to and produce the several shapes of braces required.

The back end of the supporting-frame S S is provided with a driving-shaft, B B, on which are fastened the variously-shaped cams, from

which all the moving parts of the machine receive their motion. o o are the cams and yokes, and p p the connections which operate the moving dies A A. The cam h, with its yoke, gives the direct linear movement to the middle part of the moving dies, which grasp the bar and hold it in place during the time in which it is bent, punched, and cut off. The cams r r, with their yokes and connections, operate the punches d' d'; and the cams r' r', through the connection k on the under side of the machine, and rocker-shaft k', operate the punches d d. Suitable troughs x x for holding water are placed over all the punches to keep them cool.

In Fig. 2, Sheet 2, the last-named punches, with their operations, are more fully represented, r being the cam on the driving-shaft B, and k the connection, and k' the rocker-shaft operating the punches d d.

In Fig. 3, Sheet 2, a longitudinal view of the rocker-shaft k' is given, showing the arms to which the punches d d, &c., are attached.

Fig. 4 is a perspective view of the car-brace as bent, punched, and cut off by the machine.

Fig. 5 is a top view of the moving dies A A, showing the joints on the central part of the dies.

Having thus described the construction and operation of my invention, what I claim as new, and desire to have protected by Letters Patent, is—

1. The combination of the stationary form C, movable dies A, and punches d, whereby the braces are bent and punched at the same operation, substantially as shown.

2. The combination of the stationary form C, movable dies A, and punches d with the saws or cutters, whereby the braces are bent, punched, and cut at the same operation, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in the presence of two witnesses.

SETH RIGBY, 3D.

Witnesses:

ROBT. BOYD,
JAMES MCGOUN.