[20.] James Timms & W. P. Brown's Car Coupling.

119,097. Patented Sep. 19, 1871.

Fig 1

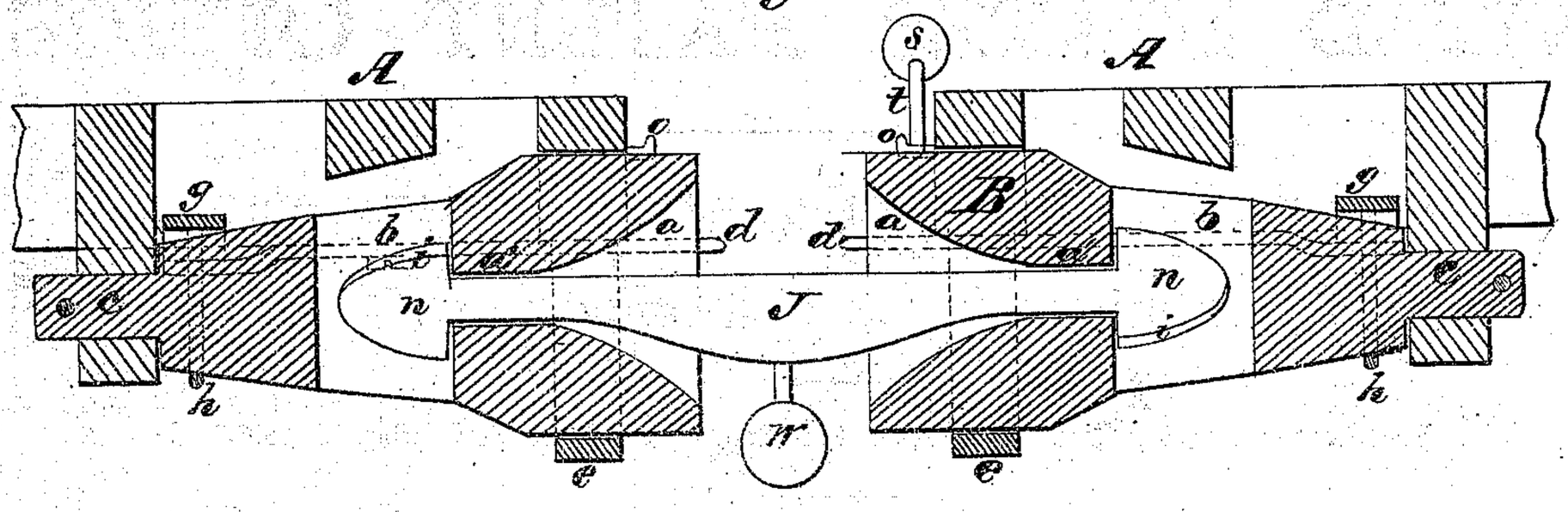


Fig. 2

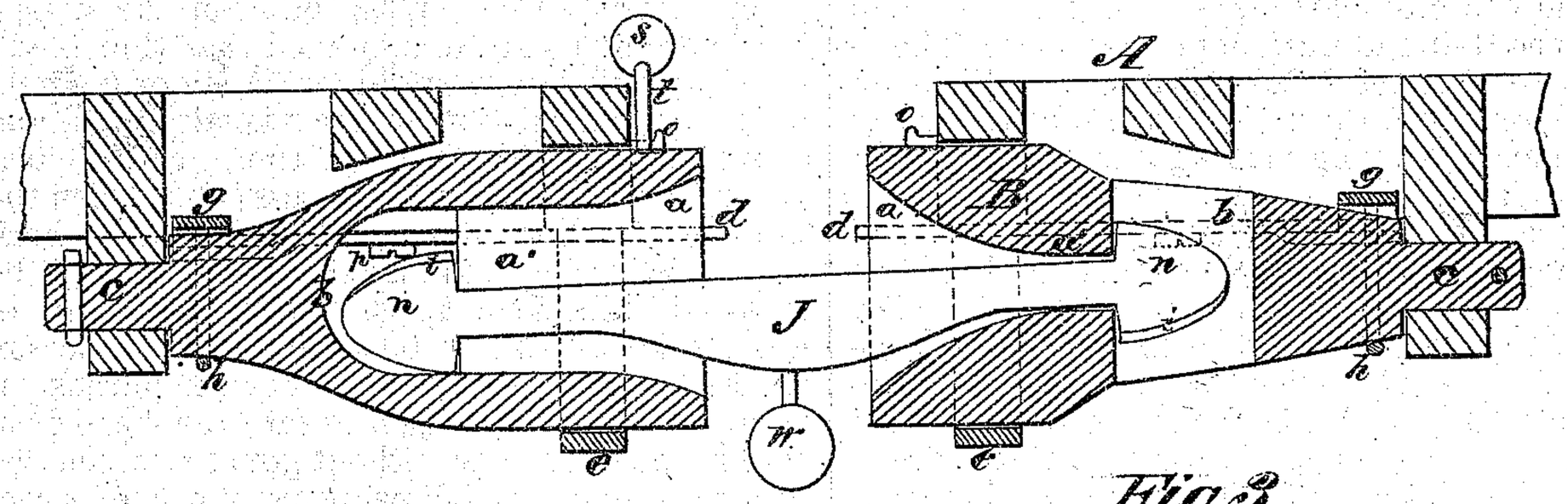


Fig 3

Fig. 4

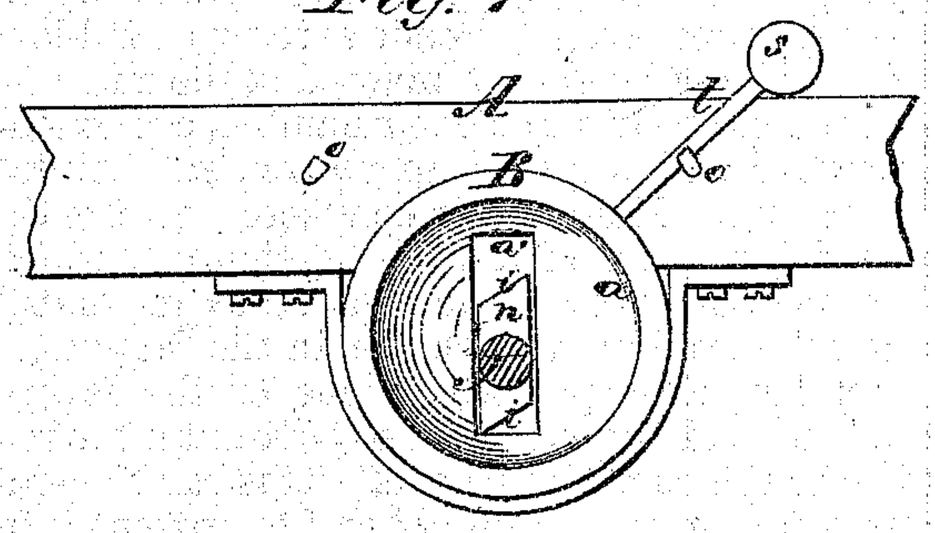
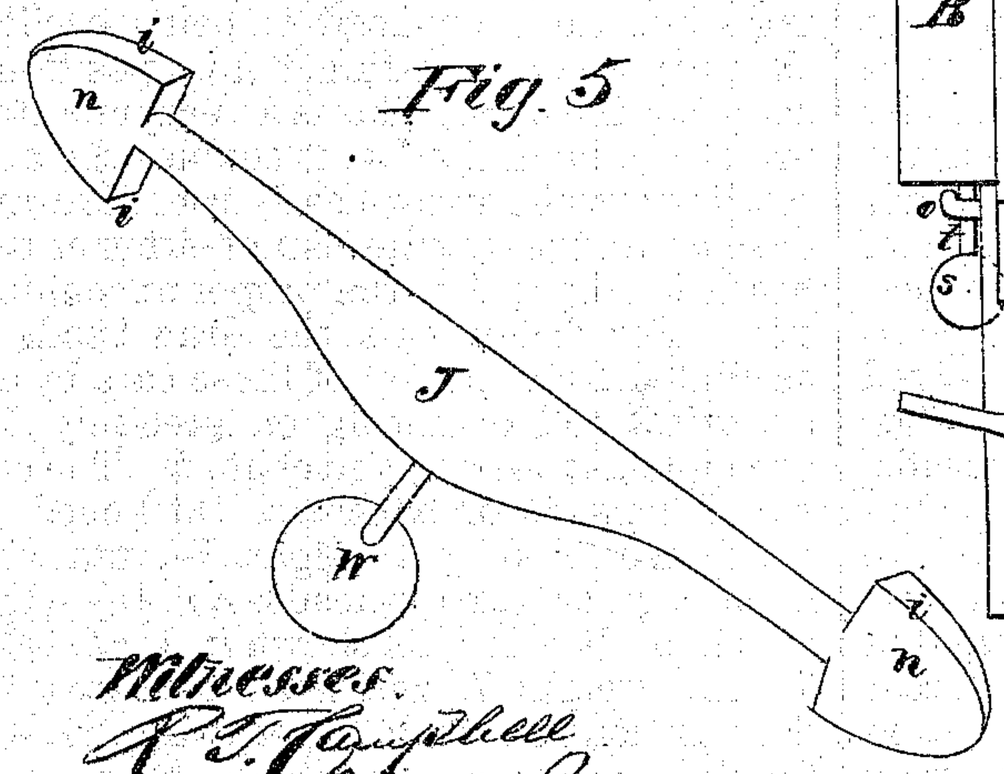
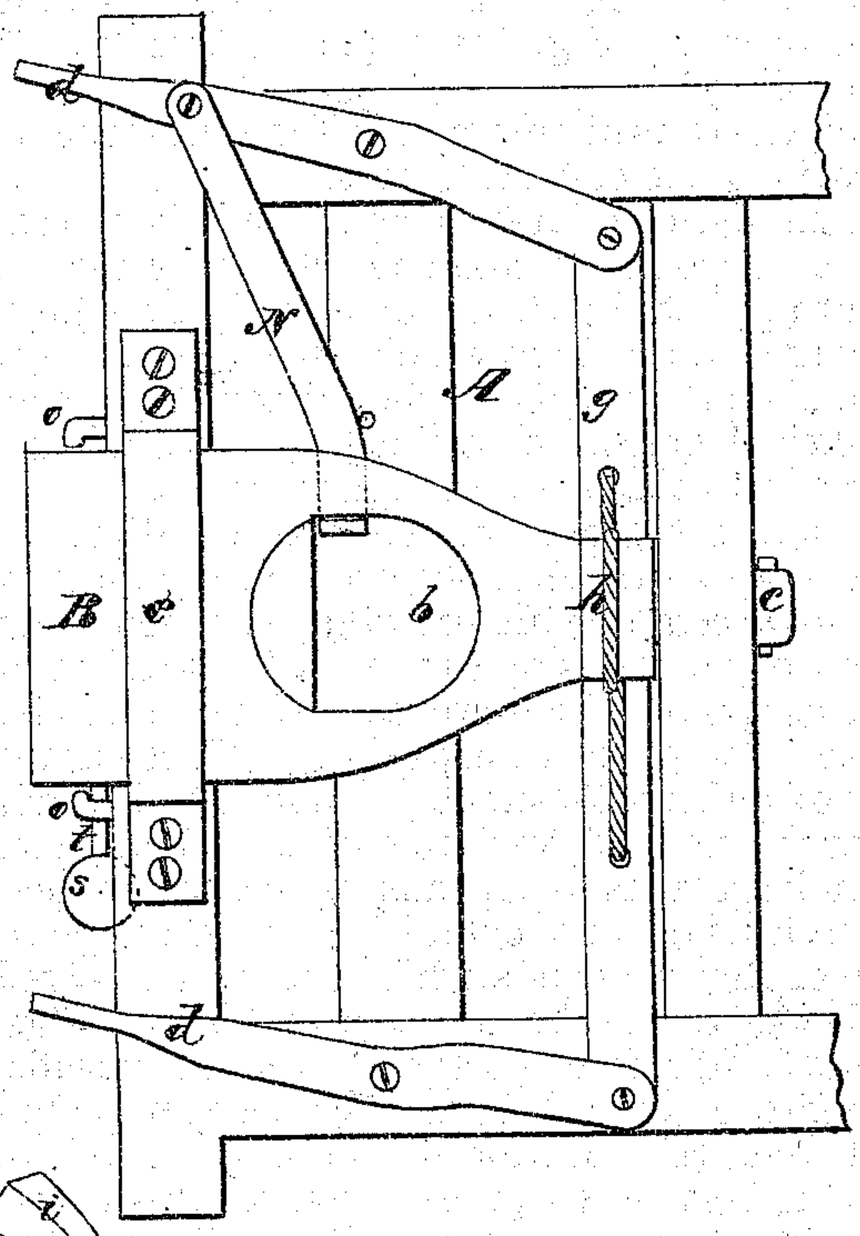


Fig. 5





Witnesses.
P. T. Campbell
J. N. Campbell

Inventor.
James Timms
W. P. Brown
by
Munn. Pennell & Lawrence.

UNITED STATES PATENT OFFICE.

JAMES TIMMS AND WILLIAM P. BROWN, OF MALTA, OHIO.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 119,097, dated September 19, 1871.

To all whom it may concern:

Be it known that we, JAMES TIMMS and WILLIAM P. BROWN, of Malta, in the county of Morgan and State of Ohio, have invented a new and Improved Railroad-Car Coupling; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making part of this specification, in which—

Figure 1 is a section taken longitudinally and vertically through the center of the ends of two cars coupled together. Fig. 2 is a similar view of the same parts shown in Fig. 1, indicating one of the draw-heads turned so as to effect an uncoupling. Fig. 3 is a bottom view of one end of the, car showing the devices for turning a draw-head. Fig. 4 is an end view of a draw-head adjusted for allowing the head of a coupling-bar to escape from it. Fig. 5 is a perspective view of the coupling-bar.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention relates to improvements on that class of railroad-car couplers wherein rotary or oscillating draw-heads are employed, in conjunction with coupling-bars which have enlargements or heads on their ends for engaging with the said draw-heads and automatically effecting a coupling when two cars are brought together.

The following description of our invention will enable others skilled in the art to understand it.

In the accompanying drawing, A A represent the end of the beds of two cars, the transverse buffer-beams of which are curved out centrally to receive two draw-heads, B B. These draw-heads or buffers are supported and kept in place so that they are allowed to oscillate about their longitudinal axes by means of straps *e e* near their front ends, and cylindrical tenons or journals *c c* on their rear ends, which latter are received into the bolsters of the car-beds, as shown in Figs. 1, 2, and 3. The front portions of the draw-heads, which are embraced by the straps *e*, are cylindrical, and the interior of these portions are chambered so as to present outwardly-flaring mouths *a a*, terminating in contracted elongated throats *a'*, as shown in the drawing. At the rear termination of the quadrilateral throat of each draw-head B there is a passage, *b*, transversely through the head, the front end of which passage is flat and parallel to the front end of the draw-head. Each draw-head can be oscillated either from the platforms or from the sides of the car, the extent of oscillation being limited by a loaded lever, *t*, striking one or the other of the stops *o o*. These stops are so arranged that the oblong throat *a'* will either stand vertically or horizontally. When this throat is in a vertical position, shown in Fig. 4, the head of the coupling-bar J will not be arrested in the recess *b*, but when the draw-head is turned so that the throat is horizontal, as in Fig. 1, the head of the bar J will be arrested. The lever *t*, with its weight *s*, will allow the draw-head to be oscillated by a person on the platform of the car. For the purpose of allowing a person to oscillate the draw-head from either side of the car without going between two cars we employ the following contrivance: *g* represents a horizontal transverse bar, which is arranged over the rear portion of each draw-head and pivoted at its extremities to two hand-levers, *d d*. These levers are pivoted to the under sides of the sill-beams and their handles are extended forward and outward to convenient points for grasping. The bar *g* is connected to the draw-head by means of a rope or chain, *h*, which is passed once around the head, and its ends are attached to bar *g*, as shown in the drawing. A stop-bar, N, is pivoted to one of the levers, *d*, and its end turned down so as to enter the recess *b* through each draw-head. This bar N operates as a stop to the coupling-bar J to prevent it turning while the draw-head is being oscillated for the purpose of adjusting it to a position for uncoupling the cars. This is a very important feature of the invention, as it enables the attendant to withdraw the arrow-heads from the draw-heads or separate the cars the instant either of the draw-heads is adjusted to the proper uncoupling position. For freight-cars the draw-heads may be oscillated from the top of these cars by means of a vertical rod operating on precisely the same principle as the bar *g* and chain *h*. The coupling-bar J consists of a central thickened portion, which is loaded by a weight, W, and which terminates in two arrow-heads, *n n*, the edges *i i* of which are beveled, as shown in Figs. 1, 2, 4, and 5. The weight W will keep the arrow-heads in the positions shown in the drawing, so that when the draw-heads are so turned that the longest portions of their throats *a'* are horizontal, as shown in Fig. 1, the heads *n* will not be with-

drawn from their draw-heads. The object of beveling the arrow-heads is to make them couple with the draw-heads automatically when cars are brought together. By beveling the edges of the heads *n* they will impinge on the flaring interior surface of the draw-heads B and cause the bar J to turn sufficiently to allow the heads *n* to pass through the contracted throat *a'* into the recesses *b*. To uncouple, one of the heads B is turned about one quarter around, so as to bring the longest diameter of the throat *a'* in a vertical plane, as shown in Figs. 2 and 4. Instead of beveling the arrow-heads *n n*, the same effect will be produced by giving the interior surfaces of the draw-heads a spiral twist.

We are aware that a revolving tube with an oblong opening through its end has been arranged within a stationary draw-head which has a flaring mouth, such tube being capable of oscillating, and also being weighted so that it shall be kept in a given position. We are further aware that a coupling-link with an arrow-head on each end is not new, therefore we do not claim such contrivances; but

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The oscillating coupling-bar J, made with arrow-heads on each end and loaded as described, in combination with the oscillating draw-heads B B, made with a flaring mouth, an oblong contracted throat, and a transverse passage or space, *b*, all substantially as and for the purpose described.

2. The draw-head B made with a flaring mouth, *a*, oblong-contracted throat *a'*, and transverse space or passage *b*, in combination with the loaded lever *t*, stops *o o*, and loaded arrow-headed coupling-bar J, substantially as and for the purpose described.

3. The levers *d d* and bar *g* and the flexible attachment *h*, combined with the head B, and arranged substantially as described.

4. The stop N for preventing the coupling-bar turning while the draw-head is being turned, substantially as set forth.

JAMES TIMMS.
WILLIAM P. BROWN.

Witnesses:
A. W. WALKER,
ANDREW J. HART.