

(No Model.)

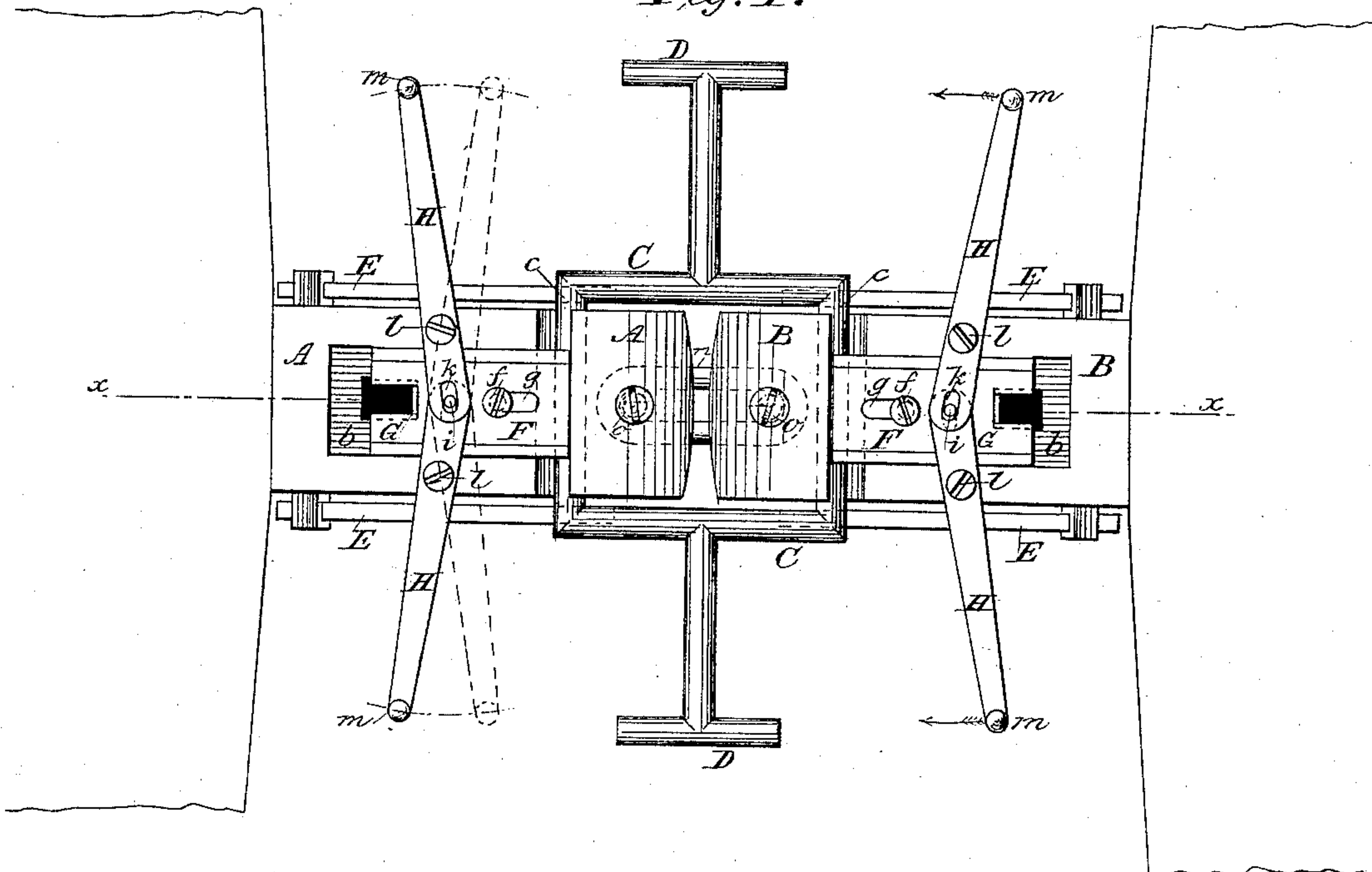
## H. SOMMERFELD.

## CAR COUPLING.

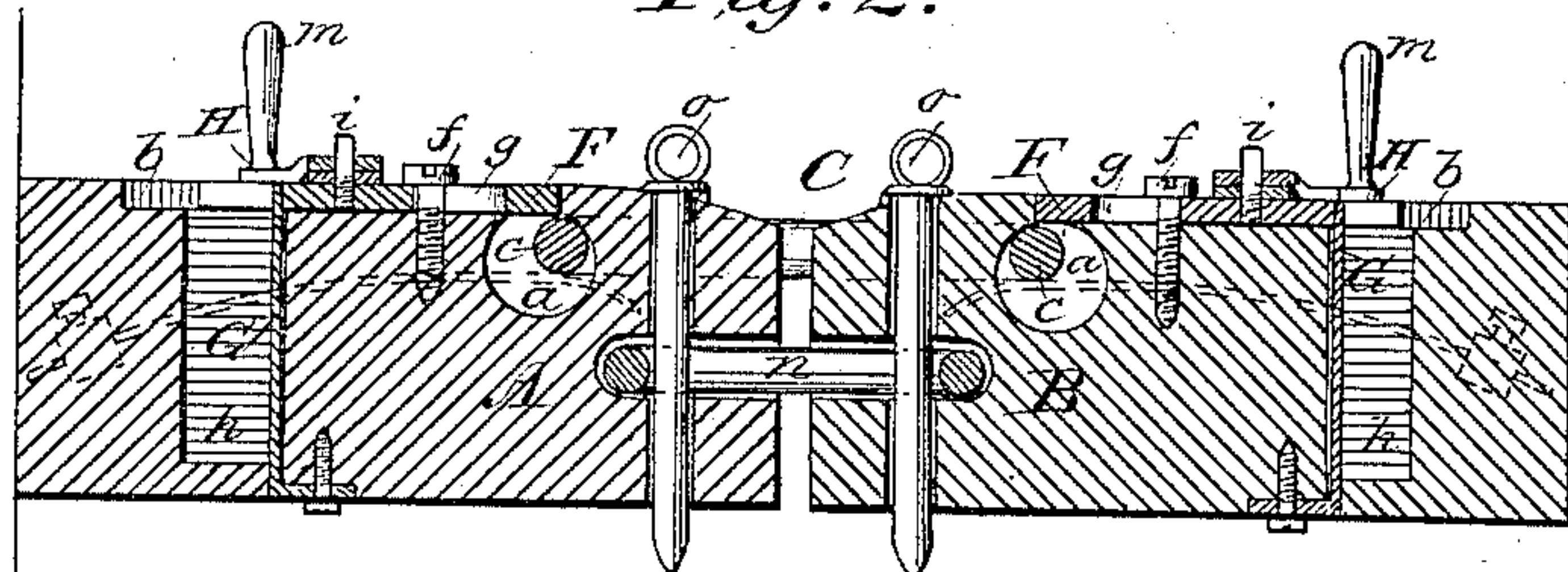
No. 387,323.

Patented Aug. 7, 1888.

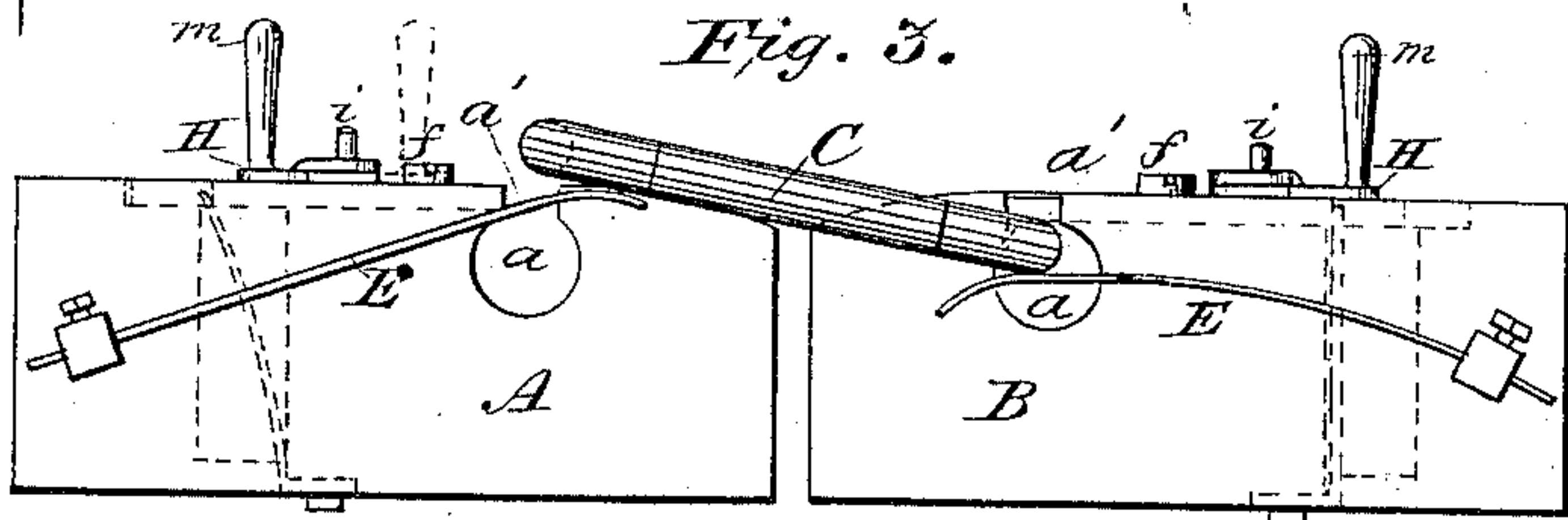
*Fig. 1.*



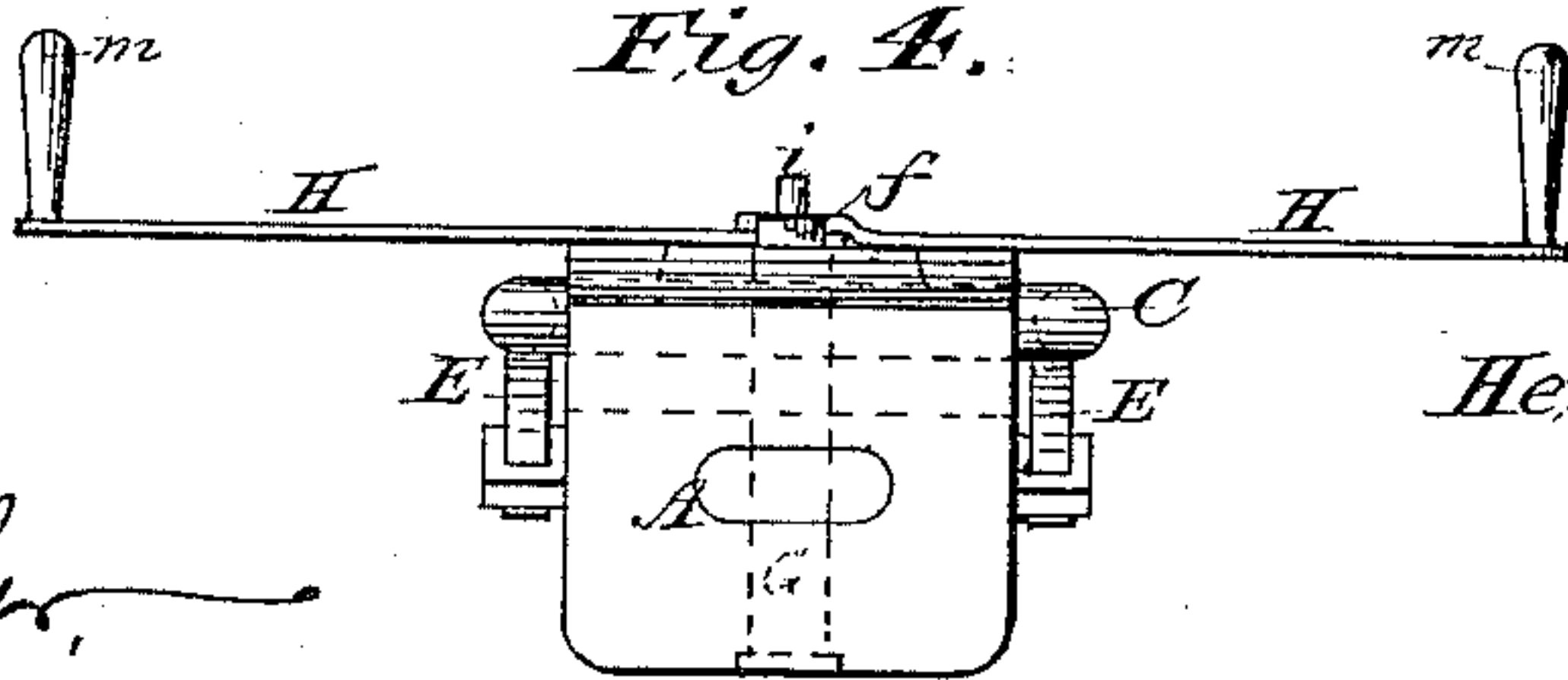
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*

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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 387,323, dated August 7, 1888.

Application filed May 7, 1888. Serial No. 273,057. (No model.)

*To all whom it may concern:*

Be it known that I, HEINRICH SOMMERFELD, a citizen of the United States, residing at Canton, in the county of McPherson and State of Kansas, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in railroad-car couplings, and the object is the production of a car-coupling of very simple construction which can be coupled and uncoupled without the brakeman or other operator being compelled to pass between the cars during the operation of coupling and uncoupling; also, to provide for the uneven or irregular heights of the cars; also, to accommodate the rocking or vibrating motion of the coupled cars; also, to provide means to couple the cars automatically, if desired; furthermore, to prevent the possibility of the cars becoming uncoupled without being operated by the brakeman, &c.; also, to prevent the necessity of providing right and left hand couplings; and, finally, to produce a coupling that is always ready for operation and not liable to get out of order.

With these objects in view my invention consists in the construction of certain details and arrangement of parts, as will be more fully described hereinafter, and specifically pointed out in the claims, reference being had to the accompanying drawings and the letters of reference marked thereon.

Like letters indicate similar parts in the different figures of the drawings, in which—

Figure 1 represents a plan or top view of the two couplings of cars coupled together. Fig. 2 is a longitudinal section on line *xx* of Fig. 1. Fig. 3 is a side elevation of the same. Fig. 4 is an end elevation of one of the couplings.

In the drawings, A and B represent two car-bumpers, of any suitable construction, and secured to the cars in the usual manner. The

bumpers are provided near the front ends with a transverse circular groove, *a*, having an open slot, *a'*, for the admission of the cross-bar *c* of the link C. This link is rectangular in shape, and is provided with the handles D to operate it with from the sides of the car. The ends of the link are supported on springs E, adjustably attached to the sides of the bumper. The ends of the springs are slightly curved to facilitate the passage of the link over them as the cars are brought together, and the upper faces of the bumpers are rounded to permit the cross-bars of the link to pass over them and enter through the slots *a'* into the groove *a*. The upper face of the bumper is provided with a recess or depression, *b*, for the reception of a sliding plate, F, held in place by one or more bolts or pins, *f*, passing through the slots *g*, which allow the plate F to be moved backward and forward by means of a spring, G, secured in a recess, *h*, and bearing with its upper end against the end of the plate F. The plate F is provided with a pin, *i*, fitting into the slots *k* in the levers H. The levers are fulcrumed at *l*, and have handles *m* on their outer ends, which may be extended to the sides of the cars, so as to operate them from the outside and obviate the necessity of passing between the cars, which often causes serious accidents or deaths. One end of one of the levers is preferably provided with an offset, so that both levers are in the same plane at their outer ends.

If desired, the link C may be made of oblong shape, and the grooves *a* in the bumpers must then be correspondingly curved.

The levers H might be made in one piece, and the fulcrums and pins and slots correspondingly changed.

Any suitable materials may be used in constructing my improved car-couplings, and they may be made of any desired shape and size.

In case cars are not provided with my couplings, the link *n* and pins *o o* may be used.

The operation is as follows: When it is desired to couple the cars, the link is first inserted into one of the recesses *a* of the bumper by moving one of the levers H in the direction of the arrow, Fig. 1, and after insertion of said link the lever is released, which



permits the plate F to pass over the cross-bar c and hold it, as seen in Fig. 3, it being supported on the springs E. The cars being brought together, the link C slides on the curved face of the bumper until it comes over the slot a', and as the plate F has in the meantime been drawn back it falls by gravity through said slot a' into the recess a of the other bumper, and the plate being forced over the other cross-bar c of the link C by the action of the spring G, and the lever H being released, the link is secured in place and the cars coupled. To uncouple the cars, the action is merely reversed.

It will be readily noticed that cars of very uneven height can be easily coupled by this device. It permits the cars to vibrate freely from side to side without danger of uncoupling the cars. It prevents accidents to brakemen, &c., as they are not compelled to pass between the cars, and the device is not likely to get out of order.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In car-couplings, the link C, having handles D, in combination with the bumpers having recesses a and slot a', and provided with sliding plates F, operated by pivoted levers H, in the manner shown and herein specified.

2. The combination of the bumpers A and B, provided with sliding plates F, actuated by springs G and levers H, with the links C, having cross-bars c to engage with the recesses a and slots a', all constructed and arranged as herein shown and set forth.

3. The combination of the bumpers A and B, provided with sliding plates F, actuated by

springs G and pivoted levers H, with the links C, having cross-bars c and supported by springs E, and arranged to engage with the slots a' and recesses a, in the manner and for the purpose herein specified.

4. The link C, supported on adjustable springs E and provided with handles D, in combination with the bumpers A B, having recesses a and slots a', and provided with sliding plates F, actuated by springs G and pivoted levers H, all operating as shown and set forth.

5. The car-coupling herein described, consisting of the bumpers A B, provided with sliding plates F, actuated by springs G and levers H, and having springs E, in combination with the link C, having cross-bars c and arranged to engage with the slot a' and recess a, all as shown and specified.

6. In car-couplings, the spring-actuated sliding plate F and levers H, arranged to secure the link C, having handles D, in the slotted groove a in the bumpers A B, provided with springs E, for supporting said link C, and all constructed and arranged as shown and specified.

7. In a car-coupling, the combination of a link, C, having handles D and cross-bars c, with bumpers having slotted grooves a, and arranged to engage by a movable sliding plate and pivoted levers attached thereto, in the manner and for the purpose herein described.

In testimony whereof I affix my signature in presence of two witnesses.

HEINRICH SOMMERFELD.

Witnesses:

T. C. BRECHT,  
H. A. BRECHT.