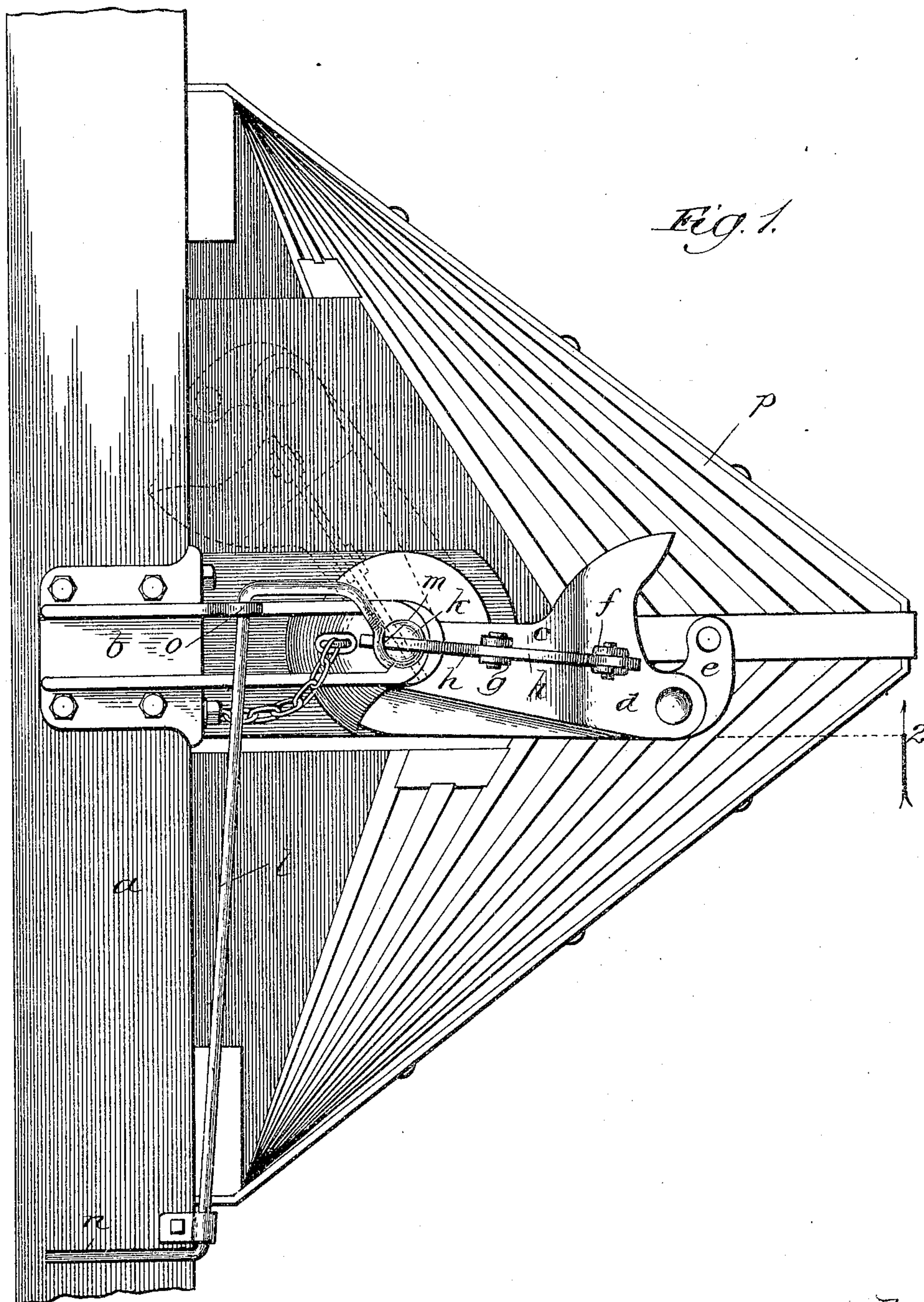


No. 808,651.

PATENTED JAN. 2, 1906.

E. GRAFSTROM, DEC'D.
D. B. GRAFSTROM, ADMINISTRATRIX.
CAR COUPLING DEVICE.
APPLICATION FILED MAY 27, 1903.

2 SHEETS—SHEET 1.



Witnesses:

J. W. H. Clay
Chas. H. Ebert

Inventor:

Edward Grafstrom

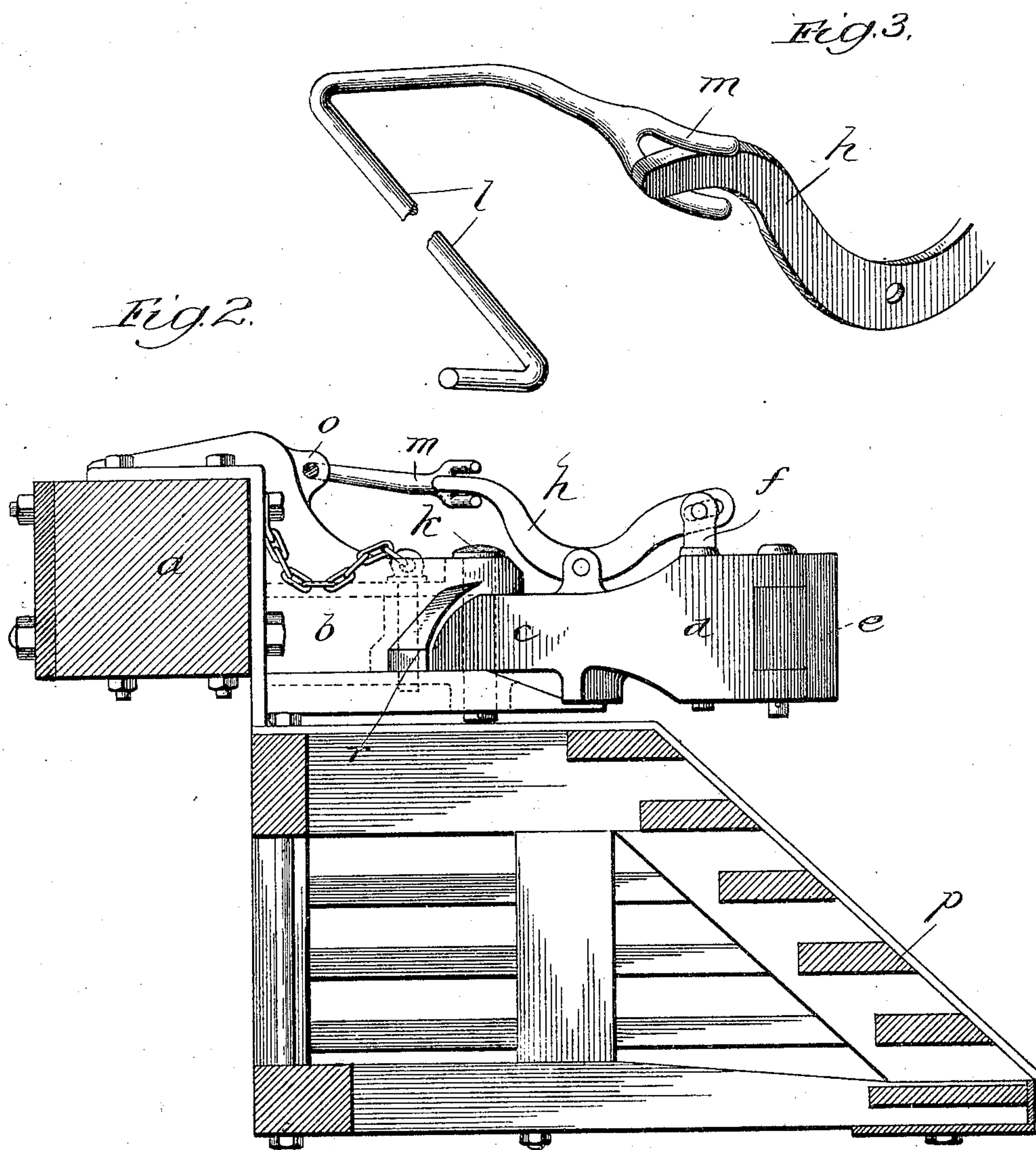
By Paul Synnestvedt
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Attorney

UNITED STATES PATENT OFFICE.

EDWARD GRAFSTROM, OF TOPEKA, KANSAS; DOROTHY BEACH
GRAFSTROM ADMINISTRATRIX OF SAID EDWARD GRAFSTROM,
DECEASED.

CAR-COUPLING DEVICE.

No. 808,651.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed May 27, 1903. Serial No. 158,922.

To all whom it may concern:

Be it known that I, EDWARD GRAFSTROM, a
subject of the King of Sweden and Norway,
residing at Topeka, in the State of Kansas,
have invented a certain new and useful Car-
Coupling Device, of which the following is a
specification.

My invention relates especially to the means
for coupling cars to engines, and to means for
operating the coupling device from the out-
side of the car and for swinging the coupler
out of the way when not in use. The objects
of my invention are, to avoid the danger and
inconvenience of having a coupling head pro-
jecting from the front of a car or engine when
not in use; to avoid the danger of the brake-
man going between the cars or between the
engine and car in the act of manipulating the
coupler; to mount the mechanism for operat-
ing the lock upon the head in such a way that
it cannot be manipulated when the head is
not in place; to provide a pivoted car coupling
bar, to provide a safe and accurate locking
means for the coupler head, and to generally
improve the construction and operation of
the means for coupling an engine to a car.
The above objects, together with other advan-
tages which will hereinafter appear, I attain
by means of the mechanism illustrated in pre-
ferred forms in the accompanying drawings,
in which—

Figure 1 is a plan view of the pilot and cow
catcher on the front of an engine and of my
coupling device mounted thereon, showing in
full lines and in dotted lines respectively, the
two positions of the coupling head and pivoted
bar.

Figure 2 is a side elevation of the coupling
devices and a central section through the cow
catcher and front end beam of the engine.

Figure 3 is a perspective view illustrating
the lever arms for operating the locking mech-
anism.

The many dangers resulting to the brake-
man and others occupied in railroad work in
coupling cars or rather from going between
the cars to couple or uncouple the same has
led to legislation requiring means for manipu-
lating the coupling devices from the outside
without going between the cars. It is also
highly desirable if not necessary, for the coup-
ling head itself to be capable of being swung
out of operative position when not in use; in

order to combine these two features and to im-
prove the coupling device generally I have
provided as illustrated in the drawings, a
coupling bar made in two parts of which the
forwardly extending part carrying the coup-
ling head itself is pivoted to the other and
may be swung sidewise out of position when
not in use.

The cross abutment beam *a* of the engine
to which the car coupling bar is generally at-
tached may be of any desired form; and upon
this I place the bracket extension *b* which at
its forward end through a pivot *k* carries the
swinging member *c* of the coupler, having in-
tegral with it the coupling head *d* which may
be of the ordinary Master Car Builders type
having a pivoted knuckle *e* to coöperate with
a like coupler head upon the other car or
another engine. As is well known this type
of coupler head has a knuckle which when
pushed into the position shown in Figure 1 is
generally locked by the falling of a key be-
hind the tail of the knuckle. A locking pin
is illustrated at *f*; and in order to raise this
locking pin *f* out of place to allow the finger
e to open and uncouple the cars I provide for
lifting the pin *f* out of place by the lever *h*
which is pivoted upon the part *c* and has its
tail end embraced by the bifurcated head *m*
of the lever *l*, which extends out to the side
line of the engine and cars and there has a
handle *n* for manipulating the same.

When the heads are uncoupled and the
coupling bar therefor is not desired in the
position shown it may be swung around as is
illustrated in dotted lines in Figure 1 when it
will be out of the way and in this position it
will be noted that the lever *h* is disengaged
from the head *m* of the lever *l*. This con-
struction is not necessary however, since it is
evident that the head *m* may be so arranged
as to avoid disengagement of the two when
the head is swung out of operative position.
The pivoted portion of the coupler bar, *c*,
may be provided with an abutment which en-
gages a similar abutment *r* upon the station-
ary part *b* so as to hold the coupler firmly in
proper position in alinement with the engine
when in operating order.

It will of course be understood that it is not
essential to my invention that the locking
mechanism of the coupler head be of any par-
ticular form, nor is the position of the pivot-

ing point of the lever λ nor the particular form of the head of the lever λ material. But I believe I am the first to provide a pivoted coupler bar upon the front of an engine which may be swung out of position and also the first to provide lock operating means, upon the coupler bar itself and so articulate it with other means as to be operated from the outside of the car when the coupler head is in place.

The many advantages of this device will readily occur to those familiar with the use thereof.

Having thus described my invention and illustrated its use, what I claim as new, and desire to secure by Letters Patent, is the following:

1. The combination with a coupler bar having a hinged extension carrying a locking coupler, of a lever mounted upon said extension for operating the coupler lock, and a second lever attached to the body of the car or engine for operating said first mentioned manipulating lever from outside the car line.

2. The combination with a pivoted coupler bar, of a pair of levers one of which is borne on the pivoted bar and one of which is borne on the car and designed to cooperate with the pivoted coupler bar when it is in alinement and to be out of operative position when the same is folded against the car body, substantially as described.

3. In a car coupler the combination with a coupler head and an extension carrying the

same mounted pivotally to swing sidewise out of operative position, a coupler lock operating mechanism carried on said swinging head, and means for operating said locking mechanism from outside the car comprising levers which are in an engagement when the extension is in operative alinement with the car and is out of engagement when the said coupler head is swung sidewise out of position.

4. The combination with a coupler head extension pivoted to swing sidewise out of operative position, an automatic coupler and a coupler lock thereon, a lever mounted on the swinging extension, a lever mounted on the car and provided with a fork engaging the first mentioned lever to operate the coupler lock, said connection of the two levers being adapted to engage when the coupler bar is in alinement and to disengage when it is swung sidewise out of position.

5. The combination with a pivoted extension coupler bar having a coupler lock operating mechanism thereon, of an actuating lever on the extension and an operating lever on the car provided with a forked end loosely engaging said lever on the extension, substantially as described.

In testimony whereof I have hereunder signed my name in the presence of the two subscribed witnesses.

EDWARD GRAFSTROM.

Witnesses:

J. M. RUTER,

C. J. MOORE.