

No. 684,121.

Patented Oct. 8, 1901.

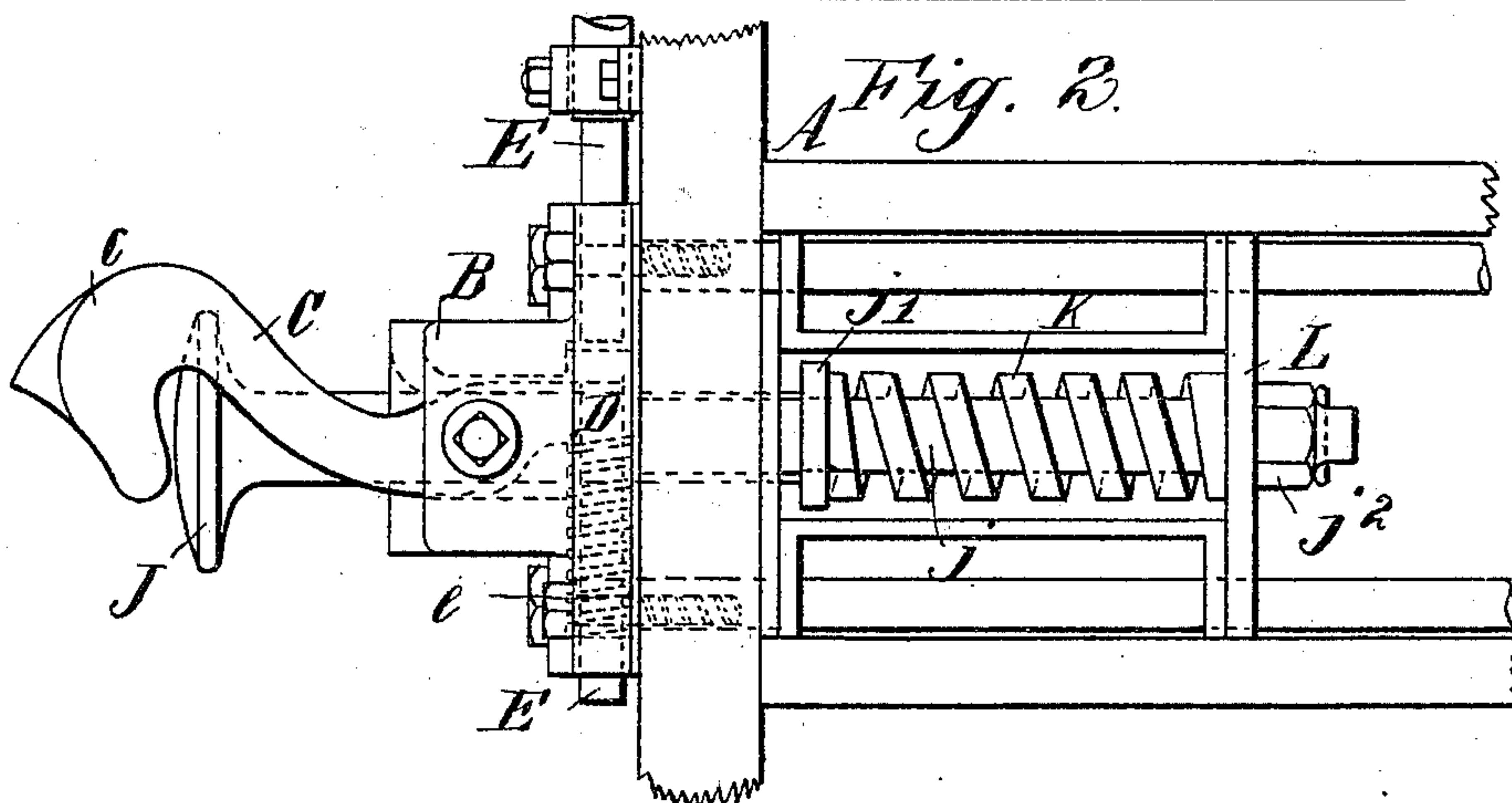
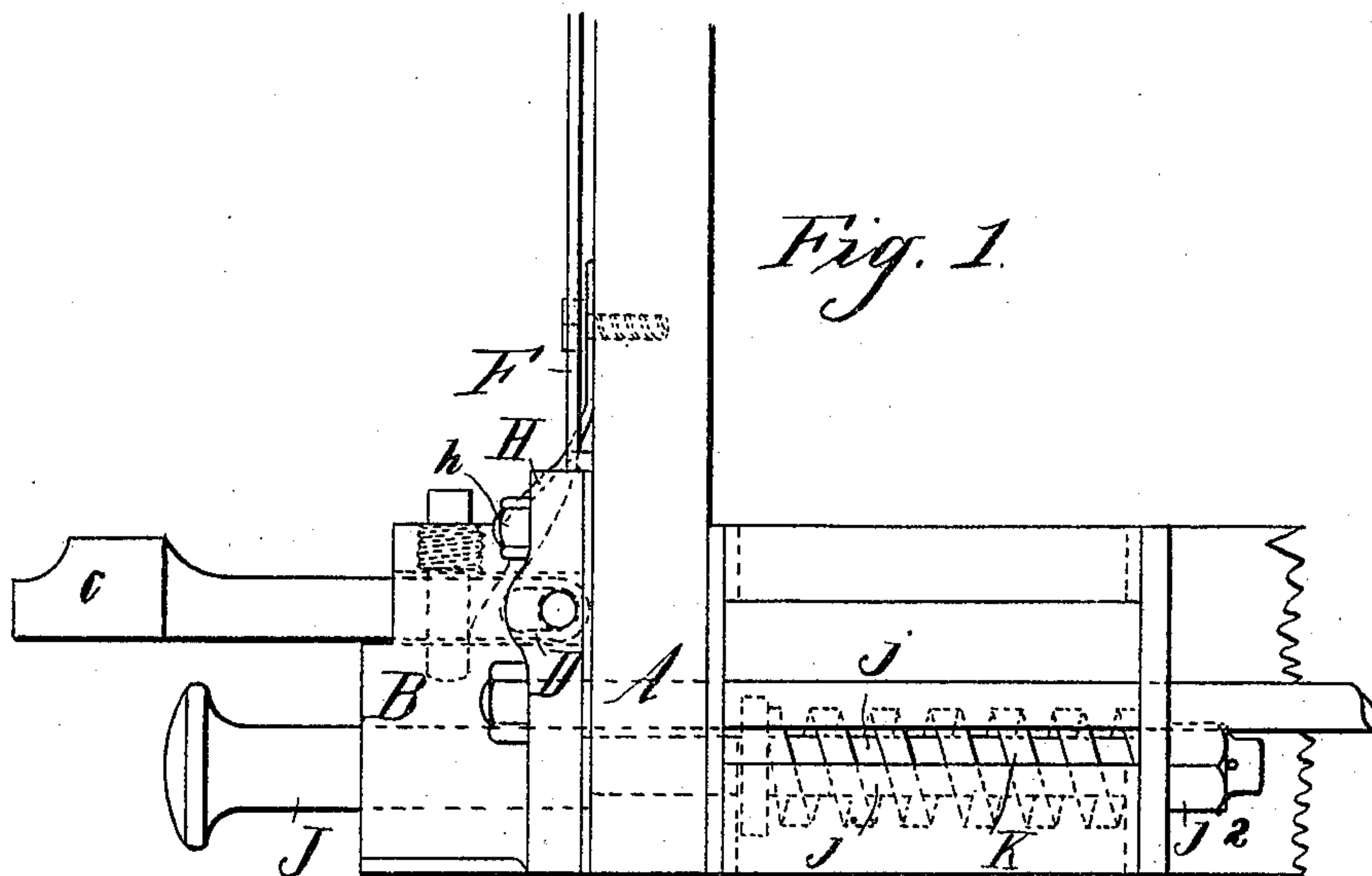
W. SMITH.

COUPLING AND BUFFER FOR RAILWAY CARRIAGES OR WAGONS.

(Application filed June 11, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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WILLIAM SMITH, OF BRIGHTON, ENGLAND.

COUPLING AND BUFFER FOR RAILWAY CARRIAGES OR WAGONS.

SPECIFICATION forming part of Letters Patent No. 684,121, dated October 8, 1901.

Application filed June 11, 1900. Serial No. 19,866. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SMITH, a subject of the Queen of Great Britain and Ireland, and a resident of 9 Newport street, Lewis road, Brighton, Sussex, England, have invented an Improved Coupling and Buffer for Railway Carriages or Wagons, of which the following is a specification.

This invention relates to an automatic coupling and buffer apparatus for railway carriages and wagons.

On the end of each car I fix a casting carrying a strong hook pivoted to it and adapted to turn horizontally. This hook is provided with a lever extension, operated by a spring, and a spindle which keep the hook normally in engaging position, but allow it to be turned to one side. When the cars come together, the heads of the adjacent hooks meet, push each other aside, and engage. A lever passing to the side of the car serves to release the coupling-hooks by moving back the spindle, which turns the hook to one side. A catch retains the lever in open position until it is released for the next coupling operation. The buffer is combined with the coupling apparatus, being carried by the same casting, and is at the center of the car, so that a single buffer serves in place of the two side buffers commonly employed.

The accompanying drawings illustrate the construction of my coupling and buffer apparatus.

Figure 1 is a side view, Fig. 2 a plan, and Fig. 3 a front view, of the apparatus; and Fig. 4 shows in plan two apparatus coupled.

The beam A of the car carries the casting or casing B, bolted to it at the center. To it is pivoted the strong hook C, the head c of which is of considerable depth and is beveled at the front, so that on two hooks meeting they are mutually pressed aside. As shown, the hook is pivoted vertically, so as to turn in a horizontal plane. The hook is formed with the lever extension D, preferably of forked form, having the spindle E passing through and bearing against it. This spindle is within the casing B and is free to move transversely. The spring e is fitted around this spindle and bears upon the extension D, keeping the hook normally in fully-extended position, as shown in the drawings. The

other end of the spring abuts against the end of the casing B, which has a passage permitting the spindle E to pass through.

The lever F, which releases the coupling, is pivoted to the car at f and is formed with the head f' to bear against the projecting end of the spindle E. The other end of the lever is bent upwardly and is provided with a handle for operating. On pulling down the lever the spindle E is pushed back, carrying with it the extension D of the hook, causing the latter to turn around its pivot and to disengage. To hold the lever in open position, a spring-catch H is provided, having the nose h, which engages the lever when the latter is pulled down past it. The catch, as shown, is curved outwardly and is pressed back by the lever as it passes until the lever reaches the point of the nose. To release the lever, the catch is simply pushed back.

The single central buffer J projects through the casing B below the coupling-hook, and the spindle j of the buffer is carried under the car in the usual manner, having the strong steel spring K around it bearing against a collar j' and a fixed plate L. On the end of the spindle is the adjusting-nut j². The coupling and buffer thus form a single apparatus, which acts in a simple manner and with complete certainty obviating all danger in its working.

What I claim as my invention, and desire to secure by Letters Patent, is—

In an automatic coupling apparatus for railway-cars, having a hook pivoted to a fixed casing and adapted to turn in a horizontal plane and provided with a forked lever extension upon its rear end, a spindle C bearing upon the extension, a spring e upon the spindle and a lever F pivoted to the car having the curved or cam portion f' bearing against the projecting end of the spindle E but otherwise entirely unconnected with the coupling apparatus, substantially as herein described and shown.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

WILLIAM SMITH.

Witnesses:

FRANK WILLIAM PATTISON,
HERBERT JAMES CRAGGS.