

United States Patent Office.

ALZIRUS BROWN, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 94,167, dated August 24, 1869.

IMPROVEMENT IN HARVESTERS.

The Schedule referred to in these Letters Patent and making part of the same.

Know all men by these presents:

That I, ALZIRUS BROWN, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Mowing and Reaping-Machines; and I do hereby declare that the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a top or plan view of so much of a mowing and reaping-machine as is necessary to illustrate my present improvements;

Figure 2 represents a section on line A B, fig. 1; and

Figure 3 represents a perspective view of a section of the connecting-rod.

To enable those skilled in the art to which my invention belongs, to make and use the said improvements, I will describe the same more in detail.

My improvements relate to certain particular devices for retaining the connecting-rod in place while the machine is in operation, as will be hereafter explained.

In the drawings—

A is the shoe to which the heel-end B, of the finger-beam C, is fastened.

The finger-beam is provided with slotted-finger, D, through which the cutters E work, the cutters being fastened to the cutter-bar F, in the usual manner.

The shoe A, in this instance, is provided with ear-pieces *a a*, which are hinged between the ears *b b b b* of the hanger-iron G, which is to be fastened to the main frame in any proper manner.

H is the connecting-rod, only the end next to the cutter-bar being shown, since that is sufficient to illustrate my present improvements.

Rod H is provided with a wrist, *e*, which passes through a hole in the heel-end of the cutter-bar, whereby, when said rod is operated by the usual crank-device, a rapid reciprocating motion is imparted to the cutter-bar and cutters.

Many devices have been employed for retaining the wrist or hooked end *e* in place, the most common being a spring-key or pin, inserted in a hole in the end of the wrist.

As such keys or pins are liable to work out, other devices have been tried, and, among the number, may be mentioned the casting of a flange, *d*, on the upper side of shoe A, of sufficient height to pass up above the end of the connecting-rod.

While this plan insures the retention of the rod in place, it involves much friction, since a portion of the

rod equal to, if not more than, the distance which the cutter-bar moves, is constantly rubbing and wearing against the inside of said flange.

To avoid such objections, while at the same time securing all of the advantages of the plan last above described, I weld a steel projection, *e*, on to the lower side of the connecting-rod, as indicated in the drawings, whereby only a very narrow flange, *d*, is required to retain the connecting-rod in place, the projection *e* extending down past the upper edge of the flange, as indicated in the drawings.

A guard-rod, I, is attached to the under side of the hanger-iron G, to prevent the cutter-bar and connecting-rod from falling down upon the ground when the outer end of the finger-beam is raised up, which is necessary, in order to swing the flange *d* far enough from the projection *e* to slip the wrist *e* out of the hole in the cutter-bar, when the latter is to be taken out for grinding the cutters or for any other purpose.

The friction of the projection *e* is slight, while it is very effectual in retaining the connecting-rod in its proper position, as before explained.

The improvement, as shown, is more particularly applicable to the mowing-machines, for which Letters Patent were granted to myself, Kniffin, and Dodge, on the 17th day of November, 1863, but it may be applied with good results on all or nearly all of the other mowing and reaping-machines in use.

The projection *e* may be formed by upsetting or bending the connecting-rod, or a small dog or finger may be secured in any proper manner to the rod for the purpose.

Having described my improvements in mowing and reaping-machines,

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

1. A connecting-rod for mowing and reaping-machines, having a projection *e*, substantially as and for the purpose set forth.

2. The combination with the connecting-rod, heel-end of the cutter-bar, and the shoe which supports the heel of the finger-beam, of a projection *e* and flange *d*, substantially as and for the purpose set forth.

3. The combination with the connecting-rod H, cutter-bar F, flange *d*, and projection *e*, of the supporting or guard-rod I, substantially as and for the purposes set forth.

ALZIRUS BROWN.

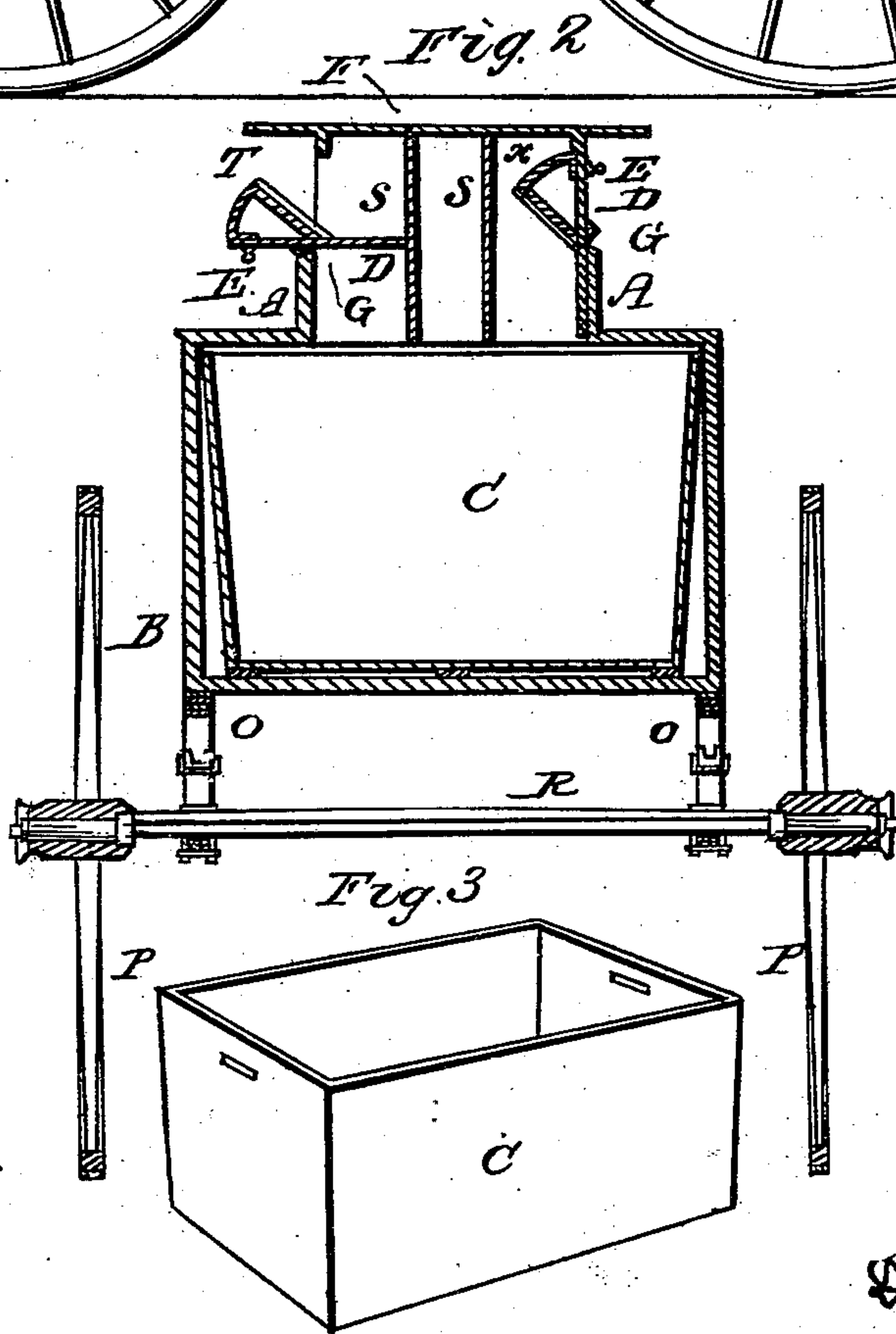
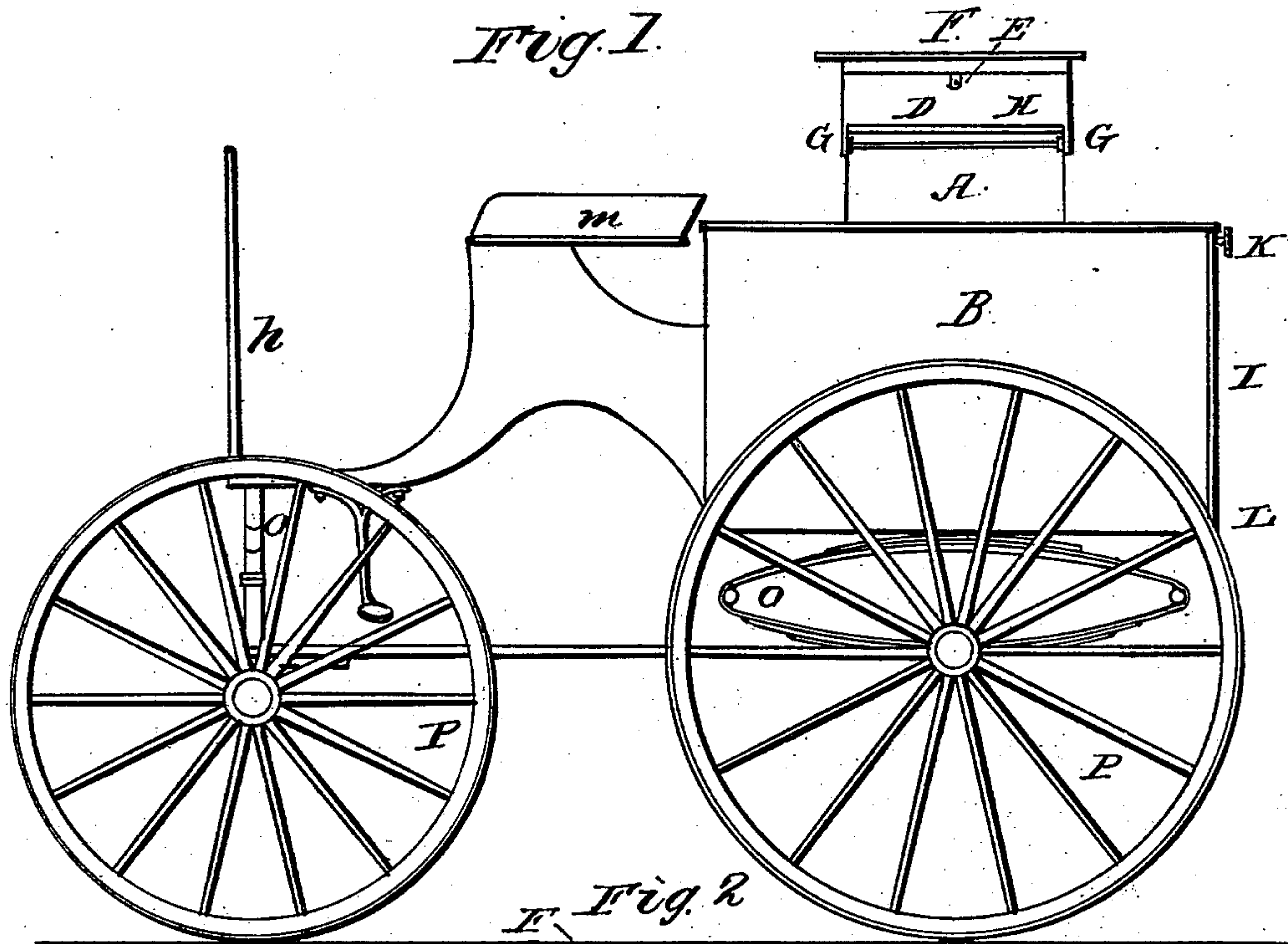
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Vehicle for Carrying Mail.

No. 94,168.

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