

M. STONE.
Detaching Horses.

No. 103,679.

Patented May 31, 1870.

Fig. 1

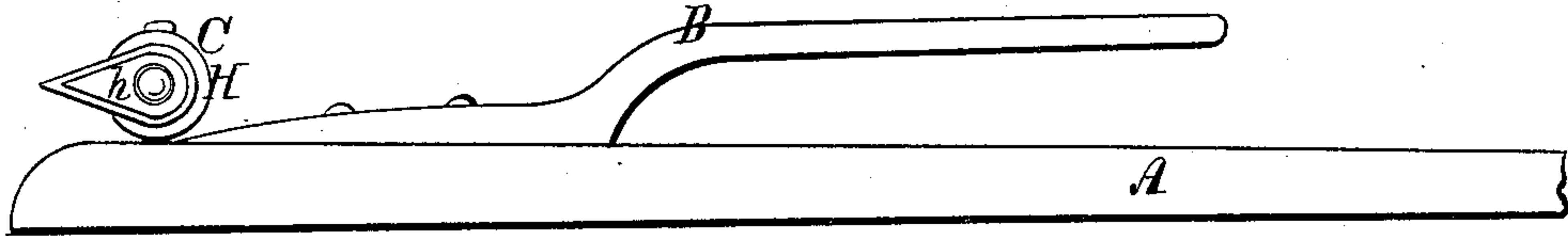


Fig. 2

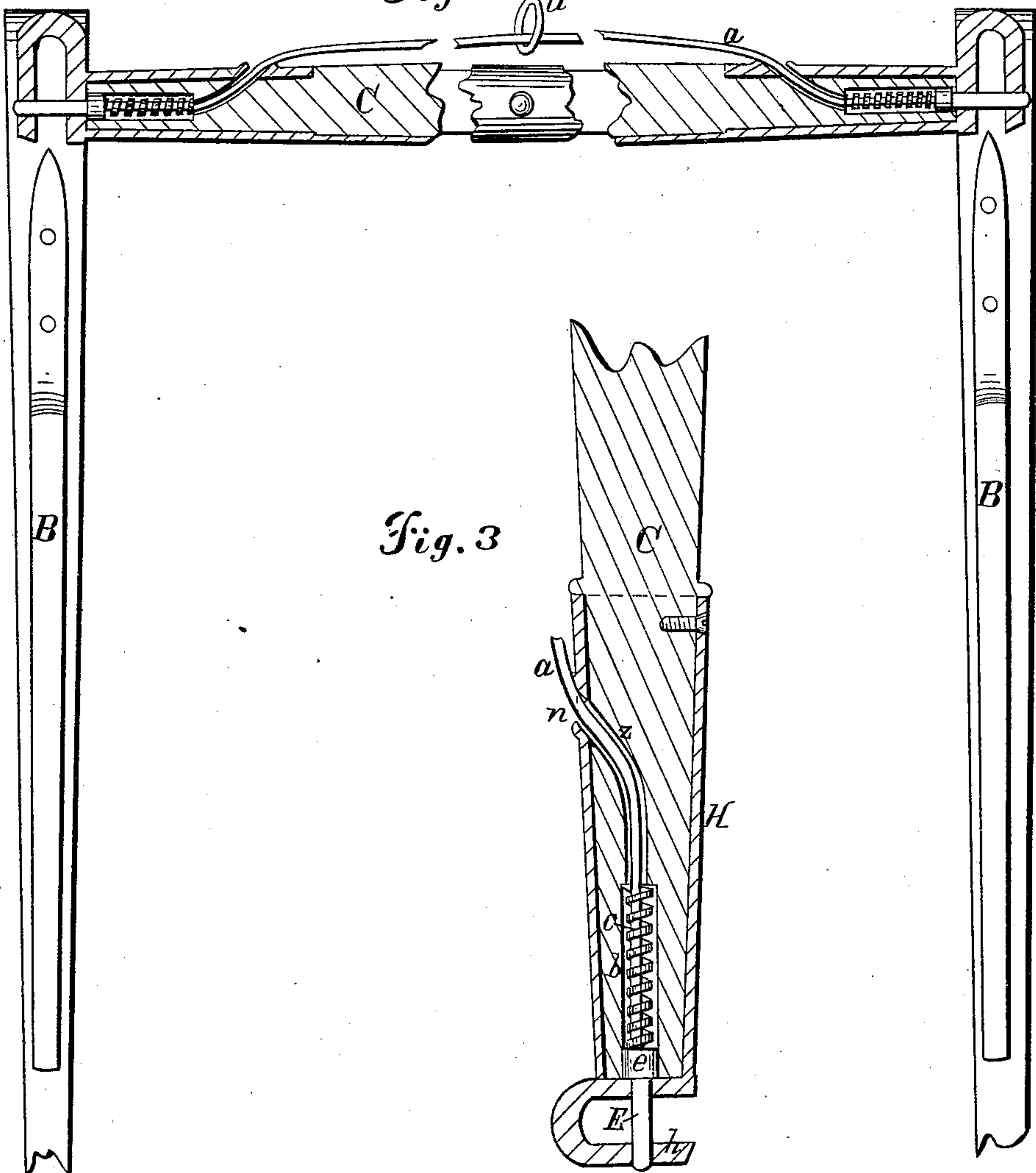
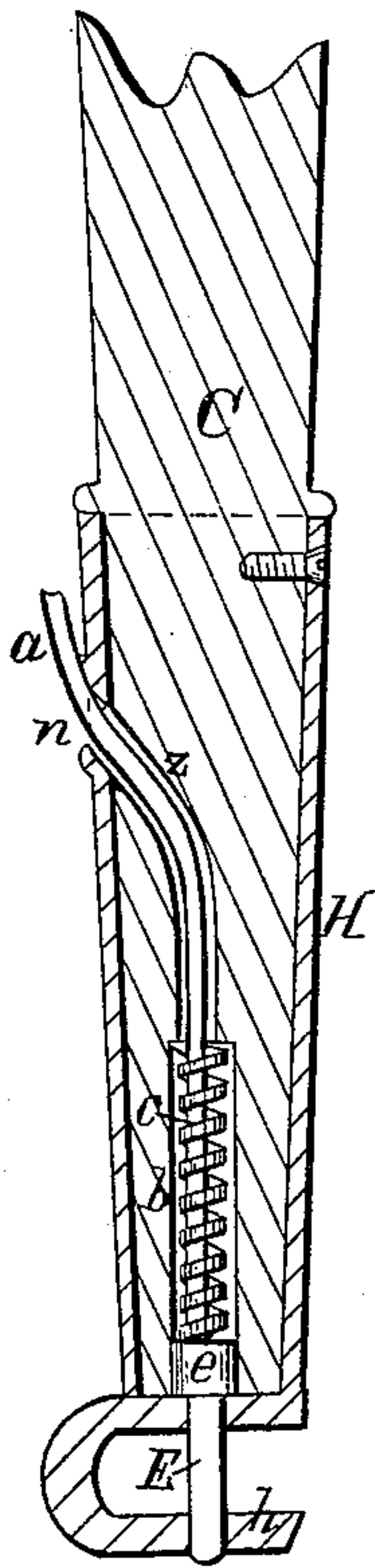


Fig. 3



Witnesses.
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United States Patent Office.

MELVIN STONE, OF VERMILLION, OHIO.

Letters Patent No. 103,679, dated May 31, 1870.

IMPROVEMENT IN SAFETY WHIFFLETREE.

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

To all whom it may concern:

Be it known that I, MELVIN STONE, of Vermillion, in the county of Erie and State of Ohio, have invented a new and valuable Improvement in Whiffletrees; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a side view of my invention.

Figure 2 is a horizontal section of the same.

Figure 3 represents an enlarged similar section.

My invention relates to bored whiffletrees, and the spring-bolts therein contained, adapted to confine the ends of the tugs until such time as the driver of the vehicle may wish to loose them, and consists in the construction and novel arrangement of devices whereby the perforated portion of the whiffletree is made as strong as any other part, and the arrangement otherwise benefited and improved.

Heretofore it appears to have been thought necessary to employ a bolt of some length, extending nearly to the pivot-bolt of the whiffletree, and consequently necessitating great weakness therein on account of the central perforation. This long bolt was employed in order that its end should have stiffness enough to enable it to withstand the traction of the tugs.

My improvement is designed to overcome this difficulty, and may thus be described.

The letter A of the drawing designates a pair of shafts, upon which are placed the hold-back hooks B B, so formed that they will offer no obstruction to the release of the horse, if once the tugs are loosed from the ends of the whiffletree.

C represents any ordinary whiffletree to which my improvement has been thus applied.

First, a perforation, *b*, of a couple of inches or thereabout in length, is made in the end of the whiffletree. This perforation is in the direction of its axis, and is usually a little over three-eighths of an inch in diameter.

A continuation of this perforation is made for the depth of one-half an inch further into the wood, but a smaller bit is used, the object being merely to provide a passage for the operating cord *a*. The same bit is now used to bore in from the rear side of the whiffletree, in an inclined direction, thereby forming an outlet, *z*, for the cord, at a distance of not over three inches from the end of the tree.

A coiled spring, *c*, is now introduced, in such a manner that its end shall rest on the shoulder *s* formed near the end of the perforation *b*.

E designates a short pin, not above an inch and a half in length, provided with a collar, *e*, against which

the spring *c* operates, and an eye, *d*, to which the end of the operating cord is attached.

It is evident that the strain of the tug must be met mainly by the supports at each end of this pin. Therefore, I next place over the end of the whiffletree the thimble H, four or five inches in length, provided with the perforated elbow *h*, and perforated at *n* to provide for the passage of the operating cord. This thimble may be secured by a screw in the usual manner.

A two-fold object is here attained. Not only is the thimble made to sustain the traction of the tug on the pin in its end, but, as it extends some distance on the whiffletree beyond the end of the perforation therein, it also operates to strengthen the perforated end thereof in a complete and satisfactory manner. The wear of the cord upon the exit opening is prevented by the perforation *n*, the edges of which are provided with a swell, over which the cord will pass with but little friction.

The advantages of my arrangement are obvious. Not only are they seen in the construction, but also in the operation of the parts. The cord *a*, escaping from the whiffletree near its ends, is thrown over the dash-board in the form of a loop, and is therefore always ready at hand, while its action cannot be hindered by the tail of the horse.

I am aware that the principle of boring whiffletrees for the introduction of spring-bolts is not new. Therefore I do not claim such broadly.

Sometimes I attach a ring, *a'*, to the loop *a*, and fasten thereto a single cord, arranged to pass through the center of the dash-board. As the ring will move freely on the loop, there will be no danger of the horse setting himself free by switching his tail. The ring will also prevent one tug from remaining fast while the other is loosened by the pull of the driver. The same effect will be produced by attaching the ring to the loop when it is thrown over the dash-board. It will thus act as a handle, and prevent an unequal strain.

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

In combination with the wooden whiffletree C, perforated at *b*, and provided with the sliding eye-bolt E and coiled spring *c*, the arrangement of the strengthening thimble H, extending beyond the perforation, and provided with the perforated elbow *h* and the aperture *n* for the passage of the operating cord *a*, substantially as shown and described.

In testimony that I claim the above, I have hereto subscribed my name in the presence of two witnesses.

MELVIN STONE.

Witnesses:

E. W. ANDERSON,
VILLETTE ANDERSON.