(No Model.)

A. G. NORTH.

BOLSTER SPRING.

No. 494,158. Patented Mar. 28, 1893.

Fig. I.

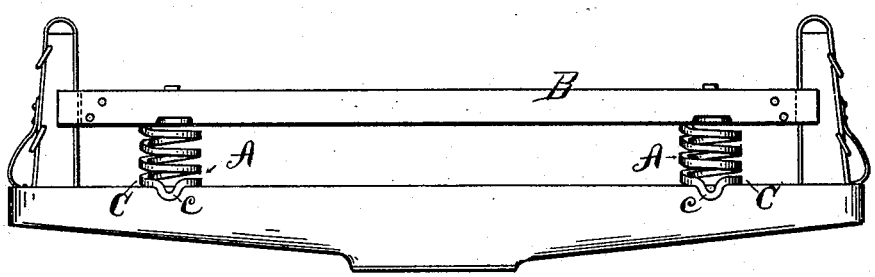
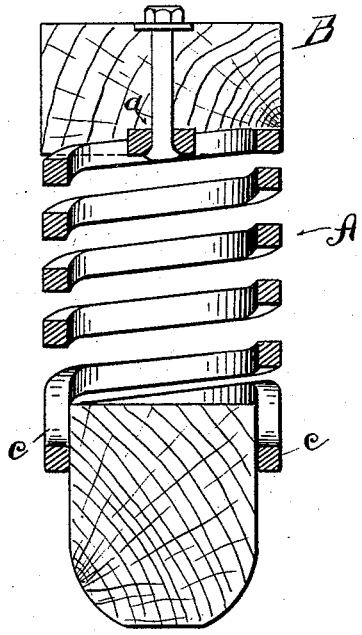


Fig. II.



WITNESSES
W. H. Bradford
H. Clough.

INVENTOR
Albert G. North
by Parker & Burton
his Attorneys.

UNITED STATES PATENT OFFICE.

ALBERT G. NORTH, OF PONTIAC, MICHIGAN.

BOLSTER-SPRING.

SPECIFICATION forming part of Letters Patent No. 494,158, dated March 28, 1893.

Application filed January 18, 1892. Serial No. 418,405. (No model.)

To all whom it may concern:

Be it known that I, ALBERT G. NORTH, a citizen of the United States, residing at Pontiac, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Bolster-Springs; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to bolster springs, and has for its object the production of a spring that may be used without the supporting casting now employed to retain the spring on the bolster. These castings add greatly to the expense of the spring, without performing any necessary function other than to retain the spring in its place on the bolster. They also raise the spring and the body the thickness of the casting above the bolster, when it is desirable to economize space in this regard. I design to rest the lower turn of the spring directly on the bolster, and provide the lower turn of the spring with extensions adapted to embrace the bolster on the sides and hold the spring in position.

In the drawings, Figure I is a view of a bolster and a pair of bolster springs, constructed according to my invention. Fig. II is a vertical section through the bolster and spring, showing the details of its construction.

In the figures, A is the spring, made spiral in form, and provided at its upper extremity with the eye *a*, through which to bolt the spring to the cross bar B. The lower turn C of the spring, I provide on opposite sides of the spring with a depending loop *c*. The spring itself, I make of sufficient diameter so that these loops placed on opposite sides will fit over the sides of the bolster and hold the spring in position. By making the loops of sufficient width, they prevent the spring from turning on the bolster, as well as from slipping off to front or rear. In place of the loops formed from the spring itself, any suitable extension may be attached to the lower loop of the spring; but the simplest and most economical way of constructing it is to have the loop formed, as shown, from the steel of which the spring is made. The manner of supporting these springs, as before stated, has been on a bed-plate having flanges or depending extensions, adapted to embrace the bolster in the same manner as is done by the loops herein shown. This necessitated employing, in addition to the plate itself, means for engaging the spring with the plate, which added further to the expense. In my construction, there is no necessity for bolting or providing for bolting the bottom of the spring. If desired, the loop may be extended downward and form an eye through which the spring might be bolted to the bolster; but I find no necessity for so doing. Any number of these springs may be employed, all connected by the cross bar B, as shown in Fig. I.

What I claim is—

1. In combination with a bolster and bolster stakes, a cross bar provided with end slots, a coiled spring terminating at its upper end with a central eye, and having its lower coil provided with two diametrically opposite depending loops formed integral with the spring, a bolt adapted to pass through the eye and secure the spring to the cross-bar. The said depending loops being adapted to embrace the sides of the bolster, substantially as and for the purpose described.

2. In combination with a bolster and bolster stakes a cross bar provided with slotted ends, a spring terminating at its lower end with a long tapering point, and provided on its lower coil, with two diametrically opposite depending loops, and having a central eye at the termination of its upper coil, a bolt securing the coil to the cross-bar, substantially as and for the purpose specified.

In testimony whereof I sign this specification in the presence of two witnesses.

ALBERT G. NORTH.

Witnesses:

CHARLES H. FISK,

EFFIE I. CROFT.