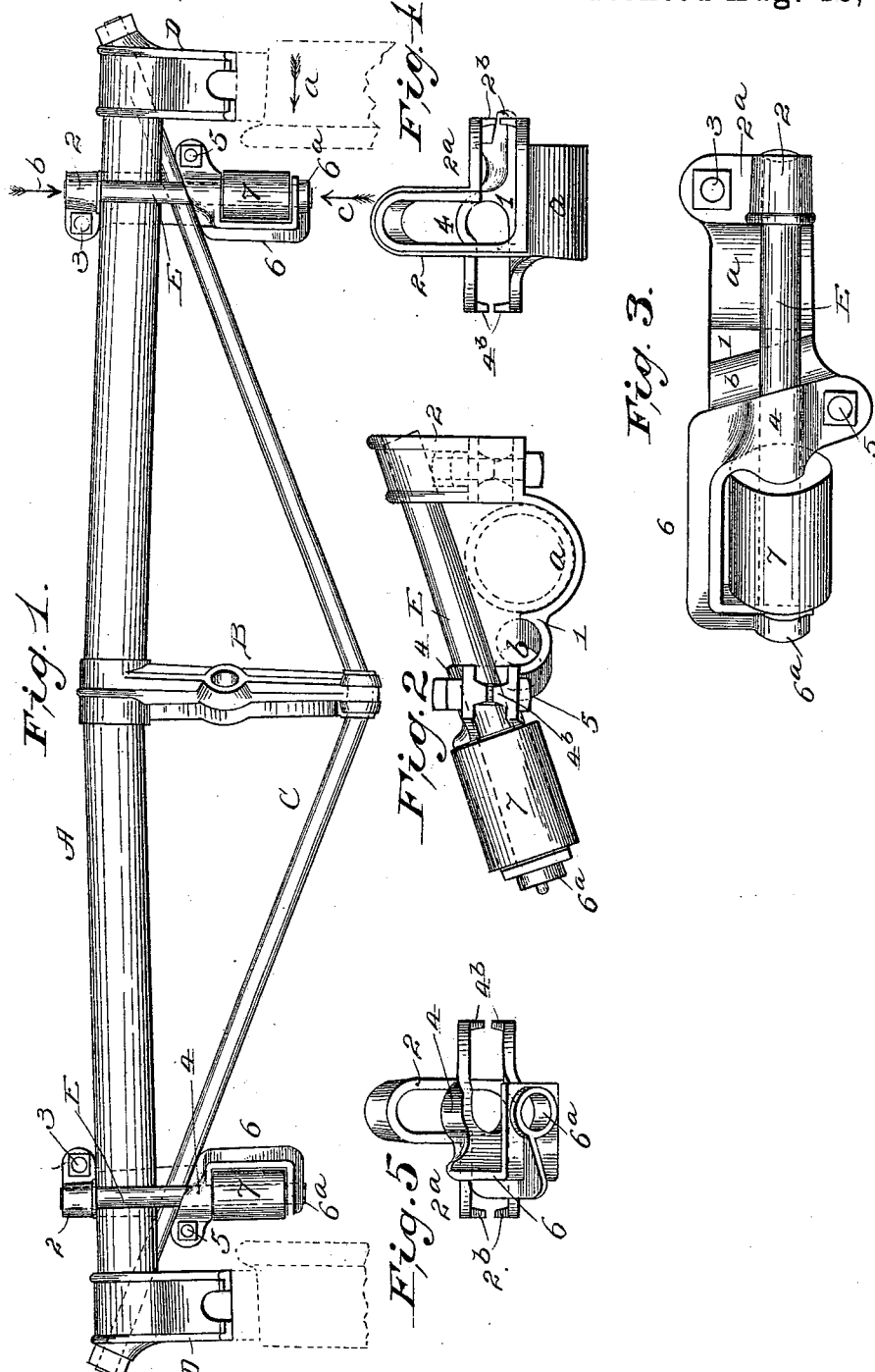


(No Model.)

H. B. ROBISCHUNG.
FINGER GUARD FOR BRAKE BEAMS.

No. 544,418.

Patented Aug. 13, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

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FINGER-GUARD FOR BRAKE-BEAMS.

SPECIFICATION forming part of Letters Patent No. 544,418, dated August 13, 1895.

Application filed January 15, 1895. Serial No. 535,032. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. ROBISCHUNG, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Finger-Guards for Brake-Beams; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a brake-beam having finger-guards embodying my invention applied to the beam. Fig. 2 is a detached side elevation of the finger-guard clamp, looking in the direction of the arrow *a*, Fig. 1, the finger-guard and its roller being in position. Fig. 3 is a top plan view of the finger-guard clamp detached from the beam, the finger-guard and its roller being in position. Fig. 4 is a rear end elevation of the clamp-section, looking in the direction of arrow *b*, Fig. 1, the finger-guard and its roller removed; and Fig. 5 is a front end elevation of the clamp, (the opposite end from that shown in Fig. 4,) looking in the direction of the arrow *c*, Fig. 1, the finger-guard and its roller removed.

Like symbols refer to like parts wherever they occur.

This invention relates to the construction of finger-guards for brake-beams and the clamps for securing the same to trussed metallic brake-beams, and is in certain of its features—to wit: the clamp—an improvement on my former patent, No. 527,159, dated October 9, 1894. In the case of outside-hung brakes it is customary to provide the beam with finger-guards to control the lateral or endwise vibration of the beam and preserve the proper relation of the brake-shoes to the wheels. These finger-guards are subject to great wear and friction as well as to sudden and violent shocks with the attendant liability to bending or breaking off of the finger-guard and the resulting probability of want of alignment of shoe and wheel when required. To correct and prevent such difficulties, I provide the projecting portion of the finger-guard with a loose sleeve or roller, which not only relieves the finger-guard of direct wear, but braces it against any tendency to bend or

break off under the sudden shocks to which it is subject, and such a construction or its equivalent embodies the first feature of my invention. In order to better support the guard-finger as well as to afford a bearing for the outer or free end of the guard-finger (which is the journal for the loose sleeve or roller) I provide the finger-guard clamp with a bracket which projects in substantially the plane of the finger-guard and terminates in a bearing for the end thereof, and such a construction or its equivalent embodies a second feature of my invention.

There are other minor features of invention, adjuncts to the main features and incident to the particular construction selected to illustrate the main features of invention, which features pertain mainly to the clamp, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the compression member, B the strut, and C the tension member of a trussed brake-beam, chosen for purposes of illustration only and not as matter of limitation, as various well-known forms of trussed beam may be used at will, and so far as certain features of this invention are concerned—to wit: the loose sleeve or roller and the parallel bracket—any form of brake-beam may be substituted.

D D indicate the brake-heads with relation to which (and the wheels indicated in dotted line) the finger-guards E are applied, the finger-guard being at right angles to the beam, as usual.

1 indicates the base-plate of the clamp having a seat or seats for the beam, (in the present instance two converging grooves, one marked *a* for the compression member A and the other *b* for the tension member C,) and at its rear end an arch, loop, or U-shaped clamp-fold 2, (see Fig. 4,) which by preference terminates in a flange or ear 2^a parallel with the base-plate 1. The ear 2^a and base-plate 1 adjacent thereto may be provided with fulcrum-lugs or limit-lugs 2^b to enhance the spring-grip of the clamp-fold 2, and should be perforated for the passage of a bolt 3, (see Fig. 10)

3,) or an equivalent binding device should be provided.

Near the front end of the base-plate 1 is a second clamp-fold 4, (see Fig. 5,) which, in case of a trussed beam of the character shown in the drawings, need be but slightly arched, and the said free end of the fold and the base-plate adjacent thereto may also be provided with fulcrum-lugs or limit-lugs 4^b for like purpose with lugs 2^b and perforated for a clamping-bolt 5.

Beneath the forward clamp-fold 4 the base-plate 1 may be slightly inclined or channeled at right angles to the groove *a*, which receives the compression member in order to form a seat or bearing for the finger-guard E, (see Figs. 2 and 5;) and extending from the base-plate 1 outward and in a line parallel with the finger-guard E, when the guard is in place, is an arm or bracket 6, having at its outer end a bearing 6^a for the free end of the finger-guard.

The finger-guard E is encircled within the bracket 6 by a loose sleeve or roller 7, which is preferably but slightly less in dimensions than the space within the bracket, so that while the sleeve or roller 7 is free to rotate on the guard-finger it is in turn braced and supported by the inclosing-bracket 6, thus adding greatly to the strength and durability of the devices.

To secure the guard-finger E to the beam all that is necessary is to apply the base-plate 1 of the clamp to the under side of the beam, as indicated in Fig. 1, which will bring the upper part of arch or clamp fold 2 above the member A. The finger guard or pin E is then passed forward through arch or clamp fold 2 over the members A C of the beam under clamp-fold 4, through the sleeve or roller 7, until its free ends enters the bearing 6^a on the front end of bracket 6, after which the nuts on the clamp-bolts 3 and 5 may be tightened to clamp the pin or finger guard E and cause the same to bind on the beam.

By means of the general construction herein set forth a very efficient finger-guard, not liable to be bent or broken, is obtained, and through the special construction a simple,

cheap, and easily applied finger-guard, clamp, and roller-guard are secured.

The clamp and roller bracket may be of any suitable material, but are preferably integral malleablized iron casting.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A finger-guard for brake-beams provided with a loose sleeve or roller journaled thereon, substantially as and for the purposes specified.

2. The combination with a finger-guard, of a bracket having a bearing for the free end of the finger-guard, and a sleeve or roller journaled on the finger-guard within the bracket; substantially as and for the purposes specified.

3. The combination with a brake-beam finger-guard of a loose sleeve or roller, a clamp having a base-plate and one or more clamp folds, and provided with a bracket or extension bearing for the free end of the finger-guard; substantially as and for the purposes specified.

4. A finger-guard clamp having a base-plate, a plurality of clamp folds adapted to hold a finger-guard, and a beam seat between the clamp folds; substantially as and for the purposes specified.

5. A finger-guard clamp having a clamp fold adapted to bind on the guard finger or pin, and a bracket provided with a bearing for the free end of the guard finger or pin; substantially as and for the purposes specified.

6. A finger-guard clamp, having a plurality of clamp folds adapted to bind on a guard finger or pin and provided with an extension or bracket having a bearing for the free end of the finger or pin; substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 7th day of January, 1895.

HENRY B. ROBISCHUNG.

Witnesses:

P. J. CUNNEEN,
E. T. WALKER.