J. B. GOLDSMITH.

Shaft-Tips for Vehicles.

No. 158,371. Patented Jan. 5, 1875.

Fig: 1.

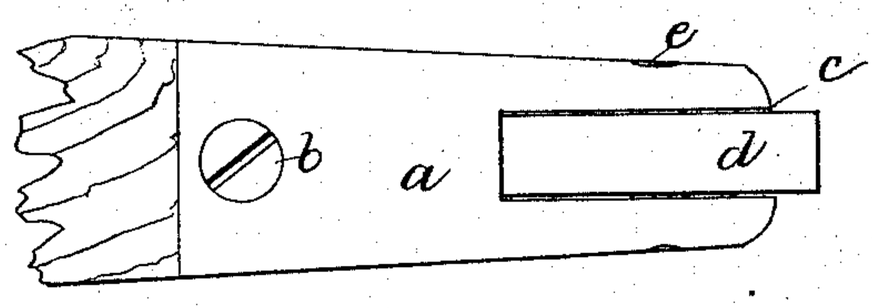


Fig: 2.

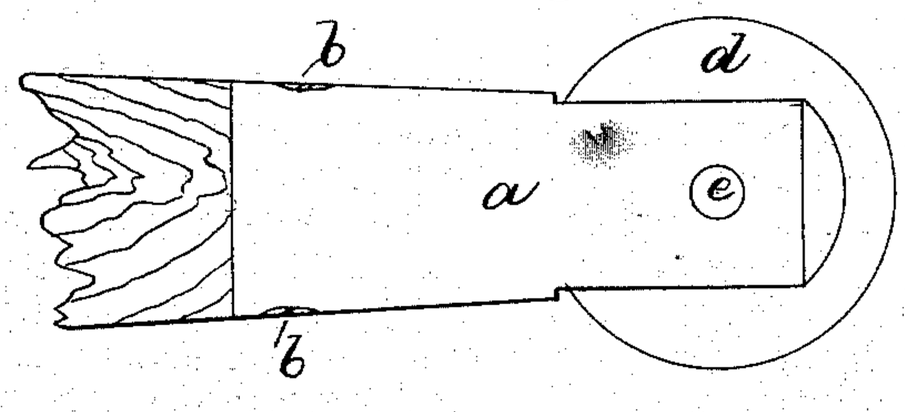
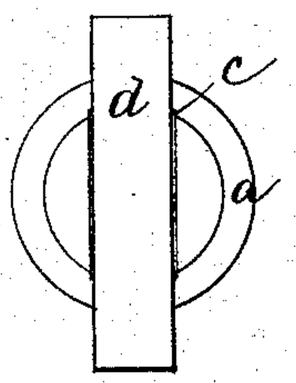


Fig: 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JACOB B. GOLDSMITH, OF ROCKPORT, MASSACHUSETTS.

IMPROVEMENT IN SHAFT-TIPS FOR VEHICLES.

Specification forming part of Letters Patent No. **158,371**, dated January 5, 1875; application filed July 16, 1874.

To all whom it may concern:

Be it known that I, JACOB B. GOLDSMITH, of Rockport, in the county of Essex and State of Massachusetts, have invented an Improved Carriage-Shaft Tip; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The metal tips applied to carriage-shafts, being generally formed as simple ferrules, are soon abraded and worn away, so as to become useless or unsightly, by contact of the ferrules with the ground, or with the stable-floor, as the carriage is moved when the shafts rest upon the ground or floor.

My invention is intended to insure the safety of the tips from such injuries or defacements. For this purpose I form each tip with a vertical slot cut endwise into it, and pivot in this slot an elastic or rubber roll, which will at all times cushion the tip from direct contact with the floor or ground, and will turn as the carriage is moved while the shafts are down. The invention consists in metal shaft-tips thus slotted, and provided with friction rollers or cushions, preferably formed of elastic material.

The drawing represents an end of a shaft with one of my roller-tips applied thereto.

Figure 1 shows the tip in plan. Fig. 2 is a side view thereof. Fig. 3 is an end view.

a denotes the tip or ferrule, fastened upon the end of the shaft by screws *b*. Into the end of the ferrule is cut the vertical slot *c*. The fork formed by the slot receives the rubber roll *d*, held in position by, and turning upon, a cross-pin, *e*. The roll projects beyond the end and top and bottom of the tip, and thus always forms a fender for the tip, to preserve it from contact or injury.

The addition to the tip is inexpensive, and the rolls wear evenly, and are very enduring.

I claim—

The metal shaft-tip, slotted, and having upon the pin *e* an elastic roller, all combined substantially as shown and described.

J. B. GOLDSMITH.

Witnesses:

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