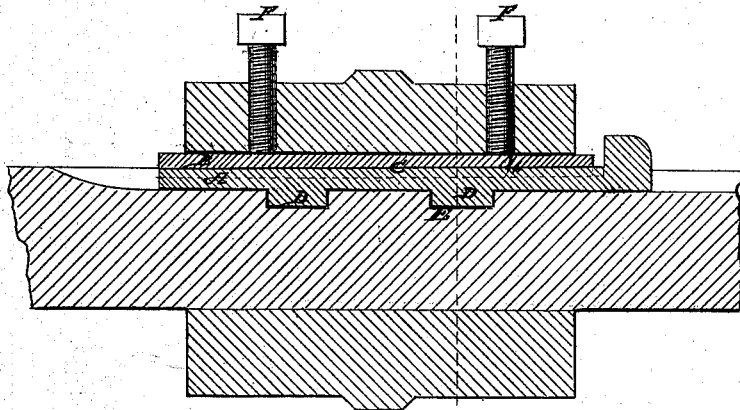
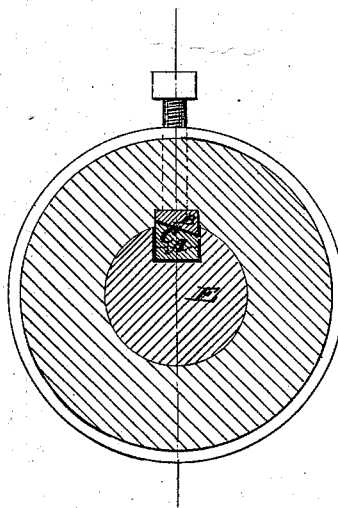


*C. B. Cole,*  
*Shaft Coupling*  
*No. 112,551.* *Patented Mar. 14, 1871.*

*Fig. 1*



*Fig. 2.*



Witnesses:

*E. W. H.*  
*S. J. Mabee*

Inventor:

*C. B. Cole*  
PER *Mumford*  
Attorneys.

# United States Patent Office.

CHARLIE B. COLE, OF CHESTER, ILLINOIS.

Letters Patent No. 112,551, dated March 14, 1871.

## IMPROVEMENT IN KEYING WHEELS TO SHAFTS.

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, CHARLIE B. COLE, of Chester, in the county of Randolph and State of Illinois, have invented a new and useful Improvement in Keying Wheels to Shafts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to journal-and-hub couplings; and

The principle thereof consists in applying, between the journal and hub, two antagonistic wedges, each inclined transversely to the line of the axle, but in opposite directions to one another, for the purpose of creating a constant tendency to tighten, instead of the reverse, as the vehicle moves forward.

Figure 1 is a longitudinal section of a wheel-hub and shaft keyed together according to my improved plan, on the line *xx* of fig. 2, and

Figure 2 is a transverse section of the same on the line *yy* of fig. 1.

Similar letters of reference indicate corresponding parts.

A is the lower part, and B the upper part of the key, which are formed on the oblique line C on the sides which fit together.

The part A is provided with one or more studs, D, which enter corresponding recesses cut in the shaft E in the bottom of the key-seat therein, to prevent the said part from working out in case it gets loose.

The projections D are not so long as to prevent inserting the part A in the key-seat after the wheel has

been adjusted to its place, and before the part B is put in.

This latter part may be driven in tight, or it may be fitted more loosely, and afterward tightened up by one or more set-screws, F.

The oblique faces C of these two parts are so arranged that the turning of the wheel backward will cause the part B to rise up the oblique face of the part A and thus wedge tightly between the bottoms of the two key-grooves.

When wheels are keyed in this way their removal from the shafts when required is very simple and easy, for by shifting the wheel forward slightly the two parts of the key will become loosened and may be readily taken out.

In case the wheel is of such a kind that the set-screws cannot be used, the two parts of the key may be pinned together.

Instead of making the studs on the part A and the recesses in the bottom of the groove in the shaft, the said studs may be on the other part and the recesses in the groove of the wheel, but I prefer this arrangement.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The coupling, formed of two laterally and oppositely-beveled pieces A B, applied as and for the purpose specified.

CHARLIE B. COLE.

Witnesses:

H. SPEC. RENAN,  
WM. SCHUCKERT,