

UNITED STATES PATENT OFFICE.

WILLIAM T. CORE, OF NORFOLK, VIRGINIA.

IMPROVEMENT IN EXTENSION-LADDERS.

Specification forming part of Letters Patent No. **168,378**, dated October 5, 1875; application filed August 6, 1875.

To all whom it may concern:

Be it known that I, WILLIAM T. CORE, of Norfolk, in the county of Norfolk and State of Virginia, have invented a new and useful Improvement in Extension-Ladder, of which the following is a specification:

Figure 1 is a front view of my improved ladder partly extended. Fig. 2 is a longitudinal section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a cross-section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention relates to the arrangement of the pulleys, around which the cord for raising each ladder-section passes, on the rounds of the same, and confining them in position between parallel bars, which extend in either direction, to the next round above and below, as hereinafter described.

A is the lower section, B the intermediate section, and C the upper section, of the ladder. The side bars of section A have inner grooves *a'*, and the bars of section C outer grooves *c'*, to receive the respective flanges *b'* *b''* of section B. The projecting ends of the round *a''* have cranks D and ratchet-wheels E, with which latter pawls F engage. The rope or chain H passes from drum G on round *a''*, up on one side of the rounds of the section A, over a pulley, I, mounted on one, *a''*, of the upper rounds of said section A. The rope or chain H passes down between the rounds of

the sections A B, around a pulley, J, mounted on a round, *b''*, in the lower part of the section B, passes back into the space between the sections A B, and up between them. The rope also passes over a pulley, K, mounted on an upper round, *b''*, of the section B, and down between the sections B.

The rounds *a''* *b''* *b''*, on which the pulleys I J K are mounted, are each strengthened, and the pulleys thereby also kept in position on the rounds, by means of two parallel bars, L, the ends of which are connected with the rounds above and below the said pulley-rounds, thus distributing the strain, and preventing the pulley-rounds from being broken. In other words, this arrangement enables me to avoid providing separate bearings for the pulleys, (such as have been heretofore commonly employed,) while the bars strengthen the rounds on which the pulleys are mounted, as well as confine the pulleys in position.

I do not broadly claim the combination of parallel bars with the pulleys and pulley-rounds of an extensible ladder; but

I claim—

The combination of the cord-pulleys, mounted on rounds *a''*, and the parallel bars L L, extended to the two contiguous rounds, as shown and described.

WILLIAM THOMAS CORE.

Witnesses:

THOS. KERILL,
JOS. F. WEAVER.