

JOSEPH S. OAKLEY & OSCAR D. WOOD.

Improvement in Lawn Mowers.

No. 120,994.

Patented Nov. 14, 1871.

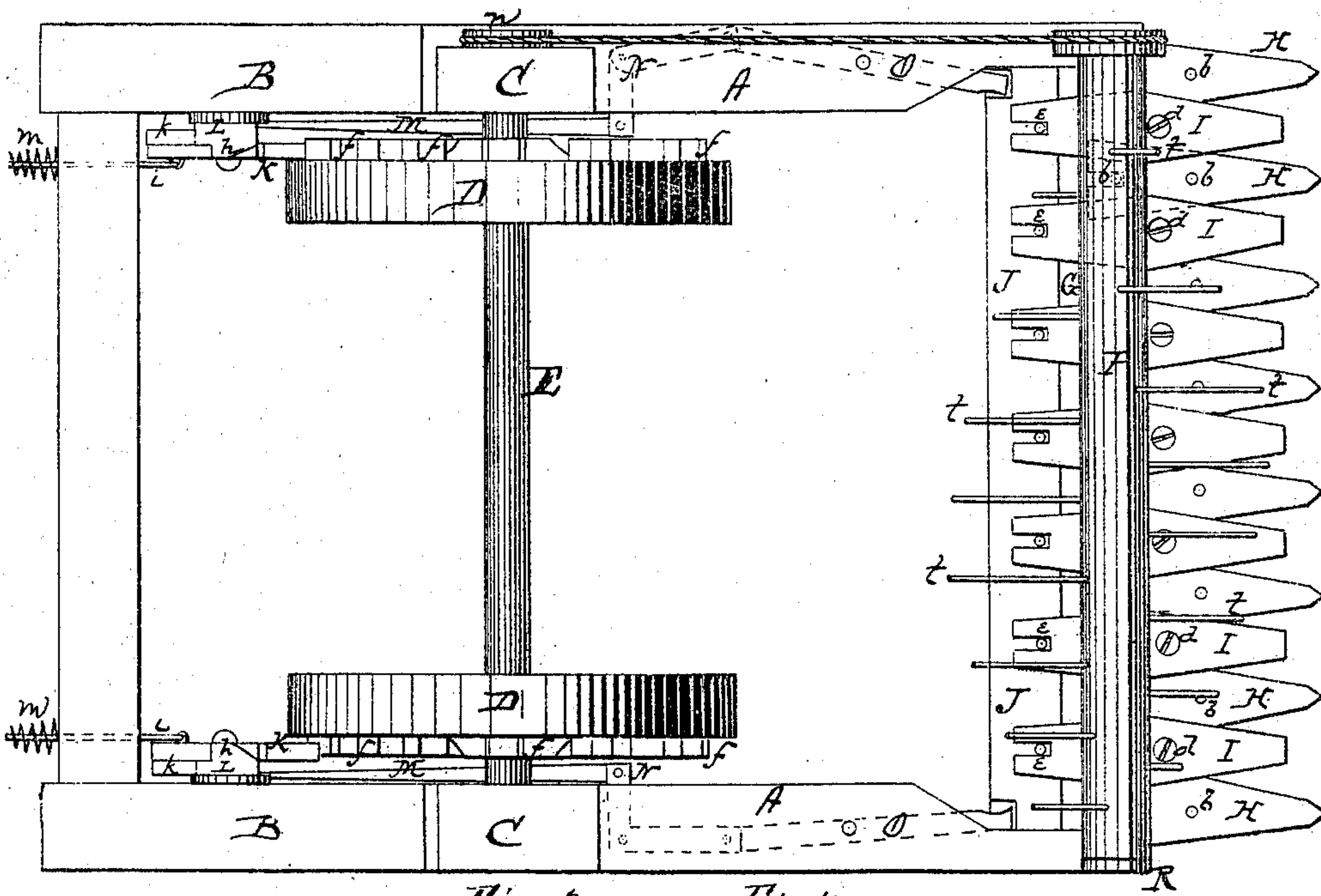
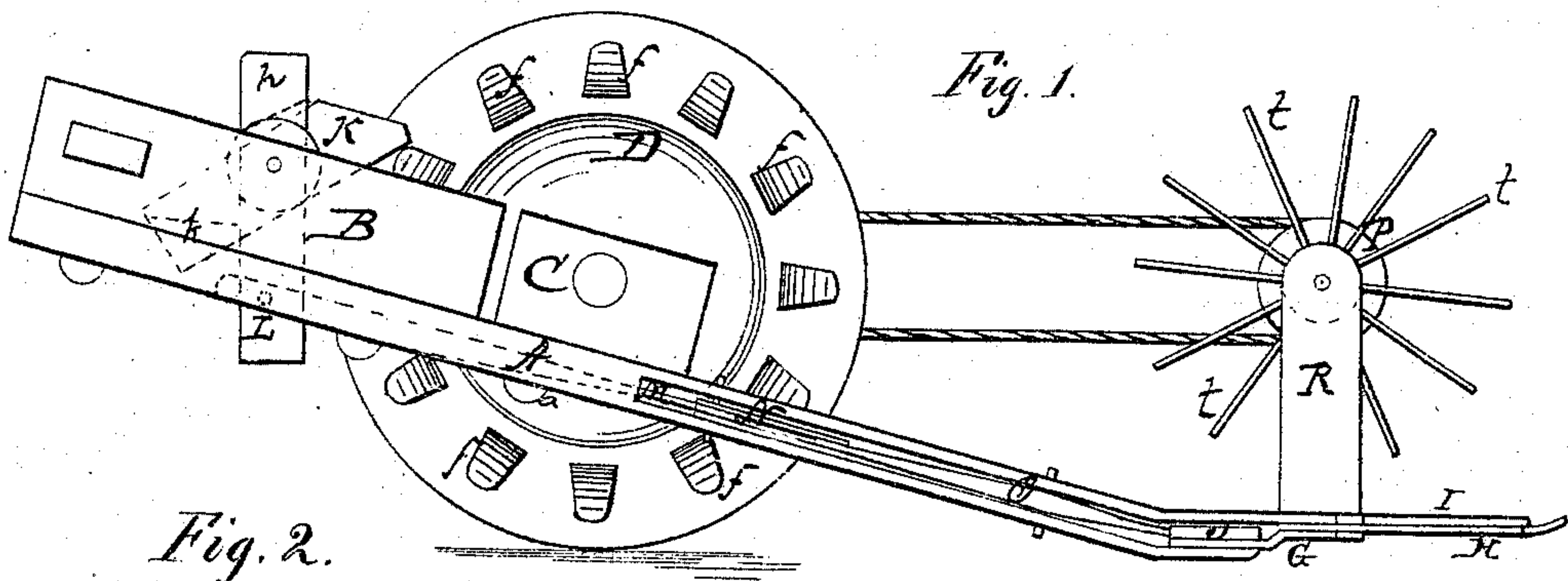


Fig. 3.

Fig. 4.

Witnesses:

Henry N. Miller,
C. L. Everett.

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Oscar D. Wood
per Alexander M. Mason, Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH S. OAKLEY, OF PASSAIC, NEW JERSEY, AND OSCAR D. WOOD, OF
NEWBURG, NEW YORK.

IMPROVEMENT IN LAWN-MOWERS.

Specification forming part of Letters Patent No. 120,994, dated November 14, 1871.

To all whom it may concern:

Be it known that we, JOSEPH S. OAKLEY, of Passaic, Passaic county, New Jersey, and OSCAR D. WOOD, of Newburg, in the county of Orange and in the State of New York, have invented certain new and useful Improvements in Lawn-Mowers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of a lawn-mower, as will be hereinafter more fully set forth and claimed.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, and Fig. 2 a plan view of our machine. Fig. 3 represents a portion of one of the side beams, and Fig. 4 is a section through and across some of the knives.

A A represent two side bars connected by means of a frame, B, secured on their upper sides at the rear ends. Immediately in front of this frame, on the bars A A, are fastened blocks C C, forming journal-boxes for the axle E, upon which the wheels D D are placed. The blocks or boxes C C are fastened by means of screws *a* passing upward through slots in the side bars, by which means the axle and wheels can be adjusted backward or forward, as may be necessary. The side bars A A are slotted horizontally for a suitable distance backward from their front ends to receive a part of the mechanism which operates the movable knives. Connecting the front ends of the side bars A A is a plate or bar, G, upon which are laid the stationary knives H H. For each of these knives there are two pins, *b b*, projecting upward from the plate G, and in the knife is a hole for the front pin to pass through, while the rear pin passes through a slot in the rear end of the knife. This slot allows for any inaccuracies in the position of the pins or the hole, while it yet holds the knife so as to prevent any vibration of the same sidewise. It will be noticed that the knives H H rest only on the plate G at less than their rear halves, while their front ends are entirely unsupported. These knives

are held down solely by the upper movable knives I I, which are pivoted, at or near their centers, to the plate G by screws *d*, said screws passing into said plate between the stationary knives. The rear ends of the upper knives I I are slotted, as shown, to receive each a pin, *e*, which projects upward from a plate or bar, J, laid on the top of the rear portion of the plate G, and moves sidewise on the same, its ends being guided in the slots of the side bars A A. The plate or bar J has a reciprocating side motion, whereby the upper knives I I obtain their required motion. On the outer side of each wheel is attached a series of lugs or projections, *f f*, which, as the machine moves forward, operates upon a lever, K, pivoted to the inside of the frame B. On the same pivot and close to the frame is another lever, L, which has a projection, *h*, on its inner side at the upper end, while the lever K has a similar projection, *k*, on its outer side at the lower end. When the machine moves forward and the lugs *f f* turn the lever K, the lugs *k k* each engage with the lever and thus also turn the lever L a short distance. But when the machine moves backward and the lugs turn the lever K, the lever L is left in its position, and after each lug has passed the lever K a spring, *m*, connected with said lever by a cord, *i*, throws the same back in position again. The lower end of the lever L is, by a bar, M, connected with an L-shaped lever, N, which is pivoted in the slotted side bar A, and the other end of said L-shaped lever is pivoted to a pitman, O. This pitman is also pivoted in the slotted side bar A, and its front end inserted in a notch in the plate or bar J. The lugs on the two wheels D D are arranged so that the levers, &c., on the two sides of the machine will operate alternately, and thus give the plate or bar J a reciprocating motion. On one end of the axle E is a pulley, *n*, connected by a belt or rope with a pulley on the end of a roller, P, which has its bearings in standards R rising from the front ends of the side bars A A. On this roller are spirally arranged teeth *t t*, which, as the roller revolves, throw the grass backward from the knives. It will be seen that as the upper knives I I are held each by a single screw, *d*, which pivots the knife, when the knives become worn they can readily be tightened by merely turning said screw; and by removing the screws *d d* and taking off the upper knives

the lower knives may be lifted off from their pins *b b* for the purpose of sharpening or other necessary repairs. It will also be seen that as the lower knives are laid on top of the knife-bar and the upper knives are secured and laid on top of the lower, with no lug or projection between said lower knives, the knives can always be kept tight together by merely tightening the pivot-screws *d d* to correspond with the wear of the knives.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as described, of the stationary and separately-detachable knives *H* with the pivoted knives *I*, when the stationary knives are held upon the knife-bar solely by the overlying pivoted knives, and are

kept from lateral displacement by means of pins *b* projecting from the knife-bar and engaging with openings in the stationary knives.

2. The combination of the lugs *f f* on the wheels *D D*, the levers *K L* with projections *k h*, spring *m*, connecting-rod *M*, L-shaped lever *N*, and pitman *O*, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 24th day of October, 1871.

JOSEPH S. OAKLEY.
OSCAR D. WOOD.

Witnesses:

C. L. EVERTS,
A. N. MARR.

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