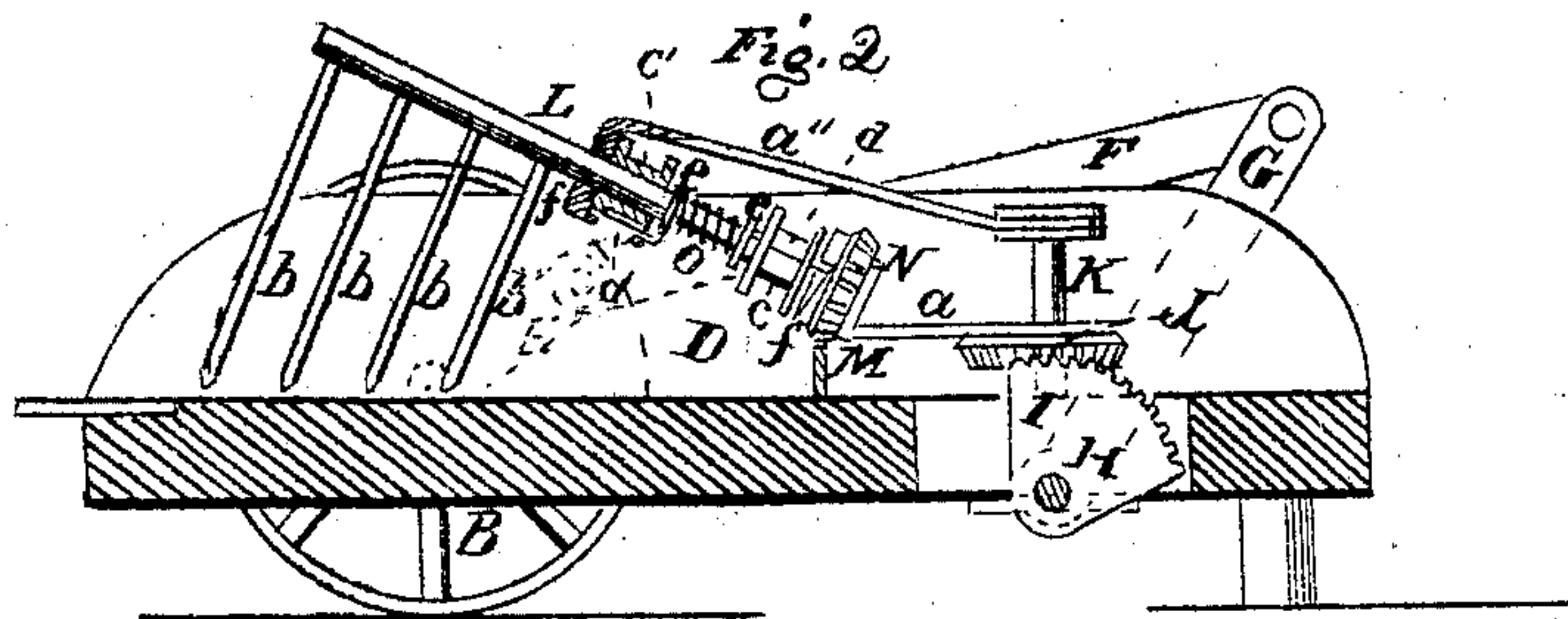
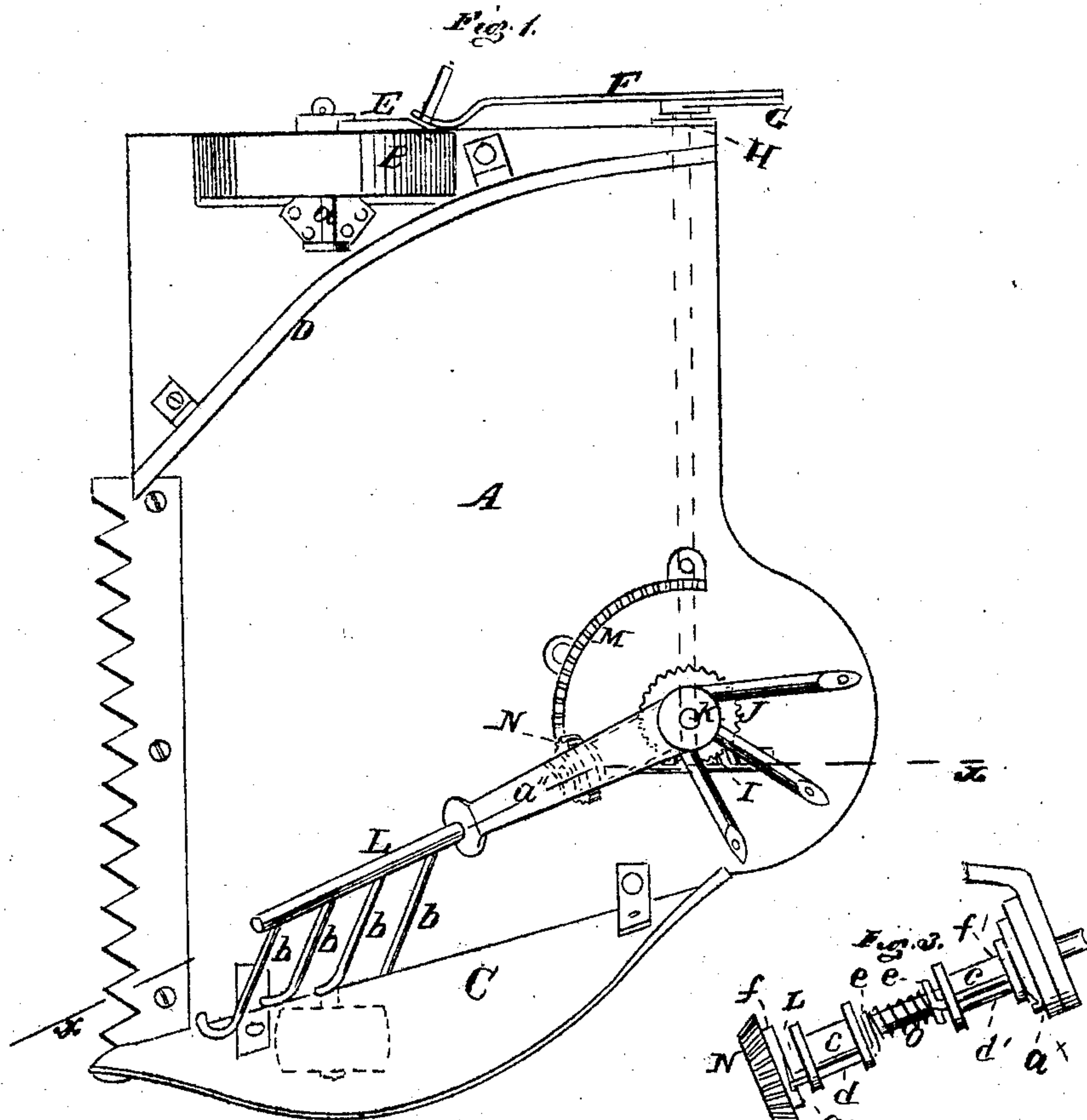


A. E. M^c Gaughey.
Harvester Rake.

No. 4522

Patented Feb. 9. 1864.



Witnesses
J. W. Combs
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UNITED STATES PATENT OFFICE.

ALBERT E. MCGAUGHEY, OF RED WING, MINNESOTA.

IMPROVEMENT IN RAKING ATTACHMENTS FOR HARVESTERS.

Specification forming part of Letters Patent No. 41,522, dated February 9, 1864.

To all whom it may concern:

Be it known that I, ALBERT E. MCGAUGHEY, of Red Wing, in the county of Goodhue and State of Minnesota, have invented a new and useful Improvement in Raking Attachments for Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention; Fig. 2, a side sectional view of the same, taken in the line *xx*, Fig. 1; Fig. 3, a detached view of the rake-revolving mechanism.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the platform of a harvester, supported by wheels, one of which, B, drives the rake-operating mechanism. At the grain end of the platform the divider or separator C is secured, and at the opposite end there is secured a curved or segment guard, D, the curvature of which corresponds with the sweep of the rake.

On the outer end of the axle *a* of the wheel B there is placed a crank, E, to which one end of a rod, F, is connected, the opposite end of said rod being attached to an arm, G, which is on one end of a shaft, H, underneath the back part of the platform A. On the opposite end of the shaft H there is placed a toothed segment or sector, I, which passes up through a slot in the platform A and gears into a wheel, J, on a vertical shaft, K, the latter having two arms, *a'* *a''*, attached to it, in which the rake-head L is fitted. The rake-head L is of cylindrical form, and is allowed to turn freely in the arms *a'* *a''*. It has an inclined position, as shown in Fig. 2, and is provided with a series of teeth, *b*, which extend down nearly to the platform. The shaft K is the center from which the rake-head works, and the former is at the back part of the platform near the grain end, as shown in Fig. 1.

On the platform A, near the shaft K and concentric with it, there is secured a segment-rack, M, into which a pinion, N, gears, the latter being placed loosely on the rake-head L, and on the rake-head, between the ends of the arms *a'* *a''*, there are permanently secured two

heads or bosses, *c* *c'*, in which slide-rods *d* *d'* work. These rods are curved or bent at their inner ends, so as to form eyes *e*, which encompass the rake-head L and slide freely thereon. Between these eyes *e* *e'*, and upon the rake-head L, there is placed a spiral spring, O, which has a tendency to keep the rods *d* *d'* forced apart and their outer ends in contact—one, *d*, with a notched plate, *f*, attached to the pinion N, and the other, *d'*, with a notched stationary plate, *f'*, attached to the outer end of the arm *a''*, which supports the rake-head, as shown clearly in Figs. 2 and 3.

The operation is as follows: As the machine is drawn along a reciprocating partially-rotating movement is communicated to the shaft H from the axle *a* through the medium of the crank E, connecting-rod F, and arm G, and an oscillating movement is consequently given the toothed segment or sector I, which actuates the pinion N and gives a reciprocating partially-rotating movement to the vertical shaft K and causes the rake to sweep back and forth over the platform A from the divider or separator C to the back end of the former. When the rake moves toward the back end of the platform the teeth *b* of the former are down, so as to sweep or rake off the grain, the rake-head L being prevented from turning in the arms *a'* *a''* in consequence of the outer end of the slide-rod *d'* bearing against the notch *a^x* of the plate *f'*, attached to the arm *a''*, and during this movement of the rake the other rod, *d*, bears against the notched plate *f* of the pinion N, said plate rotating with the pinion and causing its notch *a^x* to come directly behind the rod *d* as the rake reaches the termination of its backward and working movement, and upon the return movement of the rake the notch *a^x* catches against the rod *d* and causes the rake-head L to rotate under the action of the pinion N, said rake-head making one entire revolution as it moves to the divider, and causing the teeth *b* to move upward and over the rake-head, so as to be out of the way of the grain which falls upon the platform during the forward movement of the rake. When the rake reaches its forward position, so as to commence its backward or working movement, the notch *a^x* does not act against the rod *d*, but leaves it as the pinion N turns in a reverse direction as the rake moves toward the back end of the platform, while the rod *d'* will catch

against the notch a^* of the plate f' to hold the teeth b in proper position.

Thus by this simple means I obtain an efficient automatic raking device, one which operates with but little friction and in a perfect manner.

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

The means employed for moving the rake in the arc of a circle forward and back over the platform, and rotating the rake during said

movement—to wit, the rock-shaft H, provided with a toothed segment, I, the rack M on the platform wheel J on shaft K, with the pinion N, bosses c c' on rake-head L, slide-rods d d' , and notched plates f f' , all arranged to operate substantially as and for the purpose specified.

ALBERT E. McGAUGHEY.

Witnesses:

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