(No Model.) 2 Sheets—Sheet 1.

C. PAY.

HOISTING BUCKET.

No. 424,571. Patented Apr. 1, 1890.

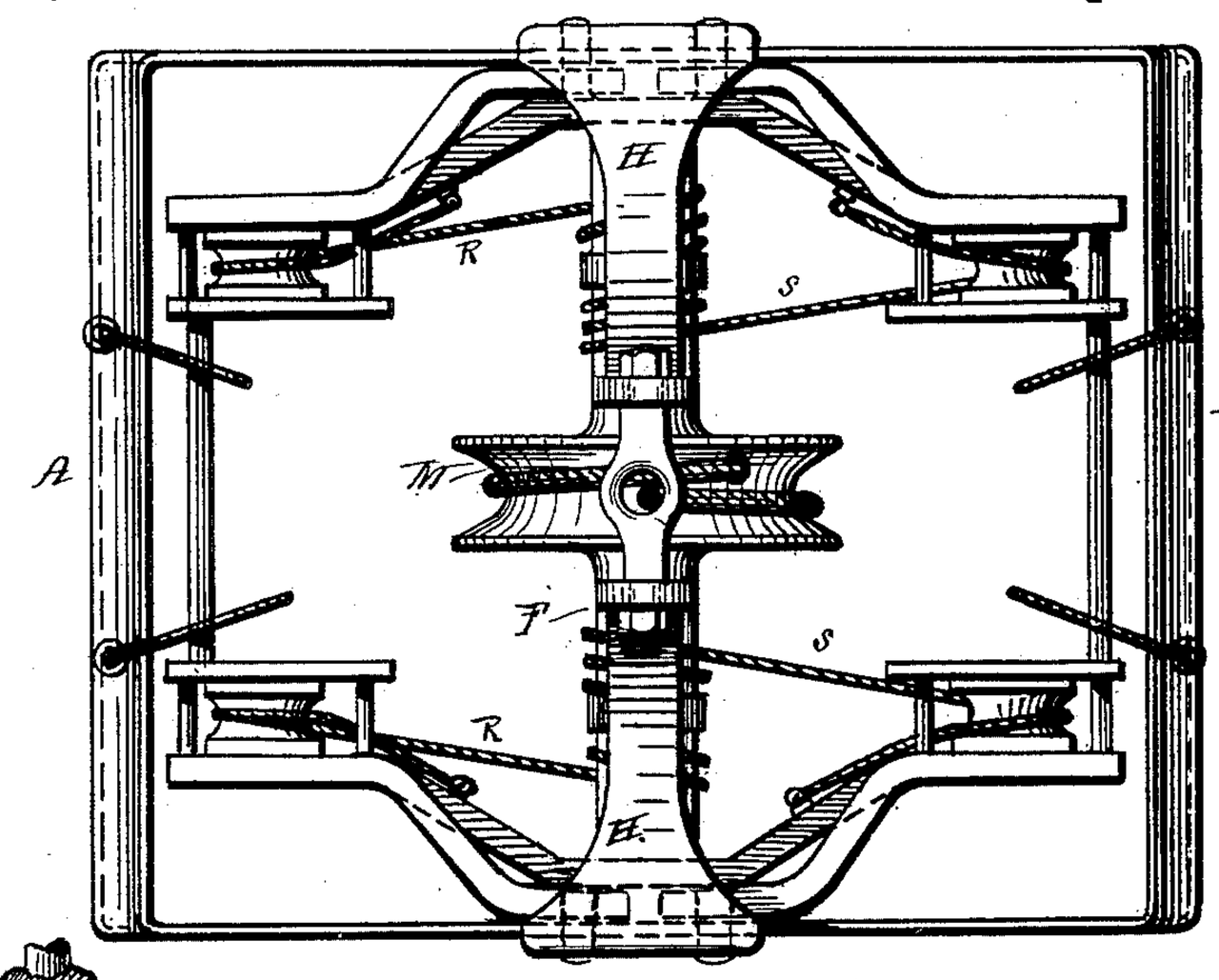

FIG. 2.

FIG. 5a.

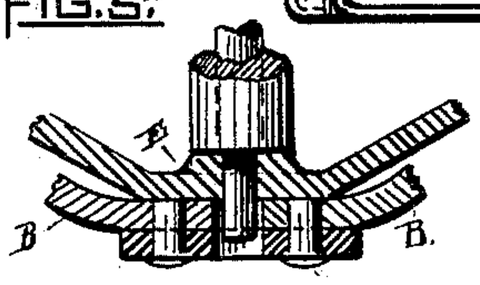

FIG. 5.

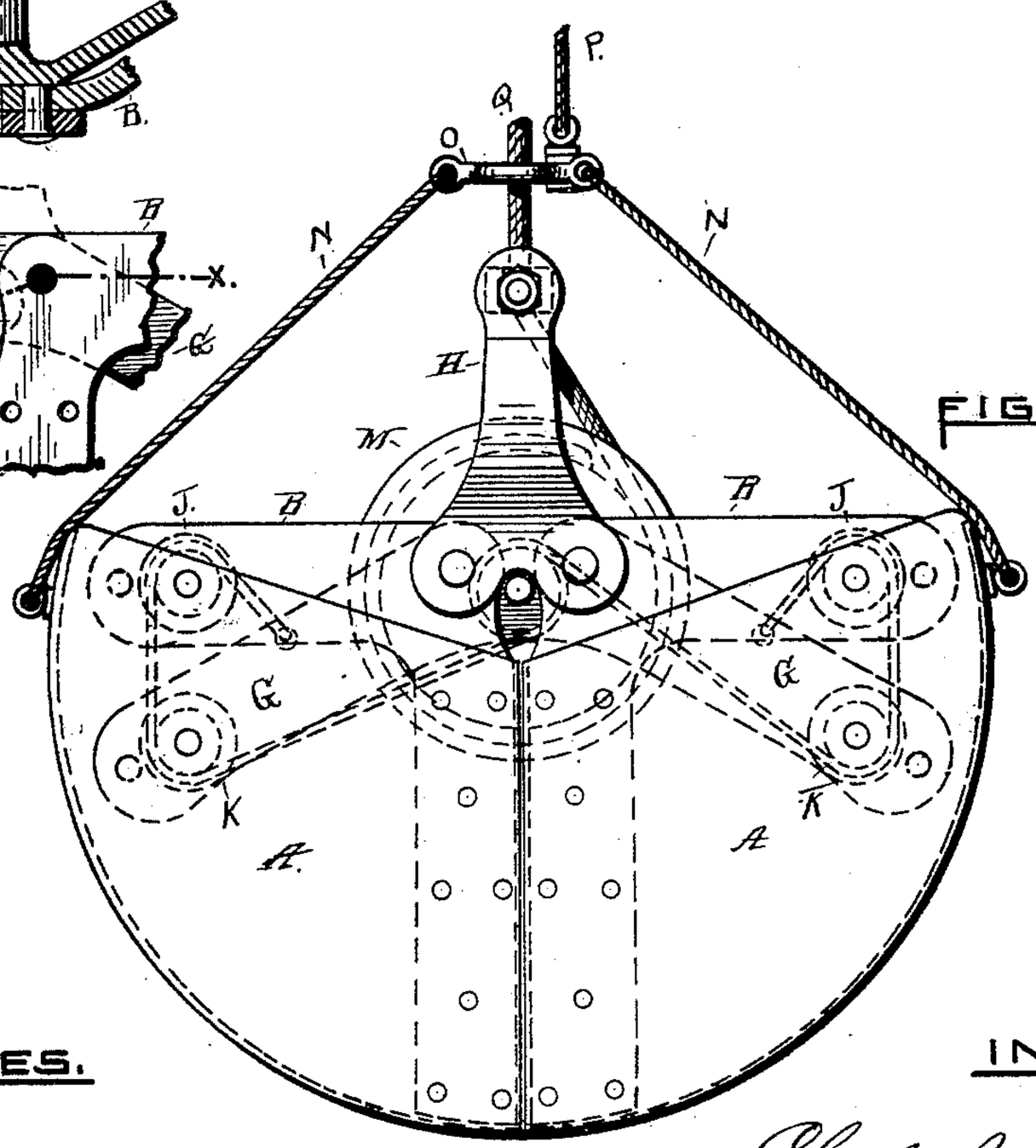

FIG. 1.

WITNESSES.

E. A. Brown

Dennis F. Sheahan

INVENTOR

Charles Pay

By Walter D. Vincent

Atty

(No Model.) 2 Sheets—Sheet 2.

C. PAY.

HOISTING BUCKET.

No. 424,571. Patented Apr. 1, 1890.

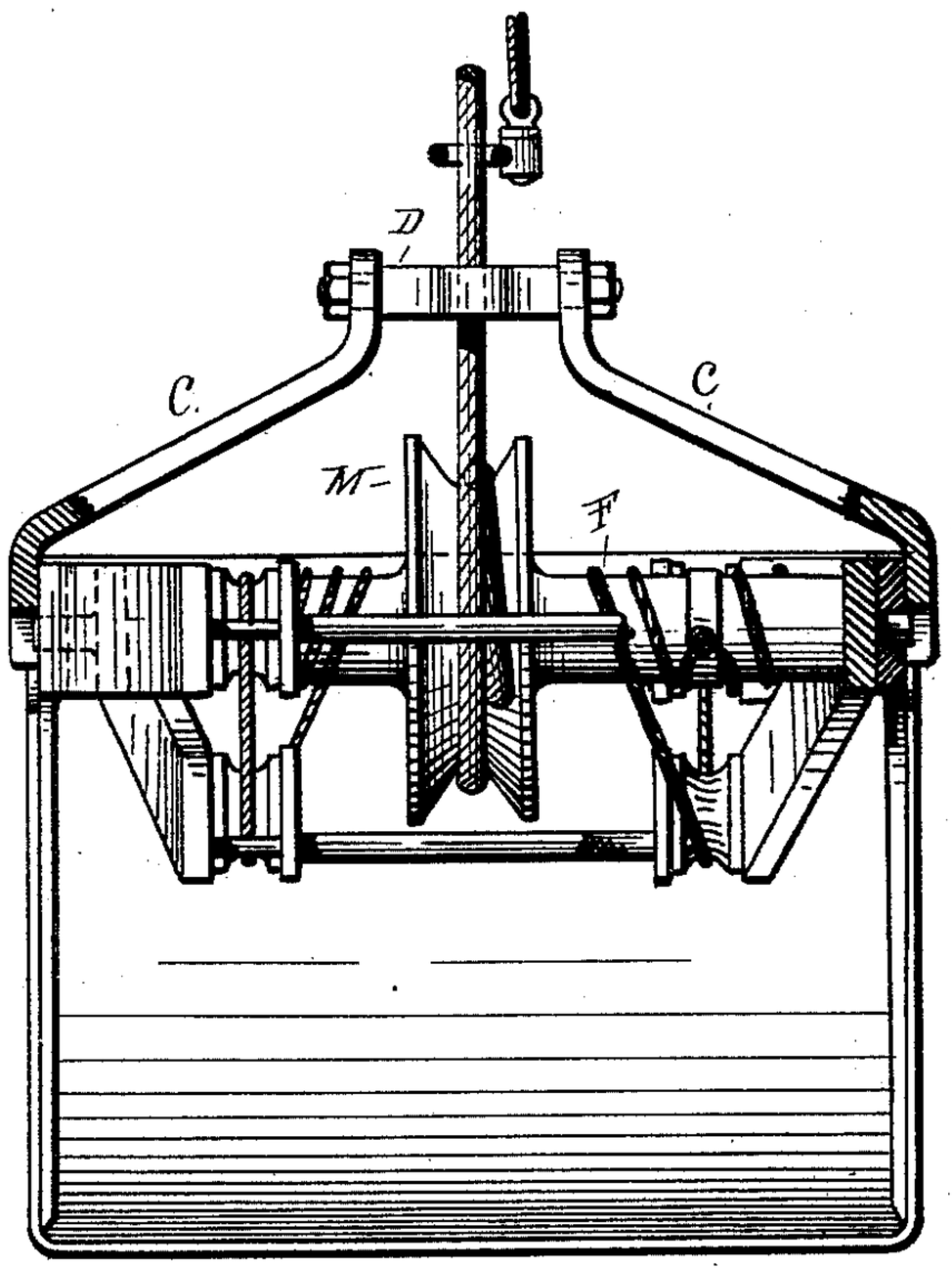

FIG. 3.

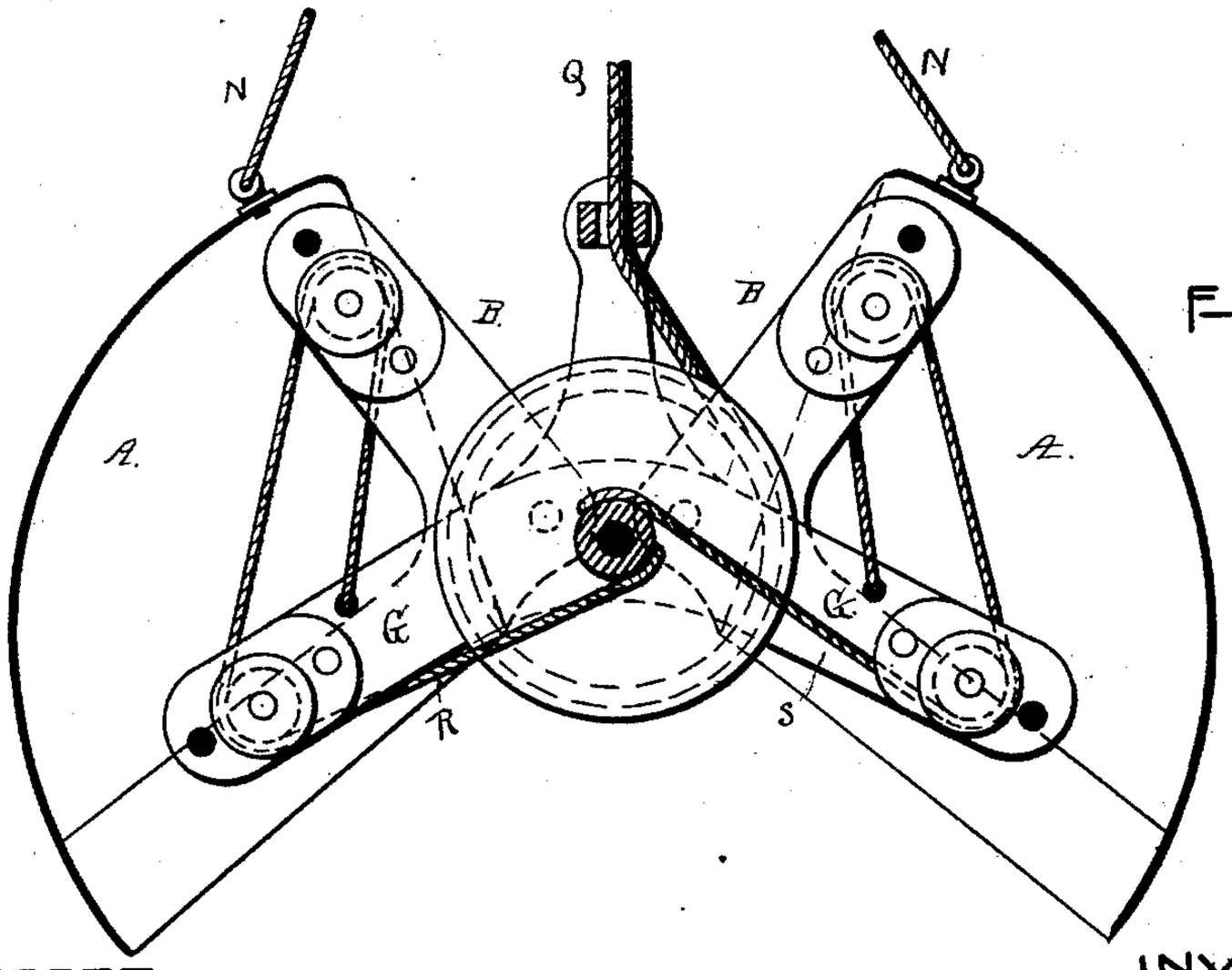

FIG. 4.

WITNESSES.

E. A. Benson

Dennis T. Sheehan

INVENTOR

Charles Pay

By Wilton B. Vincent Atty.

UNITED STATES PATENT OFFICE.

CHARLES PAY, OF PROVIDENCE, RHODE ISLAND.

HOISTING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 424,571, dated April 1, 1890.

Application filed January 2, 1890. Serial No. 335,705. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PAY, of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Hoisting-Buckets; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is an end view of the bucket closed. Fig. 2 is a top view of the same. Fig. 3 is a vertical section showing side view of working mechanism. Fig. 4 is an end view of bucket open. Fig. 5 shows the manner in which the levers are attached to and operate upon the shaft. Fig. 5ª is a horizontal section of same,

The object of my invention is to produce a bucket in which the two halves shall be capable of a wider or greater opening than those now in use and at the same time be possessed of greater closing-power, both of which features are especially useful in operating upon coarse material; and it consists in the combination and arrangement of devices as hereinafter described.

In a bucket of this class it is desirable before dropping it upon the material to open the two halves as wide as possible, and at least to an extent whereby the operating or cutting edges will be brought into a line perpendicular to the surface of the material to be removed. This opening serves to give the bucket a greater downward tendency in closing and enables it to grasp or secure a greater quantity of material.

In the drawings, A A are the two halves of the bucket, which together occupy about half a circle and are provided with elbow-levers B B, the vertical arms of which are riveted to and strengthen the edges of the halves A A, while the remaining arms extend horizontally toward the sides of the bucket.

C C are the two parts of a bale or cross-rod connected by a block D, through which is a passage for the operating-cable. The rod C C has vertical ends E, which serve as bearings for the shaft F, and to which are attached the cross-bars or levers G G. To the ends of the rod C C are riveted straps or ears H H, the vertical ends of which are without the bucket, and to which are pivoted the elbow-levers B B, to which the halves of the bucket are attached.

The horizontal ends of the levers B B and the ends of the levers G G are provided with sheaves J J K K, and upon the shaft F is a drum M.

N N are side chains, which connect the bucket with a bar O, the whole being supported and raised or lowered by a cable P.

Q is the operating-cable, which rotates the shaft F in closing the bucket through its action upon the drum M. The ends of the cross-bars or levers G G are somewhat depressed to secure the requisite leverage in closing the bucket.

R R and S S are chains having their ends secured to the levers G G, and pass around the sheaves J J and K K, and under, over, and around the shaft F, respectively.

Commencing with the bucket closed, as shown in Fig. 1, as it is let down by the cable P the cable Q is slackened, when the halves A A, being supported from their outer edges by the chains N N, will open by their own weight, the width of the opening depending upon the amount of slack in the cable Q, and being at all times under the control of the operator. The halves A A having been opened, as shown in Fig. 4, or wider, if desired, the bucket falls upon the material to be removed. The operating-cable Q is then drawn upward, which, as it unwinds from the drum M, rotates the shaft F and winds up the chains R R and S S. As the chains R R and S S become wound upon the shaft F they will draw together the ends of the levers G G and B B until the two halves of the bucket A A are brought together. As the halves A A are thus being closed they have a tendency to dig down into the material, which results in filling the bucket. As soon as the bucket is closed it is hoisted up and discharged at the proper time and place by the slackening of the cable Q, as it is well understood.

It will be observed that the vertical space required for the operation of the bucket is less than that necessary for the practical and successful operation of other buckets now in use, and that at the same time the two halves or parts A A may be opened to a width which

will bring their edges in a vertical line with the material to be removed. The width of the opening tends to insure the downward or digging tendency while the bucket is being closed and the securing of a full load even when the material to be removed is very coarse.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the elbow-levers B B, the angled levers G G, all provided with sheaves, the chains R R and S S, and the rotating shaft F, the whole arranged and operating together to close the parts of the bucket, as described.

2. The combination of the two chains R R and S S with the shaft F, two of said chains being wound upon each end of said shaft, the drum M, and the cable Q, the whole constructed and operating upon the levers B B and G G to close the bucket, as described.

CHARLES PAY.

Witnesses:
WALTER B. VINCENT,
JOSEPH H. FLARITY.