(No Model.) 3 Sheets—Sheet 1.

C. KINKEL.

MACHINE FOR CLEANING WINDOWS OR OTHER SURFACES.

No. 574,202. Patented Dec. 29, 1896.

Fig. 1.

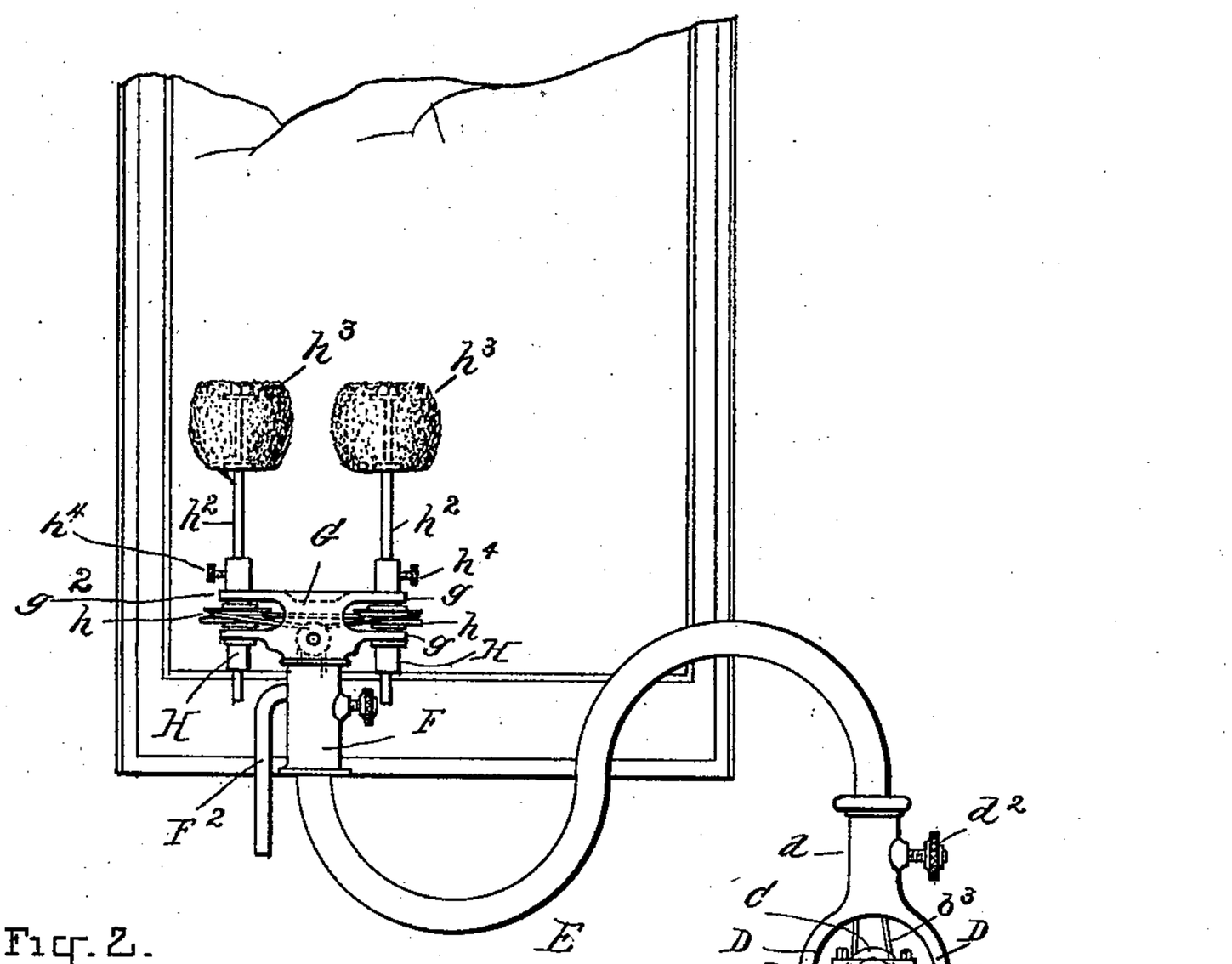
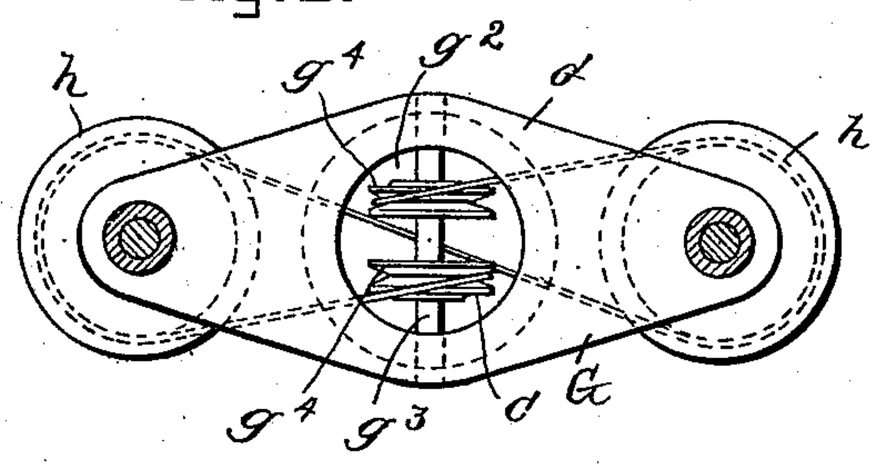


Fig. 2.



WITNESSES:

C. E. Whitney.

C. Gerst

INVENTOR

Charles Kinkel.

BY

Edgar Tate & Co

ATTORNEYS.

(No Model.) 3 Sheets—Sheet 2.

C. KINKEL.

MACHINE FOR CLEANING WINDOWS OR OTHER SURFACES.

No. 574,202. Patented Dec. 29, 1896.

Fig. 3.

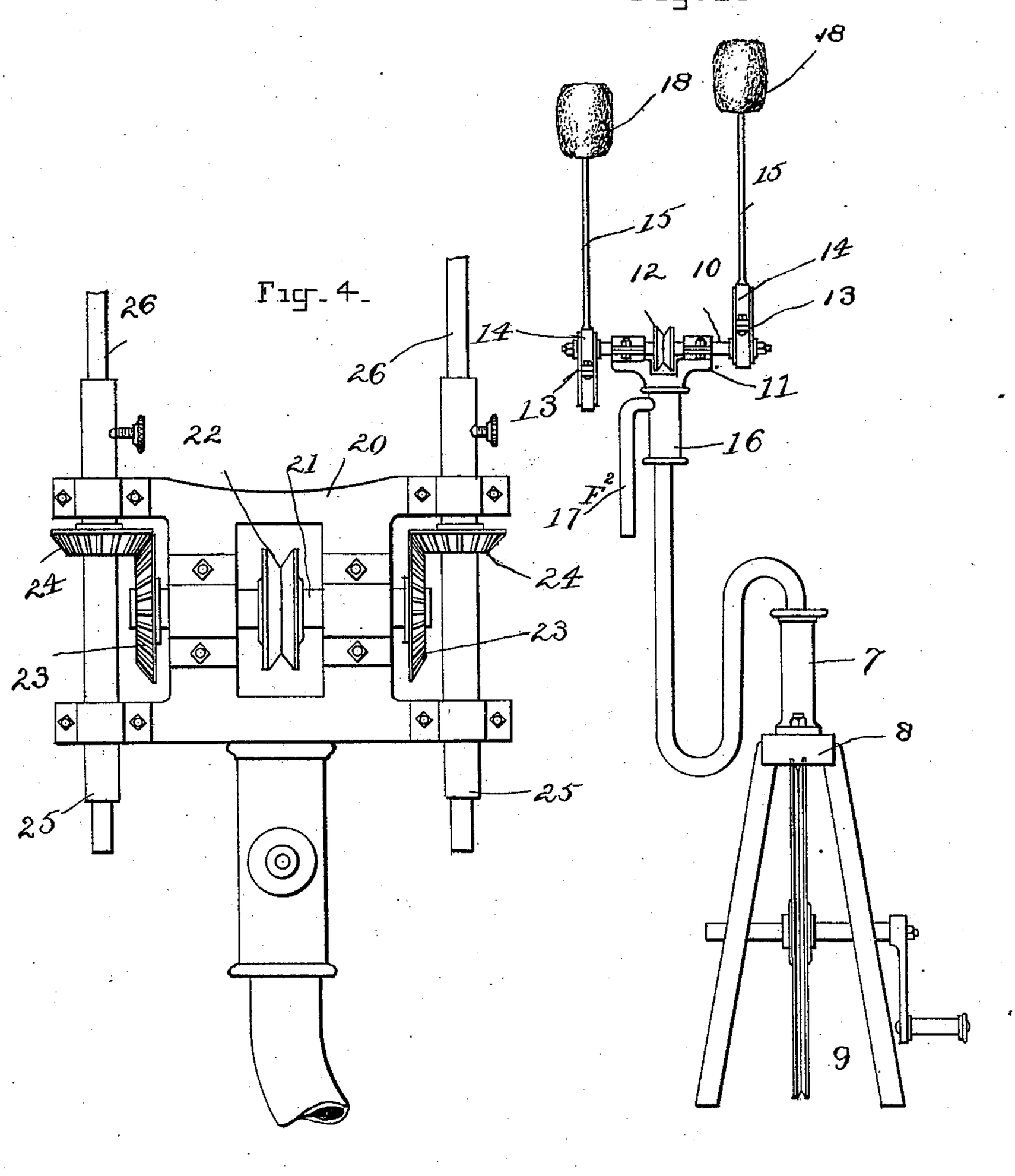


Fig. 4.

WITNESSES:
C. E. Whitney.
C. Gerst.

INVENTOR
Charles Kinkel.
BY
Edgar Tate & Co
ATTORNEYS.

(No Model.) 3 Sheets—Sheet 3.

C. KINKEL.

MACHINE FOR CLEANING WINDOWS OR OTHER SURFACES.

No. 574,202. Patented Dec. 29, 1896.

Fig. 5.

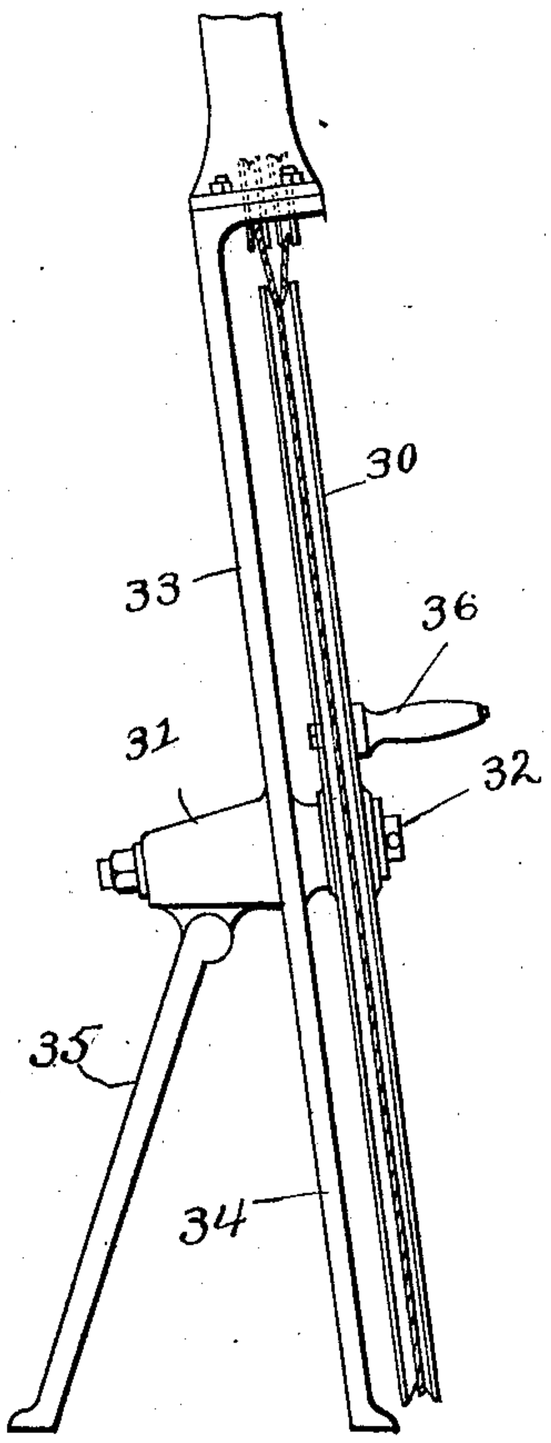
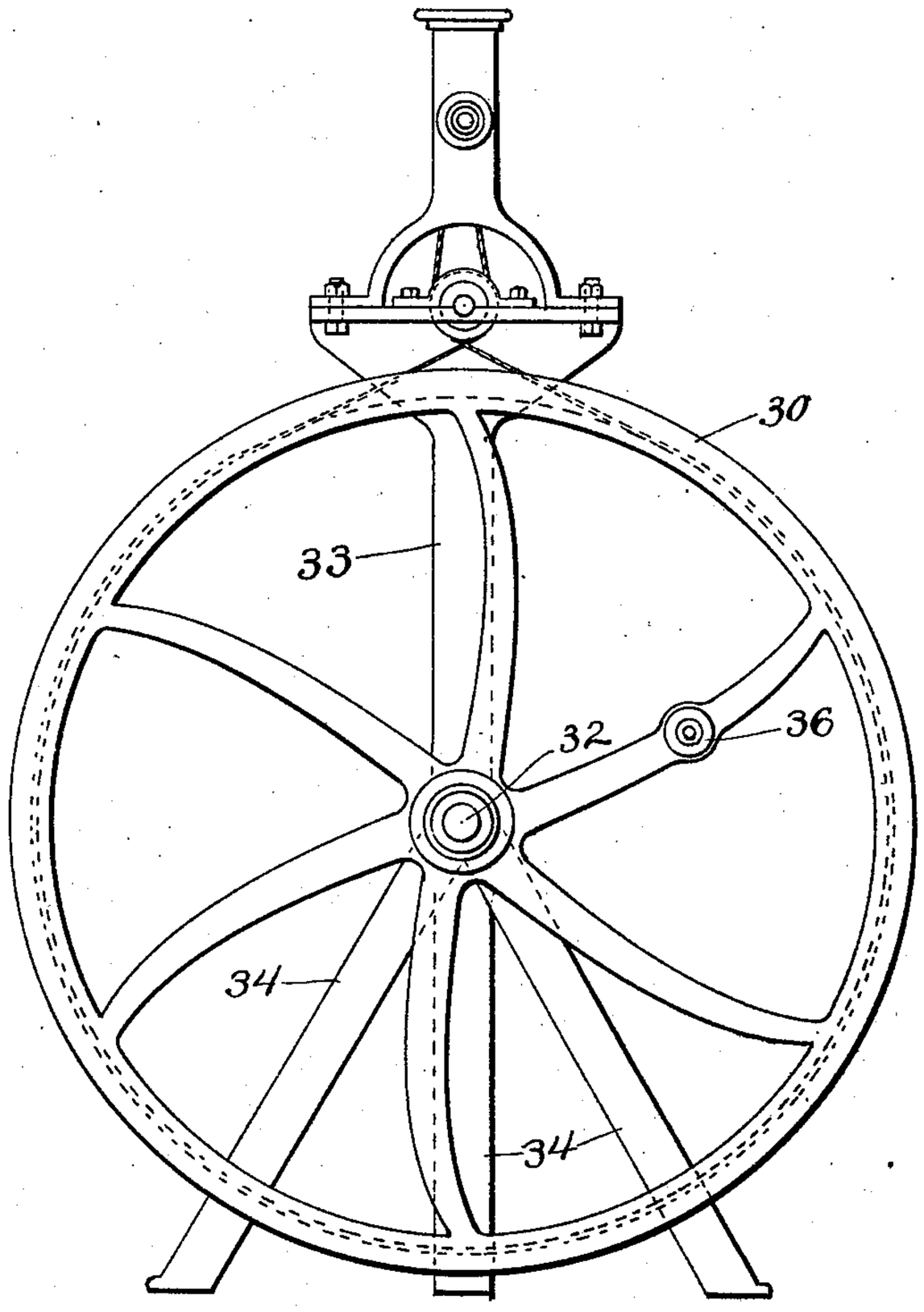


Fig. 6.



WITNESSES:

C. E. Whitney.

C. Gerst

INVENTOR

Charles Kinkel.

BY

Edgar Tate & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES KINKEL, OF NEW YORK, N. Y., ASSIGNOR OF FIVE-EIGHTHS TO FRANK RUPPERT AND HENRY MOCK, OF SAME PLACE.

MACHINE FOR CLEANING WINDOWS OR OTHER SURFACES.

SPECIFICATION forming part of Letters Patent No. 574,202, dated December 29, 1896.

Application filed February 4, 1896. Serial No. 577,982. (No model.)

To all whom it may concern:

Be it known that I, CHARLES KINKEL, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Machines for Cleaning Windows or other Surfaces, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters and numerals of reference indicate corresponding parts.

This invention relates to mechanism for washing windows and similar purposes; and the object thereof is to provide an effective device of this class, and one which is simple in construction and operation.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is an end view of the body portion of my improved machine, showing also a part of a window and the method of the operation of the machine; Fig. 2, a section of Fig. 1; Fig. 3, a side view of the machine and showing a modification of the construction thereof; Fig. 4, a side elevation of a detail of the construction and showing another modification; and Figs. 5 and 6 are side and end views, respectively, of the body portion of the machine and showing a modification thereof.

In the practice of my invention, reference being made to Fig. 1, I provide a frame comprising a plate or table A, which is provided at each end with legs or supports a, but two of which are shown in said figure, and the legs or supports a are united by transverse bars a^2, but one of which is shown, and extending transversely of the bars a^2 and longitudinally of the frame is a shaft B, provided with a crank b, and on the central portion of which is mounted a power-wheel b^2, on which is placed an endless belt, band, or cord b^3.

Mounted centrally of the table or plate A are two pulleys C, but one of which is shown in Fig. 1, and these pulleys are inclosed by a frame comprising the legs or braces D, which are secured to said table or plate, and the tubular head d, formed integrally therewith, and through which passes a set-screw d^2, which is designed to hold the flexible tube E in said tubular head, and connected with the tubular head d is a flexible tube E, at the end of which is a cylinder F, provided with a handle F^2, and connected with the cylinder F is a cross-head G, the ends of which are transversely slotted, so as to form upper and lower arms g, and said cross-head is provided with a central opening g^2, through which passes a shaft g^3, on which are mounted two pulleys g^4, and mounted vertically in the arms g are revoluble shafts H, each of which is provided with a pulley h, and in the upper ends of the shafts H are rods h^2, each of which supports at its upper end a mop, sponge, or other similar device h^3, which may be connected therewith in any desired manner, and each of the tubular shafts H is provided with a set-screw h^4, by which the position of the rods h^2 may be regulated.

The operation of this device will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

The cord or belt b^3 is passed around the power-wheel b^2, around the pulleys C, which are best shown in Figs. 1 and 5, and then carried through the flexible tube E and passed around the pulleys g, mounted centrally of the cross-head G, and around the pulleys h, by which the tubular shafts H are operated, and the head F, with which the cross-head G is connected, is operated by grasping the handle F^2.

It will be understood that the mops or sponges h^3 are saturated with water in the usual manner, and the wheel b^2 being turned by one operator the head F is held by another, and the mops or sponges h^3 are passed over the surfaces of the glass or other surfaces which it is desired to clean, and as the wheel b^2 is turned the mops or sponges h^3, or the shafts by which they are supported, will be rapidly revolved, and thus the entire surface to be cleaned will be quickly and easily gone over and thoroughly cleansed.

In Fig. 3 I have shown a modification of this construction in which the tubular head 7 is connected directly with the table or board 8, and the cord or belt when in position on the wheel 9 is passed therethrough, and the

shaft 10, mounted in the cross-head 11, which in this construction is somewhat different in form, is provided with a single pulley 12, and each end of the shaft 10 is provided with an eccentric wheel 13, which is provided with a peripheral groove, in which is placed a revoluble band or ring 14, to which is secured one of the arms 15, and in this form of construction, when the head 16 is held in proper position by the handle 17, the mops or sponges 18 will be pressed against the surfaces to be cleaned, and when the wheel 9 is revolved the shaft 10 will also be operated or revolved, together with the eccentric wheel 13 at the end thereof, and the rods or arms 15 will be moved quickly up and down instead of being revolved, as hereinbefore described.

In Fig. 4 I have shown a modification of the construction shown in Fig. 1, in which the cross-head 20 is similar to that shown in said figure; but in this case the shaft 21 is provided with a single pulley 22, and each end of the shaft 21 is provided with a beveled gear-wheel 23, which operates in connection with a corresponding beveled gear-wheel 24, one of which is mounted on each of the tubular shafts H, which are of the same form as those shown in Fig. 1, and the rods or arms 26 are connected with said tubular shafts, as in said last-named figure, and in the operation of the device are revolved instead of being given an up-and-down motion, as in Fig. 3.

In Figs. 5 and 6 I have shown a modified form of support or frame for the wheel 30, in which I employ a hub 31, through which passes the shaft 32, on which said wheel is mounted, and connected with said hub is an upwardly-directed plate or arm 33 and three similar downwardly-directed legs or supports 34, and this support is arranged at a slight inclination, and secured to the hub 31 is a brace or leg 35, which constitutes a part of said support or frame, and the wheel 30 is provided with a handle 36, which is connected with one of the spokes thereof.

It will be apparent that many other changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages, and I reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

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

1. In a machine for washing windows, constructed substantially as herein shown and described, the combination with the flexible tube E, of cylinder F, slotted cross-head G, having a central opening, shaft g^3 in said opening, pulleys g^4 on said shaft, shafts H mounted on said cross-head; pulleys h on shafts H, rods h^2 on shafts H, and scrubbing or cleaning devices on the ends of said rods, all constructed and arranged substantially as herein shown and described.

2. In a machine, for washing windows, and other surfaces, the combination with a frame or support, of a power-wheel mounted therein, a cord or belt passed over said power-wheel and over pulleys supported in the top thereof, a flexible tube connected with said frame or support through which said cord or belt is passed, a head provided with a shaft, said shaft being provided with two pulleys over which said cord or belt is passed, and said head being provided with a tubular shaft in each end thereof, each of which is provided with a pulley over which said cord or belt is passed, and said tubular shafts being each provided with a mop or sponge, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 1st day of February, 1896.

CHARLES KINKEL.

Witnesses:
C. GERST,
L. M. MULLER.