G. W. Holmes,

Windlass.

No. 52,045. Patented Jan. 16, 1866.

Fig. 1.

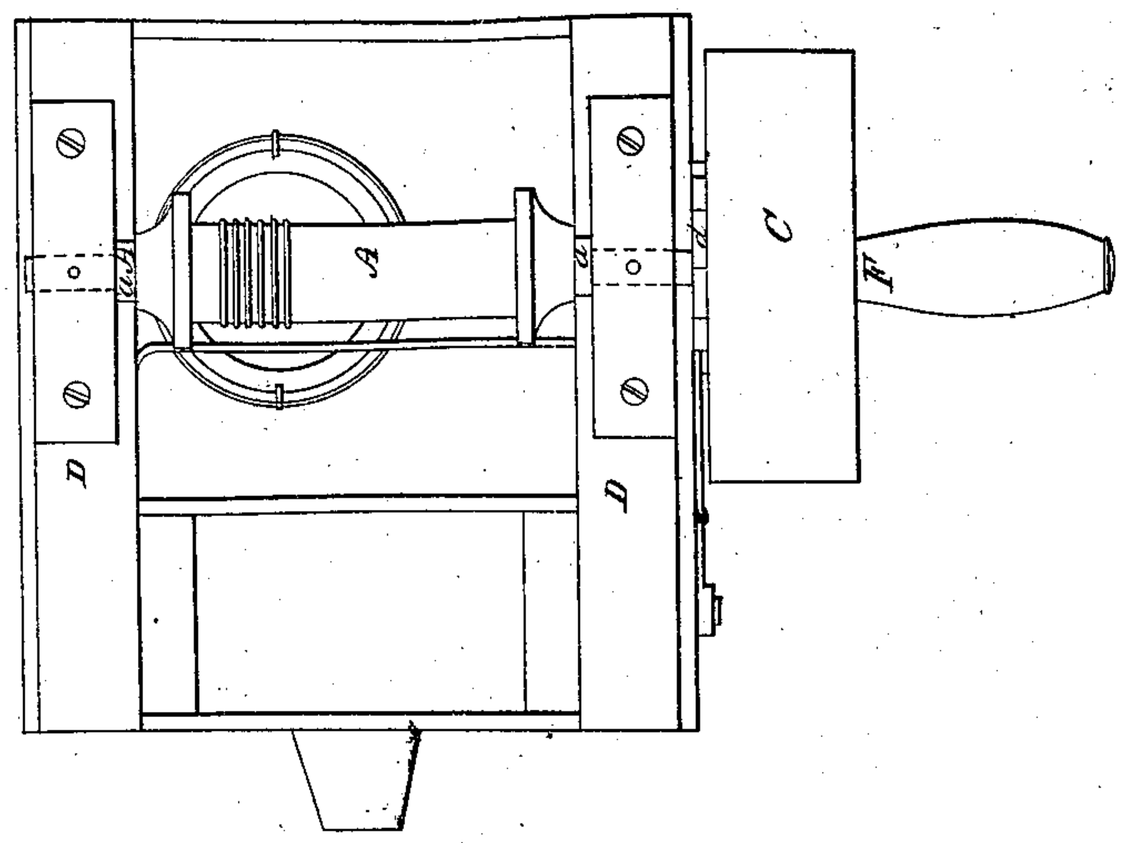


Fig. 3.

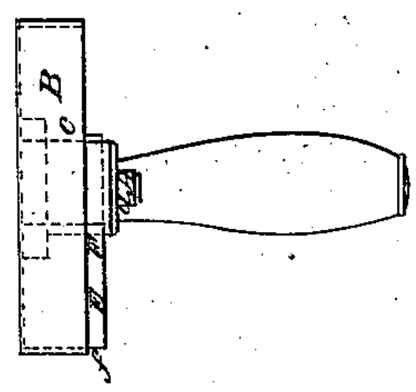
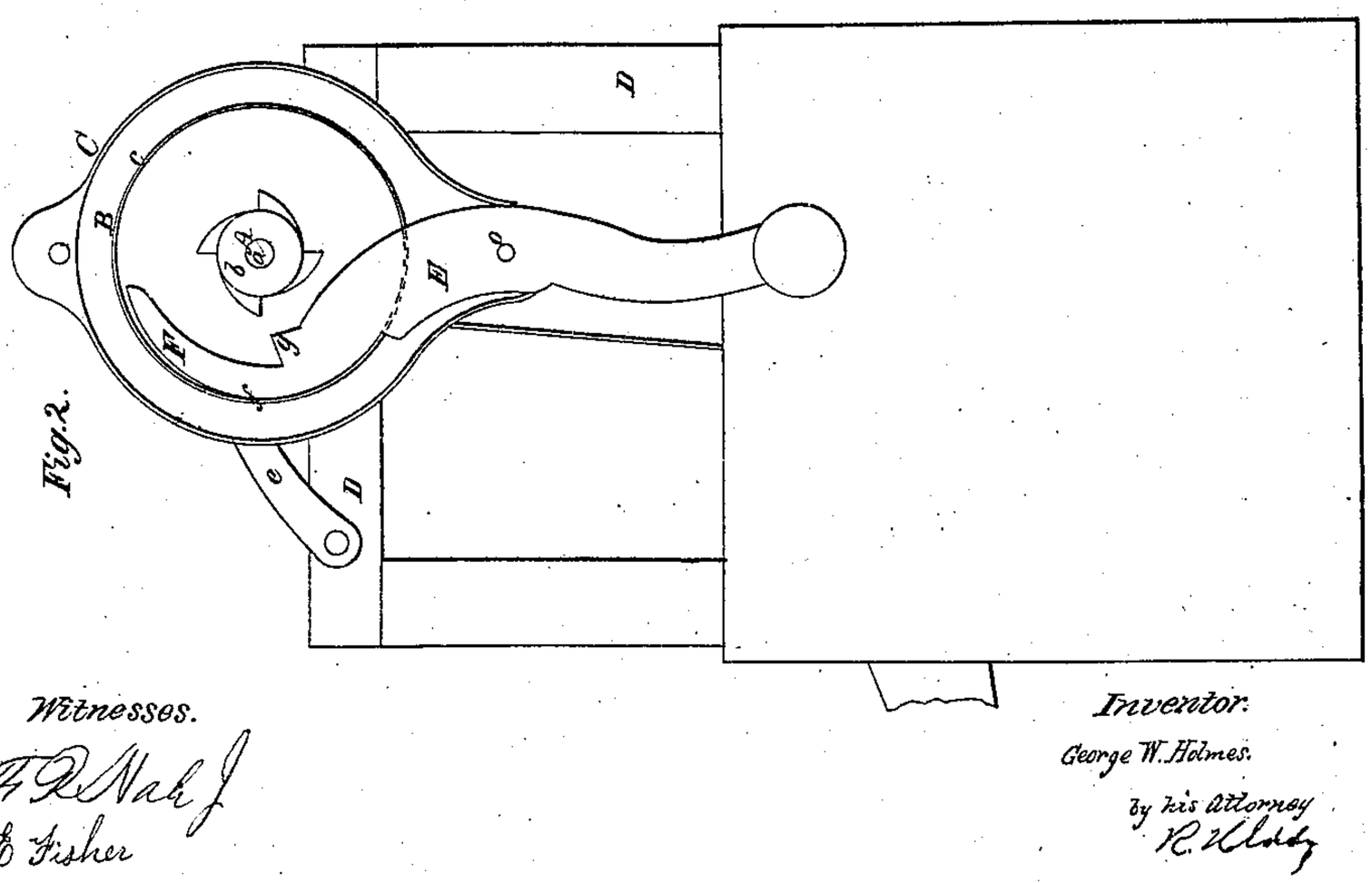


Fig. 2.



Witnesses.

A. R. Nash

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UNITED STATES PATENT OFFICE.

GEORGE W. HOLMES, OF BRIDGEWATER, MASSACHUSETTS.

IMPROVEMENT IN WINDLASSES.

Specification forming part of Letters Patent No. **52,045**, dated January 16, 1866.

To all whom it may concern:

Be it known that I, GEORGE W. HOLMES, of Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Windlasses, or in mechanism for operating the barrels thereof; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view of a windlass provided with my invention and applied to the frame or curb of a well. Fig. 2 is a side elevation of it, the cap-plate of the operative mechanism being removed in order to exhibit the friction-wheel and the brake, pawl, and ratchet, to be hereinafter described. Fig. 3 is a top view of the crank and its friction-brake.

In carrying out my invention I affix on the shaft *a* of the windlass A a ratchet, *b*, and also a friction-wheel, B, whose rim *c* projects on one side of the disk or body of the wheel. The said ratchet and friction-wheel I arrange within a case, C, which turns freely on the windlass-shaft and has a ratchet, *d*, fastened on its rear side, a pawl, *e*, projecting from the frame D, on which the windlass is supported, being employed in connection with such last-named ratchet.

The case C carries a crank, E, which turns on a pin, *o*, extending through the case, and has an arm, E, projecting from it and into the friction-wheel and over the ratchet within such wheel. The part *f* of the arm constitutes a brake to act against the inner surface of the rim of the friction-wheel, and there is a tooth or projection, *g*, from the arm, which, when the arm is forced toward the ratchet, serves to so engage the crank with the shaft of the windlass as to enable a person to turn the said windlass by means of the crank. After the windlass may have elevated a body suspended from it, the crank, by a short movement, may be thrown out of engagement with the ratchet, and the friction-brake may be borne against the interior periphery of the friction-wheel, so as not only to allow of the descent of the body raised by the windlass, but to check the downward fall of the body or prevent it from descending too rapidly.

By means of the pawl *e* and the ratchet *d* the case C can be adjusted on the windlass-shaft to the most convenient position for the person at the crank to apply his strength to regulate, by the crank and brake to the best advantage, the fall of the body raised by the windlass, whether such body be the bucket of a well or of any other description.

I do not claim coupling a crank to a windlass-shaft in such manner that the said crank be instantly uncoupled from the said shaft and be used as a brake-lever for the purpose of checking or controlling the reverse movements of the windlass. Nor do I claim arranging a crank with a windlass-shaft, a ratchet, and a pawl in such manner that the instant the said crank is uncoupled from the windlass-shaft a further action upon the said crank will relieve the ratchet from the action of the pawl, and also cause a friction-brake to so act upon the windlass-shaft as to check or control its reverse movements. My invention, although operating in an analogous manner, is an improved arrangement of parts for effecting such results. Furthermore, it will be seen that by my said arrangement the brake of the crank works within the friction-wheel and against its inner periphery, all of which not only simplifies the construction of the mechanism, but affords other advantages.

What, therefore, I claim as my invention is as follows:

1. My improved arrangement of the friction-wheel B, the brake *f*, the crank E, the tooth *g*, and the ratchet *b*, as described, the whole being applied to a case or its equivalent, and to a windlass, A, and to operate substantially as specified.

2. The combination of the auxiliary pawl *e* and ratchet *d* with the windlass A, the case C, the crank E, the brake *f*, the tooth *g*, and the ratchet *b* the whole being to operate substantially as described.

GEO. W. HOLMES.

Witnesses:
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