(Model.) 2 Sheets—Sheet 1.

J. McEWEN & S. SPENCER.

APPARATUS FOR BOTTLING AND SIRUPING AERATED BEVERAGES.

No. 292,565. Patented Jan. 29, 1884.

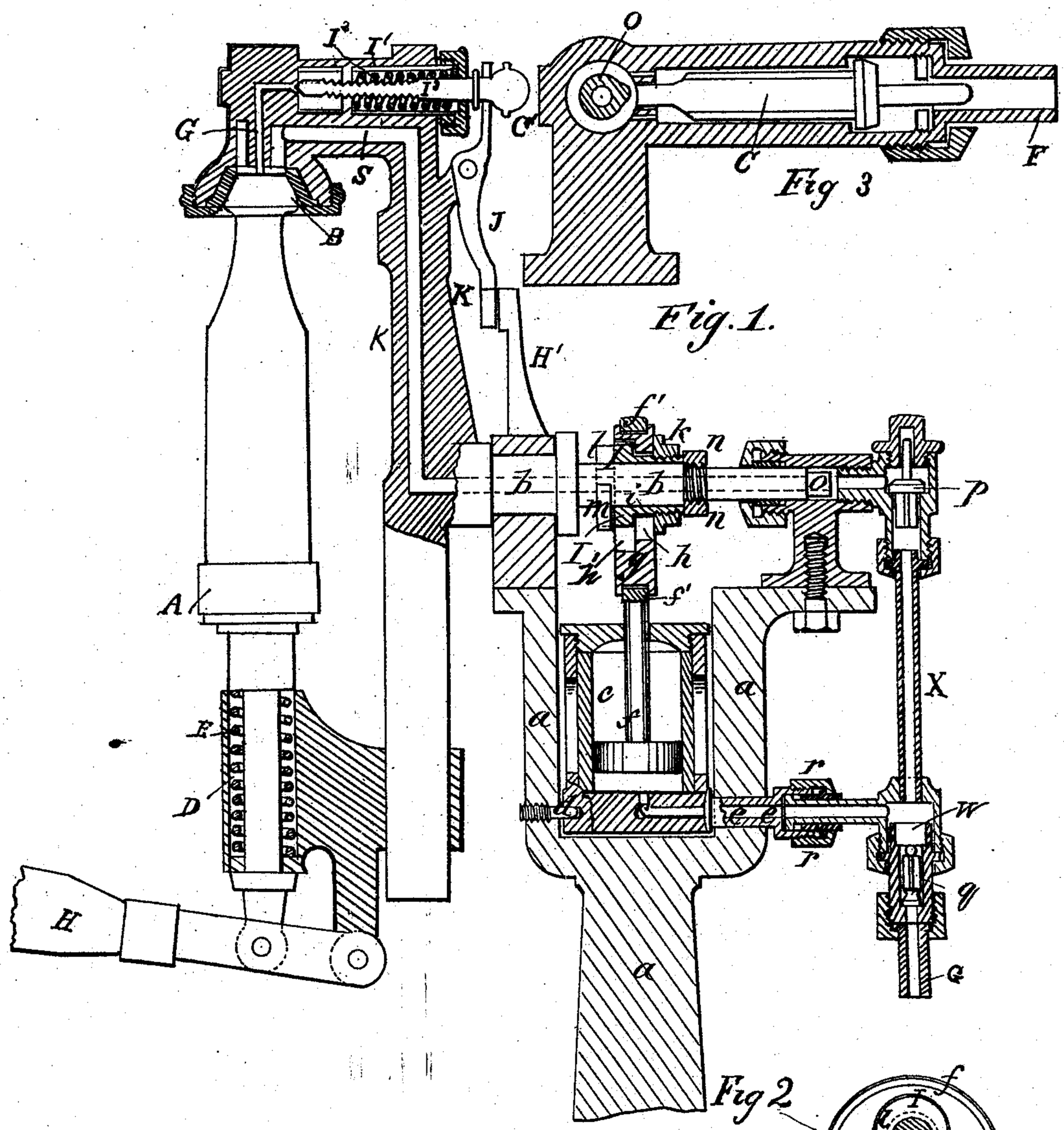

Fig. 1.

Fig 3

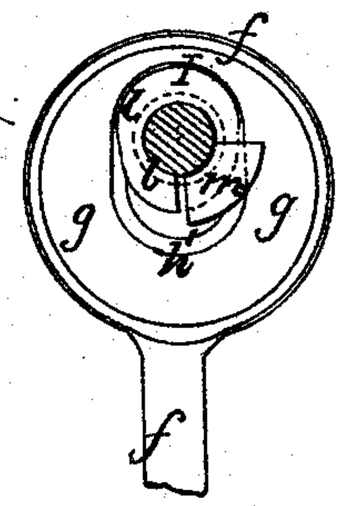

Fig 2

WITNESSES:

Donn Twitchell

C. Sedgwick

INVENTOR:

J. McEwen

S. Spencer

BY Munn & Co

ATTORNEYS.

(Model.) 2 Sheets—Sheet 2.

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Fig. 4.

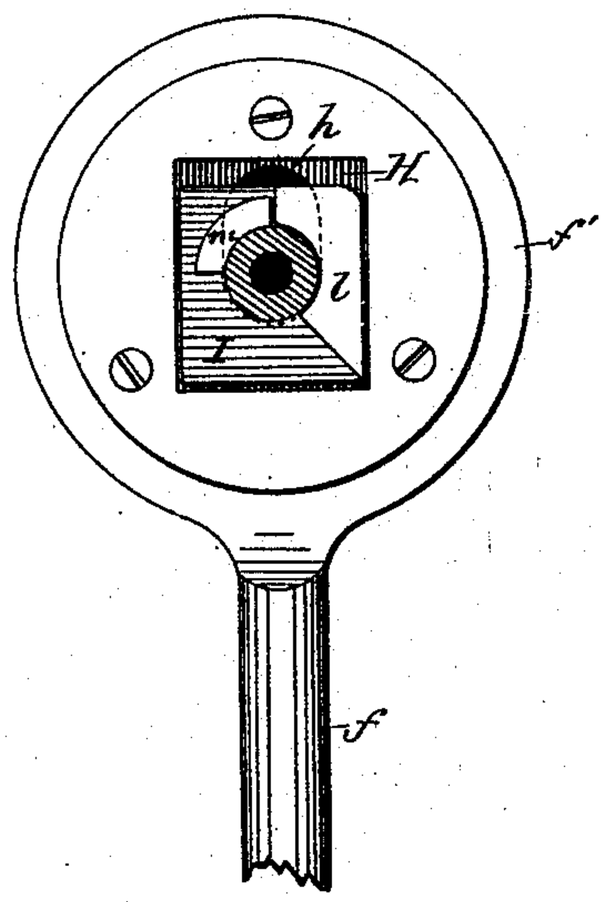


Fig. 5.

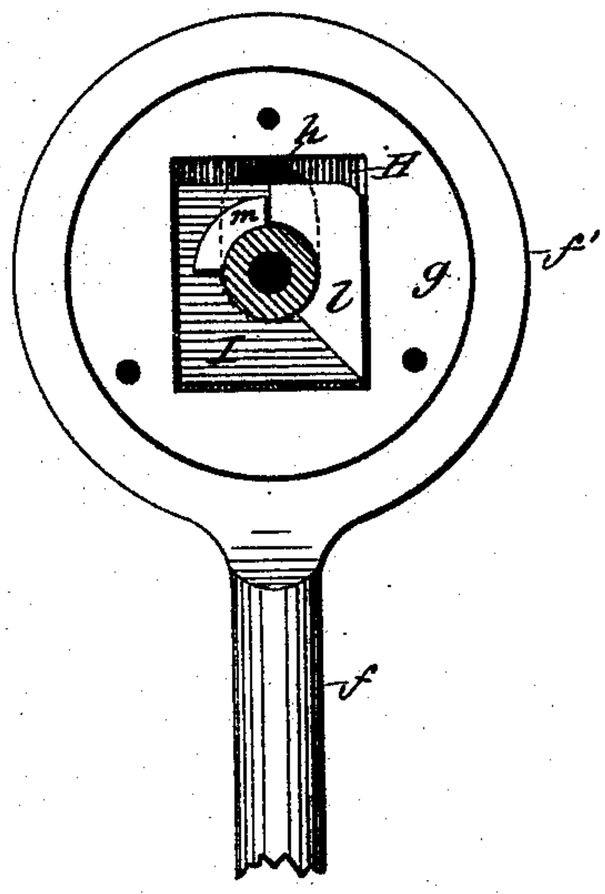
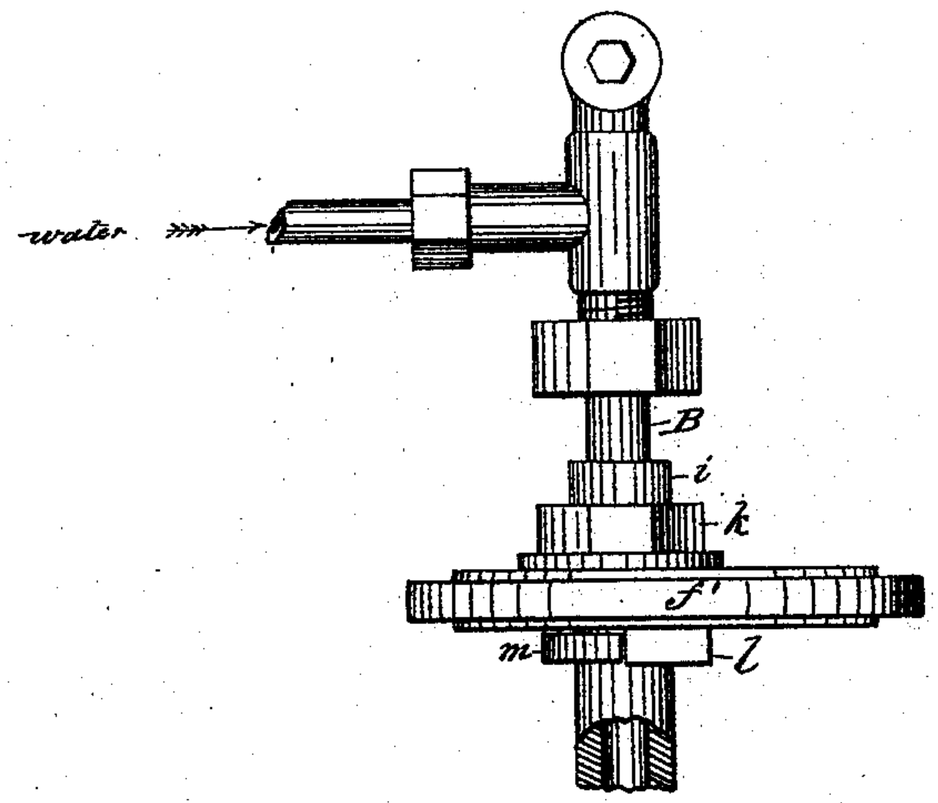


Fig. 6.



WITNESSES:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES McEWEN AND SIMEON SPENCER, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

APPARATUS FOR BOTTLING AND SIRUPING AERATED BEVERAGES.

SPECIFICATION forming part of Letters Patent No. 292,565, dated January 29, 1884.

Application filed December 15, 1882. (Model.) Patented in England December 23, 1880, No. 5,402.

To all whom it may concern:

Be it known that we, JAMES MCEWEN and SIMEON SPENCER, both of Manchester, in the county of Lancaster, England, have made certain new and useful Improvements in Apparatus for Bottling and Siruping Aerated Beverages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings and letters of reference marked thereon, in which—

Figure 1 is a vertical section of our improved apparatus for bottling and siruping aerated beverages. Fig. 2 is a side elevation of the eccentric. Fig. 3 is a vertical section of the aerated-water valve and its cylinder, and the cam or eccentric on the end of the revolving shaft passing through the eccentric for operating said valve. Fig. 4 is a side elevation of the eccentric, the hollow shaft being in section. Fig. 5 is a similar view with the holding-plate removed, and Fig. 6 is a detail plan view of the eccentric and water-inlet tube.

a is part of the iron stand, and *b* is the revolving shaft of the filling-machine.

c is the oscillating cylinder of the pump, working on the fixed pivot *d* on one side, and on the hollow pivot *e* on the other side.

f is the piston-rod, secured at its upper end to the eccentric strap *f'*, the latter embracing the eccentric *g*. The eccentric *g* is provided with a slot, *h*, enlarged at *h'*, and is mounted on a sleeve, *i*, placed loosely on the shaft *b*. The sleeve *i* is provided with an oblong block or head, I, on one end, that fits into the enlarged part H of the slot *h*. The eccentric *g* can be placed more or less out of the center by raising the eccentric *g* and its slot *h* on the block I, and then fixed by a nut, *k*, so as to give more or less throw to the piston, in order to regulate the throw of the piston and the amount of sirup to be supplied. The block I is provided with a lug or projection, *l*, and the shaft *b* is fitted with a projecting catch, *m*, the same being so arranged that when the shaft *b* is turned forward in filling a bottle the catch *m*, coming against the lug *l*, moves the eccentric *g* with it, and consequently oscillates the pump-cylinder *c* and its piston-rod *f*; but in rocking the shaft *b* in the reverse direction it can make a quarter of a turn before it acts upon the eccentric *g*, so that in filling bottles with internal stoppers the bottle can be rocked slightly, so as to bring the stopper into position without working the sirup-pump. The pump-cylinder is made to oscillate, in order that the piston-rod *f* may work air-tight in the head of the cylinder *c*.

n is a nut for keeping the loose sleeve *i* up against the catch *m*.

o is the cam or eccentric on the end of the shaft *b*, for opening the aerated-water valve C by pressing it backward, aerated water passing from its tank or cylinder (not shown in the drawings) through the hollow shaft *b*, up through the passage S and the hollow upper bottle-carrier, B, into the bottle held between the bottle-carriers A B. The shank of the lower bottle-carrier, A, works in a cylinder D, and is surrounded by a spiral spring, E, the tension of which is always exerted to throw the lower bottle-holder upward to grasp the bottle between the upper and lower holders, A B.

H is a handle or lever pivoted to the shank of the lower holder, A, whereby the holder can readily be lowered for the insertion of an empty bottle between the holders A B.

G is an air-passage for the escape of air from the bottle into the cylinder I', when the bottle is being filled, and thence into the open air. The upper end of the air-passage G is provided with a valve, I^3, surrounded by a spiral spring, I^2. The valve I^3 is provided with a head, C', inside of which the loop of the lever J passes. The lever J is pivoted to the part K, which carries the bottle-carriers, and the passage for aerated water and sirup and the air-passage from the bottle with its valve. The lever J is pivoted to the part K, so as to turn with it, and the lever J is operated by the regulating-arm H', secured to the upper part of the bearing of the shaft *b*, to operate the valve I^3.

p is the outlet sirup-valve, and *q* the inlet sirup-valve.

r is an oscillating joint, made with a leather or other suitable washer and a split gland.

In the operation of the machine, it is firmly

secured to the floor, and the aerated water-pipe is attached to the union F and the sirup-pipe to the union G. Having placed the bottle in its carriers, and adjusted the eccentric so as not to operate the piston, insert the empty bottle between the bottle-carriers and revolve the bottle-carriers by means of the lever H, when the aerated water will flow into the bottle, the lever J striking the arm H′, opening the valve I³, to allow the air to escape from the bottle.

To put the sirup-pump in action, adjust the eccentric to operate the piston, revolve the bottle-carriers by means of the lever H, raising the piston, the sirup will be forced by suction into the cylinder *c*, and in the downstroke of the piston the valve W will be closed by the pressure of the sirup on it, and the sirup will pass up the tube X, open the valve *p*, pass through the hollow shaft *b*, and thence through the passage S into the bottle.

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

1. The combination, with a cylinder mounted on pivots near its lower end and provided with a piston, of an adjustable eccentric for oscillating said cylinder and operating said piston, substantially as described.

2. The combination, with the shaft *b*, of the eccentric *g*, provided with a slot, *h*, enlarged at *h′*, the sleeve *i*, having head I, and the nut *k*, substantially as described, and for the purpose set forth.

3. The combination, with the shaft *b*, provided with the catch *m*, of the eccentric *g*, provided with a slot, *h*, enlarged at *h′*, sleeve *i*, provided with head I, having lug *l*, and the nut *k*, substantially as described, and for the purpose set forth.

4. The combination, with the bottle-carriers A B and shaft *b*, provided with the catch *m*, of an adjustable eccentric, *g*, sleeve *i*, having lug *l*, piston-rod *f*, and cylinder *c*, mounted on pivots near its lower end, substantially as described.

5. The combination, with the aerated-water valve C and the shaft *b*, carrying the eccentric *g*, which operates the piston and cylinder, of the cam *o* on the end of the said shaft, whereby the aerated water and sirup are alternately admitted into the bottle, substantially as described.

In witness whereof we, the said JAMES McEWEN and SIMEON SPENCER, have hereunto set our hands and seals this 8th day of November, A. D. 1882.

JAMES McEWEN. [L. S.]
SIMEON SPENCER. [L. S.]

Witnesses:
EDMD. L. BOND,
Solicitor, Manchester.
EDMUND CHADWICK,
Patent Agent, Bolton.