H. J. & W. D. DAVIES.

AUTOMATIC SMOKING-SIGN.

No. 193,930. Patented Aug. 7, 1877.

Fig. 1

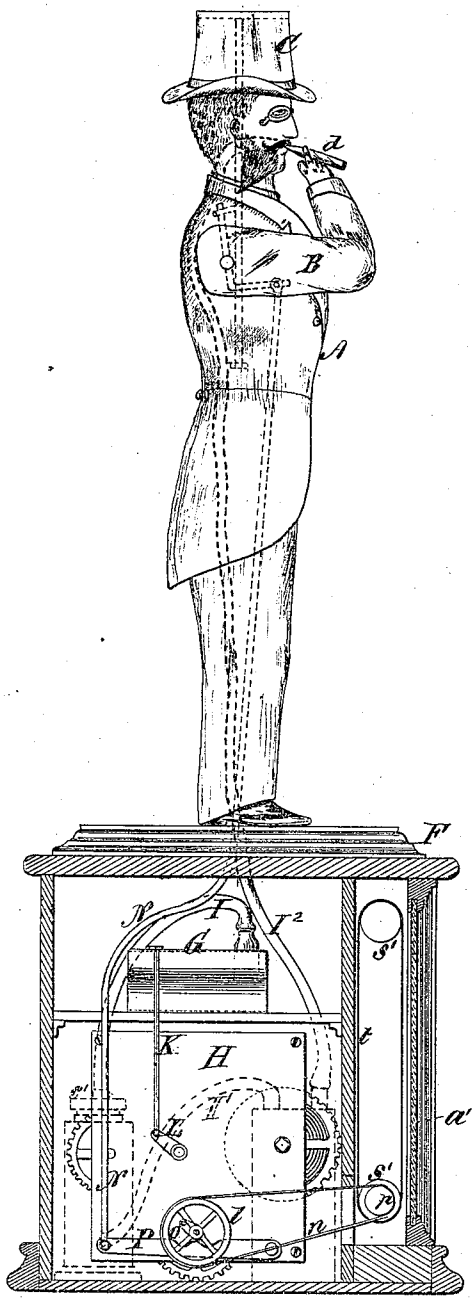
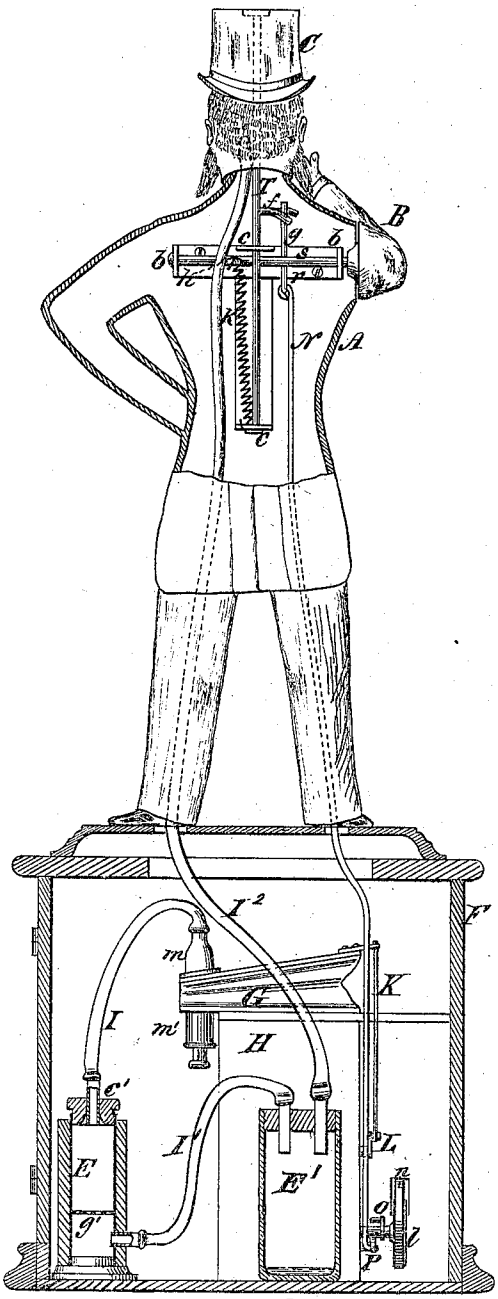


Fig. 2



Witnesses:
Michael Ryan
Fred. Haynes

Inventor
Henry J. Davies
Walter D. Davies
by their Attorneys
Brown & Allen

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY J. DAVIES AND WALTER D. DAVIES, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN AUTOMATIC SMOKING-SIGNS.

Specification forming part of Letters Patent No. **193,930**, dated August 7, 1877; application filed July 2, 1877.

To all whom it may concern:

Be it known that we, HENRY J. DAVIES and WALTER D. DAVIES, both of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Tobacconists' Smoking-Signs; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification.

Our invention has for its object the supply of an automatic smoking-figure, designed to be used for tobacconists' advertising, and which represents a person smoking a cigar, but without the defects of toy smoking-figures as heretofore constructed.

Such smoking-figures have heretofore been constructed with a pipe or a pseudo cigar, in which tobacco or other combustible material for generating smoke is placed, the pipe or cigar being held to the mouth, and the smoke being drawn from the same through a tube descending through the figure to a bellows worked by clock-work, from which the smoke drawn in is expelled through another tube leading to an opening in the mouth of the figure, from which the smoke issues. This construction has presented the difficulty that the dust, oil, and juice from the burning tobacco, or other material employed in the pipe or cigar, are drawn into the tube descending through the figure to the bellows, clogging the same, and as such tube and bellows are difficult to reach for cleaning, great inconvenience has resulted.

In our improvement the smoke is never drawn through the bellows, nor the mouth of the figure, but is first purified, and then only ejected from the mouth, the pseudo cigar or pipe held to the mouth not containing the tobacco or other material for generating the smoke; hence the smoke-tube is not liable to clog, as heretofore, and only one tube in the body of the figure is necessary to produce the desired resemblance to actual smoking.

The invention partly consists in an automatic figure placed upon a hollow base, a furnace or fire-pot for generating the smoke, a bellows, a collector of dust and condenser, (said bellows, fire-pot, and condenser being within said base,) clock-work for operating the figure and bellows, a tube leading from the bellows to the fire-pot, a tube leading from the bellows to the condenser and dust-collector, and another tube leading from said condenser and dust-collector to the aperture in the mouth whence the smoke issues.

The invention also consists in mechanism for operating the arm of the figure which holds the pseudo cigar, in such manner that, at intervals, the cigar is taken from the mouth and held at a distance from the same, for imitating the motion of the arm of a living smoker while smoking a cigar.

The invention also consists in the combination, with the above-named mechanism for operating the arm, of other mechanism for moving the head of the figure, the combined movement of the head and arm being such as to resemble that of a living smoker in smoking a cigar.

The invention further consists in the combination, with the automatic toy smoker, constructed and operated as hereinafter described, of an endless advertising-sheet, and rollers for moving the same, impelled by belt or gearing from the same clock-work which operates the automatic smoker.

Figure 1 in the accompanying drawing is a side view of the entire device, one side of the hollow base being removed to show the interior working parts. Fig. 2 is a rear view, a portion of the automatic figure being broken away to show the interior working mechanism, and the back part of the hollow base being removed to show the furnace or fire-pot, the condenser and dust-collector, and the connections with the bellows and other working parts contained in said base. The fire-pot and condenser are also shown in section.

A is the automatic smoking-figure, having the movable arm B and the movable head C. In the hand of the movable arm B is fixed the pseudo cigar *d*, Fig. 1, which, in one position

of the arm, is applied to the mouth, as shown, and in another position of the arm, as hereinafter described, is removed from the mouth to imitate the withdrawal of the cigar from the mouth of a living smoker at the time of ejecting the smoke. E is a furnace or fire-pot, placed within the base or pedestal F, upon which the figure stands, which base also contains a bellows, G, and a train of clock-work gearing, H, for operating the same. The fire-pot E has preferably a grate, g', on which tobacco or other combustible is placed, and a cap, c', which closes the fire-pot. To the fire-pot E an air-tube, I, leads from the bellows, and from the fire-pot a tube, I′, leads to a condenser and dust-collector, E′, and from thence another tube, I″, leads up through the figure to the aperture in the mouth thereof. The said condenser and dust-collector is a simple chamber, preferably a glass bottle with a suitable stopper, which collects the dust and condenses the oil and moisture from the smoke during its passage through said condenser. The bellows G is operated by the clock-work H through a pitman, K, connecting said bellows with a crank, L, or a cam driven by said clock-work.

Suitable valves are applied to the bellows at m m', to direct the current of air from the bellows to the fire-pot E, and smoke from the fire-pot to the condenser, and from the condenser to the aperture in the mouth of the smoking-figure. A pitman, N, extends from an oscillating lever, P, impelled by a crank, o, connected with the clock-work train to a lever, r, Fig. 2, attached to the rock-shaft s. The arm B is attached to the end of this rock-shaft, which has its bearings b in the body of the figure.

The revolution of the crank o through the oscillating bar P and pitman N rocks the rock-shaft s in its bearings at the proper intervals, and operates the arm to withdraw the cigar from the mouth of the figure and replace it again, after the manner of a living smoking-figure.

The movable head C is attached to a vertical rod or rock-shaft, T, which rocks in bearings c, placed in the body of the figure. From the side of the said rock-shaft T extends, laterally, a bifurcated lever, f, in the fork of which plays a lever-arm, g, extending from the rock-shaft s. From the side of said rock-shaft, opposite the lever r, extends an arm, h, to which a coiled spring, k, is attached. The action of this coiled spring is opposed to that of the rod N, and in contracting it reverses all the movements caused by the action of the rod N. The action of the rod N is, through the rock-shaft s, to remove the arm and the pseudo cigar held in the hand thereof from the mouth, and at the same time to turn the head on its vertical axis. The contraction of the spring reverses all these movements.

In this way is formed and operated an automatic smoking-figure, the movements of which very closely resemble those of a living smoker, without danger of clogging the bellows or the tube through which the smoke is ejected.

The fire-pot E, condenser E′, and the tube which connects them are very conveniently accessible for cleaning, when desired.

Tobacco or any other suitable substance which freely forms smoke during its combustion may be used in the fire-pot.

Through a pulley, l, driven by the clock-work, a belt, n, is led to a pulley, p, on the end of one of two parallel rollers, s', placed in the base F near the front thereof.

Over these rollers is extended an endless advertising-sheet, t, which slowly moves during the operation of the figure, and the movements of the said figure attract attention to the advertisements of different grades and qualities of tobacco, cigars, and other articles sold by tobacconists printed on said endless sheet.

A plate of glass, a', is preferably placed in front of the base F to display said advertising-sheet; but, of course, a system of gearing may replace the belt and pulleys for driving the advertising-sheet.

We claim—

1. The combination, with an automatic figure representing a living smoker, of a bellows and a furnace or fire-pot in the base on which the figure stands, clock-work for operating the automatic figure and bellows, tubes leading from the bellows to the fire-pot, and from the fire-pot to an aperture in the mouth of the said figure, and a valve or valves directing the smoke in such manner that it flows from the fire-pot only toward and out of said aperture, substantially as and for the purpose set forth.

2. The combination, with the smoking-figure A, bellows G, fire-pot E, and eduction-tubes directing smoke from the said fire-pot to the aperture in the mouth of the figure, of the condenser and dust-collector E′, interposed between said fire-pot and said aperture, and connected therewith by the tube I′, substantially as and for the purpose set forth.

3. The combination of the movable arm B, the rock-shaft s, having bearings in the body of the figure, and attached to said movable arm, the lever r, the rod N, the lever h, the spring k, the horizontal pivoted bar P, and the crank o, operated by the clock-work H, to actuate the horizontal bar, substantially as and for the purpose described.

4. The combination, with the arm B, the rock-shaft s, having vertical lever g, and oper

ated by the clock-work H through the medium of the rod N, horizontal pivoted bar P, and crank *o*, of the vertical shaft T, having forked lever *f*, and adapted to oscillate the head C, substantially as described.

5. The combination, with the automatic smoker and the clock-work and bellows for operating the same, substantially as herein described, of the endless advertising-sheet *t*, arranged in the same case or hollow base that contains the clock-work, and operated by belt or gearing connecting the same with the said clock-work, substantially as and for the purpose set forth.

HENRY J. DAVIES.
W. D. DAVIES.

Witnesses to the signature of Henry J. Davies:

FRED. HAYNES,
BENJAMIN W. HOFFMAN.

Witnesses to the signature of Walter D. Davies:

BENJAMIN W. HOFFMAN,
EDWARD B. SPERRY.