May 23, 1939. F. H. C. COPPUS 2,159,472

SYSTEM OF DRAFTING LOCOMOTIVES

Filed Aug. 20, 1937 3 Sheets-Sheet 1

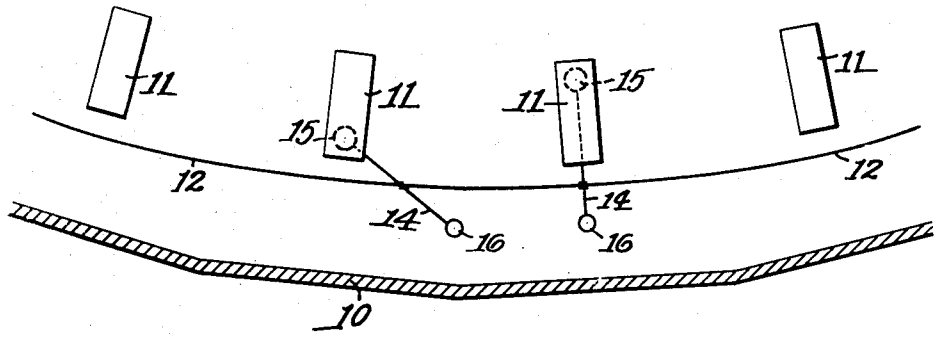


Fig. 1

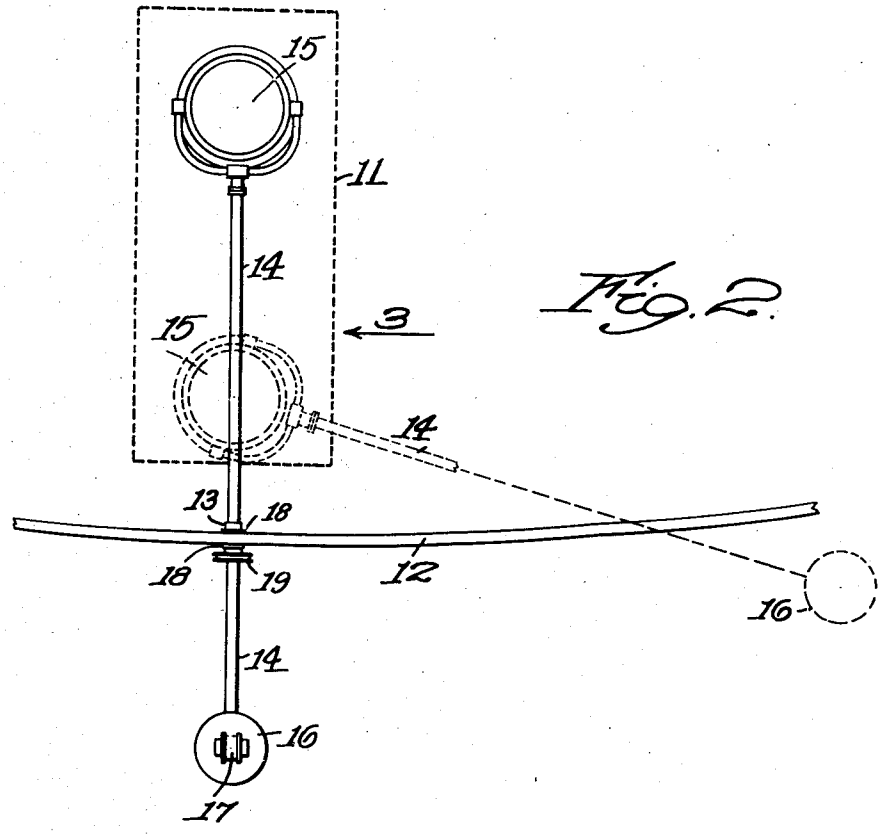


Fig. 2.

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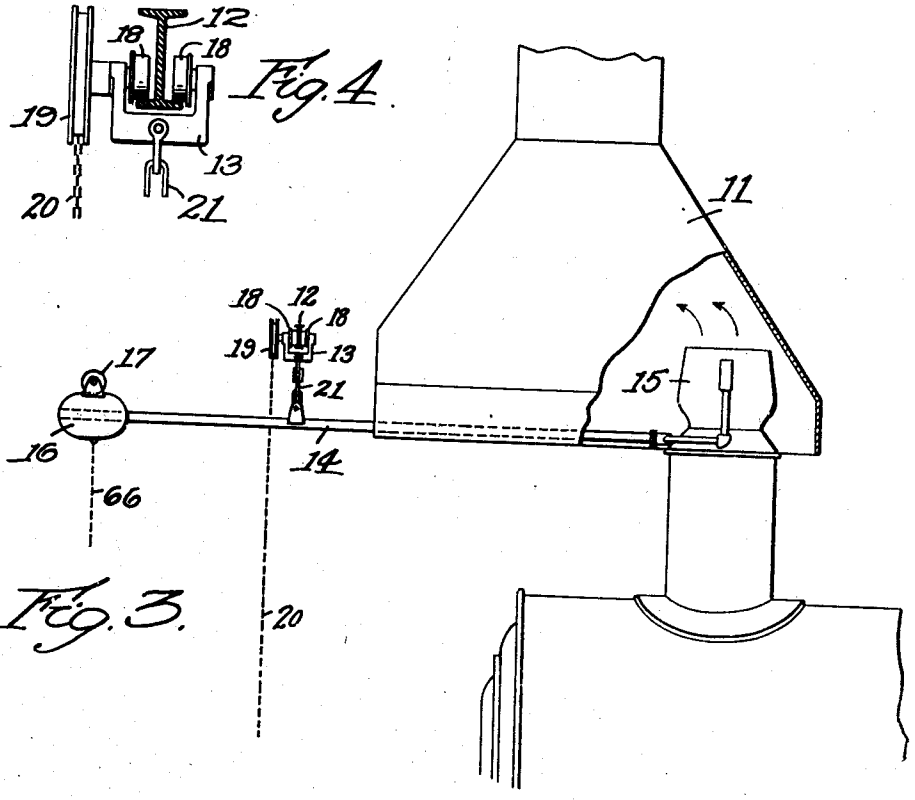


Fig. 4.

Fig. 3.

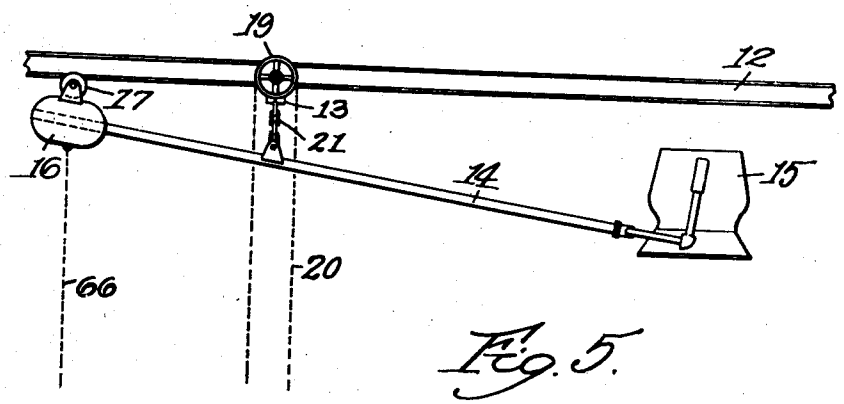


Fig. 5.

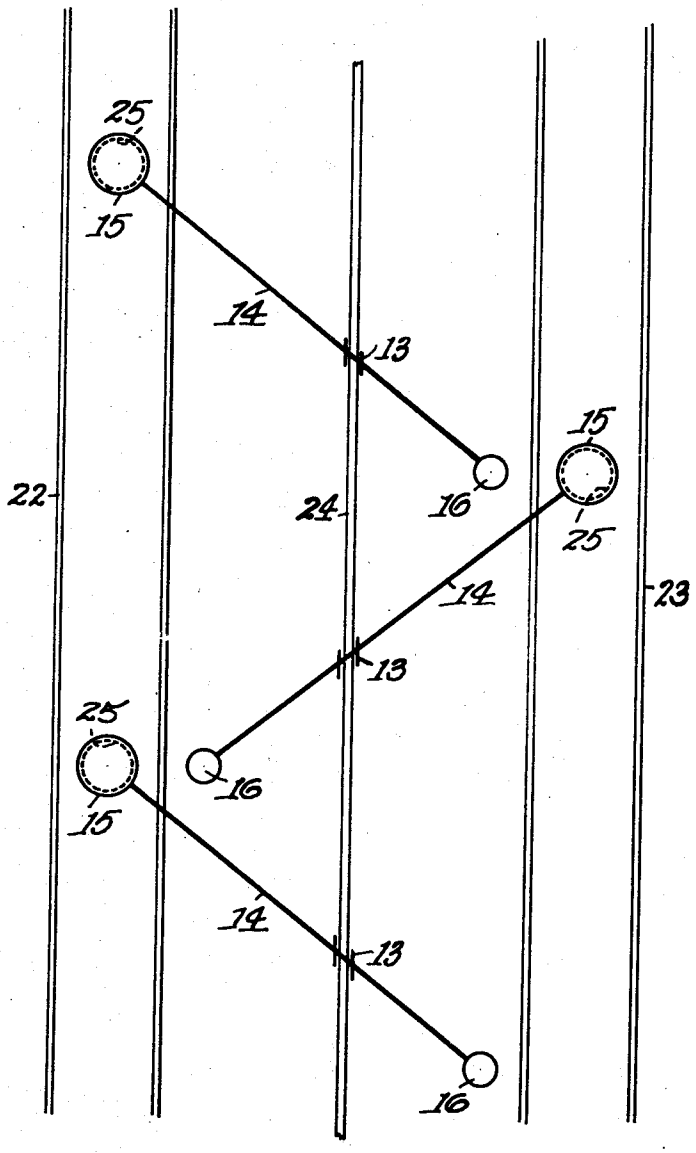
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Fig. 6.



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UNITED STATES PATENT OFFICE

2,159,472

SYSTEM OF DRAFTING LOCOMOTIVES

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Application August 20, 1937, Serial No. 160,076

6 Claims. (Cl. 104—52)

This invention is an improvement over that set forth in my prior Patent No. 1,669,455 and has for its special objects the provision of a support outside the line of locomotives and smoke jacks; means for drafting locomotives, with means for counterbalancing the drafting device, a trolley for moving the drafting device in the roundhouse, and a trolley wheel, preferably attached to the counterweight, for engaging the track and enabling the device to be transported conveniently.

Another object is to provide for drafting a locomotive whether the smoke stack is at one end or the other of the smoke jack or at any intermediate position.

Another object is to provide supreme simplicity in the installation of the system.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which:

Fig. 1 is a plan view of a roundhouse showing a few of the smoke jacks in position therein and the way of drafting when a locomotive is run all the way into the end of the jack or when its smoke stack is at a distance therefrom;

Fig. 2 is a plan view of one of the smoke jacks showing the adjustment of the fork for drafting a locomotive smoke stack at either end of it;

Fig. 3 is a side view showing the drafting of a locomotive by this system;

Fig. 4 is a sectional view of the supporting track and trolley;

Fig. 5 is a side view showing this device when removed from operative position and in position to be moved around the roundhouse from one smoke jack to another, and

Fig. 6 is a plan view of a pair of railroad tracks either inside a roundhouse or in a railroad yard, showing three smoke stacks representing the location of three engines on said tracks and the way of drafting said engines.

One form of this invention illustrated comprises a roundhouse having an outer wall **10**, a series of smoke jacks **11**, a beam **12**, in front of the smoke jacks, for supporting a trolley **13** and a fork **14**. This fork can be moved to the position shown in Fig. 5 and the whole device moved around the roundhouse to any desired position. The fork **14** is provided at one end with a blower **15** such as shown in my above mentioned prior patent. At the other end it is provided with a counterweight **16** and a guide wheel **17** adapted to engage under the beam **12** to guide the whole device along the beam **12**. By pulling downward on a chain **66** preferably connected to the counterweight the blower will be raised and by letting this chain go the blower will be lowered, thus taking care of different heights of stacks. By pulling on the chain sidewise the fork will be swung around pivoting about the supporting chain **21** thereby allowing the blower to take up any position desired. This enables the whole device to be moved from one place to another in the roundhouse and to bring the blower into registration with a smoke stack located in any position under the smoke jack.

Another form of this invention illustrated comprises two tracks **22** and **23** substantially parallel to each other on which locomotives may be located as indicated by dotted circles **25** representing locomotive stacks and an elevated beam **24** between said tracks for supporting the trolley **13** and the fork **14**.

At the bottom of the rail beam **12**, which preferably is in the form of an I-beam, two wheels **18** rest upon it and these support the trolley **13**. There is also a grooved wheel **19** on the shaft of one of these wheels **18** and it carries a chain **20** by which it can be turned one way or the other for the purpose of rolling the trolley along the beam. A chain **21** is supported by the trolley and hangs down to support the fork **14**.

It will be seen from Fig. 1 that the fork can be placed in two extreme positions to bring the blower **15** over the smoke stack of a locomotive whether it is merely pushed into the outer end of the smoke jack or is moved all the way up to the extreme end of it and this is shown more fully in Fig. 2. Any intermediate position between these extremes may, of course, be occupied by the blower.

The counterweight is of less weight than the blower and ordinarily merely serves to reduce the weight of the blower so that it can be placed in the proper place easily, but when the device is to be moved around the roundhouse under the beam **12**, the counterweight with the guide wheel will move high enough, due to the weight of the blower, to engage the bottom of the beam **12**. It is in this position that the trolley is turned by the chain **20** in either direction to move the device towards the smoke stack of the engine to be drafted. Then by pulling down on the pull chain the guide trolley **17** is disengaged from the beam, the fork swung around and by moving the trolley **13** in the proper direction the blower is placed on the stack.

No details of the smoke jack are shown herein as the smoke jack can be used as illustrated in my above mentioned prior patent.

It will be seen, therefore, that with a single rail or beam 12, the fork 14 can be moved from place to place and adjusted accurately to register the blower with the smoke jack of the locomotive under the smoke jack and all desired exhaustion of the same can be obtained, the same as in my above mentioned patent.

This construction is comparatively simple and inexpensive and entirely eliminates the switch and spur track set forth in said patent and is useful under certain conditions in which it is adapted to be used.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. The combination with a plurality of smoke jacks, each adapted to receive the smoke stack of a locomotive, of a fixed beam extending around outside the smoke jacks, a trolley carried by said beam, an arm universally pivoted intermediate its ends to the trolley, a blower carried by the arm at one end so as to be registered with the desired smoke stack, a counterweight for the blower carried on the arm at the other end, and a guide on the counterweight adapted to engage the bottom of the beam, the blower being arranged and adapted to hold the arm in position for the guide to be pressed against the beam while the blower is out of use, to facilitate the moving of the device from one jack to another along the beam.

2. The combination with a roundhouse comprising a series of smoke jacks, of a fixed beam extending around the inside of the wall of the roundhouse and outside the smoke jacks, a trolley depending from said beam, an arm universally pivoted between its ends to the trolley, a blower carried by the arm at one end, a counterweight for the blower on the other end of the arm, the blower normally overbalancing the counterweight to lift it, and a guide on the counterweight adapted to engage the bottom of the beam, when the counterweight is so lifted.

3. The combination with a plurality of smoke jacks, of a fixed beam extending around outside the smoke jacks, a trolley carried by said beam, a fork carried by the trolley universally pivoted thereto and capable of being moved into a position to be registered with the desired smoke jack, a blower carried by one end of the fork, a counterweight for the blower on the other end of the fork, the pivot for the fork being located between the blower and counterweight and a guide connected to the counterweight and adapted to engage the bottom of the beam to hold the fork in position while out of use, to facilitate the moving of the device from one jack to another along the track.

4. The combination with a roundhouse having a plurality of smoke jacks therein under which locomotive smoke stacks can be placed, of a fixed beam extending around the inside of the wall of the roundhouse and outside the smoke jacks, a trolley carried by said beam, an arm universally pivoted between the ends of the arm to the trolley, a blower carried by one end of the arm and capable of being registered with the desired smoke jack, the trolley being movable to carry the blower from one jack to another and the arm being turnable about said pivot to adjust the blower to exactly the desired place, a counterweight for the blower on the opposite end of the arm, and a guide carried by the arm and adapted to engage the bottom of the beam to hold the arm in position, while out of use, to facilitate the moving of the device in the roundhouse.

5. The combination with a roundhouse, of a fixed beam extending around the inside of the wall of the roundhouse and outside the smoke jacks, a trolley carried by said beam, an arm universally pivoted between its ends to and carried by the trolley, a blower carried by the arm at one end, a counterweight on the other end of the arm for the blower, and a guide on the counterweight adapted to engage the bottom of the beam by the action of the blower which is capable of lifting the counterweight by the aid of gravity.

6. The combination with a roundhouse having a plurality of smoke jacks therein under which locomotive smoke stacks can be placed, of a fixed beam extending around in front of the jacks of the roundhouse, a trolley carried by said beam, a depending arm universally pivoted intermediate its ends on the trolley, a blower carried by the arm at one end thereof so as to be capable of being registered with the desired smoke stack, the trolley being movable to carry the blower from one jack to another and the arm being capable of being turned to adjust the blower to exactly the desired place, a counterweight for the blower on the opposite end of the arm, the blower tending normally to lift the counterweight, and a guide on the counterweight capable of engaging the bottom of the beam to hold the counterweight against the bottom of the beam.

FRANS H. C. COPPUS.