

(No Model.)

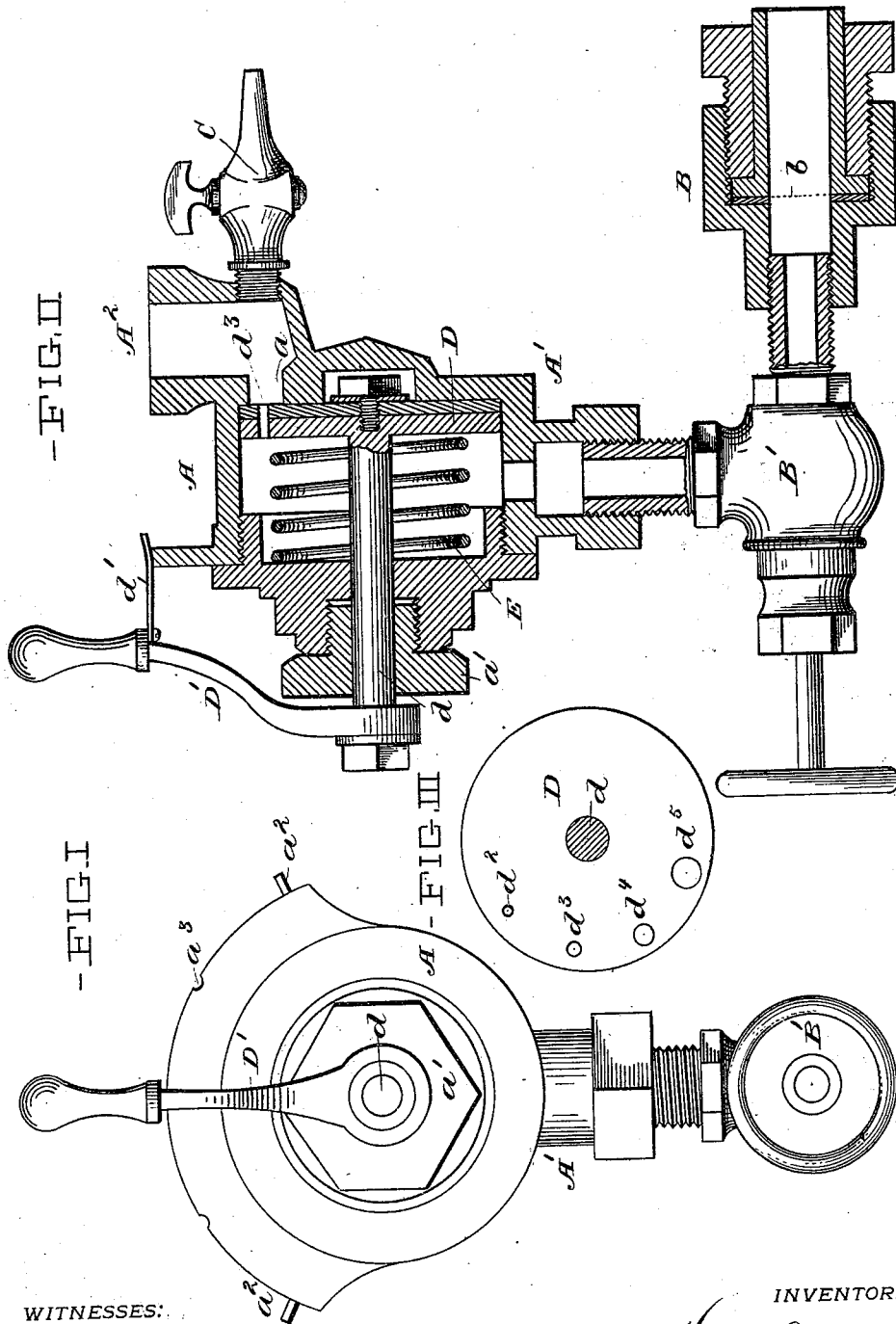
2 Sheets—Sheet 1.

H. TIRMANN.

BLAST CONTROLLING VALVE FOR TRACK SANDING APPARATUS.

No. 562,049.

Patented June 16, 1896.



WITNESSES:

J. C. Turner
Jm. Lecher

INVENTOR:

Hugo Tirmann
By Hall & Pry
ATTORNEYS.

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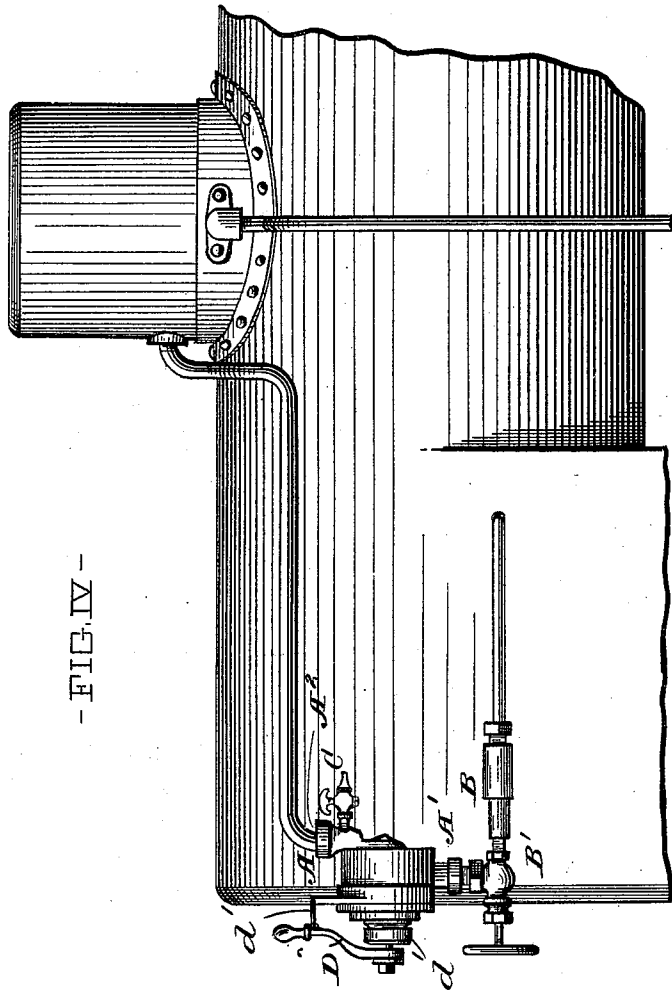
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- FIG. IV -

WITNESSES:

J. C. Turner
A. C. Ernst

INVENTOR:

Hugo Tirmann
BY *Hall & Fay* ATTORNEYS

UNITED STATES PATENT OFFICE.

HUGO TIRMANN, OF CLEVELAND, OHIO, ASSIGNOR TO BENJAMIN PATTERSON, OF SAME PLACE.

BLAST-CONTROLLING VALVE FOR TRACK-SANDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 562,049, dated June 16, 1896.

Application filed December 7, 1895. Serial No. 571,350. (No model.)

To all whom it may concern:

Be it known that I, HUGO TIRMANN, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Blast-Controlling Valves for Track-Sanding Apparatus, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

In the annexed drawings, Figure I represents a front view of my improved blast-controlling-valve mechanism; Fig. II, an axial section of the same, and Fig. III a face view of the valve-disk. Fig. IV is a side elevation of a locomotive-boiler, showing the location of my improved controlling-valve and its connection with the sand-box.

A casing A has a cylindrical interior and has an air-inlet A' through one side and an air-outlet A² through one head. The air-inlet is connected to any suitable source of compressed air by means of a pipe connection B, having a strainer b and an ordinary globe-valve or similar cut-off B'. A petcock C or similar straightway valve is provided directly opposite the valve-opening a of the outlet. A valve-disk D fits against the seat formed by the head of the casing and has a central stem d, which is journaled in a suitable gland a' in the opposite head of the valve-casing. A handle D' is secured upon the valve-stem outside of the head, and said handle has an index-finger d' projecting from it, which finger may engage stops a² upon the casing at the ends of the desired throw for the handle, and notches a³, which indicate certain predetermined stages of the throw of the handle and valve-disk. A spring E serves to force the valve-disk against its seat. The valve-disk has a circular series of openings d², d³, d⁴, and d⁵, of increasing diameters—as, for example, one thirty-second, one-sixteenth, one-eighth, and one-fourth of an inch.

The above-described air-valve mechanism is principally intended for use with pneumatic sanding apparatus for locomotives in which the feed of sand to the rails is controlled by the quantity of air-blast admitted

to the sanding device. The mechanism may of course be employed wherever a graduated supply of fluid is to be controlled. When in use with a sanding apparatus, the valve is arranged in the locomotive-cab within convenient reach of the engineer and has the inlet connected to a source of compressed air and the outlet connected to the sanding device. The valve upon the inlet is normally open. When the sanding device is to be used, the valve-handle is turned until its index is opposite the notch or stop which indicates the valve-opening registering with the outlet and the desired quantity of air will rush through the valve to the sanding device. The quantity of air may be gaged as desired by setting the handle opposite the mark which indicates that a certain sized opening is opposite the outlet, so that a smaller or greater quantity of sand will be fed to the track from the sanding device. The petcock serves to test whether air is passing through the valve-casing or not, and also serves as a passage through which a pin or straight piece of wire may be inserted to clean the air-outlet and the openings in the valve-disk should the latter become obstructed.

I therefore particularly point out and distinctly claim as my invention—

In a blast-controlling-valve mechanism, the combination with the valve-casing A having an index of circular outline integral therewith and provided with stops a² and notches a³ and formed with a valve-seat having an opening a, of the circular valve-disk D having a series of openings d², d³, d⁴, and d⁵ of varying and increasing area and registering with the said opening a and provided with a valve-stem d, having a handle D' provided with an indicating-finger d' engaging the stops a² and notches a³, said stops and notches corresponding to known positions of the openings d², d³, d⁴ and d⁵.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 20th day of November, A. D. 1895.

HUGO TIRMANN.

Witnesses:

WM. SECHER,
J. C. TURNER.