

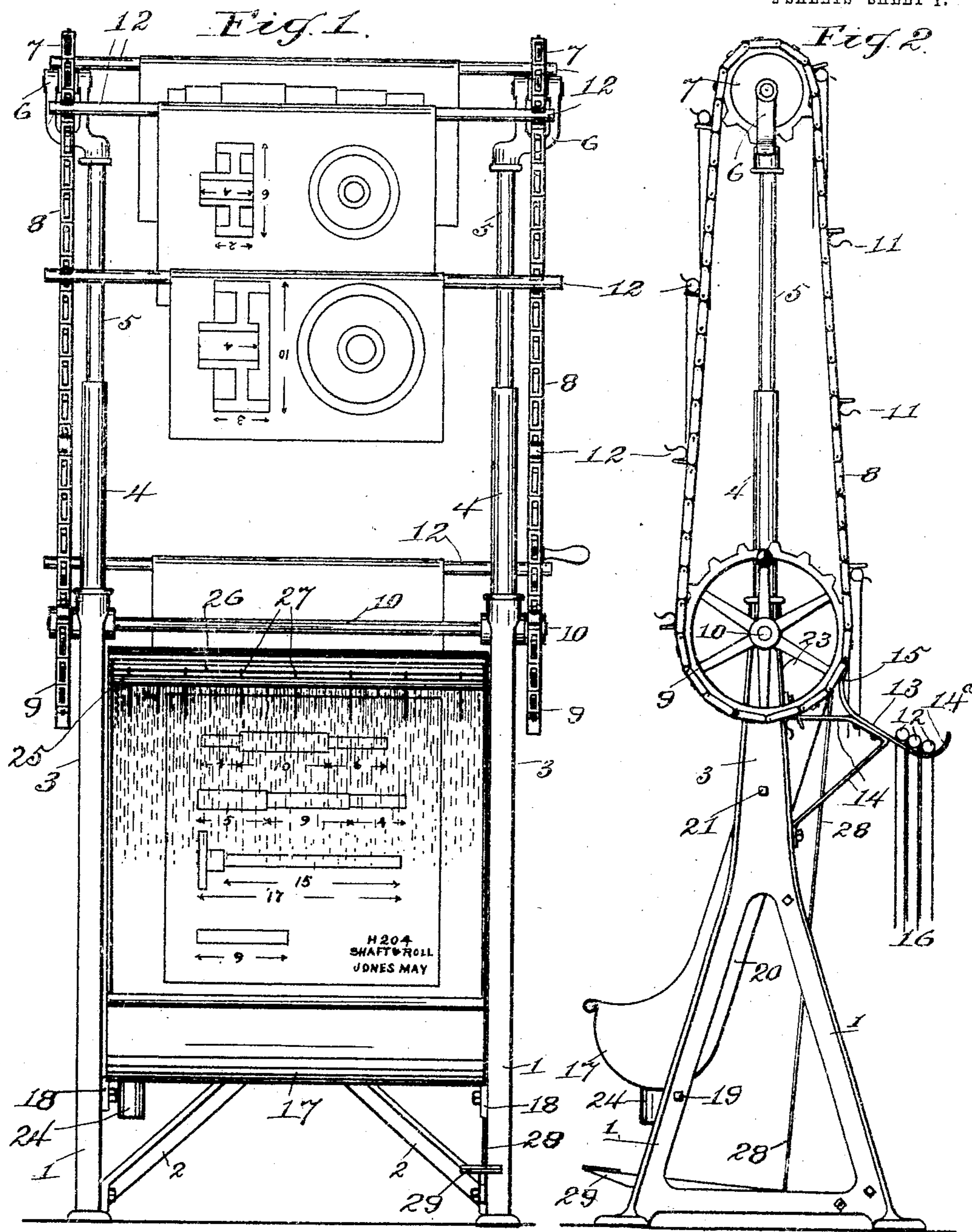
No. 786,596.

PATENTED APR. 4, 1905.

C. F. PEASE.
APPARATUS FOR WASHING AND DRYING BLUE PRINTS.

APPLICATION FILED JUNE 25, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

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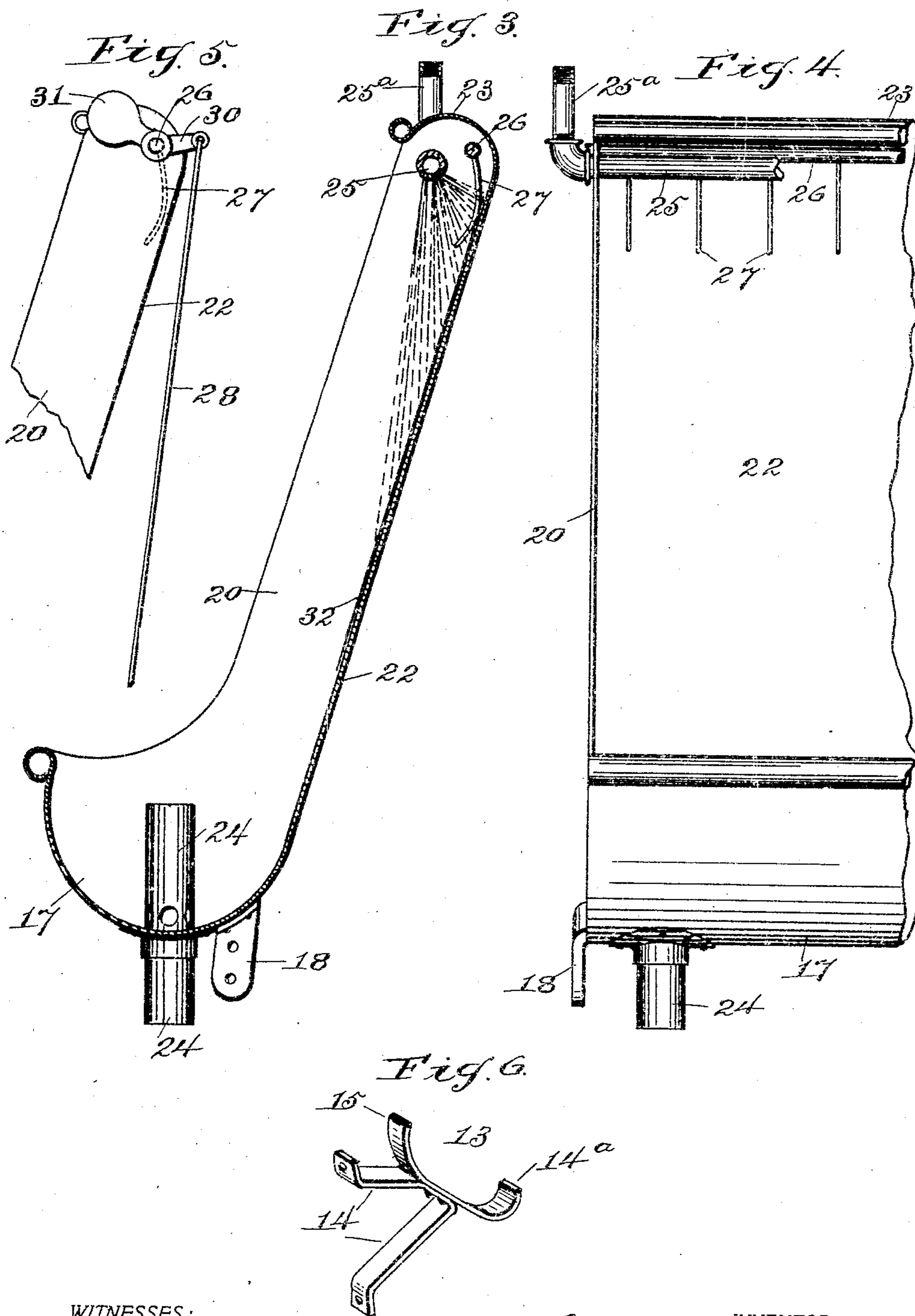
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UNITED STATES PATENT OFFICE.

CHARLES F. PEASE, OF CINCINNATI, OHIO.

APPARATUS FOR WASHING AND DRYING BLUE-PRINTS.

SPECIFICATION forming part of Letters Patent No. 786,596, dated April 4, 1905.

Application filed June 25, 1904. Serial No. 214,141.

To all whom it may concern:

Be it known that I, CHARLES F. PEASE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Apparatus for Washing and Drying Blue-Prints, of which the following is a specification.

This invention relates to the developing of blue-prints, and pertains especially to a machine for washing and drying blue-prints.

The object of the invention is to provide means for the expeditious treatment of blue-prints, whereby they may be washed and dried by one and the same machine.

A further object of the invention is to provide a machine for washing and drying blue-prints, of such novel and peculiar construction that the usual handling of the prints and the various steps in washing and drying thereof heretofore practiced are avoided and the objections and disadvantages ordinarily experienced are entirely overcome.

A still further object of the invention is to provide a machine having sprocket-chains provided with hooks for suspending blue-print-hanger rods; a washing-tray provided with spring-fingers operated to hold and release the blue-prints convenient for them to be hung upon said rods over the tray, and brackets to strip the rods from said hooks for drying the prints.

The invention, broadly considered, consists in a washing-tray positioned under a spray-pipe, and a pair of sprocket-chains, belts, or their equivalent adapted to carry a series of rods upon which prints are hung and carried from and over the tray and automatically deposited upon drying-brackets in the rear of the tray.

In the accompanying drawings, forming part of this application, Figure 1 is a front elevation of the machine. Fig. 2 is an end view. Fig. 3 is a detail vertical section of the washing-tray. Fig. 4 is a detail front view of the washing-tray, partly broken away. Fig. 5 is a detail elevation of the means for operating the spring-fingers. Fig. 6 is a perspective view of one of the brackets.

The same numeral references denote the

same parts throughout the several views of the drawings.

The frame is preferably constructed of cast-iron, and consists of legs 1, having braces 2 and diverging from uprights 3, provided with a hollow post 4, in which standards 5 may be vertically adjusted to increase or diminish the height of the frame, said standards having secured thereto U-shaped journal-bearings 6.

Sprocket-wheels 7 are journaled in the bearings 6 and motion is imparted to these wheels by sprocket-chains 8, driven by larger sprocket-wheels 9 on a shaft 10. The chains 8 are provided at intervals throughout with spring-hooks 11 to removably hold hanger-rods 12, the ends of which project beyond the chains for the purpose hereinafter described. From the rear side of each frame-upright 3 is suspended a bracket 13, having arms 14 secured thereto and to the said uprights. These brackets are positioned in the same horizontal plane with the uprights 3, are inclined thereto, and have an upturned outer end 14^a and a curved inner end 15, against which the projecting ends of the rods 12 strike and are thereby stripped from the hooks 11, so that the rods, with the prints 16 hanging thereon, are deposited upon the said brackets and are held thereon by the upturned ends 14 of the brackets.

The washing-tray has a semicircular basin-like bottom 17, provided with ears 18, attached to certain of the legs 1 at 19, and the sides 20 of the tray are secured to the uprights 3 at 21. The back 22 of the tray inclines rearwardly and terminates in a covered top 23. The basin 17 has an apertured drain-pipe 24, and a perforated water-pipe 25 extends through the sides of the tray under its top near the front of the tray, so as to leave considerable space between the back of the tray and the said pipe 25. A supply-pipe 25^a is coupled to the pipe 25, as clearly shown in Fig. 3. A shaft 26 is journaled in the sides of the tray near the top of the latter, and it is provided with a series of spring-fingers 27, operated in the aforesaid space by a lever 28, connected at one end to a foot-lever 29 and at the other end to an arm 30 of a weight or counterbalance 31, secured to one end of the

shaft 26 to hold and release the prints—as, for example, the print 32. (Shown in Fig. 3 of the drawings.) It is obvious that the foot-lever has simply to be depressed to throw the fingers away from the tray-back, and thereby permit the insertion of a blue-print, the counterbalance making the fingers hold the print to the tray-back during the spraying or washing of the print. The latter is removed from the finger engagement, and without necessarily taking it from over the basin it is hung upon one of the traveling rods 12, whence the water drips therefrom into the tray while another print is being washed. The dripping prints are gradually carried over the top of the frame and deposited with their rods upon the drying-brackets.

It will be observed that the chains may carry any number of rods and prints, as desired or as occasion may demand, that as the prints are thus carried they thoroughly drip and partially dry, and that as each rod strikes the drier-brackets in succession the latter strip the rods with the prints from the chains without stopping the movement thereof.

It is to be understood that various changes may be made in the practical application of this machine without departing from the spirit of the invention.

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

1. A dripping device for blue-prints comprising disconnected vertically-movable chains or belts having spring-hooks to hold suitable rods upon which the prints are hung, and means to rotate the chain or belt.

2. A dripper and drier for blue-prints comprising vertically-movable chains or belts having hooks to carry suitable rods upon which the prints are hung, and means to rotate the chains or belts; and the suspended brackets between the chains and engaged by the rod ends to dislodge the latter from the said chains or belts onto the brackets.

3. A blue-print washing, dripping and drying machine comprising a tray having a suitable water-spray, chains provided with means to hang the prints therefrom, the sprocket-wheels to give the chains vertical rotation over the tray, and the drier-brackets positioned in the rear of the tray to strip the prints from the chain.

4. In the development of blue-prints, the combination, with the tray provided with a water-spray, and means to hold the prints therein, of the sprocket-chains having hanger-rods, sprocket-wheels to revolve the chains over the tray, and the brackets to strip the rods from the chains and to suspend the prints for drying.

5. In the development of blue-prints, the combination, with the tray having a suitable water-spray, and the drier-brackets, of the chains having hooks, blue-print rods carried

by the hooks, and means to revolve the chains, of the drier-brackets positioned to be engaged by the rods and strip the latter from the chains.

6. In the development of blue-prints, the combination, with a pair of sprocket-chains having hooks from which the prints are suspended for dripping, means to revolve the chains, and the drier-brackets to strip the prints from the hooks for drying, of the washing-tray positioned between and below the chains, a spray-pipe carried by the tray, and means in the tray to retain and release the prints.

7. In the development of blue-prints, the combination, with a frame, the sprocket-wheels, and the sprocket-chains, of the spring-hooks upon the chains, and the hangers secured to the frame and projecting from between the chains so as to dislodge the prints from the hooks.

8. In the development of blue-prints, the combination, with the frame, the top sprocket-wheels, the lower sprocket-wheels of larger size than the said top wheels, and the sprocket-chains provided with a series of hooks from which the prints are hung to drip, of the tray secured to the frame and having a water-spray and a basin to catch said drippings.

9. In the development of blue-prints, the combination, with the vertically-adjustable frame, a pair of sprocket-wheels journaled in one part of the frame, a shaft journaled in the other part of the frame, a pair of sprocket-wheels secured to the shaft, the chains having spring-hooks and operated by the wheels, of the tray having a water-spray and secured within the frame under the said shaft, suitable rods removably held by the said hooks, and the brackets suspended from the frame in the path of the rods to remove them.

10. In the development of blue-prints, the combination, with an inclined fixed tray having a water-spray, of means having the prints hung therefrom for dripping into the tray, comprising driven chains or belts, and rod-holding hooks secured at intervals throughout the chains or belts.

11. In the development of blue-prints, the combination, with a fixed tray, and a spray-pipe contained therein, of means to hold and release the prints comprising a shaft journaled in the tray and having spring-fingers, a counterbalance secured to the shaft, a foot-lever, and a lever connecting the counterbalance with the foot-lever.

12. In the treatment of blue-prints, a washing-tray having means to suspend the print from one end, and provided with a liquid-supply for washing, fixing or chemically treating the print.

13. A blue-print or other chemically-prepared print-washing tray operative at various angles from a horizontal position and terminating in a basin or receptacle, a water or liq-

uid supply in the tray, and means to hold a print against the tray for washing it.

14. In a blue-print or other chemically-prepared print-washing device, a vertically-inclined tray or receptacle provided with means for holding a print thereagainst, and means for spraying or flowing water or other liquid over the surface of the print.

15. In a blue-print-washing apparatus, a vertical or inclined tray or receptacle, springs or fingers coacting with the tray to hold the print against it, and means for spraying or flowing water or other liquid over the print.

16. In the treatment of blue-prints, an open washing-tray having means to suspend the print against the back of the tray, and pro-

vided with a liquid spray for washing, fixing or chemically treating the print.

17. In an apparatus for dripping and drying prints, a pair of revoluble endless chains, spring-hooks connected to the chains and holding suitable rods from which the prints are hung and carried over one turn of the chains, and means engaged by the rods to dislodge them with the prints thereon at the other turn of the chains.

In witness whereof I hereunto set my hand in the presence of two witnesses.

CHARLES F. PEASE.

Witnesses:

WM. E. FALLON,
JAS. L. CHAPMAN.