 the inventor being to provide a valve which will work with less friction than the ordinary slide-valve by doing away with stuff
and packing-glands for the valve-rod.
ENGINE.-G. H. Collier, Joplin, Mo. Mr.
Collier's invention reses Collier's invention relates to a steam-engine
having an oscillating piston arranged in a having an oscillating piston arranged in
suitable chest or cylinder and joined by a con suitable chest or cylinder and joined by a con-
necting-ro with a crank-shaft, so as to ro-necting-rod with a crank-shaft, so as to ro ton. The chest is provided with feed and ex
haust ports controlled by a slide or other valv driven from eccentrics on the crank-shaft.

## Railways and Their Accessories.

 FISH-BAR CLAMP.-W. S. Wootton, Ro anoke, Va. This invention relates to meanfor securing fish bars or plates oppositel upon the webs of meeting track-rails of railroad, so as to secure the rails alined and
together, and has for its object to provide a novel and practical device for the indicated
purpose that is easily applied and that dispurpose that is easily applied and that dis-
penses with screw-threaded bolts and nuts
thereon as means for champing the fish bars thereon as means for clamping the f
or plates in place on the track-rails.
IMPLEMENT FOR ADJUSTING FISH PLATE CLAMPS.-W. S. Wootron, Roanoke Va. The invention refers to means for ad
justing a securing device on fish-plates that are therewith clamped upon the meeting ends for its object. more particularly to provid details of construction for an implement that is especially well adapted for adjusting the
parts of a novel fish-bar clamp, the implement parts of a novel fish-bar clamp, the implement
by its use enabling the fixture of the clamp ing device at a rail-joint in a convenient,
speedy and reliable manner and facilitating removal of the fish-bar clamp as may be re-
CAR-WHEEL.
CAR-WHEEL-C. WIMMER, Hamilton, Canada. Mr. Wimmer's invention relates par-
ticularly to improvements in driving-wheels ticularly to improvements in driving-wheel wheel of novel construction so arranged as to have a comparatively large frictional bearing surface lengthwise of a rail, thus reducing the danger of slipping to a minimum, and
therefore causing a train to come to a quicl stop upon setting the brakes and a quick an easy start

FOR RAILWAY-SWITCHES.-D Borle, Livingston, Mont. In the present pat ent the invention has reference to locks for railway-switches, and the inventor has for his
darticular object the provision of a secure darticular object the provision of a secure
device convenient to operate which will not device convenient to operate which will no associated switch-stand be overturned.
CAR-COUPLING.-J. McWatters, St. Au gustine, Fla. The object in this case is to
provide details of construction for a coupling which will be very effective and reliable in service, convenient to operate, of compact
construction, and which will positively release a car-coupling of the Janney type, whether of the improved or ordinary construction, when the car having the improved coupling thereon
leaves the track from any cause and drops below the track-rails or the car in
is derailed and its coupling is lowered.
Car-coupling.-C. C. Werthner, Toron to, Canada. The purpose here is to provide
self-locking coupler adapted for either freight or passenger service and to so construct the coupler that uncoupling may be instantly and rapidly accomplished and whereby when they will have a locking engagement, yet each draw-head and its draw-bar will be free to accommodate themselves to any
sion, or declivity in the track.

## Designs.

DESIGN FOR AN INCANDESCENT LAMP A. H. Selling, New York, N. Y. This de sign for an incandescent lamp is graceful and
ornamental. The lamp is provided with a conical illuminating surface corrugated so as to form a series of lines which converge at an
apex and thus presents a maximum of illum-别 form, the glass portion
DESIGN FOR
FRINGE.-J. C. Atrinsen,
New York, N. Y. New York, N. Y. This ornamental design for
fringe comprises a band of linen or like threads, the threads producing a bright and checkered effect and studded with woven bows of unvarying size. Below the band the threads hang
in graduated lengths to produce a scalloped form of edge. Mr. Atkinson has designed an-
other ornamental fringe of like material as the above and consisting of a band with open work center. Below the band the th
hang in skein form of uniform length. design for trimming.-C. Shidel. New York, N. Y. This new and ornamental design
for a trimming comprises a straight edged band plain cross thread effect and irregularly has a with stripes of different widths and two patterned rows, and forming a very chaste and Note.--Copies of any of these patents will Please state the name of the patentee, title of the invention, and date of this paper.

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o put up Winsor \& Newton oil colors. Carter's and









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Laws Webl Its Future. By Herbert
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New York: Whittaker \& Co., 1904. 16 mo ; pp. 118. Price, 40 cents.
The author is a well-known electrical engi-
neer, and it has been his endeavor to deneer, and it has been his endeavor to de-
scribe in plain language the general features of a modern city telephone system, and the prin ciples which govern the cost oifficulties which arise in the working of the service are many, and this is chiefiy responsible for the acrimony with which complaints against the telephone service are usually tinged. These discussions
are, in many cases, marred by lack of knowl edge on the part of the participants, not alone of the technical details, but of the fundamenta principles of an extremely technical indus try. It has been the aim of the author to try broad principles which underlie the telephone service,
mirably.
Le Turbine a Vapore ed a Gas. By Giu-
seppe Belluzzo. Milan: U. Hoepli
, author of this Italian treatise on tur one author of this Italian treatise on tur bines shows a remarkable familiarity with gineering. He shows an excellent knowledge of the mathematical phase of the subject, and we dount if there is any treatise in English which in any way approximates this work.
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ment. Detroit: The Book-Keeper Publishing Company, Lta., 1904. 8mo.; pp. 157. Price, $\$ 1$
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