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Silent Injector, Blower, and Exhauster. See adv. p. 141. The Paragon School Desk and Garretson's Extension Table Slide manufactured by Buffalo Hardware Co.
Planing and Matching Machines, Band and Scroll aws, Universal Wood-workers, Universal Hand JointBentel, Margedant \& Co.. Hamilton, Ohio. "'Illustrated History of
sent free.
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Holly System of Water Supply and Fire Protection or Cities and Villages. See advertisement in Scienfic american of last week.
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The best Truss ever used. Send for descriptive circur to N. Y. Elastic Truss Co., 683 Broadway, New York ower Hammers. P. S. Justice, Philadelphia, Pa. p. 77 Inventors' Institute, Cooper Union. A permanent exGibition of inventions. Prospectus on application. 733 For Reliable E
For Reliable Emery Wheels and Machines, address Millstone Dressing Machine. See adv., page 142. Combd Punch \& Shears; Universal Lathe Chucks. LamImper Improved Steel Castings; stiff and durable; as soft less than 65.000 lbs. to sq. in. Circulars free. Pittsburg Steel Casting Company, Pittsburg, Pa.
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## (2)

HINTS TO CORRESPONDENTS.
accompanied with the full name and address of thes writer.

## Names and addr

We renew our request that correspondents, in referring to former answers or articles, will be kind enough to of the question.
Correspondents whose inquiries do not appear after a reasonable time should repeat them. If not then pub lished, they may conclude that, for good reasons, the Eaitor declines them.
Persons desiring special information which is purely of a personal character, and not of general interes should remit from $\$ 1$ to $\$ 5$, according to the subject, as we cannot be expected to spend time and la
obtain such information without remuneration.
Any numbers of the Scientific Americas.
ment referred to in these columns may be had at this office. Price 10 cents each.
(1) P. G. asks: 1. With what substance are the porous cups of a Leclanche battery filled . $A$. makers fill them with equal parts manganese. Some manganese and retort carbon. 2. How is hard rubber polished? A. It is first filed or turned into shape, then smoothed with emerypaper, then with powdered pumice stone applied with a felt wheel or felt rubber. The
final polish is given by fine whiting and water applied with a brush.
(2) L. C. C. asks: How many horse power do you think would be required to propel a yacht at a speed of ten miles per hour, length 25 feet, breaith vessel
(3) M. F. R. writes: I think of building a small boat, and would like you to tell me what size feet, 7 feet beam. It is rot to be a fiat bottom, and I want to put on a stern wheel, as our river will not admit of a screw. What size wheel shall I use, and how wide should the padales be? A. About 7 inch cylinder and 18 inches stroke; wheel 7 feet diameter and 9 inch bucket; vertical tubular boiler 34 inches diameter
(4) A. L. K. writes: We bave here in this city three telephone lines running parallel for four or five hundred feet. Two of them use the Bell telephone, and one the Edison. Now, when they are using the Edison we can hear every word said by listening a either of the other lines, and they are not within two
feet or more of each other; that is, the lines do not
runany nearer than that. Can you give the reason?
A. The effect noted by you is due to electrical induction. An intermittent or vibratory electric current pass ing over a line will induce a current in a parallel line, even If the two wires be several feet apart. This phenomenon is beautifully illustrated by Hughes' induc-
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Minerals, etc.-Specimens have been received from the following correspondents, and examined, with the results stated:
H. J. F.-1. Quartz, decomposed hornblende and mica slate. 2 and 3 may carry a small amount of silver. ।

## cents per lb. in large quantities.

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