Editorial.

We learn with the greatest pleasure that the head centar of the Metric Bureau has made a most important and commendable move. On the 19th ult., he dekametered into the state of matrimony. We presume the ceremony and wedding gifts were not only metrical, but symmetrical, thus honoring most worthy, disinterested efforts in the past, and typifying, as we trust, the wedded bliss of the future. At all events, in behalf of the whole body of reformers, metric and phonetic, we heartily congratulate Mr. Melvil Dewey on this happy issue of the times when he did so often met-er; and we sincerely hope that all through the sters, dekasters, and hektars of life these two souls may center mefer, in true metric fashion, and that their liter of happiness may never be any bigger at all, but that it may be gramm(d) full of joy and happiness.

The metric system, confess, is not well adapted to such cold-blooded performances; but another interesting announcement in regard to metrical materials (forgive us, Mr. Secretary, if you can) will be found on our last page.

The recent triumph of the Bible party in the Board of Education in New Haven, Conn., has found its issue in a rather curious and bungling compromise. The subject of preparing a uniform form of devotion was intrusted to a committee of three Protestant and two Catholic clergymen. Among the number are ex-President Woolsey, of Yale College, and Dr. Leonard Bacon. They agreed, it seems, upon thirty lessons from the Old and New Testaments, and as many hymns, which might be used in the schools. However, there was a proviso, that when a third of the pupils were Catholics, they should have the privilege of withdrawing and attending worship in a separate room. In case the Lord’s Prayer, one of the thirty selections, is used in the presence of Catholic children, the concluding sentence, “For

thine is the kingdom, and the power, and the glory forever. Amen,” is to be omitted. Whether the Board will adopt the plan proposed by its conference committee seems doubtful. The spirit of the plan seems fair enough as between the two sects who are parties to the argument. But if to adjust the matter of religious instruction to the scruples of these sects there is a necessity for such delicate manipulation, what is to be done to accommodate the consciences of the Israelites, and of the various people who pretend to be as conscientious in avoiding the reading of the Bible, as others are in insisting upon it? As citizens, are not the Jew and the Gentile worthy of as much consideration as the Romanist and the Protestant? The plan of the New Haven conference does not seem very promising.

It has become an axiom that a good teacher makes a good school, and the best school is soon spoiled by a poor teacher. It is impossible to make a good school out of any class of pupils, unless those pupils have the instruction of a thoroughly competent and efficient teacher. In order to obtain from the public schools those results which are desired, the teachers placed in charge of them must be well and thoroughly qualified to do their work. More than that,—the successful teacher will have a natural endowment of common-sense, and brains enough to contribute to a good intellectual culture. Without these to start with, the aspiring pedagogue would better turn to the plow, or the work-bench, though without brains and common-sense no success can be anticipated in any calling. At any rate, in teaching, these are simply essentials to the effort.

In the next place, there must be a special fitness for the work of teaching, as well as for the profession of the artist or the lawyer. Preaching the Gospel is not the only vocation to be followed in response to a “call.” Let him never attempt to teach a school who is not conscious of such a spirit pervading his whole mental constitution—who does not possess such a quick, prophetic insight into the minds and hearts of his pupils—as to move and actuate him, like an inspiration, almost without his recognition—at least without his intent or purpose. To be a teacher is more than to be a hearer of recitations. The successful teacher must possess a certain qualification which is not to be obtained from study, or from the normal school. The normal school cannot possibly make teachers of some students, because they lack originally a genius for teaching. We say of a poet, nascitur, non fit, but this is no less true of the real teacher. The poet discriminates spontaneously the finest shades of appropriateness or beauty in the use of words, or phrases, or figures of speech, and no one can define the grounds of his preferences in such a manner as to enable another to acquire the poet’s skill, and so this special and primary qualification in the teacher is not capable of a definite location or an exact definition. The genuine teacher selects his language and performs his work in a manner which all can appreciate and admire, but which none can define or communicate by rules.

The Weekly is always glad to receive communications written in the spirit of Mr. Lowrey’s letter, published in the correspondence department. With a few necessary restrictions, the columns of the Weekly are a free platform. To forward discussion and to arouse wholesome thought is the object of the paper. While
it has convictions of its own, which are not easily changed, the
editor claims no prerogatives except that of a reasonable moder-
ator, and no privilege except that of taking the floor at any time
in his own columns. Hence, let no one hesitate to attempt to
speak through the pages of the _Weekly_ because his sentiments
may differ from ours. Pains shall be taken to extend every
courtesy to such communications. While the _Weekly_ will
stand up fearlessly for what it believes to be right and best, it
hopes to avoid all dogmatism.

The day has been when we could have written Mr. Lowrey's
letter in favor of having girls go to college. But that day has
passed. Not that a change has taken place anywhere except in
ourselves. Things do not speak to us in the same language as
they used to; that is all.

"If college life unfits a woman for the relation of wife, it is
certainly disqualifies a man to perform the proper functions of
husband." Is this so? College life is a field of strife and ambi-
tion. Its tendency, its object, is to create a thrist and fitness for
the forum, or the bar, or the study, or the pen. If a young
lady is not influenced by these tendencies, she is to that extent
out of college, and is so far protected from the influences which
are to be deprecated. It is as impossible for the soul filled with
college inspirations to accept the monotonous, undramatic, but
momentous duties of the housewife and mother, as it is for a
lawyer whose ambition has once been excited by a successful
political career to voluntarily return and confine himself to
the common practice of his profession. He may be every way as
worthy; but the current of his tastes and desires is changed.

To the self-reliance, self-assertion, and "push," which are rec-
ognized as essential elements in character, there is a mode, a
temperament, which is not compatible with the highest develop-
ment of matronly character. It may be that these excellences
in their excessive stage, in their untempered flavor, commend
themselves with peculiar force to us in youth. But as we grow
older do we not place a higher value on that modesty and re-
serve which shine upon us with the quiet glow of our own fires-
ide, rather than with the garish brilliancy of the public hall?

In our large cities many school children have to pass back and
forth daily on the suburban trains. How soon do girls, modest
and retiring when they first begin their trip, acquire a business
air, a nonchalance, an indifference to the circumstances
which shine upon us with the

"rail-roading." It imparts, however, a certain
amount of indifference, if not enjoyment, in publicity, a kind of
"loudness" to the character, which is not desirable in our
women, any more than it is in our girls.

A HINT ON VENTILATION.

The season of the year has come when the imperative duty
is laid upon every teacher to use all the hints and devices
that he knows of to furnish his school-room constantly with
fresh air, and at the same time to protect his pupils from the
effect of draughts. To open windows at the top is not a good
thing, although at times it is a necessity. Of the two evils,
spending the day in a close room, or having the cold air beat
down upon one's head and shoulders, the first is to be preferred,
if there is any choice at all. As a rule open windows are more
dangerous than open doors.

The importance of this subject is so great, and the means of
ventilation in most school-rooms are so defective or inade-
quate, that we venture, although in another capacity we have done
it before, to explain a simple device which our experience has
found very useful in the want of something better.

If you examine the sashes where they join or meet at the mid-

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Practically the builder has partly closed the lower opening for you in a way that you ought not to allow. If you will investigate, you will find that the perforated iron plate which constitutes a part of the register lessens the capacity of the opening by at least one-half. Go to work and take the whole register out entirely. Put it down cellar and keep it there. There is no danger of too much air escaping by that lower opening. You and your pupils have a right to its full capacity. Guard carefully against waste paper finding its way there, and the possibility of fire. If necessary get a piece of the most open wire cloth and tack up. But anyhow have the benefit of the full lower opening.

**HIGH SCHOOL TALKS.—NO. V.**

ABOUT CHARACTER.

**WE** take out of life that for which we came into it,—character. We may not live long enough to amass wealth or win a famous name, or call down upon us the world’s applause, but we do live long enough to form a good character. We may not have grand abilities, nor golden opportunities; we may always walk the lowly paths of earth. But we have the ability, we have the opportunity, to gain that which is above all ability, above all opportunity—a noble manhood, a noble womanhood.

Character is the answer to a problem in addition. It is the sum total of all that we have thought and felt and done. Every thought, every emotion, every deed, leaves its mark. There is a fearful unchangeableness about that which is forever past. It is only the future that can be wrought with by that lowly opening. But we have the ability, we have the opportunity, to gain that which is above all ability, above all opportunity—a noble manhood, a noble womanhood.

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We are sometimes perplexed about that great book which is to be opened at the judgment day, wherein is the written record by which we must stand or fall. But I have sometimes thought there is no mystery about it. We hold the pen, we write the record, we make the book, and nothing can be read at last which was not set down by our own hands. We set in youth the copy that in old age we follow.

“Childhood shows the man
As morning shows the day.”

Prodigal sons may reform and lead noble lives, but the probabilities are that prodigal sons will become prodigal men. A man that is formed is always better than one that is reformed. The marks of the old life can always be seen through the new. A man distinguished in the councils of the nation said to a friend of mine not long since that he would give his strong right arm.

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When we consider that everything we do leaves its record in ourselves, the trivial things of our every-day life become magnified into things of great importance. In character-making there is nothing little or insignificant. Everything does something. Little things do big things. It is the little foxes that spoil the vines; the little corals that build the continent. It seems to be the law that great things must be made little by little. If, as a rule, riches take unto themselves wings and fly away, they seem to stand already plumed for flight when in the hands of him by whom they have been unjustly gained. The fortune that stands is the one whose dollars have been cemented into a compact whole by the sweat of honest toil. It takes its stabilitt from the manner of its getting. Character cannot be inherited like lands and houses. Every man must make what he has, little and mean, or great and noble, as the case may be.

Minerva may spring “full-panoplied from the brain of Jupiter,” but such things take place only in some strange mythology. Grand character is not made in a day. It takes an earnest lifetime for such a work.

**FRIEBEL.**

In the march of human knowledge this fact seems plain,—the birth of great ideas is attended with toil and suffering. History is filled with the names of men who “were ridiculed or stoned by contemporaries, and to whom following generations built monuments.”

Nearly thirty years ago, in a German village, there dwelt a man whom the simple country folk called “The old fool,” because he spent the greater part of his time playing with children. A tall spare man with gray hair and kindly eyes, and a face that attracted and won at once the hearts of little children. Such is a brief description of Friedrich Froebel, a man who suffered trials and privations to establish what he deemed the true system of teaching;—a man whose greatness it was to live so far in advance of his time as not to be recognized while he lived, and whose work, now spreading in all lands, is a new hope for the future of our own people. His actions were often misunderstood, but his character commanded the admiration of all by its purity and goodness. Whether playing with the children on the green, or holding solitary communion with nature, he was but seeking the completion of an idea, which had its beginning in his busy brain when but a child.

He was a child of unusually quick sensibilities and keen sympathies. While he delighted in long rambles through the woods and fields, he would also spend much of his time in studying the Gothic architecture of the village church. Of this church his father was pastor, and was often in the village settling quarrels which arose in his parish. Friedrich’s mother dying when he was young, he was left much to the care of his father, and so remained for several years, spending the happiest days of his childhood.

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Although Froebel enjoyed a common-school education, he was preeminently a man of self-culture. His contemplation of the architecture of the parish church ripened into a taste for mathematics. He enjoyed agriculture practically, and sought to acquaint himself with the sciences, pursuing all of these studies throughout his entire life. While still studying with no particular...
lar object in view, he was offered a position as assistant in a normal school, which position he held for several years. Taking advantage of a holiday, he went to Switzerland to visit Pestalozzi, then in the height of his glory. He afterward remained with him about three years, when he left, feeling that Pestalozzi's method, though carried to completion, could never reach the highest standard. With keen insight he saw that the means of acquiring knowledge were superficial, and that the true remedy for this evil was to educate children properly.

We have already spoken of his own education. He was, in all respects, self-instructed, studying not only the arts and sciences, but himself, believing that in order to understand fully the nature of the child, one must understand himself—the nature of man. He held that all women, and especially mothers, should be capable of instructing the youthful mind, and for this end he established a school for kindergartners, composed of young women who, in some degree, appreciated his idea.

His manner of stating his theories is often obscure; but one remark to his class of kindergarten masters will give you an insight, and the experience of many will testify to its truth. "The ABC of things must precede the A B C of words, and give to the words their true foundations. It is because these foundations fail so often in the present time, that there are so few men who think independently, and express skillfully, their inborn divine ideas."

As the poet saith:

"Hardly have we skill to utter one of all
The nameless feelings that course through our breast,
But they course on forever unexpressed,
And long we try in vain to speak and set our hidden self."

Thus we see that Froebel desired that each child should develop its own original ideas, and not that the nature of every child should be run, like so many bullets, through the same mold, as seems to be the object of the present system of education.

How absurd it would have sounded to Froebel to ask if a child had passed his examination—a certain grade. A child's mind was to him a beautiful bud that by watching and care would blossom into a flower of wondrous beauty. Cramming would have seemed to his pure mind a vile worm that would, in time, shrivel and destroy that plant. His instructions were like dew from heaven.

We may well pause here to consider if we, as instructors of the present generation, are pursuing the right course. We may be incompetent to discuss this important subject, but a few years teaching in our public schools will cause the most dormant mind to ask if this be true education.

The whole principle of Froebel's teaching is based on a perfect love of children, and a full and genial recognition of their nature. The child is social—he must have companions. He is active—keep him busy. He is an artist—give him music, imaginative action. He is curious—teach him to think and discover. "Here is work not against the grain, but with it." We will not pause to dwell longer upon his theories. He went on lecturing tours through Switzerland and Germany, and, by this means, several schools were founded on his plan. His own school was established at Marienthal. Here, in this beautiful Vale of the Marys, he spent many happy hours teaching children those innocent, instructive plays which have made the school indeed a Garden for Children. "Play," says Froebel, "is the development of the human mind, its first effort to make acquaintance with the outward world. The child indeed recognizes no purpose in it, sees not the end that is to be reached; but it expresses its own nature, and that is human nature in its playful activity."

We will illustrate his idea of instructive amusement. The child's first "gift" is a ball, the second a cylinder, a stepping-stone between the sphere and the cube, which is the third gift. The passage from the solid to the surface is approached in the oblong blocks, into which the cube is divided. The seventh gift is a series of tablets, and the interlacing slats of the eighth mark the transition from surface to line. Finally, in the occupation of pricking paper with a pin, the child reaches the point. From the solid, which is concrete, he has passed to the point, which is the abstract. "He has broken the first little foot-path of human thought. It is the highway to all philosophy." Many of the plays are conducted so as to acquaint the children with the habits and lives of animals, that page of the book of nature always so attractive to them. In addition to games, Froebel taught them the privileges and uses of a judicious government, by establishing wise rules and regulations, to be carried out in connection with their school-life;—thus fitting them for future useful citizens, instead of lawless outcasts, who regard all law simply as restraint.

All who have any acquaintance with ordinary school methods will appreciate the chasm which separates them from Froebel's ideas; will understand better than he did, in his worldly simplicity, the opposition, or "indifference more deadly than opposition," which continually met his efforts. Few understood his plans—could perceive their practicability. He had many believers, and a few devoted friends, who aided and cheered him through his life-long work. Had it not been for these he might have despaired of ever accomplishing his cherished plans. However, "in the very consciousness of a glorious action, there is a certain reward; the immortality of glory is not a thing to be despised by one who is himself mortal." But no doubt a small measure of the attention and praise his system is now receiving would have greatly encouraged and sweetened his labors with a cold, unsympathizing world. Still one is never left entirely without hope.

"So may the seed which hath been sown to-day,
Grow with the years, and, after long delay,
Break into bloom."

And who knows, but that some such inspiring thought may have been one bright ray, cheering him ever onward! But he did not live to see the clouds that obscured his horizon clear away, and to behold the dawning of the day now at hand. His seventieth birthday was celebrated with great rejoicing. But the blow he received, when the government prohibited the establishing of all kindergartens within Prussian domains, proved his death-blow. Two months later, the man who had ever labored for others, and whose whole life was spent in want and hardship, that others might be blessed, passed away.

"But now truth has a hearing, and has dipped her pen in the sunlight, and written in clear blue" the name of Friedrich Froebel high among the list of Christian educators and philanthropists. His tomb is composed of a cube, a cylinder, and a sphere, and "on the cube, which serves for a pedestal, they have gravied his own sweet words, 'Come, let us live for our children.'"

—SOME ARITHMETIC.—A man met a Burlington boy walking toward town on the Agency road, eating an apple. "How many apples have you?" asked the man. The boy replied: "One-half as many apples as I have eaten, added to twice as many as I am going to eat, less five that a bigger boy took away from me, divided by two-thirds of the number that I dropped in the orchard when I saw the dog, plus six which I ate on the orchard fence before the man saw me, will equal one-fifth of all I tried to get." How many apples did he have?
Quality, as I have said, cannot be had for the asking; it is difficult and often unattainable, and when it is obtained, it is often lost. The continuous inheritance of culture, the development of the individual mind, and the inheritance of its epiphenomena in the same darkness with its development, which lies behind the advance of life upon the globe. Inherited, as it doubtless must be, yet its arising cannot be foreseen in the span of human generation. In the past it has often burst forth from obscurity as the Greek and Arab from the Orient, the Roman from the Latin, the Phian, the Greek, or the Persian from Byzantium, the Tudor from England from Lancastrian and Plantagenet. Men of high quality do not appear, generally, to have sprung, like Pallas, from the brain of their fathers, but conceived in the dark womb of time to have lighted upon, the world in companies. How then education, by teaching thought unto itself, is to breed or men of great initiative is a hard question. It seems clear, however, that it is not to be done simply by the wedding of brain to brain but that for its generation may be needed some stance, of play to individual gifts—not promoting a dull uniformity, nor pinching back genius as the contrary, more complex growth, will be late in the bud and easy to be despoiled. That many mute inglorious Mithras are as 1 have said, cannot be had for the asking, it is fitful in its frequency, and the power beside that of genius itself; and urge him to work which will win the undying gratitude of men. Quantity may be conceived as lying partly in the bulk of the nerve cells themselves, and partly in the volume of their vessels; partly also in the virtue of the blood itself. It cannot be forgotten that the health of the brain and nervous system upon which the abundance of its force depends, is closely related to the tone and activity of the rest of the corporeal frame. The volume of force issuing from the brain is largely dependent, for example, upon the power of the stomach and allied viscera, upon the power of rapidly digesting and assimilating an abundance of food, and of breaking up and excreting spent material. A dyspeptic may well have nerve force of high quality, and of high tension; but I never met with a dyspeptic whose nerve force felled continuously. Like Brougham and Cavour, men of great power of continuous work have usually been large as well as sound eaters. A "hard-headed"

1. In the Girls' High School at Leeds, a well managed school in many respects, the girls are at work from breakfast to dinner and after dinner, with no interval for digestion; all four—for much of the year, that is, during all the daytime. Their cheeks know not wind and sunshine. 2. That recognizability of brains, its play and its productiveness are but various degrees of function, we cannot forget, but few data of its national history of the stage of infancy. I believe in many schools more children are ordered to write "original" essays on set subjects.
Called upon as children to teach
The
·say

of sad to think how many young ministers have come to me alone with such a
the exhausted brain takes to recover itself! A young physician may boldly

down . to thInk nor stand up to pray. The explanation is too clear . The

of them creep into orders to come in later years to the physicians, almost

never rec o ver its tone, or recover it only after a long season of rest. It is
tell the overtaxed

undergraduate, or spiritual increase in the forced and jejune exhortations of

before any degree of stability is regained . . It is nearly always true thai a case

brain has been forced, and has

self-

college are 'filled with,young men-ambitious, of generous impulses and

Repair in so delicate an organ is slow, and we know that gardeners and

false

to educate his younger brothers. Staunch to the backbone the lad throws


from

~mental di s ease, " ·

of the existence of the science of physiology.

While I endorse heartily the first paragraph of your article on "Higher
Education of Women," the remainder is so incompatible with my own ob-

question, "How may a bill, introduced into Congress, become a law?" One

youthful aspirant wrote: "A bill may be introduced into congress through the

postoffice."

A smart little girl asked who was Mrs. Grundy. The teacher answered

to it meant "the world." Some days after the teacher asked the class,

What is a zone?" After some hesitation, this bright little girl replied,

"It's a belt around Mrs. Grundy's waist."

CORRESPONDENCE.

SHALL GIRLS GO TO COLLEGE?

To the Editors of the Weekly:

While I endorse heartily the first paragraph of your article on "Higher
Education of Women," the remainder is so incompatible with my own ob-

for the assertions that I ask your forbearance in

entered my protest against it.

I entered the University of Michigan when the opposition to women in

and...
The Educational Weekly

ANOTHER SOLUTION OF PROBLEM NO. 85.

[Although Prof. J. E. Hendricks presented, in No. 87, a clear general statement of such problems we insert the following solution of this particular problem.—Ed.]

To the Editors of the Weekly:

I send you "solutions" of the Problems found on page 152, No. 85, Vol. 4, of your journal.

Prob. 1. Let x=A's land, and then 300—x=B's land.

Also put y=price per acre of A's, and y+3=B's price. By conditions, x—y=300, and (300—x)(y+3)=300

The last being reduced and 300 substituted for xy, we have x=400—500,

But in eq. 1st, x=500, hence 31=400—500.

This equation reduced gives x=5y=3,

a quadratic in which y=8.1731.

But as y is a positive quantity, y=8.1731

or, y=8.693, A's price per acre, and y—7.75=2.443, B's.

Now as x=400—500, x=1693.4(300)—700=177.2+acres, and 300—

177.2=122.8—B's number of acres.

VERIFICATION.

122.8—acresX$2.443+=$299.9996+, B paid

177.2+acresX$1.693+=$299.9996+, A paid

300 acres

.75 600.000, Both paid.

More decimals would come still nearer.

SAN BERNARDINO, CAL., Oct. 18, 1878.

J. A. ROUSSEAU.

THE BALL PROBLEM.

Four balls, each six inches in diameter, are placed in a pile, with three balls at the bottom, and one on top. Required the height of the pile.

SOLUTION.—Balls all tangent, distance between centers 6 inches in all cases. Join the four centers, forming a regular tetrahedron whose base is the equilateral triangle formed by joining the centers of the three lower balls, and vertex the center of upper ball. Each edge = 6 inches. Find altitude of tetrahedron. Add to it the distance of base above the ground (3 in.), and distance from upper vertex of tetrahedron to highest point of upper ball (also 3 in.). The sum will be the height of the pile.

To FIND ALTITUDE OF TETRAHEDRON:—Base an equilateral triangle, each side = 6 inches; find distance from a vertex of this basal triangle to center point of the same triangle. This will be the base of a right-angled triangle whose hypotenuse is the edge of the tetrahedron, and perpendicular is its altitude. To find this distance (from vertex to center point), bisect one side of the basal triangle with a perpendicular. Bisect also an adjacent angle. These bisecting lines will intersect at the center, forming a right-angled triangle, base 3 inches, adjacent acute angle = 30°. Hypotenuse = 3 inches.

cos. 30° = .86603.

Solving the upright triangle, altitude=y=4.348968+4.898+ inches. Additional distance from ground to base (3 in.), and distance from center of ball to highest point (3 in.), we have 10.868 inches—height of pile.

[Mr. J. A. Rousseau, of St. Bernardino, Cal., sends the same solution. Mr. F. Glaffe, Jr., of Mendon, Mich., sends a very neat solution, using simply geometry. We try to make his solution plain, without inserting his figure.—Ed.]

Circumscribe the equilateral base. The bisecting perpendicular is plainly 3sin. Prolong this bisecting line to the circumference. Here, then, are two intersecting chords, the rectangle of the segments of one being equal to the rectangle of the segments of the other. From this it comes that the perpendicular of the bisecting perpendicular is 3sin. This, together with the half of the bisected base (3 in.), forms a right-angled triangle. Adding the squares of these, and extracting the square root of the sum, we have the hypotenuse=5sin. But this hypotenuse is the side of a regular inscribed hexagon, and the radius of the circle=the distance from the center of the basal triangle to one of its vertexes. The final triangle then has 3sin. for its base, and an edge of the tetrahedron (6 in.) as its hypotenuse, giving for the altitude y=6—12s=4.898+in. (Mr. Glaffe makes an error, and gets 4.874+.—Ed.), to which add 6 in., and the height of the pile is found.

QUESTIONS.

To the Editors of the Weekly:

The following problem has caused some discussion as to the correct answer; will you or some of your readers give a solution:

A train leaves St. Louis for San Francisco at 6 o'clock every morning, and one from San Francisco for St. Louis in the same way. A man leaves San Francisco on the Monday morning train and is six days in going to St. Louis. How many trains does he meet?

J. P. B.

LA CROSSE, Wis., Oct. 22, 1878.

What is the greatest number of interior acute angles that any convex polygon can have? Why?

H.
CHICAGO, NOVEMBER 7, 1878.

THE WEST.

ILLINOIS.—W. H. Lanning is attending the Law Department of the Illinois Wesleyan University.

Mrs. Lanned, superintendent of Champaign county, has divided her territory into districts, for institute work. Each district has a monthly meeting. On the 28th ult. meetings were held at Fisher and Mahomet. These meetings were well attended and the time was spent in practical work. This is the first move of the fitness of such a practical nature that we have observed. If faithfully followed it will result in an amount of good that its most sanguine friends have not anticipated.

 Paxton has 292 pupils in the public school. Charles M. Taylor is principal.

The teachers of Wyman Township, Bureau Co., have organized for the campaign. We observe that Geo. F. Peddicord is a prominent figure in all the educational enterprises of his county. Teachers in all grades can derive great benefit from these associations, but they are of especial value to those young people who have entered the ranks without special preparation and without a serious thought of remaining any considerable time. In a dim sort of way they begin to feel that possibly there may be something in it besides "keeping school!"

The Centralia schools are under the supervision of Charles L. Howard, of the Illinois Normal, class of 76. There is a school population of 1,100, and an enrollment of 750 in the schools. There are one hundred pupils in the public school. One hundred and ten pupils take German on the Cincinnati plan, viz.: half the day in German department and half the day in the English. There are fourteen teachers, seven of whom have attended the State Normal, four being graduates. Mr. Howard is a man of unusual energy and pluck, and a teacher of decided skill. With a fair chance he will make schools of which Centralia will have to be proud.

Chenoa has 273 pupils in the public school. J. A. Miller is principal.

A correspondence is taking place concerning the annual meeting of the State Association. The executive committee consists of S. Elke, Jerseyville; James Hannan, Chicago, and Prof. T. J. Burrill, Champaign. The meeting, probably, will be held at Springfield during the holidays, although the committee has not had public its decision respecting the place. The fee is usually about two dollars.

From the Aurora Beacon we gather the following items as presented in the sixth annual report of the report of the board of education: District No. 4: Estimated value of school property, $31,000; Salary of Superintendent (L. M. Hastings) $1,000; There are ten teachers employed, nine of whom are graduates of the high school. Of the eight graduates in 1878, six were born in Illinois and two in New York. The total number who have received diplomas is 95. The general health of the pupils has been good, not one death occurring in an enrollment of six hundred and ninety-two. Average number of pupils to a room, 51; in 1877 it was 47, in 1876, 51; total cost of schools in 1878, $5,787.07, in 1877, $7,092.61, in 1876, $7,258.61. In the East Aurora schools there were 2,077 pupils enrolled. W. B. Powell is superintendent; salary, $2,100; 58 pupils enrolled in high school. The number of persons in district between 6 and 21 years of age, 4,705; percent of attendance, 93.8.

The teachers of Stephenson county held their annual institute at Dakota, Oct. 15. Prof. Wells, of Ogle county, was introduced by Prof. Krape as conductor of the institute. Seventy-five teachers were enrolled the first day. Prof. Wells lectured in the evening on "Egypt and her Pyramids." The next day 122 teachers were present. It was expected that Prof. Dougherty, of Peoria, would lecture in the evening, but as he missed connection, Prof. Meno, of the Illinois Normal, again entered the members of the institute with a lecture—this subject this time being "The Schoolmaster Abroad." The next day Supt. Estabrook, a local school, gave a lecture on "Public Schools." The next evening Prof. J. Piper, of Chicago, delivered an energetic and instructive lecture. Home talent was well employed in the institute, lectures given by Geo. W. Conner, J. F. Kreuzinger, F. T. Old, C. A. Curn, S. R. Chambers, Miss Julia Pickard, E. F. Norris, Wm. Askay, F. T. Fisher, and J. H. Keagle, besides those before mentioned. One hundred and twenty teacher were present.

Orders for subscriptions may be sent to the above editors, if preferred. Items of educational news are invited from superintendents and teachers.

MINNESOTA.—The telegraph company has constructed a connection with the Pittsburgh astronomical observatory at Carleton College, Northfield, and presented the institution with a set of telegraphic instruments.

A Northfield student, who was given to impressive quotations of Scripture, when debating upon the evils of novel reading, concluded with this:--"The student who neglects his Greek or mathematics for Dickens, George Eliot, or Hawthorne, is but another Esau selling his birthright for a mess of pottage."

The Mankato board of education levied the special tax for this year at about six mills. This is for maintaining schools, paying interest on bonds, and to meet $5,500 bonds falling due in July next. This makes the total tax levy for state, city, and school purposes, about 21½ mills.

MICHIGAN.—The fall series of institutes closed with the last week of Oct., during which four were held at Centerville, Tompkins Co.; Prof. E. O. Old, conductor; Vicksburg, Kalamazoo county, Mr. and Mrs. Ford; Dubuque, Cass county, Sam'l Johnson, and Principal Estabrook; Petersburg, Monroe county, Prof. L. McLouth. The general feeling over the fall institutes is one of success, and that the system will stand. Some of them have been very large, as that at South Haven, Mich., numbered 130, and that at Benton Harbor, numbering about 120. Mr. and Mrs. Ford had 27 in the Ottawa county Institute at Three Rivers, Oct. 21. 5

The number of students in the University at the close of October, compared with those enrolled in the several departments during the whole of last year, is as follows: Literary, 435 against 351; Law, 328 and 429; Medical, 107 and 206; Dental, 56 and 431 Homoeopathic, 56 and 73; Pharmacy, 69 and 69. New students continue to arrive in considerable numbers. Prof. Morris has offered a place in the University of California, but will probably hold the position of Prof. Hennepin, late of this state. Prof. Hennequin, late of the French, and the student must have the first of a new series of textbooks on the French. It will be a book of reading lessons.

Prof. Charles Chandler, formerly principal of the Grammar schools in Grand Rapids, has been elected president of the State Teachers' Association. This will hold a session in Lansing from Dec. 25th to 27th, inclusive. Teachers, township superintendents, former academy principals, and others interested in educational matters, are earnestly requested to be present and take part in these deliberations. The following are the topics, as far as decided.

A report of normal institutes in the state, and report of schools securing same credit as ordinary branches.

Are normal institutes schools securing additional money from the state, and the ordinary branches to be expected? Is it expedient to have normal schools now generally pursued in these schools, other topics? and, in general, as United States history, natural science, natural history, and the elements of geometry? 

The Educational Weekly.
undine amount of time devoted to any of the subjects now taught in these schools and our graded schools? What can be done to secure greater permanency in the work of the common school teacher? Is a consolidation of the school system for this year, as proposed by Dr. M. C. Waterman? Would higher wages do it? 6. What is the best practical system of supervision for these schools? 7. What are the best means to be used for improving the teachers of these schools?

WISCONSIN.—The regents of the Wisconsin University have concluded arrangements with Prof. James C. Watson, the celebrated astronomer of Michigan, to take immediate charge of the chair of astronomy in the university, and also assume direction of the work of observatory, which will be conducted in the finest equipment now existing in the United States when it is completed, which will be in the course of a couple of months.

From Sept. Westcott's annual report we obtain the following items respecting the schools as closed over the last 20 years of age residing in the city, Aug. 31, 1878, 5,287; whole number in the public schools, 2,302; number of male teachers employed, 5; female, 38. The school houses in the city, 140; pupils, 2,779; cash loan, $57,000. Cash value of sites owned by the city, $17,000. Now in high school, 141; year before last, 5; including a preparatory class last year, 129. Certificates have been issued to 21 teachers. There are three rooms in the new building used for the high school and one for the primary department, cost, $7,425, which is a very low figure for so fine a building.

CALIFORNIA.—The State University of California, having experienced some severe cases of hazing, the Grand Jury has taken the matter in hand. The San Francisco Chronicle, alarmed at the rapid growth of what it terms a "new importation, pronounced hazing not only hurtful to its worst and most offensive feature. It is the hazing of the offenders in every case to the bitter end. It not only detects the expulsion of the offenders, but argues that in every case "the hazing ruffian should be sent ignominiously to jail."

OHIO.—Columbus sent a delegation of 104 teachers to the late meeting at Dayton of the Central Ohio Teachers' Association. There is not a city in Ohio which equals Columbus in the spirit with which its teachers attend associations. Mrs. C. L. Buoman, president of the Board of Education of Dayton, is complimented by our new paper correspondent as being a handsome man. In addition to the meeting at Warren on the 19th ult., as mentioned last week, a similar meeting in the interest of ungraded schools was held on the same day in Marysville, and was addressed by her excellent Governor, Dr. Payne, Supt. Campbell, and Supt. Stevenson. These meetings are doing much good, and it is hoped will bring about some decided action by the General Assembly in favor of the ungraded schools.

COLORADO.—Senator Teller has presented the Greeley public schools with a bound copy of Hayden's Atlas of Colorado.

MISSOURI.—E. R. Carr, school commissioner for Andrew County, edits— not an educational column, in the Andrew County Advance, but several such columns, and teachers of that county will find material assistance in those columns.


THE SOUTH.

TEXAS.—The Inter Oceen says that castor oil has been introduced into the Texas schools as an instrument of torture. A teacher in Galveston compelled a boy to take a heavy dose as punishment for smoking, and rubbed castor oil over a girl's lips for the same offense. The punishment was effective, but the people swell with indignation, and pronounce it barbarous. The Reform, and the revival of classical literature in England. Eton, founded by Henry VIII., has a century or more a docked adulter Winchester. Westminster is one of the many grammar schools originally established in connection with the cathedrals and conventual establishments for which the endowments are held by English monasteries. Besides Harrow, Rugby, Shrewsbury, Merchant Taylors', and St. Paul's, are among the multitude of schools founded in the sixteenth century, either by grants of land from the Crown, or by private persons, generally of the middle class, who considered the up-hill flight they had made in childhood and early life, were determined to give to those coming after them the means of overcoming such difficulties.—N. Y. Sun.

From Arden Holt's European letter to Andrew Basar we glean the following item: "I have already mentioned that you the North London College School for Girls, and the last day I was in the laying of the memorial stone of the new building, which are to be worthy of a great educational establishment hitherto conducted in two or three adjoining private schools. The boys are much strike on this particular school, because it is almost the first large public day school for girls where an education similar to that which boys would expect is offered them at a low rate. It was started as a private school Miss Buss, who now still reigns paramount, although it is now under the jurisdiction of the board. It was a pretty sight, this ceremony of laying the stone. A marquee, almost identical in size with the large central hall, had been erected, gay with flowers. The master of the Claphams Company laid the corner-stone, and also laid upon the table a check for 2,500. 'The Princess of Wales has become patron of the establishment.'

MISCELLANEOUS ITEMS.

The "American Catalogue," now issuing by F. Leybold, New York, brings into juxtaposition for the first time the works and editions of authors whose books were previously to be found only by a long hunt through many publishers' or library catalogues. Probably no family has been so prolific as that of Jacob and J. S. C. Abbott and their sons. Jacob, in fact, leads all American authors in actual works, no less than 170 individuals, divided among seven publishers, being credited to his name, besides 32 with his brother, J. S. C. has 27 of his own; and of the sons, Lyman, editor of the Christian Union, has 6; Edward, editor of the Literary World, 4, and Austin and B. V., the editors of legal digests, 14 works, in 84 volumes. T. S. Arthur, the temperance writer, counts but 100. William T. Adams ("Oliver Optic," has 83; and but one, however, are on the catauge of one bookseller. Sunday school writers of the same name of Mrs. H. N. W. Baker, but better as "Aunt Hattie" and Mrs. Madeline Leslie, leads all in actual number of volumes, 206, but as many as these in tiny names, representing a less amount of actual work. There are 55 Brownes entered as authors, of whom six are simple Johns, distinguished by place. But there are 10 Brownes of Edinburgh, the M. D. and the D. D. Alice seems to be the favorite name in fiction, 57 titles beginning with that word. Over 60 editions of Bunyan's "Pilgrim's Progress" are entered, with translations in eight languages, and over 50 of De Foe's "Robinson Crusoe." Of Dickens' works there are no less than 24 editions, besides those of his individual books; his works are published by different publishers, under a most remarkable masquerade of altered titles and combinations, but as a rule they are traced to the original book.

Charles Reade is 64 years old; Jacob Abbott, 75; Edmund Abbott, 50; William T. Adams (Oliver Optic), 56; A. B. Alcott, 79; T. B. Aldrich, 42; Berthold Auerbach, 66; George Bancroft, 78; Robert Browning, 66; Carlyle, 83; S. L. Clemens (Mark Twain), 43; G. W. Curtis, 54; R. H. Dana, 91; Darwin, 65; Diletti, 73; Pepworth Dixon, 57; Emerson, 75; J. A. Enderby, 55; E. F. Glascott, 68; John Holland, 59; Dr. Holmes, 69; Julia Ward Howe, 59; Thomas Hughes, 55; T. H. Huxley, 53; George Elliot, 58; Longfellow, 71; Benson J. Lossing, 65; Donald G. Mitchell, 56; Max Muller, 55; James Parton, 56; Mayne Reid, 60; Renan, 65; John G. Saxe, 63; Mrs. Stearns, 63; Anthony Trollope, 63; Whittier, 71; Wilkie Collins, 53; Swinburne, 41; Wm. Black, 37; M. F. Tupper, 68; D. C. Warner, 49; W. D. Howells, 41—Exchange.

Lowell, Mass., High School receives prizes for the best essay on "The true basis of a good school system," and that of Amherst College is making an effort to purchase a restored mammoth which Prof. H. A. Ward has in his museum at Rochester, N. Y.
SPECIAL CORRESPONDENCE.
FROM DAYTON.

The exercises of the Central Ohio Teachers’ Association were opened, after prayer, by C. L. Bueman, Esq., President of the Dayton Board of Education, who welcomed the association. He remarked that the Association is, like the Roman mother, is proud of her jewels, and entrusts them to the hands of her faithful teachers. He hoped the deliberations might tend strongly to make those whom he has the honor to greet more skillful pedagogues.

When Prof. John Hancock, Superintendent of the Dayton schools, and President of the Association, took the floor, the large hall, with a capacity of over six hundred, was filled, exhibiting an array of pedagogical talent seldom witnessed in Ohio. Dr. Hancock, in his inaugural address, returned his thanks for the honor of being chosen to preside over the Association, and discussed several topics of school reform. An abstract of the elaborate and able address would fail in justice to the gentleman, and we forbear, in hopes that it may be published.

Prof. Alton Ellis, of Hamilton, read an exhaustive paper against compulsory education. It was perhaps as able an argument against compulsory education as could be advanced, the author bringing fact, figures and fancy, to his aid. He held that crime and ignorance do not sustain the relation of cause and effect; compulsory education makes good subjects, not good citizens; school attendance in America is greater than in Prussia, where compulsory education prevails; that compulsory education makes good subjects, not good citizens; schools are inoperative. His weakest and most objectionable argument was that compulsory education would demoralize the schools by the introduction of “street Arabs.” Although the sentiment of the convention was against him, Prof. Ellis was given close attention.

Prof. J. P. Patterson, of Washington C. H., replied to Prof. Ellis in an off-hand speech, without manuscript, and in an able address almost demolished the fallacies that had advanced.

Prof. H. P. Ufford, of Chillicothe, read a paper on “Pedagogical Delusions”; full of humor and sarcasm. Among the delusions, he mentioned that teachers sign a contract; and to whom the many suburban schools teachers must break the will, the spinal column of the mind, is wrong; and lastly, the delusion that normal schools turned out ready-made teachers. However, he failed to include the notable delusion of the pedagogue who wrote the paper, as to the superiority of celibacy. But before he gets out a new edition of his “Delusions,” his eyes may be opened. Who knows, perhaps Prof. Ellis and Mr. Ufford, obeying their iconoclastic spirits, took away from the educators some of their best incense, and had him following a dull, hard track, with only selfish personal motives to urge him to progressive study.

Prof. E. C. Park, of Springfield, Ohio, discussed the paper for a short time, when the association adjourned till Saturday morning at 8:30 o’clock.

In the evening the teachers were present in Young Men’s Christian Association Hall, by request, to listen to a rehearsal of the Dayton Philharmonic Society, who sang portions of the “Creation,” “Messian,” solos and duets. The singing was good, and of a high order, particularly the solos. The association adjourned to meet at 8:30 o’clock Saturday morning, when it was past nine o’clock when President Hancock called the convention to order.

Mr. L. D. Brown, of Eaton, read a paper on “Literature in the Public Schools,” arguing more regard for the kind of, and system in, the reading of literature. Mr. Murray, from the Normal School, taught the teachers in such a school are all subscribers to THE EDUCATIONAL WEEKLY.

Superintendent Campbell, of Portsmouth, read a scholarly paper on “Ethics of the School-room,” discussing the paper, said that if but one language could be studied well, that should be English, and that a thorough knowledge of the mother tongue was far preferable to a smattering of three or four.

Mr. Murray, from the Normal School, taught the teachers in such a school are all subscribers to THE EDUCATIONAL WEEKLY. The public school at Elmhurst, sixteen miles west of Chicago, has a good two-story brick building, in which two teachers are regularly employed. Mr. Homer Bixler is principal, and Miss Della C. Knapp as assistant. Mr. Murray, from the South school, southwest of Oak Park, teaches there two hours in the afternoon. The school is not large, many pupils going from this district to the Oak Park school, but it is a pleasant school, and under Mr. Bevin’s management is gradually improving. The principal is one of the best schools in Cook County. The salaries paid are liberal, ranging from $500 to $750 for the assistant, and $2,000 for the principal. Of the teachers in such a school are all subscribers to THE EDUCATIONAL WEEKLY.

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A very fine large building was dedicated Oct. 31. There are three departments in the institution—one for those young men who wish to prepare for the ministry, one for those who desire a classical education, or to prepare for both, and one preparatory to form public characters. The preparatory department consists of six teachers; the commercial, 17. The faculty consists of six teachers, of whom Rev. P. H. Murphy is Inspector, or President. In its present character the college was opened in 1872; before that it was chiefly a theological seminary, which gave way in 1872 to the one opened in Missouri. The grounds cover 20 acres; there are three buildings, two of brick and one of wood.

IS COEDUCATION EXPEDIENT?

President L. C. Seeley delivered an address before the Connecticut State Teachers' Association Oct. 17, in which he discussed the collegiate education of women, concluding as follows:

"Has our experience shown that it is expedient to open colleges exclusively for women? In the three female colleges now there are more women pursuing courses of study than there are in all the colleges where coeducation has been adopted. Where are the scores of students who, we were told, were anxious to enroll the male colleges as soon as the doors were opened? They are at Vassar, at Wellesley, and at Smith College. They prefer college establishments and conducted for themselves, as the young men do. Most of the few very young ladies now studying in male universities are situated, or they are relatives of members of the faculty. In all they are not so many as the members of Smith College's first class. Newspaper accounts of the overcrowding and disorder at the universities have been all the more interesting because short sentences prevail all the way through it.

"I do not believe that coeducation will be attended with any gross immoralities, although the result in countries where coeducation has been practiced for a long time is not pleasant or encouraging. I was told that in a certain university, when the students were making their way to the library, one of them placed his hand on the hip of a woman, and the girl rebuked him, saying 'I am not here for your amusement.'" The speaker referred to the practice in a Western college of girls receiving young men—classmates—in their own rooms, without any supervision. Also to the results of coeducation in another Western college, where a young man and a young woman would go hunting together, she carried the gun and he the bag. A lady who consulted him about placing a niece in Smith College said she knew the dangers of coeducation. The antagonism inevitable in such cases is best handled by plucking something from woman which she could never regain. "I believe," said he, "that all sensible parents will choose to send their girls to institutions founded for and adapted to themselves, where careful study of their duties has resulted in a system which will develop whatever is best in the child, and deprive them of anything womenly. Princely gifts are continually coming to such institutions, and in a short time they will be as comprehensive and able as any established for men." The speaker referred to the practical difficulties of girls and the want of good teachers. "If she is the power behind the throne," said he, "then that power should be made as intelligent and as refined as possible. No advantages which can aid her perfect intellectual development should be withheld from her, or made hard for her to obtain."

Prof. Barbour, of Yale, told the Connecticut Teachers' Association, the other day, that not every dull recitation is to be laid to the charge of the scholar. The teacher, the school committee, the town, or some one else away out in the domain of secondary causes, may be chargeable for the failure. The teacher should be the head of the school in good spirits as well as good conduct. Let every teacher try it. Begin the school as if you had just heard good news and took pleasure in imparting it, and keep this up all day. Those whom we teach have a right of an intellectual handling of the mind and in paying it to study. The powers of the mind in learning are, first, detecting difference; second, observing sameness; and third, retaining what is seen. These, however, cannot be exercised all at once, and yet how often are the retentive powers put to work, while the observant and discriminating powers are kept standing idle. The needless handling of the mind is not yet over with. I maintain the right of the taught to such a quality in the teacher's character as will command their respect. The one who is in charge of the mind to lead it into knowledge will only fail, if at every turn of the way, he cannot show himself the master. If a teacher fails in trying to explain a study to his pupil, he instructs that pupil no longer. If the narrow and selfish mind is discernible, the taught see it as soon, yes, sooner than the others. "Let no man despise thee," was Paul's advice to Timothy. The taught have a right to the absence of a suspicion of questionable proclivities in their teachers. How are the taught to be led into doing, if the teacher talks at the alphabet of the lesson? There is a hidden truth which makes the taught perceive the worth of his teacher. Knowledge itself is an instrument merely, and as ready to serve wrong as right. What is wanted is a training that will teach the taught not the other, but the teacher, manner in perseverance, in punctuality, in veracity. There is an ethical training in the very discipline of the school. Moral harangues need not be frequent. Not the seeming, but the being is the hidden force that compels the taught to own the genuine worth of the master.

**VOICE OF THE PRESS.**

**STIMULATE YOUR PUPILS.**—Teachers should be judged as far as possible not by the amount of knowledge which they seemingly impart, but by the efforts which they induce the child to put forth for himself in acquiring knowledge. To teach is not to simplify every step until there is no real work for the child, neither is it to lecture to the class, displaying the immense knowledge of the teacher. It is rather to arouse, excite, stimulate all the activities of the child's mind, so that the acquirement of knowledge through study and investigation becomes a source of pleasure. If you would keep a bright scholar out of mischief, give him enough to keep him busy. If you assign him no harder task than you do scholars of average talents, how is he to employ himself except in mischief?—Central School Journal.

Teaching is a business to grow into, nor can it be well done unless it is loved by the doer. Adopted merely for the sake of stipend, degraded to a mechanical routine, made only an affair of text-books and formal recitations, never getting beyond a drill of classes, the term time all too long, and the vacation all too short, the monotony varied only by quarrels with committee-men and controversies with fault-finding parents, teaching under such pitiful limitation as well as the school-keeper not only into a machine, but into a machine constantly disordered. The distemper of discontent is contagious, and reaches from the desk of the principal to the desk of the pupils, until what should really be a delightful occupation both for the teacher and the taught, becomes a weariness to all the soul which either has left.—N. Y. Tribune.

**SHORT WORDS AND SHORT SENTENCES.**

I have in composition writing let us insist upon our scholars' using short words and short sentences. Short words are the most easily understood the most expressive, and the most forcible. The same may be said of short sentences. The difficulty frequently is that the selections contain sentences too long and involved that the scholars can hardly read them without getting out of breath. Not long since the writer was examining a pupil in analysis. The pupil was required to write a composition. She was then required to analyze the first sentence. She found considerable difficulty in the attempt, and finally said she was not used to analyzing such long sentences. "But is it one of your own sentences, isn't it?" "Yes, it is." She was advised to re-write her composition, and break up her long sentences into short ones, so that she could analyze them. The result was an interesting composition. If teachers take some of Wm. M. Evarts' long, involved sentences, and contrast them with some of Dickens' or Victor Hugo's passages made up of short, simple sentences, scholars will be able to appreciate the difference.

Some teachers in giving advice to contributors, told them for one thing, to revise their manuscripts and cut out ten-ninth of the adjectives. Good advice to young writers is to break up every compound or complex sentence into simple ones.

A school history of the United States has recently been published, that is all the more interesting because short sentences prevail all the way through it.

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**The Educational Weekly.**

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<td>A</td>
<td>4 x 6½ in.</td>
<td>Harper's, Harper's and Latin Texts, etc.</td>
</tr>
<tr>
<td>B</td>
<td>6 x 9 in.</td>
<td>Fine, Fine, Diamond Edition, etc.</td>
</tr>
<tr>
<td>C</td>
<td>8 x 11 in.</td>
<td>Wells's Bible, Rye, etc.</td>
</tr>
<tr>
<td>D</td>
<td>8½ x 11½ in.</td>
<td>Daily News, New York Times, Medical Journal, etc.</td>
</tr>
<tr>
<td>E</td>
<td>12 in.</td>
<td>Harper's, Atlantic, Galaxy, etc.</td>
</tr>
<tr>
<td>F</td>
<td>20 in.</td>
<td>Scribner's, Commercial and Popular.</td>
</tr>
<tr>
<td>H</td>
<td>30 in.</td>
<td>Harper's Weekly, Hand, Leslie's Ideal, etc.</td>
</tr>
<tr>
<td>I</td>
<td>36 in.</td>
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