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THE FIRST GERMAN MUNICIPAL EXPOSITION. (DRESDEN, 1903.)

I.

IN 1897 the *Oberbürgermeister* of Dresden proposed to a meeting of German municipal officials at Karlsruhe an exposition of the great development of German municipalities in the last decades. The plan was heartily seconded, and at a meeting called soon thereafter it was concluded to hold a German municipal exposition at Dresden this year. This exposition was to present (1) the condition of the German municipalities at the beginning of the twentieth century—especially their progress in the last decades; and (2) the productions of industrial firms for municipal use. Four hundred manufacturers accepted the invitation presented to them; and of the cities invited—those having over 25,000 inhabitants—128 accepted.

The various departments of the exposition will be dealt with as follows:

A. Traffic: (1) streets—paving, lighting; (2) street railways; (3) bridges; (4) harbors and docks.

B. Expansion: (1) the board of public works; (2) the suburban movement; (3) housing of the working classes.

C. Public charities: (1) outdoor relief; (2) tramps; (3) orphans; (4) aged poor; (5) defectives; (6) bequests and endowments.

D. Municipal employment bureaus.

E. Public health and safety: (1) hospitals; (2) parks, boulevards, play grounds; (3) public baths; (4) public conveniences; (5) water-supply; (6) sewerage; (7) street-cleaning, garbage, etc.; (8) smoke prevention; (9) dis-

infection ; (10) food inspection ; (11) municipal *abattoirs* ; (12) municipal markets ; (13) fire-fighting ; (14) police ; (15) cemeteries and crematories.

F. Education : (1) school equipment ; (2) school instruction ; (3) school hygiene ; (4) school buildings ; (5) libraries and reading-rooms ; (6) the exposition as an educational institution.

G. Public art : (1) street decoration ; (2) city decoration ; (3) public architecture ; (4) cleanliness ; (5) the exposition from an art standpoint.

H. Public finance : (1) bookkeeping ; (2) taxes ; (3) municipal operations ; (4) municipal savings banks ; (5) municipal pawnshops.

I. Statistics.

Municipal undertakings such as have been represented the past summer in Dresden are, doubtless, made possible by the fact that the German municipality is a business corporation, run on business principles, by competent and efficient men who aim to serve their city and who honor the positions which they hold. Albert Shaw, in his *Municipal Government in Continental Europe*, has doubtless already made this familiar.

A. TRAFFIC.

Commerce and industry to a large extent make the modern city what it is ; hence the great need for thoroughfares. In view of the increase in amount and rapidity of transportation, these great business thoroughfares must be broad, numerous and straight. Diagonal or radial streets are necessary for expedition and convenience. The old street was the left-over space between buildings. The modern street is the unit of the city—an organic unit. Not only is the modern street a thoroughfare, but it also takes the place of the market-place of olden days for the display of goods for sale. As the street is thus seen to be of such prime importance for the very existence and continuance of the modern city, we are not surprised at the great expense allowed for streets—building, repairing, lighting, cleaning, etc. There is no haphazard laying out of streets. The board of public works plans all new streets so that they shall accord with the rest of the streets of the city, and so that they shall promote communication, health, and beauty. This supervision extends to all expansions of the city, for the benefit of the future, and also to correction of the errors of the past. Many cities find that their busiest quarters are in what was formerly the old walled city—

with closely built houses, and tiny crooked streets. New streets adequate for modern needs have to be cut through these masses—as in Frankfurt a. M., Nürnberg, Darmstadt, Dresden, and Halle, for example. Hamburg has bought out picturesque, dirty houses, razed them, and rebuilt the new district with modern buildings—not nearly so picturesque, but far better for the health and welfare of the whole community. Nürnberg has preserved, on historical and artistic grounds, two old towers which stand directly in the way of traffic. To atone for this, however, she has tunneled through the adjoining buildings, and has run the streets through. Sidewalks represent a comparatively recent differentiation of the street surface. Some boulevards have equestrian paths, bicycle paths, etc. As modes of locomotion increase—and traffic—further differentiations of the surface of thoroughfares may well be expected. In Germany the street-car tracks represent such a differentiation—one not yet clearly marked in American cities. This problem of caring for the various traffic of the future—various in speed, in type, in purpose—is already being considered by the city builders of today, that the work of correction may be less for their successors than it has been for them.

The municipality cares not only for the great thoroughfares, however, but also for the minor streets. These minor streets, including residence streets, not serving as main thoroughfares where speed and ease of movement are necessary, may well be curved, or at least slightly out of the straight line. The slightly bending street has a great deal in its favor. In the first place, it is really a necessity where there is rising ground, in order to make the grade easy. In the next place, it renders impossible the wind's sweeping down a street, carrying ever-increasing clouds of dust with it. Then, too, it gives opportunity for taking account of sunshine and shadow—not leaving miles of houses with never a ray of sunshine in their front rooms. A curving street gives a curving building line—with a house fronting northeast or northwest, for example, rather than due north. This arrangement has also its æsthetic side, as the eye always has a new picture presented, instead of following interminable

straight lines of main streets and cross streets. The laying out and arrangement of streets is a highly developed science in Germany. The *Ringsstrasse*, found in many a German city, usually occupies the site of the old town wall. It is usually boulevarded—not merely well paved, for all streets have that characteristic, but lined with trees, embellished with flower beds, an occasional fountain, and—not to be so highly recommended—many a statue of warrior or nobleman. It makes a pleasant driveway, connecting the various sides of the city without the necessity of going through the busy center, and adds an important element to park and boulevard systems.

Thus much is being accomplished in the German cities. No city streets are left unpaved, and whenever pavements are renewed it is always to change for the better. We in America have the opportunity of building for the future and profiting by the experience of the German cities.

Paving.—In great thoroughfares, where traffic is heavy, stone-block pavements are usually found. In residence districts macadamized streets are still the rule. The latter are cheap, easily repaired, and almost noiseless. They have the disadvantage, however, of becoming dusty in dry weather and muddy in wet weather. Attempts are now being made, as in America, to discover some treatment which would remove this difficulty. The experiment of sprinkling with oily substances was made, and exposition visitors were able to watch the process. One cannot say that the experiment has as yet proved a complete success. No cobblestone pavements were exhibited, even as relics! Asphalt and wood blocks are replacing other pavements whenever possible. Quiet and cleanliness are sought after as much as is durability, even for chief thoroughfares. Whether asphalt or wood be used, a deep foundation of concrete always precedes. Instead of the ordinary asphalt paving, many cities are laying on concrete foundation asphalt blocks, made under high pressure. They are quiet and elastic like asphalt, and have the added advantage of allowing repair of the pavement more readily than does the ordinary asphalted street. For wood pavements, carefully selected hardwood—often imported Australian tallow

wood—is used. On the concrete foundation is laid a soft cement, into which (in Dresden) the rectangular wood blocks are set. In Dresden the blocks are laid closely, with nothing between them. In Bremen they are set upon felt (laid on the concrete foundation) and have strips of felt between them. Such a pavement is the most expensive—costing in Dresden almost three times as much to lay as does macadamized pavement. When first-class wood is selected and the workmanship is good, these quiet, clean, elastic pavements are also durable. Moreover, to prevent the slipping of horses in wet weather, very fine gravel is strewn lightly over the pavement. The traffic pounds this into the wood and makes a hard surface which resists wear, without causing deterioration of the pavement.

Lighting.—Electricity and gas are made for lighting purposes, partly by the municipalities and partly by companies with franchises from the municipality. For example, in the following cities electrical works are owned and operated by the municipality: Bielefeld, Breslau, Cassel, Cöln, Darmstadt, Dortmund, Dresden, Düsseldorf, Duisburg, Elberfeld, Erfurt, Frankfurt a. M., Halle, Hannover, Königsberg, Mainz, Pforzheim, Stuttgart. In these cities the electrical works are owned by the municipality and leased to private operating companies: Chemnitz, Charlottenburg, Plauen i. V., Würzburg. In Berlin, Hamburg, Leipzig, Magdeburg, and Strassburg the electrical works are owned and operated by private companies on long-term franchises. Only these twenty-seven out of 780 electrical works are represented in the exposition. Cöln and Frankfurt a. M., in order to have centrally located electrical works, have constructed them underground. The constant improvements in gas-lighting, together with its cheapness and its availability for fuel, will prevent its being replaced by electricity—at least for a long time to come. Dresden presents an outfit of gas burners, for light and for fuel, together with automatic arrangement for selling gas by the ten-pfennig worth. Lights, stoves, meter, and slot machine are all installed free of charge.

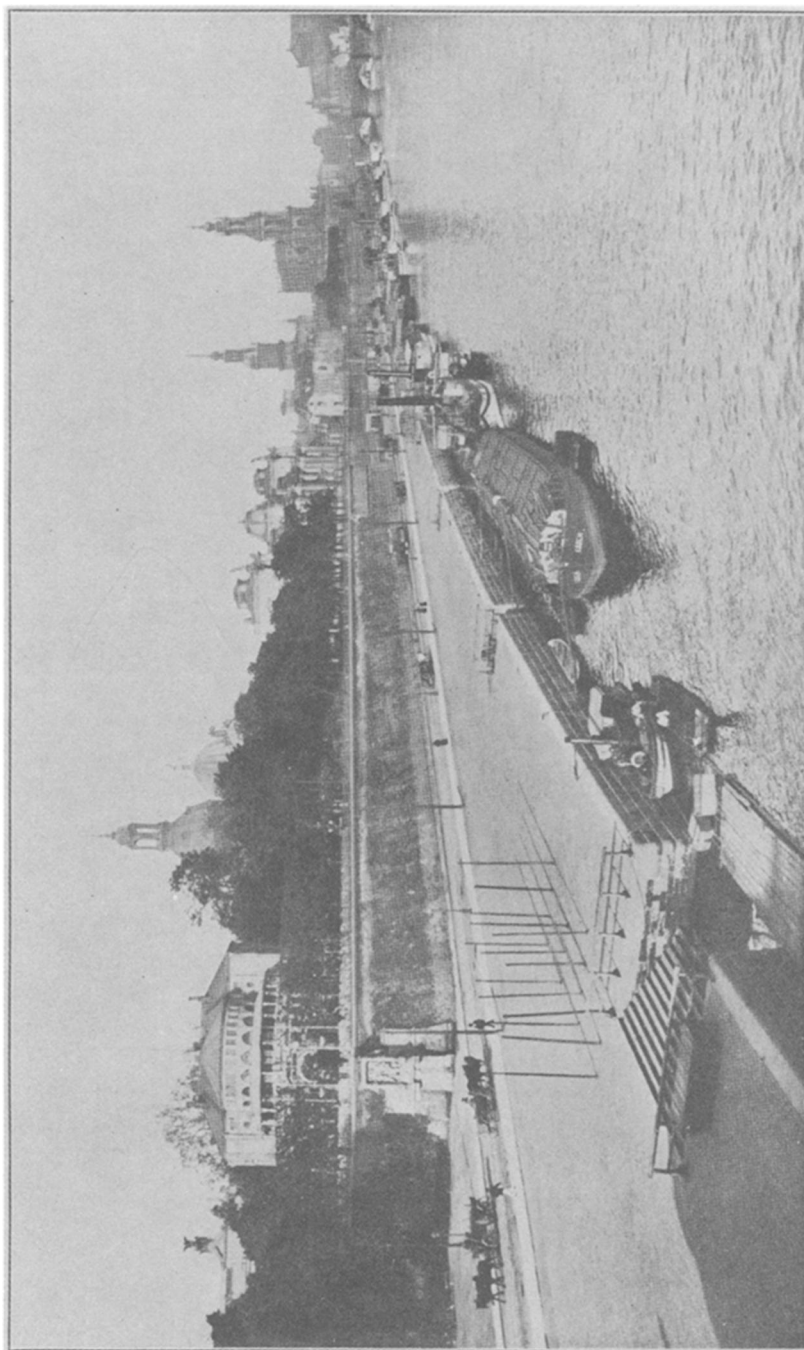
Street railways.—The use of electricity in German cities is greatly increased by the demand for power for street railways,

which are largely electric. Indeed, the chief use of electricity in Hamburg is for street railways; and in Dresden electricity was first used for street railways, and afterward introduced for lighting purposes. The expansion of the network of tracks over the city territory and out to the suburbs shows the possibility of street-railway rapid transit helping in the distribution of population, and thus aiding a solution of the housing question. Low fares, good transfer system, excellent service and connections characterize the German city railways. The overhead trolley, with double or single poles, is used almost universally, except in the busiest districts, where, in Dresden, for example, for some distance power must be otherwise supplied—underground conduit or storage battery. The cars are so equipped as to make this change when they enter the city district, using the overhead trolley again wherever it is permitted.

The concrete street foundation is increased about one-third under the car rails. For example, in Leipzig the car rail is set upon a block of Australian tallow wood, which latter is imbedded in cement from 9 to 13 cm. thick; this is laid upon 10 to 14 cm. of concrete, under which is 10 cm. of packed gravel. Such foundations give a solid bed; and the rail itself is, with the wood block, partly imbedded in the cement, which holds it fast. All street-railway rails are grooved and, in Dresden, Breslau, and Leipzig, for example, are drained into the sewers by pipes or shafts. Where rails are laid in asphalt pavements they are now always bordered by a row of wood blocks such as are used in wood pavements. As has been suggested, the street-railway tracks are a differentiation of the street surface, just as are sidewalks, and are hardly more available for other traffic than are the latter.

Elevated or underground roads have not yet appeared to any great extent except in Berlin; though Elberfeld presents its hanging railway as the only one of its kind. This, as is well known, makes use of canals as well as of streets for its line.

Bridges.—Bridges form an important part of a complete system of thoroughfares. They not only give access to highroads, but serve to unite closely the parts of the city lying on opposite banks. Trade and commerce, and also the distribution of popu-



BRÜHL'SCHE TERRACE, DRESDEN, SHOWING WHARF BELOW AND PROMENADE ABOVE.

lation, are furthered by bridges. Most bridges are now of iron construction, though many cities are trying cement with strong steel wires laid through it. This latter gives, perhaps, a more imposing effect, more in keeping with the character of the buildings at either end of the bridge. München has probably erected in the past two years, and planned for immediate erection, more expensive bridges than any other city, in Germany at least. The Reichenbach bridge, 1902-3, cost 760,000 marks; the Prinzregenten bridge, 1901, 600,000 marks; the Max Josef bridge, 1902, 750,000 marks; the Isar bridge, to be built 1904, 500,000 marks; the Cornelius bridge, 1902-3, 730,000 marks; the Wittelsbacher bridge, to be built 1904, 770,000 marks; the Maximilian bridge, to be built 1903-4, 1,000,000 marks.

Harbors.—Railways, rivers, canals, harbors, quays, elevators—all aid in the transaction of business and consequent promotion of municipal well-being. Railways are in the hands of the state, so do not appear in the exposition. As for the rest, however, inasmuch as they are so vitally bound up with the welfare of the municipality, they are considered as proper municipal undertakings. The correction of streams and the building of retaining embankments come first. Lübeck has spent 47,500,000 marks for the correction and dredging of the Trave. In harbor-building Hamburg, of course, offers the classical example; and Bremen and Bremerhaven are also well known. Breslau opened in 1901 harbors which had cost her 5,750,000 marks. Crefeld, though some distance from the Rhine, has undertaken the building of large harbors and of a canal to connect them with the Rhine. This undertaking is to cost 11,000,000 marks, and will be ready in 1905. A still greater project is a connection by a canal between these new harbors and Antwerp. This attempt of an inland city to reach out after commerce is certainly a remarkable one. Mannheim between 1897 and 1903 built, at the cost of 6,900,000 marks, the first harbors intended exclusively for industrial purposes. Duisburg presents comparisons between its harbor and other large harbors which will surprise most Americans:

Duisburg and Ruhrort	-	-	13,198,302 tons
Hamburg—inland	-	-	5,974,800 “
Hamburg—foreign	-	-	8,688,627 “
Antwerp—foreign	-	-	8,420,743 “
Rotterdam—foreign	-	-	6,600,547 “

Municipalization of harbors and docks allows of their location at such points as shall be best for the whole city. German cities usually make the most of their river frontage, and above and below the wharves and docks the water front is developed into promenades and parks. Würzburg has had to build an embankment to prevent the flooding of adjacent land by the river Main at high water. This embankment is not, however, merely a retaining wall, but has a seventy-foot boulevard, with double rows of trees, broad driveway, and sidewalk. The lower quay is subject to overflow of the river. This building of a promenade above the wharves, even when they are above high-water mark, serves to give access to the river front, adds healthfulness and beauty, and does not inconvenience light traffic. It would seem that we might come, in time, to building such promenades, even when large warehouses must, for commercial reasons, line the lower wharves. Then we should have the picture of busy wharves back of which would be the warehouses and above the warehouses would be an elevated boulevard.

B. EXPANSION.

The board of public works.—One of the chief lessons taught by this exposition is that the city is a social organism. The old cities were aggregations; the new city is an organic body, and, consequently, its growth must be organic. The growth of the old city was haphazard, unordered. The growth of the modern city is directed, shaped. The condition of the old city, as it comes down to us, is such that in order to adapt it to modern ideas and needs—hygienic, social, and economic—great corrections have to be made. To prevent necessity for such corrections in the near future, the German municipality deems it wise to oversee and order the growth. The instrument of this oversight is the *Baupolizei*. The organization and methods of this board of public works differ in different parts of the empire. Three

typical examples may be cited in Augsburg, Breslau, and Chemnitz.

In Augsburg, a city of 89,990 inhabitants, there was formed, in 1900, a *Bausenat*, to which the *Baupolizei* itself is subordinated. This "senate" is composed of the two burgomasters and ten magistrates—three jurists (paid magistrates) and seven citizen magistrates (unpaid). This number may be increased when necessary by the addition of magistrates of either sort for the sake of their expert knowledge. These magistrates have, then, both seat and voice in the senate. Other city officers may be called in for consultation, but do not vote. Plans, with a petition signed by owners of adjacent or affected property, are presented to the department of buildings. The plans then go to one of the burgomasters, and next to the adjustor for the department of buildings, who arranges compromises with such adjacent property owners as have not signed the petition (*i. e.*, those who have any objections). Then the matter comes to the building department, the city surveyor (if the proposed building is to adjoin public buildings), then also to the city architect, the city engineer, to the superintendent of water-works (*Oberingenieur für Wasserbau*), if turbines, etc., should be planned for. Then the plans go back to the building department. After its opinion has been passed upon the plans, they go to the chief of the department for his signature and to the adjustor of the department. For particulars the plans may be referred to seven other departments—fire, health, "business," etc. Then they go to the second adjustor, who gives the consent of the municipality, conditionally or unconditionally; then back to the department of building, and finally to the "senate" for decision.

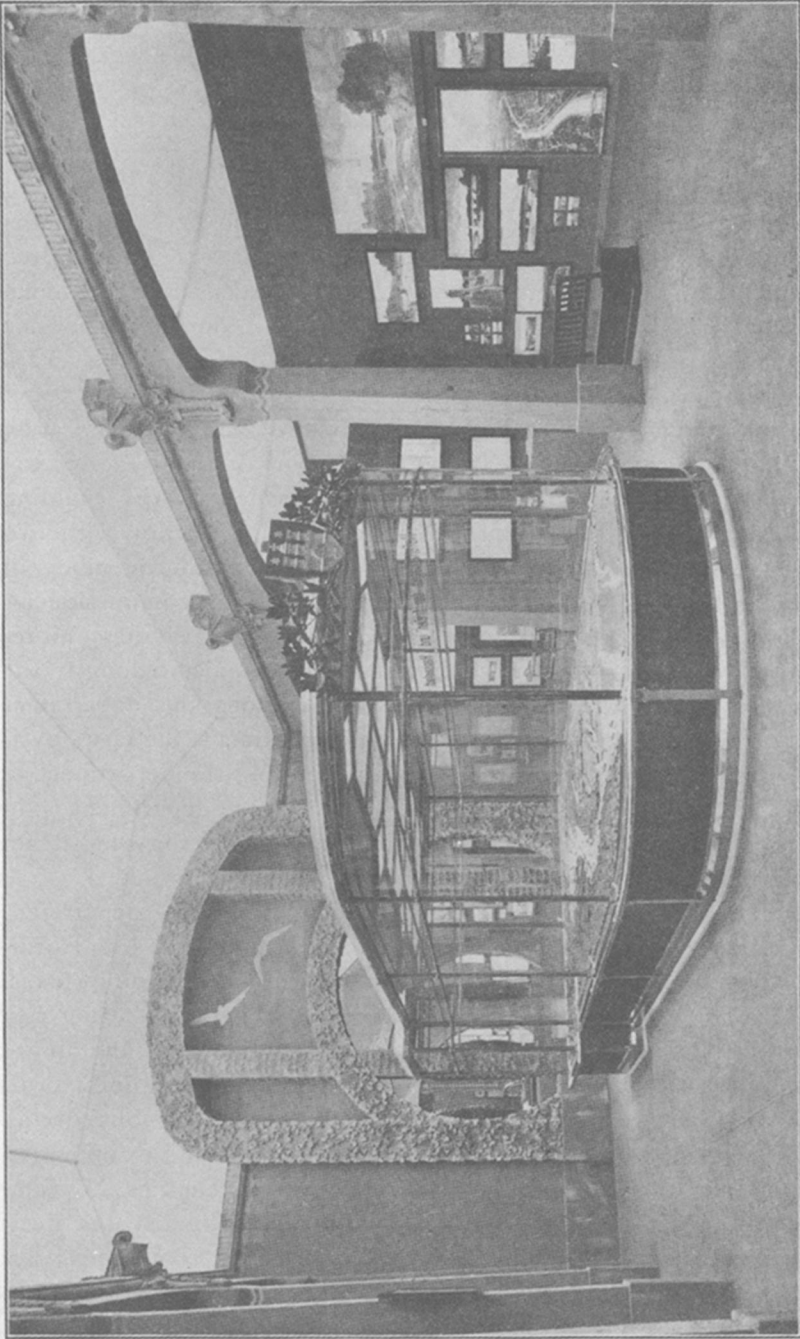
It is surely a great reel of red tape, and the "right of protest" on the part of neighbors and of the municipality is reminiscent of olden times.

In Breslau, with 427,164 inhabitants, conditions are different. At the head of the department is the *Oberbürgermeister*, and the burgomaster and deputy magistrates. The executive work is in the hands of the commissioner of the department of building, who has under him a building inspector and assistants. The

examination and approbation of applications for building permits is in the hands of the building inspector. The whole matter was transferred to the city government only on August 6, 1899. Even now all building laws must be presented in brief to the government's representative before being decreed. Fees for inspection are, in Breslau, reckoned on the cubic contents of the buildings: workshops and factories at two marks per one hundred cubic meters, with a minimum of twenty marks and a maximum of two hundred marks; for dwelling houses, four marks per one hundred cubic meters, with a minimum of sixty marks and a maximum of five hundred marks.

Chemnitz, a city of 206,509 inhabitants, has an organization which may be taken as fairly typical for all the larger Saxon cities with revised laws. The city council is the building authority. At the head is a salaried jurist councilor, with two "assessors" as assistants. Under him are the other members of the department—the chief building inspector, a "commissioner," seven *controlleurs*, and sanitary and plumbing inspectors. Moreover, five city councilors and five city officials also belong to the department. For approbation of applications the department may also call in the chief of the fire department, the city physician, the city surveyor, the city engineer, and the department of buildings, as well as the chief of police (whose department is, in Chemnitz, municipal), and the "business" inspector when steam boilers, etc., come into question.

The field of operations of the Chemnitz building department regularly embraces: the making and altering of laws and ordinances relating to building; the making of building plans, and of regulations relative to adjoining property; platting and expropriation of lots; inspection and approbation of buildings; inspection and approbation of divisions of building lots; ordinances for protection of workmen and of the public during building operations; oversight of the execution and examination of the completed work; and the infliction of penalties for violations of laws, ordinances, and regulations. Ordinarily the decisions are prepared by the building department, sometimes after reference to the committee, and in rare cases, after reference to the whole city council.



A TOPOGRAPHICAL EXHIBIT SHOWING MODELS OF THE HARBOR AND DOCKS OF HAMBURG.

Thus may be seen what a complicated machinery there is in the German city and what strict oversight the municipality exercises. Of course, the centralization of such great and minute power in one body of men will make for extreme conservatism, at the same time that it secures for the city a harmony and unity which it would otherwise, perhaps, lack. In Augsburg there is an "Order for the Preservation of the Architectural Picture of the City as a Whole," which, aside from any advantages or disadvantages it may accompany, is an index.

The olden city was an agglomeration of which the house was the unit. The modern city has the street as its unit. It is the collective effect of the street, not the individual effect of the house, which the board of public works seeks. To secure this effect the community must act in unison, not leaving it to each individual builder to build his house as high or as broad, as far from the building line or as near to it, as he wishes; to pave the street and clean and light it, or to leave that all undone; to make his house dangerously weak, of easily combustible materials, or without such provisions of light, air, and cleanliness as to make it unsanitary and unhealthful—thereby endangering the health, not only of its inmates, but of the community at large. The community takes charge of these matters, and also requires that the style of the building shall be such that it may harmonize with the street-picture. The street belongs to the city; and so close is the organic connection which exists that the city logically claims the right to decide upon the erection, alteration, or removal of everything connected with the street. In such cities as Nürnberg and Hildesheim, which are living largely in the past, the street-picture of the sixteenth and seventeenth centuries is preserved, and all alterations or additions to such street-picture must be harmonious. We shall return to this in discussing municipal art, but the point here made is that the community does, in Germany, have oversight even to this extent.

We have already seen how the department of public works has charge of laying out streets. All additions are subdivided and mapped out on definite scientific principles, and with a regard for the artistic side proportional to the development and

appreciation of the department officials. The importance of art in such matters is coming more and more to realization, but does not yet seem to be definitely recognized in the complicated boards of public works. The arrangement, direction, and width of streets are planned, as are paving, drainage, and sewerage; the division of the city into residence, factory, and business quarters is in the hands of the *Baupolizei*; the building line, the proportion of the building lot to be left vacant, the size and form of court areas, the amount of light and air a room should possess—proportional to the number of persons for whom it is planned—are decided by the same department; sections of the city are set aside for detached or semi-detached houses, others for tenement rows, and parks are laid out by them; further regulations as to size, height, materials, and general style are made by this same building department.

A few specific building regulations will serve to show the working of the plan. In Mannheim a house may not be taller than the distance between it and the opposite building line, and the maximum height is twenty meters. Windows must open upon streets or upon courts, and must be of specified size so as to furnish a sufficient amount of light and air. In Breslau, not more than three-tenths, or on corners five-tenths, of the lot is to be built upon in dwelling-house (*i. e.*, “tenement row”) districts. The height of these buildings is fixed by the breadth of the street, with twelve meters as the minimum and fifteen meters as the maximum height. In sections where detached houses are the rule, the front garden is arranged for, and houses are not allowed to approach the neighbor’s line nearer than five meters (leaving a minimum of ten meters between houses); and the house must on all sides have a presentable appearance. In such buildings windows are allowed in the side walls—though where the distance between houses, as in more closely built districts (*e. g.*, semi-detached) is less than ten meters, the side walls must be left blank! Why an extra window on the side, even though it did not add a specified quantum of light and air, would not be better than a blank wall, it is hard to see. Chemnitz differs from most German cities in not having definitely

defined sections of the city. Factories, and the houses of their workmen, are scattered pretty well through the city. In Stuttgart the courts, and the windows as well, must be of such size that direct light shall enter the windows at an angle of 45° . The intricacies of some of these arrangements are graphically presented in certain building plans exhibited by Dresden. Take a tenement row, for example: the main building must not be so high as the street is wide, with sixteen meters as maximum; the maximum height of the wing building is fifteen meters; a rear building must leave a distance between itself and the front and wing equal to the respective heights of the latter, and must not approach the line of the building lot nearer than four and one-half meters; six meters back of this may be another rear building, which may touch the line of the lot on the second side, but on the other two sides must leave, respectively, four and one-half and six meters. This seems fairly complicated; and one wonders if all the calculations are upon so scientific a basis as the specifications would suggest. A detached house in Dresden must not cover over one-third of the building lot. The depth of the house equals the width, and the maximum dimension is twenty meters. The back garden must be at least as deep as the height of the building, and the side gardens must be at least as wide as one-half the height of the building; the front garden may vary between a minimum of four and one-half meters and a maximum of twenty meters.

It almost seems as though the very arithmetic of it all would make one house dangerously like all others. One may well question whether such strict supervision in seeming details would not be weakening in more than one respect, in spite of the very evident excellence of the centralized planning which makes for coherence, symmetry, and harmony.

The suburban movement.—The walled city, constantly growing in numbers, but rigidly restricted as to area, became more cramped and crowded when the industrial influx set in. Expansion was necessary. Small villages grew outside of the walls, but they had no organic connection with each other or with the city. With the razing of the encircling walls, however,

came a strong pressure of population toward the outlying suburbs. The compactly built rows of the inner city was superseded by detached houses with gardens, in the suburbs. Concomitant with this movement toward the suburbs was a marked development in the means of transit. This suburban tendency has practically existed only during the past thirty years; and the last third of that period, which marks the most noticeable movement, is also the period of the greatest development of transit facilities.

Maps showing the city area in 1870, and the various annexations in various colored inks, made very evident the steady and increasing suburban movement. Worms mentions a fourfold growth of population in forty years—from 11,000 to 44,000. The maps of Bremen and Dresden may be presented as very noticeable examples. Frankfurt a. M. presents also excellent connections between its streets and the streets of former suburbs which are now included in the city. The area of annexations in Strassburg since 1875 is equal to the whole city area at that date. Bonn exhibited a series of eight city plans—400, 1000, 1250, 1700, 1800, 1850, 1875, 1903. First is a Roman camp, which later is subordinated to a fishing village, upon the site of which Bonn has grown.

Perhaps the rise of Schöneberg is as remarkable as anything here exhibited. In 1800 it was a village of 500 inhabitants. The growth of Berlin has meant prosperity to the little village, however. In 1871 it had only 4,500 people, but in 1898 it had reached the rank of a "city," with 72,000. In 1903 Schöneberg, though only a suburb of Berlin, ranks as a "large city," with 112,000 inhabitants. It is so young and so energetic that it has the opportunity of becoming a model of what German city-building means. There is still a broad building field, as only one-fourth of the city's area is as yet built up. By assuming control of so much neighboring territory the municipality is enabled to lay out the new quarters and thus promote the organic growth of the city. Chief thoroughfares, minor streets, villa districts, factory districts, etc., etc., are all planned in advance by the board of public works.

Barmen has wisely left its forest, the Barmerwald, and is

building on the opposite side, with connecting streets running through. Stuttgart has grown out as far as its wall of hills will permit, and has consequently abandoned the "open" building plan of detached houses, with gardens, for a more compact arrangement. She is now building in all the vacant space, in a manner reminiscent of the wall-bound towns. Whether or not it may be found possible to build beyond the hills, and to develop transportation facilities to connect such future suburbs with the city, cannot be decided without further knowledge of the district than could be got from the relief map exhibited.

Not only increase of municipal area, but also new building operations, were exhibited by many cities. In Dresden the greatest number of these have lately been in the outlying districts; in Berlin, in every direction from the periphery of the old city; in München, the new building is scattered all through the city.

Charlottenburg is planning for new districts which shall be wide enough to facilitate traffic; and in neighborhoods intended for dwellings, front gardens are prescribed. Not only laying out and building streets must be considered, but repairing and cleaning as well. Then come sewer systems, water systems, gas and electricity systems—and these all require maintenance.

When building laws prescribe detached or semi-detached houses with roomy garden space on all sides, the price of dwellings must rise, not only because the larger building lot and the detached house are dearer, but because services such as those just mentioned, together with increased expense for inspection, fire and police protection, etc., increase the expenses of the city, and taxes are higher. Under such conditions rents must rise, and then we are confronted with the housing question. Stuttgart, finding this state of affairs, and also, as has been stated, being cramped for space by the surrounding hills, has gone back to the old system of building houses close together.

In the old city streets modern traffic is impossible, and so, for the proper development of the city's trade, old, closely built city blocks must be cut through, narrow streets must be widened and hygienic requisites must be provided—such as sanitary

dwellings, "breathing places," etc. The new annexations form models for the rebuilding of the old city, and also offer a suggestion for the relief of the congestion in the dwellings of the city center. The site of the old city walls becomes a park or a *Ringstrasse*, as the case may be, and diagonal or radial streets are often cut through. Countless old buildings in Cöln have been replaced; Halle has razed a part of its second-hand-goods men's quarter; and Hamburg has razed its dock laborer's district and laid it all out anew in good streets and building lots. These give merely an example of a type of activity found throughout Germany.

The housing question.—A reference to some of the tables exhibited by various municipal bureaus of statistics (in another section) will help to show the skeptical ones that there is a housing question.

1. Undesirable conditions. A great many dwellings are located in cellars in Berlin, Hamburg, Altona, Posen, and Kiel. In spite of the absence of elevators, speaking-tubes, and such accommodations as make life in tall buildings possible, the tables show that numbers of fifth-¹ and sixth-story dwellings are to be found in Berlin, Breslau, Dresden, Schöneberg, and Rixdorf. On the other hand, very good conditions are found in Lübeck, where very few homes are higher than the third story, and where a rather large number of houses are occupied by single families—a condition quite exceptional in Germany. Again, in Barmen² 6.59 per cent. of the dwellings have no room which may be heated; whereas in Frankfurt a. M., Offenbach, and Wandsbeck, the percentage of such dwellings is negligible. In Chemnitz and Plauen we find the smallest number of heatable rooms to the dwelling; and in these same two cities there is a lack of kitchens, as less than half the homes have them!

2. Overcrowding. One-room dwellings with six persons are found in greatest numbers in Posen, Breslau, Altona, Magdeburg, Chemnitz, Berlin, etc., in this order. Six or more persons are found in great numbers of dwellings consisting of one room

¹ Used as generally in America—*i. e.*, first floor is ground floor.

² The figures quoted here refer to the census of December 1, 1900.

and a *Zubehör*—what Shaw calls a “closet-like appurtenance of a room”—in Plauen, Chemnitz, Halle, Rixdorf, Posen, Magdeburg, Breslau, Berlin, etc. In two-room dwellings we find eleven or more persons in the following cities, in order: Plauen, Leipzig, Dresden, Posen, Hannover, etc. In almost all cities we find the extreme case of six or more persons in houses with no heatable room—especially noticeable in Berlin, Rixdorf, Hamburg, Magdeburg, Posen.

3. Houses to be let. The percentage of dwellings unoccupied in 1900 was comparatively large in München, Görlitz, Dresden, Hamburg, an increase in the previous five years being noticeable in Dresden and Leipzig. On the other hand, the percentage was very small in Frankfurt a. O., Berlin, Halle, Kiel, and Magdeburg, with noticeable decrease in Magdeburg and Halle, in preceding five years. In Leipzig, Dresden, Magdeburg, Halle, and Lübeck, for the years 1896–1900, we find that of one-room dwellings, with rooms that may be heated, a relatively small percentage were vacant; of two-room dwellings a relatively smaller percentage were vacant; of three-room dwellings the number vacant was almost nil; while of four-, or more, room dwellings a relatively large percentage were vacant. A need of dwellings is expressed, then only in the case of the smaller ones; but here there seems to be a real need. Of course, these tables omit to specify price, sanitary condition, etc. The rise of the standard of living, and a better understanding of hygiene and sanitation, bring to our realization the uninhabitability of many houses. Again, the rent may be so high as to make the people think they must resort to taking lodgers to help pay it. Consequently, it may be possible that there is really a greater need than these figures would show.

Sometimes objection is made to the community's interfering with private enterprise in the furnishing of dwellings. Some people see a dangerous precedent in such activities—a precedent which step by step will take us into the quicksands of communism from which we shall be unable to extricate ourselves, and where we shall sink ever deeper. Such conditions, however, as so appreciably affect society as a whole—not only for the present, but also for the future—must be cared for by the social

body. We have long realized the necessity for inspecting the conditions under which food, clothing, and other necessities are produced and prepared for the consumer—and that, too, without compromising ourselves or our policy. So, also, a thorough study of the need for homes may present to the authorities the necessity for social regulation, and even at times for social activity in furnishing inexpensive, sanitary dwellings for people with small means. Private capital cannot undertake such operations when an absolute loss is involved—as in the case of destroying “building complexes,” cutting new streets through, and erecting new buildings with proper lighting, ventilation, plumbing, etc. Sometimes such operations do pay, in the course of time; but private capital, especially in Germany perhaps, is backward where the returns, small at best, are so distant. Consequently these activities fall to the lot of philanthropic individuals or societies, or of the community as a whole.

The conditions are varied; and we find a variety of solutions.

The *regulation* of conditions by the Board of Public Works has already been spoken of. The proper proportion of light and air in a room for the purposes to which the room is to be put, the proper drainage conditions, the proper proportion of the building lot to be built up—these are some of the conditions prescribed by the Board of Public Works. This is an endeavor to prevent the formation of slums and of slum conditions.

Improvement is accomplished by the razing of certain quarters which are a menace to comfort, health, and peace—quarters which breed disease, vice, and crime. Examples of such improvement exhibited are: Berlin—the razing of the Scheunenviertel; Halle—the breaking up of the Trödelviertel; and Hamburg—the rearrangement of the harbor district. Hamburg buys a slum district inhabited by dock laborers, clears it of buildings, re-subdivides it, and sells it on condition of the buyer's following strict building regulations. Hamburg has already expended seven million marks for this work. Now the dock is lined with a three-bordered street of clean, respectable, sanitary houses, where formerly filth and squalor reigned. Doubtless

many people will bewail the destruction of the old, half-timbered, high gabled, houses—especially when they see the rather plain-looking flat buildings which have replaced them. It certainly is a pity to destroy the picturesque; but when one sees the filth and degradation in these unsanitary, crowded, dirty houses, and realizes that human beings are making these places their habitation—not from any love of the picturesque, but from sheer necessity, whether because of convenience to their work, or because nothing else which they can afford is available—then the beauty fades, and one views the place as a menace to social welfare. To object to the razing of such buildings because of a present inconvenience, as some of our people have recently done, denotes a sociological short-sightedness. To alleviate such inconvenience is, on the other hand, highly commendable; and in Kiel's exhibit we find so-called barracks—temporary one-story buildings—built in rows, for homeless families. One of these brick barracks, with twenty one-room dwellings cost 25,000 marks; and another with twenty-five one-room dwellings, cost 27,600 marks. A two-story building with twenty two-room dwellings cost 27,800 marks.

Careful *inspection* commends itself to some people as a means for combating the evils of poor housing. Stuttgart offers the best example of the advantages of this method. The Stuttgart officials found 15,000 persons in unsanitary, overcrowded dwellings in 1901. Small flats were so dear that lodgers had to be crowded in, in order to help pay the rent. Moreover, rents were increasing, and evidently it was none too early that something be done. The suggestion of building municipal dwelling-houses did not appeal to the officials. May 21, 1901, they took up the problem, and on June 20, 1902, a *Municipal Renting Agency* was ready for operation. The services are free.

The committee which formulated the regulations was charged to include the following points:

To obtain regular monthly notice of new, and rebuilt, houses from the building commissioner; regular quarterly notice of houses in process of construction; regular quarterly notice of dwellings to be let; once or twice weekly to compile a list of dwellings to be let, with number of rooms, floor, city district,

and price; these facts to be arranged in card catalogue system so as to give at a glance all the necessary information for an intending renter.¹

Useless house inspection and house showing are hereby avoided.

In order to obtain the full benefits, the law is compulsory. Every landlord with houses or apartments to rent is required to register within eight days at the City House Department, on the cards supplied. When the dwelling is rented, he must make notification thereof within three days.

The bureau has set for itself the task of study and investigation as to possible future functions. Free information as to renters and houses is now furnished. They look to the possibility of acting as arbitrators when questions arise between tenants and landlords. An activity which they hope soon to undertake is a renting agency for small shops. Such shops as are connected with dwellings are already included in the present activity. It is expected that the proposed action will be of great benefit to the small shop-keepers, who could not afford the loss of time and trade which would be necessary for seeking out a new shop in the hope of a change for the better. A further extension of the field would include a central register of rooms to be let. They propose, further, to determine how far it may be desirable for them to go

A. FOR RENT						
St. and No. "front" or "rear"	City ward or suburb	Which floor	No. of rooms	Note if shop is connected	Yearly rent— incl. shop if any	When ready for occupant
<div style="display: flex; justify-content: space-between;"> Place..... Date..... </div> <div style="margin-top: 5px;"> Landlord's signature..... </div> <div style="margin-top: 10px; text-align: center;"> Address..... </div> <div style="margin-top: 10px;"> <p>Has the landlord filled out the special formula at the <i>Wohnungsamt</i> for further information of the intending tenant ?</p> <div style="display: flex; align-items: center;"> { <div> Yes No..... </div> </div> </div> <div style="margin-top: 10px;"> <p>If not, where may one make inquiries ?</p> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Name..... Street..... No..... Floor..... </div>						

¹ Report of the committee.

in the erection of municipal lodging houses, and municipal dwellings, according to the English plan.

The type of card for cataloguing the information concerning the houses, printed on the preceding page, shows how, at a glance, all necessary information is given.

The card sent in after the renting of the dwelling contains information, in addition to this, concerning the tenant and the terms of the rental.

B. RENTED						
St. and No. "front" or "rear"	City ward or suburb	Which floor	No. of rooms	Note if shop is connected	When ready	Tenant. Name Trade or calling City Address
Place.....	Date.....	No. of perons in family		No. of servants and help	Total No. of persons	To be sublet: Yes No
Signature..... (of landlord)						If "yes," how many rooms for how many persons
Address.....						

Besides these cards, there is the formula mentioned in Card A. It consists of the questions which follow, and when filled out by the landlord is filed in a loose-leaf register for reference.

No. Rooms—(a) heated..... (b) unheated.....

Bathroom?.....

Kitchen?.....

Bedroom?.....

Balconies or verandas?.....

Cellar, attic room, etc.?.....

{ *Water?*.....

{ *Gas?* or electricity?.....

{ *Rent* per month.....

{ Rent per year.....

{ For smaller dwellings } In what instalments { weekly monthly.....

{ } In advance?..... { monthly.....

Is water tax extra?.....

When may tenant take possession?.....

{ Is dwelling at present occupied?.....

{ If occupied, when does present tenant move out?.....

{ Is there a laundry?.....
 { Where located?.....
 { Is there a drying-room?.....
 { Where?.....
 { Is use of these included in the rent?.....
 { Is there a fuel bin?.....
 { Where?.....
 { Is there a garden?.....
 { Is use of it included in the rent?.....
 In what directions do the rooms face (*i. e.*, south, west, etc.)?.....
 { How many families does the building accommodate?.....
 { Is building detached, or in a row?.....
 { How many dwellings on each floor?.....
 { Are there arrangements for shops or workrooms?.....
 { What arrangements, and in which stories?.....
 { Is there a special entrance to these?.....
 For small { Would you rent to workmen who would ply their trade in the
 dwellings } house (*e. g.*, shoemakers, tailors, etc.)?.....
 Are there any special conditions concerning subletting?.....
 Is subletting allowed or forbidden?.....
 At what hours may the dwelling be inspected?.....
 Apply to whom (name and address)?.....

 Special remarks.....

For immediate use in the office, cards, differing in size and in color for one-room, two-room, three-room dwellings, etc., are catalogued systematically. An example follows.

ONE-ROOM DWELLING				
Landlord				
Street and Number	Floor	Rent (per year)	When ready	Apply to
Hours for inspection.....				

Besides the differences as to size, dwellings are further differentiated, in the card catalogue, as to (1) with shops (or stores); (2) with workrooms, but no shop; (3) with special rooms other than these (*e. g.*, studios, etc.).

In immediate connection with this department is the Dwellings Inspection Department. The city is divided for inspection into 210 districts. The facts on the cards sent in to the municipal renting agency are immediately to be verified by inspection, and when necessary by reference to the rules of the health department and the building department. The direction of the work is centralized; but the actual inspection is individualized, each inspector having his separate group of buildings for which he is held responsible.

It may not be amiss to give the requirements which the inspection secures.

1. At least 10 cubic meters of space for each person (or 5 cubic meters for each child under fourteen years of age) in a sleeping-room.

2. Workrooms—especially those where food is prepared—are not to be used for sleeping-rooms.

3. Every room—sleeping-room, bath-room, kitchen—to have at least one window of such size as to allow sufficient light and air.

4. The living-rooms, sleeping-rooms, kitchens, W. C.'s., stairs, lofts, as well as the area ways, courts, etc., must be kept clean.

5. In every dwelling-house there must be a sufficient number of accessible W. C.'s.

6. Damp sleeping-rooms and living-rooms not to be tolerated.

7. Cellars not to be used for living- or sleeping-rooms.

8. Rooms—especially attic rooms—used for sleeping-rooms must be floored, and the walls must be plastered or wainscoted.

9. Sleeping-rooms, and hallways leading thereto, for workmen, apprentices, servants, must not expose the inmates to danger from fire. Especially shall approach not be through rooms containing inflammable materials.

10. For workmen, apprentices, and servants the sleeping-rooms for men and for women shall be separate; and separate single beds shall be provided.

All the poorer dwellings are inspected at least once a year, and the more dubious ones much oftener. The confidence and good-will of both tenants and landlords have been gained. The

results accomplished by the department are pronounced quite satisfactory.

Building dwellings which shall furnish to people of small means such conditions as are considered indispensable is another way of meeting the housing problem. The means for this is furnished by private individuals, by building societies, or by the municipality itself.

In Essen, dwellings for the operatives of the Krupp Gun Works are provided by the Krupp bequest. In Chemnitz similar houses for families of workmen in the Saxon Machine Factory are provided. In both these instances—as, indeed, in all the cases to be cited—the aim has been to provide good and sanitary homes for as low rent as is consistent. In Dresden the Johann Meyer gift has provided, at a cost of 206,700 marks, three buildings containing forty-eight dwellings. Of these, eight have two rooms; the rest have two rooms and kitchen. To each dwelling belongs cellar space, attic space, and a small garden of about 30 square yards. Further, there are broad, well-lighted stairways; each kitchen has water supply and drainage. In a building in the court are four laundries and a mangle-room. Moreover, drying places, bleaching places, and children's playgrounds are to be found in the neighborhood. In Leipzig, the gift of H. I. Meyer, three million marks, has served, thus far, to erect three large tenements. The bequest furnishes for the tenants, further, nurseries, a kindergarten, instruction in housekeeping, gardens, and children's playgrounds. Before very long the dwellings provided by this gift will be able to house 1.3 per cent. of the inhabitants of Leipzig (population about 455,000).

Building associations have undertaken to provide for inexpensive dwellings in many of the cities. In some cases the municipalities have furnished the land on which to build the houses, *e. g.*, Frankfurt and Leipzig. In Barmen cottages are thus erected which may be bought on terms of small monthly payments. In Darmstadt the building society "Daheim" erected between 1898 and 1903 twenty-six houses—story and a half, semi-detached cottages—to be sold at 5,000 to 8,000 marks. The Public Building Association in Dresden has erected eighteen

large four-story buildings. The association was incorporated in 1886 as a stock company. Its purpose is to build houses which shall rent cheaply, but at the same time give sure, small returns to the stockholders. The stock was 300,000 marks at first, consisting of 1,500 shares at 200 marks. This was later increased to 600,000 marks. Thus far 258 dwellings have been completed, consisting of two rooms and kitchen, or of three rooms and kitchen. These rent at 160 to 316 marks per year—at least one-third less than the others in that locality. The association declares 4 per cent. annual dividends, besides keeping the buildings in good repair; and has now, at the end of its sixteenth year, a reserve fund of 80,000 marks, which is to be devoted to the erection of more such dwellings. The tax valuation is nearly 1,500,000 marks. Duisburg, Göttingen, Hannover, Kiel (fourteen four-story, two-room dwelling-houses—cost 392,000 marks), Plauen, and Worms have similar building associations. In Worms eighty-eight dwellings built since 1897—rows of story and half houses, each with a garden—at a cost of from 6,300 marks to 7,900 marks. The “Ostheim” in Leipzig has built twenty tenement buildings at an average cost of 72,000 marks. The dwellings are intended primarily for families with children. For the benefit of the tenants there are, among other things, a nursery, and a compulsory savings bank.

Municipal dwellings for those employed in various services by the municipality. In this undertaking the municipalities are doing no more than are many other employers for their employees. Of course, as the community is here the employer, the activity looks more like a communal one. The citizens have the satisfaction of knowing that the portion of their taxes paid to city employees will presumably be spent within the city limits—benefiting the community—and that there is some saving to the municipality in balancing the rent against a portion of the wages paid. Frankfurt a. M. has tenements for the street-railway employees, and others for city employees. Essen, Duisburg, Darmstadt, and Kiel furnish further examples of this activity. Kiel has a four-story double tenement for employees of the street-cleaning department—two-room dwellings; cost, 56,000

marks. Similarly for firemen; cost, 63,000 marks. For employees of the gas-works at Wik, Kiel has erected two buildings: one with five two-room dwellings (cost 21,000 marks), and the other with two three-room dwellings (cost 14,000 marks).

H. WOODHEAD.

DRESDEN, SAXONY,

[*To be continued.*]